RESOURCE DOCUMENTS

FOR THE DISCHARGE OF

WASTEWATER ASSOCIATED WITH

FOOD PREPARATION ESTABLISHMENTS

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RESOURCE DOCUMENT
FOR THE MANAGEMENT OF FATS, OILS, AND GREASE ASSOCIATED WITH FOOD PREPARATION ESTABLISHMENTS

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USER'S GUIDE FOR THE GREASE PRETREATMENT PROGRAM DOCUMENTS

The Connecticut Department of Environmental Protection is providing the Guidance Document and Resource Documents as reference material to support the *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*. These documents are intended to assist FOG Pretreatment Program Administrators in developing local grease pretreatment programs. The information is provided in hardcopy, for easy access and review but is also provided in electronic format, to allow them to be modified and used as a starting point for developing documents for local programs. The Guidance Document provides basic information on the components of a local program. The Resource Manual contains forms, example ordinances, and information for specific parties involved in the program. Many of these documents were developed specifically for the City of Torrington/Torrington Area Health District.

INFORMATION FOR PROGRAM DEVELOPERS

Activity	Information Location	Description
1) Understanding this Document	*General Guidance:* Section 1, Executive Summary; Resource Document 2-Explanation of Who is Regulated by the General Permit	This section provides a summary of the manual and background on the various documents supplied.
2) Gaining Support for Your Local Program	*General Guidance:* Section 2, Background; Section 3-Problem Scope and Options for Solutions; Section 4, Element 1-General Permit; Resource Document 1-General Permit	Understanding of the problem and support for the program within the municipal government is critical for a successful program.
3) Identify the Agency Responsible for Implementing the Grease Program	*General Guidance:* Section 4, Element 2-Permitting and Approval Programs; Section 5-Implementation *Example:* Figure 4-1	There are many possible departments of municipal government that could be responsible for overseeing the program. This information considers the roles these divisions may play.
4) Increasing Public Awareness	*General Guidance:* Section 4, Element 3-Awareness-Building and Training; Section 7-Public Education and Outreach *Example:* Resource Document 6-Examples of Public Information and Education Brochures; Document 7-Food Preparation Establishment's Guides; Document 15-Information for Grease Trap/Interceptor Cleaners on the FOG Program	This information presents options for increasing public awareness of the grease pretreatment program.
5) Program Registration, Equipment and Maintenance Requirements	*General Guidance:* Section 4, Element 2-Permitting and Approval Programs; Element 4-Installation and Operation of Equipment; Element 5-Grease Minimization Procedures; Element 6-Monitoring and Record Keeping *Example:* Resource Document 7-Food Preparation Establishment's Guides; Document 8-Grease Pretreatment Regulations; Document 9-Example Applications; Document 10-Passive and Active FOG Pretreatment Systems; Document 11-FOG Pretreatment Equipment Sizing Criteria	Details of the program must be considered including registration requirements, approved equipment, alternate equipment, and maintenance requirements. Information is presented to familiarize program developers with available options.

6) Performing an Inventory Analysis	*General Guidance*: Section 4, Element 7-Inventory and Analysis *Example:* Resource Document 3-Wastewater Discharge Registration Application for Restaurants & Food Preparation Establishments; Document 8-Fats, Oils, and Grease Pretreatment Program Registration Form	Determining the existing conditions will assist program developers in assessing progress and tracking individual wastewater discharges.
7) Maintaining Program Records	*General Guidance:* Section 6-Information Management	Methods of tracking information are presented including commercially available software programs specifically for grease management.
8) Conduction Inspections	*General Guidance*: Section 4, Element 8-Inspection Programs; Element 5-Grease Minimization Procedures *Example:* Resource Document 13-Inspection Checklist and Inspection Guidance; Document 12-FOG Minimization Plan Guidance	Specific information on conducting inspections is provided to assist inspectors in conducting thorough and consistent inspections.
9) Enforcement	*General Guidance:* Section 4, Element 9-Enforcement Programs *Example:* Resource Document 16-Notice of Violation Letter; Also see examples listed below under *Step 12)* Legal Framework	Enforcement action must be clearly defined with methods of informing the facility found to be in violation of the offence and requirements for correction.
10) Collection and Disposal of Grease	*General Guidance:* Section 4, Element 10-Collection and Disposal; Resource Document 14-Collection of Renderable and Non-Renderable FOG	Grease generators must be advised on appropriate disposal options. Sufficient collection and disposal capacity is needed prior to implementation of the program.
11) Providing Financing Assistance	*General Guidance:* Section 4, Element 11-Financing *Forms: Resource Document 17-PS99 (3) & CERT-124*	Options for financing are presented. Sales tax forms are provided for grease generators use.
12) Setting up the Legal Framework	*General Guidance:* Section 6, Element 12-Legal Framework *Example:* Resource Document 1-General Permit; Document 4-Model FOG Ordinance; Document 5-City of Torrington Sewer Use Ordinance, Document 8-TAHD Grease Pretreatment Regulations	A FOG Pretreatment Program will need to be based on legal requirements at the State and local level. A discussion of regulatory issues is provided. A copy of the State General Permit along with examples of municipal and Health District regulations are provided.

INFORMATION FOR FOOD PREPARATION AREAS

Activity	Information Location	Description
1) Requirements of the Program	*General Guidance:* Resource Document 7-FPE's Guide to the Discharge of Fat and Oil to Public Sewer Systems; Document 8-TAHD Grease Pretreatment Regulations	Provides the local requirements of the program in easy to understand language with examples including all required documentation.
	Examples: Resource Document 8-Outdoor Example Application: AGRU Example Application	
2) Sizing Grease Pretreatment Equipment	*General Guidance:* Resource Document 11-FOG Pretreatment Equipment Sizing Criteria	Guidance on the sizing requirements for both types of standard grease pretreatment units is provided.
	Example: Resource Document 9-Outdoor Example Application; AGRU Example Application	
3) Maintenance and Grease Minimization Procedures	*General Guidance:* Resource Document 7-Food Preparation Establishment's Guides; Document 8-TAHD Grease Pretreatment Regulations; Document 12-FOG Minimization Plan Guidance	The section presents information on how to maintain grease pretreatment equipment.

INFORMATION FOR GREASE TRAP/INTERCEPTOR CLEANERS

(Examples from the City of Torrington/Torrington Area Health District)

Activity	Information Location	Description
What are the Program Requirements?	*General Guidance:* Resource Document 14-Information for Grease Trap/Interceptor Cleaners	Details of changes in disposal procedures that will affect Grease Trap/Interceptor Cleaners are provided.

INFORMATION FOR EQUIPMENT SUPPLIERS

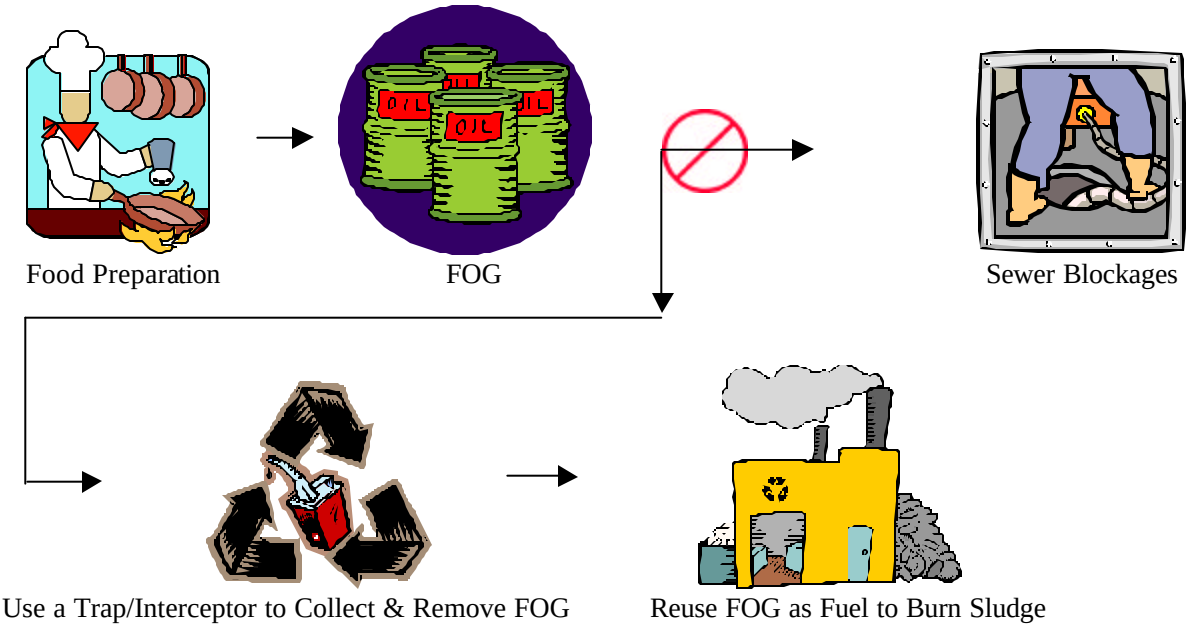
Activity	Information Location	Description
What are the Equipment Requirements?	*General Guidance:* Resource Document 1- General Permit Section 5; Document 11-FOG Pretreatment Equipment Sizing Criteria	Details on equipment installation and sizing requirements are provided.

INFORMATION FOR THE GENERAL PUBLIC

While the *General Permit* is not intended for grease pretreatment or minimization at the residential level, this manual contains information on educational materials that could be provided to residents on FOG handling and minimization.

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER MANAGEMENT
PLANNING & STANDARDS DIVISION
860-424-3704

General Permit for the Discharge of Wastewater Associated With Food Preparation Establishments



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General Permit for the Discharge of Wastewater Associated With Food Preparation Establishments

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General Permit for the Discharge of Wastewater Associated With Food Preparation Establishments

Section 1. Authority

This general permit is issued under the authority of Section 22a-430b of the General Statutes.

Section 2. Definitions

Terms used in this general permit shall have the same definitions as contained in Section 22a-423 of the General Statutes and Section 22a-430-3(a) of the Regulations of Connecticut State Agencies. As used in this general permit, the following definitions shall apply:

"Authorized activity" means any activity authorized by this general permit.

"Authorized agent" means the water pollution control authority or its designee. In municipalities where no water pollution control authority exists, the authorized agent shall be the local building official.

"Authorized discharge" means a discharge authorized under this general permit.

"AGRU" or "Automatic grease recovery unit" means an interior grease interceptor that separates grease from the wastewater by active mechanical or electrical means.

"BMP" or "Best management practice" means a practice, procedure, structure or facility designed to prevent or minimize environmental damage, or to maintain or enhance environmental quality. BMPs include without limitation, treatment requirements, operating procedures, practices to control spillage or leaks, sludge or waste disposal, or providing for drainage from raw material storage.

"Change in ownership" means a change in warranty deed or lease agreement.

"Commissioner" means commissioner as defined by Section 22a-2(b) of the General Statutes.

"Department" means the department of environmental protection.

"Facility" means any food preparation establishment at which an authorized discharge originates.

"Fats, oils and grease" or *"FOG"* means any fats, oils and grease generated from the food preparation process.

"Food preparation establishment" means a Class III and IV food service establishment as defined by Section 19-13-B42 of the State of Connecticut Public Health Code or any other facility discharging fats, oil, and grease above the effluent limits in Section 5(c)(2) of this general permit such as but not limited to restaurants, hotel kitchens, hospital kitchens, school kitchens, bars, factory cafeterias, retail bakeries and clubs.

"*General Statutes*" means the Connecticut General Statutes.

"*Grease trap/interceptor"* means any device or equipment designed to separate fats, oils and grease from wastewater while allowing water to flow through.

"*Grease trap/interceptor cleaner"* means any person regularly offering to the general public services of cleaning or servicing of grease trap/interceptors including the removal and hauling of fats, oils, grease, and food wastes which are components of sewage.

"*Individual permit"* means a permit issued to a named permittee under Section 22a-430 of the General Statutes.

"Local building official" means the municipal officer or other designated authority charged with the administration and enforcement of the State Building Code in accordance with Section 29-253 of the General Statutes or a duly authorized representative.

"*Maximum daily flow"* means the greatest volume of wastewater that is discharged during a 24-hour period.

"Municipality" means municipality as defined by Section 22a-423 of the General Statutes.

"*Non-renderable"* means fats, oils and grease generated from the food preparation processes that have been contaminated with other materials, thereby prohibiting this material from being rendered.

"*Permittee"* means a person who or municipality which is authorized by this general permit to initiate, create, originate or maintain a wastewater discharge containing fats, oils and grease at a food preparation establishment.

"Person" means person as defined by Section 22a-423 of the General Statutes.

"POTW" means Publicly Owned Treatment Works.

"POTW authority" means the Superintendent or Chief Operator of the Publicly Owned Treatment Works.

"Regional collection/transfer/disposal site" means a facility approved in accordance with law for the collection, transfer or disposal of fats, oils, grease and food waste which in Connecticut means a POTW or privately owned treatment works that is approved by the commissioner for the transfer, separation or disposal by incineration or other methods of fats, oils, grease and food waste from the wastewater of a facility. Pursuant to Section 22a-174-33 of the Regulations of Connecticut State Agencies related to Title V Sources, an in-state regional incinerator must have an operating permit that lists FOG as a source of fuel.

"Render" means the process used to clarify or extract fats, oils and greases by melting.

"Renderable FOG" means uncontaminated fats, oils and grease from the food preparation process that can be used as a source of material that is free of impurities and can be recycled into products such as animal feed and cosmetics.

"Renderer" means a person who collects and manages renderable FOG.

"Renovation" means any physical modification of the facility's food preparation area, food service area and/or dining area in excess of $20,000 in any one calendar year or a cumulative total in excess of $40,000 commencing from the effective date of this general permit to the compliance date of July 1, 2011, as established in Section 5(a)(2) of this general permit. The dollar value shall be the sum of all renovations for all building permits issued to the facility in a calendar year or from the effective date of this general permit to the compliance date of July 1, 2011, for the food preparation, floor service and dining areas, as determined by the local building official.

"Site" means geographically contiguous land or water on which an authorized activity takes place or on which an activity for which authorization is sought under this general permit is proposed to take place. Non-contiguous land or water owned by the same person and connected by a right-of-way which such person controls and to which the public does not have access shall be deemed the same site.

"Wastewater associated with a facility" means wastewater containing fats, oils and grease from a food preparation establishment.

"Water pollution control authority" means a water pollution control authority established pursuant to Section 7-246 of the Connecticut General Statutes.

Section 3. Authorization Under This General Permit

(a) Eligible Activities

The following discharge of wastewater associated with a facility, as defined in this general permit, is authorized by this general permit, provided the requirements of subsection (b) of this section and the conditions of Section 5 of this general permit are satisfied:

Any wastewater discharge associated with a facility which discharges to a sanitary sewer line and then to a POTW or a privately owned or State owned sewage treatment works.

Any other discharge of water, substance or material into the waters of the State is not authorized by this general permit, and any person who or municipality which initiates, creates, originates or maintains such a discharge shall first apply for and obtain authorization under Sections 22a-430 or 22a-430b of the General Statutes.

(b) Requirements for Authorization

This general permit authorizes the discharge listed in subsection (a) of this section provided:

(1) The grease trap/interceptor, AGRU, or other approved unit is installed in accordance with local ordinances.

(2) Coastal Area Management

Such discharge is consistent with all applicable goals and policies in Section 22a-92 of the General Statutes, and will not cause adverse impacts to coastal resources as defined in Section 22a-93 of the General Statutes.

(3) Endangered and Threatened Species

Such discharge does not threaten the continued existence of any species listed pursuant to Section 26-306 of the General Statutes as endangered or threatened and will not result in the destruction or adverse modification of habitat designated as essential to such species.

(4) Code of Federal Regulations

Such discharge is not subject to any provision of Title 40, Parts 403 through 471 of the Code of Federal Regulations.

(c) Geographic Area

This general permit applies throughout the State of Connecticut for all sites connected to sanitary sewers.

(d) Effective Date and Expiration Date of This General Permit

This general permit is effective on the date it is issued by the commissioner, and expires ten (10) years from such date of issuance.

(e) Effective Date of Authorization

An activity is authorized by this general permit on the date the general permit becomes effective or on the date the activity commences, whichever is later.

(f) Revocation of an Individual Permit

If a discharge which is eligible for authorization under this general permit is presently authorized by an individual permit, such individual permit may be revoked by the commissioner upon a written request by the permittee. If the commissioner revokes such individual permit in writing, such revocation shall take effect on the effective date of authorization of such discharge under this general permit.

(g) Issuance of an Individual Permit

If the commissioner issues an individual permit for a discharge authorized by this general permit, this general permit shall cease to authorize that discharge as of the date such individual permit is issued.

Section 4. Registration Requirements

No registration is required with the department for authorization under this general permit.

Section 5. Conditions of This General Permit

(a) Compliance Schedule

A permittee shall assure that every authorized discharge is conducted in accordance with the following schedule:

(1) A facility, which begins discharging after the effective date of this general permit, shall comply with all conditions of this general permit before initiating such discharge.

(2) A facility, which began discharging on or before the effective date of this general permit, with a grease trap/interceptor not in compliance with Section 5(b) of this general permit shall comply with all conditions of this general permit no later than July 1, 2011 with the following exceptions:

(A) A change in ownership of the facility shall require compliance with all conditions of this general permit within 60 days of the change in ownership.

(B) A renovation of the facility shall require compliance with all conditions of this general permit as part of the renovation.

(C) The authorized agent may, as necessary, designate any area or areas of its sewer system as a problem area related to fats, oils and grease. Such designation shall be by a formal action of the authorized agent and shall be based upon evidence of excessive fats, oils and grease including sanitary sewer overflows, excessive maintenance or any means of inspection. Upon notification by the authorized agent, any facility within the problem area designation shall comply with all conditions of this general permit within a reasonable time schedule established by the authorized agent.

(b) Treatment Requirements

An authorized discharge shall meet the specifications in either (1) or (2) of this subsection; however, the permittee may request the use of other units as established in Section 5(b)(3) of this general permit.

(1) Outdoor In-Ground Grease Trap/Interceptor

(A) The grease trap/interceptor shall be installed on a separate building sewer line servicing kitchen flows and shall be connected to those fixtures or drains which would allow fats, oils, and grease to be discharged. This shall include:

(i) pot sinks;

(ii) pre-rinse sinks;

(iii) any sink into which fats, oils, or grease are likely to be introduced;

(iv) soup kettles or similar devices;

(v) wok stations;

(vi) floor drains or sinks into which kettles may be drained;

(vii) automatic hood wash units;

(viii) dishwashers without pre-rinse sinks; and

(ix) any other fixtures or drains that are likely to allow fats, oils and grease to be discharged.

(B) An outdoor, in-ground grease trap/interceptor shall have a minimum depth of four (4) feet and a minimum volume of:

(i) The volume equivalent to the maximum daily flow over a twenty-four (24) hour period from all fixtures connected to the grease trap/ interceptor based on water meter records or other methods of calculation as approved by the authorized agent, or

(ii) 1000 gallons, whichever is greater.

(C) The grease trap/interceptor shall be watertight and constructed of concrete or other durable material. It shall be located so as to be accessible for convenient inspection and maintenance. No permanent or temporary structures or containers shall be placed directly over the grease trap/interceptor. Grease trap/interceptors installed in areas subject to traffic shall be designed to accommodate traffic loading.

(D) If the grease trap/interceptor is constructed of concrete the following requirements shall apply:

(i) All concrete grease trap/interceptors shall be produced with minimum 4,000-psi concrete per ASTM standards with four (4) to seven (7) percent air entrainment.

(ii) The minimum liquid depth of the grease trap/interceptor shall be thirty-six (36) inches, measured from the bottom of the tank to the outlet invert.

(iii) The air space provided between the liquid height and the underside of the tank top shall be a minimum of eight (8) inches.

(iv) All structural seams and/or lifting holes shall be grouted with non-shrinking cement or similar material and coated with a waterproof sealant. In areas where seasonal high ground water is at an elevation greater than the bottom of the grease trap/interceptor, but below the top of the grease trap/interceptor, the exterior of the grease trap/interceptor including the exterior top, sides and bottom shall be coated with a waterproof sealant creating a water tight condition for the tank. In areas where seasonal high ground water is at an elevation greater than the top of the grease trap/interceptor, the exterior of the manhole extensions to grade shall be coated with a waterproof sealant creating a watertight condition for the extension.

(v) The invert elevation of the inlet shall be between three (3) inches and six (6) inches above the invert elevation of the outlet.

(E) All non-concrete tanks shall meet the requirements set forth in Sections 5(b)(1)(C) and 5(b)(1)(D)(ii), (iii), and (v) of this general permit.

(F) Separate cleanout covers shall be provided over the inlet and outlet of the grease trap/interceptor so as to provide easy access for inspection and cleaning. Cleanout ports shall be fitted with manhole extensions to grade. In areas subject to traffic, the extensions shall be constructed of a material sufficient to withstand the traffic load. Where concrete covers are used, the lid must either weigh a minimum of fifty-nine (59) pounds or contain a locking mechanism to prevent unauthorized entrance. The manholes, extensions, and inlet and outlet access holes to the grease trap/interceptor shall have a minimum inside diameter of seventeen (17) inches.

(G) The inlet and outlet piping shall be PVC ASTM D 1785 Schedule 40 with rubber compression gaskets or solvent weld couplings. The joints must meet ASTM D 3212 specifications. The authorized agent may approve other piping materials for use. The minimum diameter of the inlet and outlet piping shall be four (4) inches. The inlet and outlet shall utilize a tee-pipe fitting on the interior of the grease trap/interceptor. The tee-pipe of the inlet and outlet shall extend to within twelve (12) inches of the bottom and at least five (5) inches above the static liquid level of the tank.

(H) The grease trap/interceptor shall be set level on a consolidated, stable base so that no settling or tipping of the grease trap/interceptor can occur.

(I) The outlet discharge line from the grease trap/interceptor shall be directly connected to a sanitary sewer.

(J) No fixture or drain other than those listed in subsection (b)(1)(A) of this section shall be connected to the grease trap/interceptor unless approved by the authorized agent.

(K) The grease trap/interceptor shall be located so as to maintain separation distances from well water supplies based on flow at the distances set forth in Section 19-13-B51d of the Public Health Code.

(L) Minimum separation distances shall be maintained between the grease trap/interceptor and items such as but not limited to buildings, watercourses, drains, etc. as listed in local municipal ordinances.

(M) Should the authorized agent notify the permittee that testing is required, the testing shall be performed in either one of the following manners:

(i) Vacuum Test - Seal the empty tank and apply a vacuum to four (4) inches (50mm) of mercury. The tank is acceptable if 90% of vacuum is held for two (2) minutes.

(ii) Water-Pressure Test - Seal the tank, fill with water, and let stand for twenty-four (24) hours. Refill the tank. The tank is acceptable if the water level is held for one (1) hour.

(2) Automatic Grease Recovery Unit (AGRU)

The AGRU shall meet the following requirements:

(A) An AGRU(s) shall be installed immediately downstream of each fixture or multiple fixtures listed in subsection (b)(1)(A) of this section.

(B) The AGRU shall be sized to properly pre-treat the measured or calculated flows for all connected fixtures or drains.

(C) The AGRU shall be constructed of corrosion-resistant material such as stainless steel or plastic.

(D) Solids shall be intercepted and separated from the effluent flow using an internal or external strainer mechanism. This mechanism shall be an integral part of the unit.

(E) The unit shall operate using a skimming device, automatic draw-off, or other mechanical means to automatically remove separated fats and oils. This automatic skimming device shall be either hard wired or cord & plug connected electrically and controlled using a timer or level control. The operation of the

automatic skimming device shall be field adjustable. The AGRU shall operate no less than once per day.

(F) The AGRU shall be fitted with an internal or external flow control device to prevent the exceedence of the manufacturer's recommended design flow.

(G) The AGRU shall be located so as to permit easy access for maintenance.

(H) No fixture or drain other than those listed in subsection (b)(1)(A) of this section shall be connected to the AGRU unless approved by the authorized agent.

(I) All AGRUs shall be designed and installed in accordance with the manufacturer's specifications.

(3) Other Approved Unit

If the permittee requests the use of a unit other than an outdoor in-ground grease trap/interceptor or an AGRU, the proposed permittee must demonstrate that the other unit can reliably meet the effluent limitations established in Section 5(c) of this general permit. Only after receiving written approval by the authorized agent will the permittee be authorized to install the unit.

(4) Diminimus Discharges

At the request of the permittee, the authorized agent may grant a waiver of the treatment requirements of Sections 5(b)(1) through 5(b)(3), inclusive, of this general permit if, in the judgment of the authorized agent, there is limited potential for FOG in the discharge when considering, including but not limited to, the frequency of operation, the volume of flow and the potential for fats, oils and grease based upon the menu.

(c) Effluent Limitations

(1) At no time shall the pH of the wastewater discharged from the grease trap/interceptor, AGRU or other approved unit and prior to mixing with any other wastewater from the facility be less than five (5.0) nor greater than ten (10.0) standard units at any time.

(2) At no time shall the concentration of fats, oils, and grease in wastewater from the grease trap/interceptor, AGRU, or other approved unit and prior to mixing with any other wastewater from the facility exceed 100 milligrams per liter. All analyses shall be conducted according to the current method as listed in Title 40 CFR 136 or as approved in writing by the department. The current method, as of 2005, is EPA 1664.

(d) Pollution Prevention/Best Management Practices (BMP)

(1) No valve or piping bypass equipment that could prevent the discharge of wastewater associated with the facility from entering appropriate treatment equipment shall be present at such facility.

(2) Renderable fats, oils, and grease shall only be disposed of in separate storage containers for recycling by a renderer. No renderable fats, oils, and grease shall be discharged into grease trap/interceptors or AGRUs, sanitary sewers, dumpsters or storm sewers.

(3) At a minimum, the permittee shall perform quarterly inspections of all grease trap/interceptors.

(4) An outdoor in-ground grease trap/interceptor shall be completely emptied by a grease trap/interceptor cleaner whenever 25% of the operating depth of the grease trap/interceptor is occupied by fats, oils, grease and settled solids or a minimum of once every three (3) months whichever is more frequent. The permittee may request approval for a less frequent cleaning interval from the authorized agent following a minimum one-year of operation of the grease trap/interceptor. The permittee shall be required to show through at least four quarterly inspections or other means of determining fats, oils, grease and settled solids that the operating depth of the grease trap/interceptor occupied by fats, oils, grease and settled solids is less than 25% during each of the three-month intervals. The authorized agent may extend the minimum frequency of cleaning in writing beyond three (3) months based upon the quarterly inspections. The permittee shall maintain a written log on-site of grease trap/interceptor cleaning and maintenance, shall maintain copies of the grease trap/interceptor cleaner's receipts and shall maintain a copy of such approval for five (5) years.

(5) For cleaning or servicing of grease trap/interceptors, including the removal and hauling of fats, oils, grease, and food wastes which are components of sewage, the permittee shall hire a grease trap/interceptor cleaner.

(6) All AGRUs shall be maintained in accordance with the manufacturer’s recommendations.

(7) For disposal in Connecticut, the contents of all grease trap/interceptors, AGRUs and other approved units shall be disposed of at a regional collection/transfer/disposal site. For disposal outside of Connecticut, the contents of all grease trap/interceptors, AGRUs and other approved units shall be disposed of in an environmentally accepted manner.

(8) The permittee may use hot water, steam, chemicals, or biological additives in the normal course of facility maintenance, but may not intentionally use hot water, steam, physical means, chemicals, or biological additives that will cause the release of fats, oils, and grease from the grease trap/interceptor.

(9) No food grinder or food pulper shall discharge to any grease trap/interceptors, AGRUs or other approved units.

(10) All wastewater flows connected to the grease trap/interceptors shall be screened to prevent solids from entering the treatment units. Screened solids shall be disposed of in accordance with applicable solid waste regulations.

(e) Reporting and Record Keeping Requirements

(1) A written log of all inspections required pursuant to subsections (d)(3) and (d)(4) of this section shall be maintained for each discharge authorized by this general permit. The log shall document:

(A) the date of the inspection;

(B) the inspector's name, title and signature;

(C) the depth, as measured at the time of the inspection, of fats, oils, grease and food waste located within the grease trap/interceptor; and

(D) any maintenance work or changes in equipment associated with such discharge that has taken place at the site since the last inspection.

(2) Except as provided in subsection (e)(1) of this section, the permittee shall retain, for a period of five (5) years at the subject facility, all inspections, cleaning and maintenance logs and analytical results from any monitoring elected to be done by the permittee. All records and reports shall be made available in writing to the authorized agent upon request.

(3) Immediately upon learning or having reason to believe that an authorized discharge may cause or has caused a sewer blockage or may adversely affect the operations of a POTW, the permittee shall notify the POTW Authority.

(4) Records required under this subsection as well as installation of a grease trap/interceptor as specified in either Section 5(b)(1), Section 5(b)(2), or Section 5(b)(3) of this general permit shall be sufficient to demonstrate compliance with the effluent limits established in Sections 5(c)(1) and 5(c)(2) of this general permit.

(f) Recording and Reporting Violations

(1) If any analytical results from monitoring data elected to be done by the permittee or other information indicates that a violation of an effluent limitation or another condition of this general permit has occurred, the permittee shall immediately take steps to identify and correct any and all conditions causing or contributing to such violation. A log of such violations shall be maintained on site and contain, at a minimum, the following information:

(A) The permit condition(s) or effluent limitation(s) violated;

(B) The analytical results or other information demonstrating such violation;

(C) The cause of the violation, if known;

(D) Dates and times during which the violation continued;

(E) If the violation was not corrected immediately upon being discovered, the anticipated time it is expected to continue; and upon correction, the date and time of correction;

(F) Steps taken and planned to reduce, eliminate and prevent a reoccurrence of the violation, and the dates such steps have been or will be executed; and

(G) The name, title and signature of the individual recording the information and the date and time of such recording.

(2) If any analytical results indicate the pH exceeds the limitation listed in subsection (c)(1) of this section by greater than one unit or lower than one unit, or that fats, oils, and grease exceed the limitation listed in subsection (c)(2) of this section, the permittee shall immediately notify the POTW Authority.

(g) Regulations of Connecticut State Agencies Incorporated Into This General Permit

The permittee shall comply with all applicable law, including without limitation the following Regulations of Connecticut State Agencies, which are hereby incorporated into this general permit as if fully set forth herein:

(1) Section 22a-430-3: General Conditions

Subsection (b) General - subparagraph (1)(D) and subdivisions (2), (3), (4), and (5)
Subsection (c) Inspection and Entry
Subsection (d) Effect of a Permit - subdivisions (1) and (4)
Subsection (e) Duty to Comply
Subsection (f) Proper Operation and Maintenance
Subsection (g) Sludge Disposal
Subsection (h) Duty to Mitigate
Subsection (i) Facility Modifications, Notification - subdivisions (1) and (4)
Subsection (j) Monitoring, Records and Reporting Requirements - subsections (1), (6), (7), (8), (9) and (11) [except subparagraphs (9)(A)(2), and (9)(C)]
Subsection (k) Bypass
Subsection (m) Effluent Limitation Violations
Subsection (n) Enforcement
Subsection (o) Resource Conservation
Subsection (p) Spill Prevention and Control
Subsection (q) Instrumentation, Alarms, Flow Recorders
Subsection (r) Equalization

(2) Section 22a-430-4: Procedures and Criteria

Subsection (p) Permit Revocation, Denial, or Modification
Subsection (t) Discharges to POTWs - Prohibitions
Appendices

(h) Duty to Correct and Report Violations

Upon learning of a violation of a condition of this general permit, a permittee shall immediately take all reasonable action to determine the cause of such violation, correct such violation and mitigate its results, prevent further such violation, and report in writing such violation and such corrective action to the commissioner and POTW Authority within five (5) days of the permittee's learning of such violation. Such report shall be certified in accordance with subsection (j) of this section.

(i) Duty to Provide Information

If the commissioner requests any information pertinent to the authorized discharge or to compliance with this general permit, the permittee shall provide such information within thirty (30) days of such request. Such information shall be certified in accordance with subsection (j) of this section.

(j) Certification of Documents

Any document, including but not limited to any notice, information or report, which is submitted to the department under this general permit shall be signed by the permittee or by a duly authorized representative of the permittee in accordance with Section 22a-430-3(b)(2)(A) of the Regulations of Connecticut State Agencies, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute."

(k) Date of Filing

For purposes of this general permit, the filing date of any document is the date such document is received by the department. The word "day" as used in this general permit means the calendar day; if any date specified in the general permit falls on a Saturday, Sunday, or legal holiday, such deadline shall be the next business day thereafter.

(l) False Statements

Any false statement in any information submitted pursuant to this general permit may be punishable as a criminal offense, in accordance with Section 22a-6, under Section 53a-157b of the General Statutes.

(m) Correction of Inaccuracies

Within fifteen days after the date a permittee becomes aware of a change in any information in any material submitted pursuant to this general permit, or becomes aware that any such information is inaccurate or misleading or that any relevant information has been omitted, such permittee shall correct the inaccurate or misleading information or supply the omitted information in writing to the commissioner. Such information shall be certified in accordance with subsection (j) of this section.

(n) Other Applicable Law

Nothing in this general permit shall relieve the permittee of the obligation to comply with any other applicable federal, state and local law, including but not limited to the obligation to obtain any other authorizations required by such law.

(o) Other Rights

This general permit is subject to and does not derogate any present or future rights or powers of the State of Connecticut and conveys no rights in real or personal property nor any exclusive privileges, and is subject to all public and private rights and to any federal, state, and local laws pertinent to the property or activity affected by such general permit. In conducting any activity authorized hereunder, the permittee may not cause pollution, impairment, or destruction of the air, water, or other natural resources of this state. The issuance of this general permit shall not create any presumption that this general permit should or will be renewed.

(p) Change in Ownership or Permittee

Upon a change in the ownership or the permittee of a food preparation establishment, the new owner or permittee shall comply with the requirements of Section 3(b), the compliance schedule of Section 5(a) and the operating conditions of Sections 5(b) through (o), inclusive, of this general permit.

Section 6. Commissioner's Powers

(a) Abatement of Violations

The commissioner may take any action provided by law to abate a violation of this general permit, including the commencement of proceedings to collect penalties for such violation. The commissioner may, by summary proceedings or otherwise and for any reason provided by law, including violation of this general permit, revoke a permittee's authorization hereunder in accordance with Sections 22a-3a-2 through 22a-3a-6, inclusive, of the Regulations of Connecticut State Agencies. Nothing herein shall be construed to affect any remedy available to the commissioner by law.

(b) General Permit Revocation, Suspension, or Modification

The commissioner may, for any reason provided by law, by summary proceedings or otherwise, revoke or suspend this general permit or modify it to establish any appropriate conditions, schedules of compliance, or other provisions which may be necessary to protect human health or the environment.

(c) Filing of an Individual Permit Application

If the commissioner notifies a permittee in writing that such permittee must obtain an individual permit if he wishes to continue lawfully conducting the discharge authorized by this general permit, the permittee may continue conducting such discharge only if he files an application for an individual permit within thirty (30) days of receiving the commissioner's notice. While such application is pending before the commissioner, the permittee shall comply with the terms and conditions of this general permit. Nothing herein shall affect the commissioner's power to revoke a permittee's authorization under this general permit at any time.

Issued Date: September 30, 2005

GINA McCARTHY.

Commissioner

This is a true and accurate copy of the general permit executed on September 30, 2005 by the Commissioner of the Department of Environmental Protection.

DOCUMENT 2

EXPLANATION OF WHO IS REGULATED BY THE GENERAL PERMIT

The requirement for Class III and Class IV food service facilities or any other facility discharging Fats, Oils, and Grease (FOG) into the sewer system to install and maintain grease trap/interceptors was designed to protect the public collection system from blockages and bypass events that can damage the collection system or endanger public health. The designation of Class III and Class IV facilities as Food Preparation Establishments was based on the definition of the activities occurring at these facilities. The Connecticut Public Health Code divides the four classes of Food Service Establishments as follows. (In these definitions, it should be understood that the term "potentially hazardous" refers to the possibility of the food transmitting food borne illnesses to the consumer, which is of primary concern to the Department of Health.)

> Class I is a food service establishment with commercially prepackaged foods and/or hot or cold beverages only. No preparation, cooking or hot holding of potentially hazardous foods is included except that commercially packaged precooked food may be heated and served in the original package within four hours.
>
> Class II is a food service establishment using cold or ready-to-eat commercially processed food requiring no further heat treatment and/or hot or cold beverages. No cooking, heating or hot holding of potentially hazardous food is included, except that commercially packaged precooked foods may be heated and served in the original package within four hours, and commercially precooked hotdogs, kielbasa and soup may be heated if transferred directly out of the original package and served within four hours.
>
> Class III is a food service establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and consumed by the public within four hours of preparation.
>
> Class IV is a food service establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and held for more than four hours prior to consumption by the public.

By definition, Class I and Class II facilities do not perform activities that generate significant volumes of FOG. Any requirement to install grease pretreatment equipment would provide little benefit to the protection of the wastewater collection or treatment system. Class III and Class IV facilities however, by definition perform cooking activities that in most cases will generate FOG. There are exceptions where facilities may be classified as a Class III or Class IV facility but still do not generate significant quantity of FOG. The *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments* does not intend for these facilities, which do not generate significant volumes of FOG, to install a grease trap/interceptor. Examples of these Class III and Class IV facilities that would not be required to install FOG pretreatment equipment are given below.

The definition of a food preparation establishment as defined in the General Permit also requires "any other facility discharging" FOG above the effluent limits to install a grease trap/interceptor. These facilities would be non-industrial, non-residential establishments that prepare food but are not regulated by the Health Department and therefore are not classified as Class III or Class IV facilities. These "other facilities" are typically regulated by the Department of Consumer Protection and include facilities that are not categorized as industries and do not serve food directly to the public. An example of this type of facility is a small bakery that provides breads and pastries to restaurants but does not sell directly to the public. Prison kitchens also fall under the jurisdiction of the Department of Consumer Protection and therefore are not classified under the Public Health Code. Because both of these types of facilities prepare large quantities of food, they are required to install and maintain grease trap/interceptors when discharging wastewater to municipal sewers.

Examples of Class III and Class IV Facilities that may be exempt from Grease Trap/Interceptors Installation

- Itinerant Vendors

  Many small self-enclosed, often mobile, vending units, offer sandwiches cooked on a grill. Depending on the menu, many of these are classified as Class III operations. The vehicles or units are often equipped with water and waste holding tanks. A very small amount of wastewater is generated because only hands and a few cooking utensils are periodically washed. The waste tanks are typically emptied at the operator's home in the municipal sewer system. Because of the limited water used, it is assumed that the majority of FOG generated is disposed of in the trash rather than in the wastewater. These operations are not required to install grease traps/interceptors because of the limited water use and the disposal practices required by the space limitations of the mobile units. If frying of food occurs in these units, disposal of the frying oil is to be with a renderer.

- Satellite Doughnut Shops and Coffee Shops

  Many small satellite shops that serve pastries do not prepare the pastries on-site. The pastries could be prepared at a central facility and shipped to the satellite shops. These shops may have a Class III rating because they offer foods that the Health Department classifies as "potentially hazardous" but which does not prepare food on-site. An example of this type of shop is some Dunkin Donuts locations.

- Ice Cream Shops

  A few ice cream shops are Class III food service establishments because they offer foods classified as "potentially hazardous". These foods may be purchased commercially rather than prepared on-site, and held hot until sold. These are primarily take-out services with limited seating capacity and little washing of dishes or utensils.
- Sandwich Shops

If a shop prepares its food using only cold cuts and vegetables the establishment is a Class II operation. If a can of commercial meatballs and sauce or tuna is opened and held in a container for use, the establishment is a Class III operation. Because no significant cooking is performed at the site there would be little FOG generated at these facilities.

- Catered Food Services

  There are facilities where food is prepared off-site and taken to a location to be served to the public. This food may be held for more than four hours so that the location serving the food is classified as a Class IV food service establishment. These facilities would only generate FOG if washing of dishes or utensils occurs at the serving site rather than at the kitchen where the food was prepared. These facilities may not need to have grease trap/interceptors installed if no other activities at the serving facility generate FOG.

As the FOG pretreatment program is developed further other exceptions may be found where the volume of FOG generated at a facility is small so that installation of grease trap/interceptors will not provide any significant removal of FOG. Local FOG pretreatment programs should consider how these facilities will be addressed by the program to provide fair and consistent treatment of all facilities while not presenting a burden disproportionate to the benefit gained from pretreatment.

DOCUMENT 3

WASTEWATER DISCHARGE REGISTRATION APPLICATION FOR RESTAURANTS & FOOD PREPARATIONS ESTABLISHMENTS

This survey was used in the Torrington FOG Pretreatment Study to gain a better understanding of the current practices of FOG generation, collection, and disposal. The results of this survey are provided in the *Torrington Pretreatment Study Report*. The questions from this form were the basis for the Example Fats, Oils, and Grease Pretreatment Program Registration Form provided in Section 6. Questions were evaluated for their long-term significance to the Torrington FOG Pretreatment Program. The intended use of this document is to provide a starting point developing local wastewater discharge registration forms for Food Preparation Establishment's (FPEs).

This document, like all others in the Resource Manual, is intended to be an example. Therefore, some terms in the following survey are provided in brackets to point out to the reviewer the type of information that might be included. These bracketed terms included {*Agent*}, {*Municipality*}, {*Address*} etc. These terms should be replaced with the corresponding information prior to distribution. A detailed description of these terms is provided in the introduction to Section 4.

Wastewater Discharge Registration Application for Restaurants & Food Preparation Establishments

What is this form and why is it necessary?
This form, when completed and submitted to the {*Agent*}, will provide registration of your restaurant or food handling facility in the {*Agent's*} fats, oils, and grease (FOG) Pretreatment Program. This FOG Pretreatment Program is being established in compliance with the Connecticut Department of Environmental Protection's *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*. All Class III and Class IV restaurants and food handling facilities within the {*Municipality*} must complete this form and return it to {*Address*}. This application will assist in determining if your establishment requires improvements to its fats, oils, and grease (FOG) handling facilities for approved wastewater discharge. It will also help in establishing a database for tracking FOG disposal.

How to complete and submit this form.
Please print legibly in black or blue ink or type your answers. Answer <u>all</u> questions unless the form specifically instructs otherwise. The form will be returned to your place of business if a question is left unanswered. If a question does not apply to your facility, write "not applicable" or "N/A" and explain why it is not applicable. Attach a copy of your menu, if available, to the application and keep one copy of this completed form for your records.

Who must complete this document?
Any restaurant or food handling facility that has a kitchen for the purpose of preparing foods and/or conducting washing operations to clean pots, pans, dishes, and/or utensils. Examples of such facilities are restaurants, schools, colleges, universities, hospitals, nursing homes, clubs and organizations, office buildings with cafeterias, supermarkets, coffee shops, etc.

Send the original signed and completed form to:
{*Address*}

Please note that the discharge of wastewater from an unregistered food preparation facility may be in violation of the DEP's *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments.* Violation of the General Permit may subject the violator to action by the DEP. Should you require any assistance in completing this document, contact {*Agent*} {*Phone number*}.

Page 2 Registration Application
(continued)

Please print or type

1. Do you or your company own more than one building that prepares or processes food and generates a wastewater discharge?
   _____ Yes _____ No _____ Don't Know

2. Please choose the one description that describes the facility for which this application is being made.

_____ Fast Food Restaurant	_____ Hospital
_____ Full Service Restaurant	_____ Nursing Home
_____ Drive through (only) Restaurant	_____ College/University
_____ Seasonal Restaurant	_____ Club/Organization
_____ Coffee Shop	_____ Company/Office Building
_____ Bakery	_____ Other (please describe below)
_____ Supermarket	_____

3. Please check the item below that applies to your facility.
   _____ Existing Sewer Discharge _____ Proposed (new) Sewer Discharge

   _____ Existing Septic Discharge _____ Proposed (new) Septic Discharge

4. Company Name: _____

5. Facility Premise Address:_____
   _____

6. Facility Mailing Address (If different from premise address):
   _____
   _____

7. Business Phone Number:_____
   Alternate Phone Number:_____
   Fax Number:_____
   e-mail Address:_____

8. Does this company own or rent the building? _____ Own _____ Rent

9. Property Owner's Name:_____

10. Property Owner's Address:_____
    _____

11. Designate Company Organization:

    _____ Sole Proprietorship _____ Corporation _____ Partnership

Page 3 Registration Application
(continued)

If your company organization is designated as a corporation, then complete number 12 below. If it is designated as a partnership or sole proprietorship, complete number 13.

12. A corporation organized under the laws of _____.

	Name	**Home Address**	**Home Phone**
President	_____	_____	_____
Vice President	_____	_____	_____
Secretary	_____	_____	_____
Treasurer	_____	_____	_____

13. Name, Title, and Home address of company owner(s) if sole proprietorship or partnership:

Name: _____ Title: _____
Home Address: _____
Home Phone: _____

Name: _____ Title: _____
Home Address: _____
Home Phone: _____

Name: _____ Title: _____
Home Address: _____
Home Phone: _____

14. Seating capacity at your place of business, please check the appropriate line.

_____ 0 to 50 _____ 51 to 100 _____ 101 to 250 _____ over 250

15. Please check each day that your business is open.

Monday _____ Tuesday _____ Wednesday _____ Thursday _____ Friday _____
Saturday _____ Sunday _____

16. Please check the meals that are served at your facility.

Breakfast ___ Lunch ___ Dinner ___ Snack/Coffee ___ Food Prep. Only ___

17. Does this facility have a grease trap?

_____ Yes _____ No _____Not Sure

Page 4 Registration Application
(continued)

18. Please check each of the items listed below that are present in your kitchen facility:

A. Fryolators	_____ Yes	_____ No	If yes, how many _____
B. Grills	_____ Yes	_____ No	If yes, how many _____
C. Ovens	_____ Yes	_____ No	If yes, how many _____
D. Tilt kettles	_____ Yes	_____ No	If yes, how many _____
E. Garbage grinder	_____ Yes	_____ No	If yes, how many _____
F. Three-bay pot sink	_____ Yes	_____ No	If yes, how many _____
G. Two-bay sink	_____ Yes	_____ No	If yes, how many _____
H. Single-bay sink	_____ Yes	_____ No	If yes, how many _____
I. Pre-rinse sink	_____ Yes	_____ No	If yes, how many _____
J. Dishwasher	_____ Yes	_____ No	If yes, how many _____
K. Mop sink	_____ Yes	_____ No	If yes, how many _____

19. If your kitchen facility has grills and/or ovens which type of exhaust cleaning system do you use to clean the filters?

_____ Automatic cleaning system _____ Manual cleaning system

20. If you manually clean your exhaust hood filters, where are they cleaned?

_____ Off-site (contractor)
_____ On-site

Please describe in detail if onsite. (i.e. 2-bay sink, 3-bay sink, dishwasher, floor drain, outside parking lot drain, other)_____
_____
_____

If you answered yes to question 17, please complete questions 21 through 26.

21. Please complete the following for EACH installed grease trap.

A. Manufacturer _____ size (gallon)_____ or (pounds)_____
Passive _____ Automatic _____
Indoor _____ Outdoor _____
Location _____
(i.e., under 3-bay sink, in basement, outside in-ground, other)

Which choice below best describes how often this grease trap is cleaned?
PLEASE CHOOSE ONE:

_____ Daily	_____ Quarterly
_____ Weekly	_____ Every Six Months
_____ Bi-Weekly	_____ Yearly
_____ Monthly	_____ Never Clean It

Page 5 Registration Application
(continued)

B. Manufacturer _____ size (gallons) _____ or pounds) _____
Passive _____ Automatic _____
Location _____
(i.e., under 3-bay sink, in basement, outside in-ground, other)

Which choice below best describes how often this grease trap is cleaned?
PLEASE CHOOSE ONE.

_____ Daily
_____ Weekly
_____ Bi-Weekly
_____ Monthly
_____ Quarterly
_____ Every Six Months
_____ Yearly
_____ Never Clean It

If more then two grease traps are installed, please attach additional information on the other grease traps at the end of the application.

22. When the indoor grease trap(s) are cleaned, how do you dispose of the waste after cleaning the trap? PLEASE SELECT ONLY ONE.

_____ Trash
_____ Mix with other grease stored on premise (i.e. fryolator grease, etc.)
_____ Contractor/Pumper disposes of grease

23. If a contractor cleans the indoor grease trap, please list the following:

Company Name _____
Business Phone Number_____

24. If waste fats, oils, and grease are stored on the premise from fryolators or other sources, where is this material stored?

_____ Inside building _____ Outside building

25. If an outdoor in-ground grease trap(s) are utilized, list the name and telephone number of the company who pumps out the trap.

Company Name _____
Business Phone Number _____

26. Do you use any additives in your grease traps, floor drains, sewer lines, etc. to help clean them?

_____ Yes _____ No

If yes, please check which type and attach the Material Safety Data Sheet (MSDS) to this application.

_____ Enzymes
_____ Chemicals
_____ Bacteria
_____ Other

Page 6 Registration Application
(continued)

27. Estimated water usage per year (Refer to water bill for this information.)
Either, _____gallons or _____ 100 cubic feet.

28. Designation of Authorized Agent:

I, _____ certify that I am the _____ of
(name) (title)

_____ and that _____ is authorized to
(business name) (name)

make submittals to the {*Agent*} on behalf of _____ and that said
(business name)
submittals are duly signed for and on behalf of said corporate powers.

_____
(signature)
Corporate Seal/Authorized Agent

Please attach a copy of the menu if available, and MSDS sheet(s) as described in question 26.

DOCUMENT 4

MODEL FOG ORDINANCE

The following Model FOG Ordinance provides language that can be amended or added to local sewer use ordinances. This Model Ordinance is intended for use by municipalities, in whole or in part. Table 1 lists the sections of this ordinance which are considered necessary to provide a complete and enforceable FOG Pretreatment Program.

The terms {*Municipality*}, {*Agency*}, and {*Agent*} have been used to assist local program developers in determining the entity responsible for various program functions. As many entities have the potential to participate in varying aspects of program maintenance and enforcement, each local FOG program will have different delegation of responsibilities. Local program developers are encouraged to consider the resources available to their community and make changes to the following Model FOG Ordinance as needed to meet their municipality's needs. Other terms have been included in brackets {} for easy identification of items that might require modification for adoption by a municipality.

The term {*Municipality*} in most cases will refer to the Town or City for which the program is set up. Under some circumstances or locations within this document this term could be a Water Pollution Control Authority (WPCA), a Local Building Official, a dedicated municipal FOG agency, a Health District or Health Department, a Department of Public Works, or a company contracted to oversee the FOG Program.

The entity referred to by the term {*Agency}* could be the Water Pollution Control Authority or its designee or the Local Building Official.

The term {*Agent*} refers to the entity performing the inspection and enforcement duties. This entity will in many cases be the same as the {*Agency*} but could be another agency or company designated by the {*Municipality*} or {*Agency*}.

In the Model Program, set up for the City of Torrington, the {*Municipality*} is the City of Torrington which adopts ordinances, the {*Agency*} is the Department of Public Works which has the technical knowledge to review pretreatment system equipment and plans, and the {*Agent*} is the Torrington Area Health District which employees inspectors and maintains Program records.

The following ordinance includes Automatic Grease Recovery Units (AGRUs) only as an alternate pretreatment system that requires case-by-case approval of the {*Agency*}. However, the *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments* allows the use of AGRUs as a pre-approved system. The model ordinance can be modified to allow AGRU's as a pre-approved system by relocating item **Section 6** D to **Section 5** with minor changes to the remainder of **Section 6**. Additionally, this model ordinance requires FOG interceptors to be designed with two compartments separated by a baffle while the *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments* does not require two

compartments. This model ordinance provides an example of how municipalities may chose to make municipal programs more stringent than the DEP's requirements.

TABLE 1
Fats, Oils, and Grease Pretreatment Ordinance Sections

Section 1. Purpose.
Section 2. Definitions.
Section 3. Application to Install a FOG Pretreatment System.
Section 4. Discharge Limits.
Section 5. Pretreatment System Requirements.
Section 6. Alternate FOG Pretreatment System.
Section 7. Pretreatment Equipment Maintenance.
Section 8. FOG Minimization

Fats, Oils, and Grease Pretreatment Ordinance
[Adopted {Date}]

Section 1. Purpose.

The purpose of this ordinance is to outline the wastewater pretreatment requirements for Food Preparation Establishments and other commercial facilities that discharge fats, oils, and grease in their wastewater flow. All new and existing facilities that generate and discharge fats, oils, and grease in their wastewater flow shall install, operate, and maintain a FOG pretreatment system. The requirements of this ordinance shall supplement and be in addition to the requirements of the {*Municipality's*} Sewer Use Ordinance.

Section 2. Definitions.

{*AGENT*} – Authorized representative of the {*Municipality*}.

CONTACT PERSON - The Contact Person shall mean the individual responsible for overseeing daily operation of the Food Preparation Establishment and who is responsible for overseeing the Food Preparation Establishment's compliance with the FOG Pretreatment Program.

FOG - FATS, OILS, AND GREASE - Animal and plant derived substances that may solidify or become viscous between the temperatures of 32°F and 150°F (0°C to 65°C), and that separate from wastewater by gravity. Any edible substance identified as grease per the most current EPA method as listed in 40-CFR 136.3.

FOG INTERCEPTOR - A passive tank installed outside a building and designed to remove fats, oils, and grease from flowing wastewater while allowing wastewater to flow through it, and as further defined herein.

FOG RECOVERY UNIT - All active indoor mechanical systems designed to remove fats, oil, and grease by physical separation from flowing wastewater, as further defined herein.

FOG PRETREATMENT SYSTEM - Refers to properly installed and operated FOG Interceptors and FOG Recovery Units as approved by the {*Agency*}.

FOOD PREPARATION ESTABLISHMENTS - means Class III and Class IV food service establishments and any other facility determined by the {*Agency*} to discharge FOG above the set limits in Section 5(b)(2) of the Department of Environmental Protection's *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*. These facilities shall include but not be limited to restaurants, hotel kitchens, hospital kitchens, school kitchens, bars, factory cafeterias, and clubs. Class III and Class IV food service establishments shall be as defined under Section 19-13-B42 of the State Of Connecticut Public Health Code.

NON-RENDERABLE FATS, OILS, AND GREASE – Non-renderable fats, oils, and grease is food grade grease that has become contaminated with sewage, detergents, or other constituents that make it unacceptable for rendering.

NOTIFICATION OF APPROVED ALTERNATE FOG PRETREATMENT SYSTEM - Written notification from the {*Agency*} for authorization to install and/or operate an alternate FOG Pretreatment System.

RENDERABLE FATS, OILS, AND GREASE – Renderable fats, oils, and grease is material that can be recovered and sent to renderers for recycling into various usable products. Renderable grease is created from spent products collected at the source, such as frying oils and grease from restaurants. This material is also called yellow grease.

RENDERABLE FATS, OILS, AND GREASE CONTAINER - Refers to a closed, leak-proof container for the collection and storage of food grade fats, oil, and grease.

REGIONAL FOG DISPOSAL FACILITY - A facility for the collection and disposal of non-renderable FOG approved by the Connecticut Department of Environmental Protection.

Section 3. Application to Install a FOG Pretreatment System.

A. FOG Pretreatment Systems shall be provided for:

(1) All new and existing Food Preparation Establishments, including restaurants, cafeterias, diners, and similar non-industrial facilities using food preparation processes that have the potential to generate FOG in wastewater at concentrations in excess of the limits defined in this ordinance.

(2) New and existing facilities which, in the opinion of the {*Agency*}, require FOG Pretreatment Systems for the proper handling of wastewater containing fats, oils, or grease, except that such FOG Pretreatment Systems shall not be required for private living quarters or dwelling units.

B. All new Food Preparation Establishments which generate and discharge wastewater containing fats, oils, and grease and which will require a FOG Pretreatment System, as determined by the {*Agency*}, shall include the design and specifications for the FOG Pretreatment System as part of the sewer connection application as described in the {*Municipality's*} Sewer Use Ordinance.

C. All existing Food Preparation Establishments which generate, and discharge wastewater containing fats, oils, and grease, and which require a new FOG Pretreatment System, as determined by the {*Agency*}, shall submit an application for the installation of a new FOG Pretreatment System within twelve (12) months of adoption of this ordinance. The application shall be in accordance with {*Municipality's*} Sewer Use Ordinance. The approved FOG Pretreatment System shall be installed within three (3) years of adoption of this ordinance.

D. Existing Food Preparation Establishments which generate, and discharge wastewater containing fats, oils, and grease, and which have an existing non-complying FOG Pretreatment System may, as determined by the {*Agency*}, operate the existing FOG Pretreatment System. Such facilities shall submit an application for an "Alternate FOG Pretreatment System" as described in {***Section 6** C*}. Such application shall be submitted within twelve (12) months of adoption of this ordinance.

E. All costs and related expenses associated with the installation and connection of the FOG Interceptor(s) or Alternate FOG Pretreatment System(s) shall be borne by the Food Preparation Establishment. The Food Preparation Establishment shall indemnify the {*Municipality*} and its Agents for any loss or damage that may directly or indirectly occur due to the installation of the FOG Pretreatment System.

Section 4. Discharge Limits.

A. No facility shall discharge or cause to be discharged any wastewater with a FOG concentration in excess of one hundred (100) milligrams per liter, as determined by the currently approved test for total recoverable fats and grease listed in 40 CFR 136.3, or in concentrations or in quantities which will harm either the sewers, or Water Pollution Control Facility, as determined by the {*Agency*}.

Section 5. Pretreatment System Requirements.

A. An application for the design and installation of a FOG Pretreatment System shall be subject to review and approval by the {*Agency*} per the {Municipality's} Sewer Use Ordinance, and subject to the requirements of all other applicable codes, ordinances, and laws.

B. Except as provided by {***Section 6***}, the wastewater generated from Food Preparation Establishments shall be treated to remove FOG using a FOG Interceptor.

C. Every structure at the subject facility shall be constructed, operated, and maintained, in a manner to ensure that the discharge of food preparation wastewater is directed solely to the FOG Interceptor, or Alternate FOG Pretreatment System. No valve or bypass piping that could prevent the discharge of food preparation wastewater from entering appropriate pretreatment equipment shall be present.

D. The Contact Person at each Food Preparation Establishment shall notify the {*Agency*} when the FOG Pretreatment System is ready for inspection and connection to the public sewer. The connection and testing shall be made under the supervision of the plumbing inspector, and/or {*Agent*}.

E. All applicable local plumbing/building codes shall be followed during the installation of the FOG Pretreatment System.

F. FOG Interceptor Requirements.

(1) The FOG Interceptor shall be installed on a separate building sewer servicing kitchen flows and shall only be connected to those fixtures or drains which can allow fats, oils, and grease to be discharged into the sewer. This shall include:

(a) Pot sinks;
(b) Pre-rinse sinks, or dishwashers without pre-rinse sinks;
(c) Any sink into which fats, oils, or grease may be introduced;
(d) Soup kettles or similar devices;
(e) Wok stations;
(f) Floor drains or sinks into which kettles may be drained;
(g) Automatic hood wash units;
(h) Dishwashers without pre-rinse sinks; and
(i) Any other fixtures or drains that can allow fats, oils, and grease to be discharged into the sewer.

(2) No pipe carrying any wastewater other than from those listed in the Paragraph above shall be connected to the FOG Interceptor.

(3) No food grinder shall discharge to the FOG Interceptor.

(4) The FOG Interceptor shall be located so as to maintain the separating distances from well water supplies set forth in Section 19-13-B51d of the Public Health Code.

(5) The following minimum-separating distances shall be maintained between the FOG Interceptor and the items listed below.

(a)	Property line	10 ft
(b)	Building served (no footing drains)	15 ft
(c)	Ground water intercepting drains, footing drains and storm drainage systems	25 ft
(d)	Open watercourse	50 ft

(6) The FOG Interceptor shall have a retention time of at least twenty-four (24) hours at the maximum daily flow based on water meter records or other calculation methods as approved by the {Agency}. The FOG Interceptor minimum capacity shall be 1,000 gallons. FOG Interceptors shall have a minimum of two compartments. The two compartments shall be separated by a baffle that extends from the bottom of the FOG interceptor to a minimum of five (5) inches above the static water level. An opening in the baffle shall be located at mid-water level. The size of the opening shall be at least eight (8) inches in diameter but not have an area exceeding 180 square inches.

(7) FOG Interceptor shall be watertight and constructed of precast concrete, or other durable material.

(8) FOG Interceptors constructed of precast concrete, shall meet the following requirements:

(a) The exterior of the FOG Interceptor, including the exterior top and bottom and extension to grade manholes, shall be coated with a waterproof sealant.
(b) All concrete FOG Interceptors shall be fabricated using minimum 4,000-psi concrete per ASTM standards with 4 to 7 percent air entrainment.
(c) All structural seams shall be grouted with non-shrinking cement or similar material and coated with a waterproof sealant.
(d) Voids between the FOG Interceptors walls and inlet and outlet piping shall be grouted with non-shrinking cement and coated with a waterproof sealant.

(9) All non-concrete septic tanks must be approved for use by the {Agency}.

(10) The FOG Interceptor shall be accessible for convenient inspection and maintenance. No structures shall be placed directly upon or over the FOG Interceptor.

(11) The FOG Interceptor shall be installed on a level stable base that has been mechanically compacted with a minimum of six (6) inches of crushed stone to prevent uneven settling.

(12) Select backfill shall be placed and compacted around the FOG Interceptor in a manner to prevent damage to the tank and to prevent movement caused by frost action.

(13) The outlet discharge line from the FOG Interceptor shall be directly connected to the municipal sanitary sewer.

(14) The FOG Interceptor shall have a minimum liquid depth of thirty-six (36) inches.

(15) Separate clean-outs shall be provided on the inlet and outlet piping.

(16) The FOG Interceptor shall have separate manholes with extensions to grade, above the inlet and outlet piping. FOG Interceptors installed in areas subject to traffic shall have manhole extensions to grade with ductile iron frames and round manhole covers. The word "SEWER" shall be cast into the manholes covers. FOG Interceptors installed outside areas subject to traffic may have concrete risers with lids either having a minimum weight of 59 lbs or shall be provided with a lock system to prevent unauthorized entrance. All manholes and extensions to grade providing accesses to the FOG Interceptor shall be at least seventeen (17) inches in diameter.

(17) Inlet and outlet piping shall have a minimum diameter of four (4) inches and be constructed of schedule 40 PVC meeting ASTM 1785 with solvent weld couplings.

(18) The inlet and outlet shall each utilize a tee-pipe on the interior of the FOG Interceptor. No caps or plugs shall be installed on the tee-pipes. The inlet and outlet shall be located at the centerline of the FOG Interceptor and at least twelve (12) inches above the maximum ground water elevation. The inlet tee shall extend to within 12 inches of the bottom of the FOG Interceptor. The inlet invert elevation shall be at least three (3) inches above the invert elevation of the outlet but not greater than four (4) inches. The outlet tee-pipe shall extend no closer than twelve (12) inches from the bottom of the FOG Interceptor and the diameter of this tee-pipe shall be a minimum of four (4) inches.

(19) The diameter of the outlet discharge line shall be at least the size of the inlet pipe and in no event less than four (4) inches.

(20) When necessary due to installation concerns, testing for leakage will be performed using either a vacuum test or water-pressure test.

(1) Vacuum Test - Seal the empty tank and apply a vacuum to two (2) inches of mercury. The tank is approved if 90 percent of the vacuum is held for two (2) minutes.

(2) Water-Pressure Test - Seal the tank, fill with water, and let stand for twenty-four (24) hours. Refill the tank. The tank is approved if the water level is held for one (1) hour.

Section 6. Alternate FOG Pretreatment System.

A. When it is not practical for the Food Preparation Establishment to install an outdoor in-ground FOG Interceptor per {***Section 5***}, an Alternate FOG Pretreatment System may be utilized upon approval by the {*Agency*} and upon receiving a "Notification of Approved Alternative FOG Pretreatment System." Approval of the system shall be based on demonstrated (proven) removal efficiencies and reliability of operation. The {*Agency*} will approve these systems on a case-by-case basis. The Contact Person may be required to furnish the manufacturer's analytical data demonstrating that FOG discharge concentrations do not exceed the limits established in this ordinance.

B. Alternate FOG Pretreatment Systems shall consist of a FOG Recovery Unit meeting the requirements of {*Paragraph D below*}, unless there are special circumstances that preclude such installation, as approved by the {*Agency*}, and in accordance with {*Paragraph E*}.

C. Alternate FOG Pretreatment Systems shall meet the requirements of {***Section 5***, *A through E*}, and {***Section 5*** *F. (2) and (3)*} and shall be installed immediately downstream of each of the fixtures and drains listed in {***Section 5*** *F. (1)*}.

D. Alternate FOG Pretreatment System Requirements.

(1) FOG Recovery Units shall be sized to properly pretreat the measured or calculated flows using methods approved by the {Agency}.

(2) FOG Recovery Units shall be constructed of corrosion-resistant material such as stainless steel or plastic.

(3) Solids shall be intercepted and separated from the effluent flow using a strainer mechanism that is integral to the unit.

(4) FOG Recovery Units shall operate using a skimming device, automatic draw-off, or other mechanical means to automatically remove separated FOG. This skimming device shall be controlled using a timer, FOG sensor, or other means of automatic operation. FOG Recovery Units operated by timer shall be set to operate no less than once per day.

(5) FOG Recovery Units shall be included with an internal or external flow control device.

(6) FOG Recovery Units shall be located to permit frequent access for maintenance, and inspection.

E. Other Alternate FOG Pretreatment System

(1) Other Alternate FOG Pretreatment Systems that do not meet the requirements of {***Section 5*** *F or* ***Section 6*** *D*}, may be considered for approval by the {*Agency*} on a case-by-case basis. The application shall include:

(a) Documented evidence that the Alternate FOG Pretreatment System will not discharge FOG concentrations that exceed the discharge limits per {***Section 4***}.
(b) Plans and specifications for the proposed system including plans and profile of system installation, manufacturer's literature, documentation of performance and any other information detailing the alternate system.
(c) A written Operation and Maintenance Plan, which shall include the schedule for cleaning and maintenance, copies of maintenance log forms, a list of spare parts to be maintained at the subject facility, and a list of contacts for the manufacturer and supplier. Following receipt of written Notification of Approved Alternate FOG Pretreatment System from the {*Agency*}, the Operation and Maintenance Plan shall be maintained on the premises. The plan shall be made available for inspection on demand by the {*Agent*}.
(d) A written FOG Minimization Plan, which shall include procedures for all Food Preparation Establishment employees to minimize FOG entering the wastewater collection system.

(e) Description of a FOG Pretreatment Training Program for Food Preparation Establishment employees in minimization procedures.

(2) A Notification of Approved Alternate FOG Pretreatment System may be granted for a duration not to exceed three (3) years, with extensions, when demonstrated to the satisfaction of the {*Agency*} that the Alternate FOG Pretreatment System, Operation and Maintenance Plan, FOG Minimization Plan and FOG Pretreatment Training Program are adequate to maintain the FOG concentration in the wastewater discharge below the limits set in {***Section 4***}.

Section 7. Pretreatment Equipment Maintenance

A. The FOG Pretreatment System shall be maintained continuously in satisfactory and effective operation, at the Food Preparation Establishment's expense.

B. The Contact Person shall be responsible for the proper removal and disposal, by appropriate means, of the collected material removed from the FOG Pretreatment System.

C. A record of all FOG Pretreatment System maintenance activities shall be maintained on the premises for a minimum of five (5) years.

D. The Contact Person shall ensure that the FOG Interceptor is inspected when pumped to ensure that all fittings and fixtures inside the interceptor are in good condition and functioning properly. The depth of grease inside the tank shall be measured and recorded in the maintenance log during every inspection along with any deficiencies, and the identity of the inspector.

E. The Contact Person shall determine the frequency at which its FOG Interceptor(s) shall be pumped according to the following criteria:

(1) The FOG Interceptor shall be completely cleaned by a licensed waste hauler when 25% of the operating depth of the FOG Interceptor is occupied by grease and settled solids, or a minimum of once every three (3) months, whichever is more frequent.

(2) If the Contact Person can provide data demonstrating that less frequent cleaning of the FOG Interceptor will not result in a grease level in excess of 25% of the operating depth of the FOG Interceptor, the {*Agency*} may allow less frequent cleaning. The Contact Person shall provide data including pumping receipts for four (4) consecutive cleanings of the FOG Interceptor, complete with a report from the FOG hauler indicating the grease level at each cleaning, and the FOG Interceptor maintenance log.

(3) A maintenance log shall be maintained on the premises, and shall include the following information: dates of all activities, volume pumped, grease depth, hauler's name, location of the waste disposal, means of disposal for all material

removed from the FOG Interceptor, and the name of the individual recording the information. The maintenance log and waste hauler's receipts shall be made available to the {*Agent*} for inspection on demand. Interceptor cleaning and inspection records shall be maintained on file a minimum of five (5) years.

F. All removal and hauling of the collected materials must be performed by State approved waste disposal firms. Pumped material shall be disposed of at a Regional FOG Disposal Facility. Pumping shall include the complete removal of all contents, including floating materials, wastewater and settled sludge. Decanting back into the FOG Interceptor shall not be permitted. FOG interceptor cleaning shall include scraping excessive solids from the wall, floors, baffles and all piping.

G. The Contact Person shall be responsible for the cost and scheduling of all installation and maintenance of FOG Pretreatment System components. Installation and maintenance required by the {*Agent*} shall be completed within the time limits as given below:

Violation	Days from inspection to Correct Violation
Equipment not registered	30 days
Installation violations (outdoor and indoor)	90 days
Operational violations	30 days

Section 8. FOG Minimization.

A. The Contact Person shall make every practical effort to reduce the amount of FOG contributed to the sewer system.

B. Renderable fats, oils, and grease shall not be disposed of, in any sewer or FOG Interceptor. All renderable fats, oils, and grease shall be stored in a separate, covered, leak-proof, Renderable FOG Container, stored out of reach of vermin, and collected by a renderer.

C. Small quantities of FOG scraped or removed from pots, pans, dishes and utensils shall be directed to the municipal solid waste stream for disposal.

DOCUMENT 5

EXAMPLE SEWER USE ORDINANCE

This document is provided as an example of how a Model Ordinance works in conjunction with other parts of a typical Sewer Use Ordinance. The model FOG ordinance appears as Article III of this document. The modifications to Article I and Article II that were needed to tie the articles together are underlined. This example is based on Torrington's Sewer Use Ordinance. Interested parties are encouraged to obtain an official copy of the Torrington Sewer Use Ordinance from the City of Torrington.

SEWERS

Chapter 170

SEWERS

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[HISTORY: Adopted by the Board of Councilmen of the City of Torrington: Art. I, 7-16-1990; Art. II, 7-16-1990. Amendments noted where applicable.]

GENERAL REFERENCES

Assessments for improvements - See Ch. 4.
Water Pollution Control Authority - See Ch. 65.
Building construction - See Ch. 85.
Street excavations - See Ch. 180.

ARTICLE I
Sewer Use Charges
[Adopted 7-16-1990[1]]

§ 170-1. Purpose.

The purpose of this Article is to establish fair and reasonable charges for the use of the Torrington sewerage system so that the maintenance and operation of said sewerage system shall be self-supporting. This user charge system is designed to produce adequate revenues required for the operation and maintenance, including replacement, of the pollution abatement facilities. Each user that discharges wastewaters to the facilities that cause an increase in the cost of operation and maintenance shall pay for such increased costs.

§ 170-2. Application of user charge system.

A. The user charge system is intended to:

(1) Provide that each user or user class pays its proportional share of operation and maintenance, including replacement, costs of pollution abatement facilities within the service area, based on the user's proportionate contribution to the total wastewater loading from all users or user classed based on actual or estimated use of wastewater treatment services.

(2) Provide that each user be notified annually, in conjunction with a regular bill, of the rate and that portion of the user charges that is attributable to wastewater treatment services.

[1] Editor's Note: This ordinance also repealed former Art. I, Sewer Use Charges, adopted 3-30-1987, as amended

(3) Generate sufficient revenue to offset the cost of all treatment works operations and maintenance.

B. For the first year of operation and maintenance, costs are based upon past experience. The Water Pollution Control Authority shall review the user charges annually and revise them periodically to reflect actual treatment works operation and maintenance costs.

§ 170-3. Definitions.

As used in this Article, the following terms shall have the meanings indicated:

BIOCHEMICAL OXYGEN DEMAND (BOD) - The amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions for five (5) days. The determination of "BOD" shall be performed in accordance with the procedures prescribed in the latest edition of Standard Methods for the Examination of Water and Wastewater.

HOUSE CONNECTION - Includes the term "house sewer," or " building sewer" where appropriate, and shall mean the extension from the building drain to the public sewer or other place of disposal.

INDUSTRIAL WASTEWATER - All wastewater from industrial processed, trade or business and is distinct from domestic sewage.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT - A permit issued pursuant to Section 402 of the Federal Water Pollution Control Act.

NORMAL SEWAGE - Wastewater with a pollutant strength of two hundred fifty (250) milligrams per liter or less of BOD and three hundred (300) milligrams per liter or less of SS.

OPERATION AND MAINTENANCE (O & M) COSTS - All costs incidental to the complete operation and maintenance of the treatment works, including replacement.

PERSON - Any individual, partnership, copartnership, firm, company, corporation, association or joint-stock company.

pH - the logarithm of the reciprocal of the hydrogen-ion concentration. The concentration is the weight of hydrogen ions in grams per liter of solution.

PRETREATMENT or TREATMENT - The reduction of the amount of pollutants, the elimination of pollutants or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into a water pollution control facility.

PROCESS WASTE - Includes water and liquid waste discharged from any trade or process carried on in the establishment, including pretreated wastes and polluted cooling water.

SANITARY SEWER - A sewer which collects and conveys domestic sewage from residences, public buildings, commercial establishments, industries and institutions. A "sanitary sewer" may also collect and convey permitted industrial wastewater and unintentionally admitted

SEWAGE - Human and animal excretions and all domestic and such manufacturing wastes as may tend to be detrimental to public health.

SEWERAGE SYSTEM - Any device, equipment, appurtenance, facility and method collecting, transporting, receiving, treating, disposing or discharging sewage.

SURCHARGE - An additional fee charged to a sewer user assessed for excessive concentrations of BOD, SS or other pollutants discharged to the city sewerage system.

SUSPENDED SOLIDS (SS) - The solid matter, measured in milligrams per liter, which may be in suspension, floatable or settleable and is removable by laboratory filtering as prescribed in the latest edition of Standard Methods for the Examination of Water and Wastewater.

§ 170-4. Classes of users.

The following classes of users are hereby established:

A. Class I residential: all single- and multifamily dwelling units. Discharge is normal strength sewage incidental to unit occupancy.

B. Class II-A Commercial: all commercial establishments and institution and all multipurpose properties, such as combined commercial and residential. Discharge is of normal strength sewage incidental to their occupancy.

C. Class II-B Municipal: municipal establishments such as city halls, police and fire stations, schools, libraries, community centers and senior citizen housing.

D. Class III-A Industrial (Sanitary): industrial facilities which discharge all or a portion of their metered water intake to the sanitary sewer system. These industries discharge sewage of normal strengths and discharge less than five thousand (5,000) gallons per day to the sanitary sewer system (strength of the discharge as determined per State Department of Environmental Protection inspection and/or independent testing by the City of Torrington).

E. Class III-B Industrial (High Volume): industrial facilities which, under state permit, discharge all or a portion of their metered water intake to the sanitary sewer system. These industries discharge in excess of five thousand (5,000) gallons per day and, by nature of this amount of discharge, are subject to particular inspection and testing. Sewage discharged is of normal strength.

F. Class III-C Industrial (Surcharge): industrial facilities which, under state permit, discharge all or a portion of their metered water intake to the sanitary sewer system. These industries have pollutant strengths that directly affect the treatment systems over and above normal sewage. Discharges with pollutant strengths in excess of two hundred fifty (250) milligrams per liter of five-day biochemical oxygen demand (BOD_5) and /or three hundred (300) milligrams per liter of suspended solids (SS) fall under Class III-C users and are subject to a surcharge. Surcharges for total discharge are based on metered flow provided by the Torrington Water Company, and strength of that flow is based on State Department of Environmental Protection testing and independent testing by the City of Torrington. The formulas for calculating the surcharges utilize the actual operating cost date.

§ 170-5. Development of user charges.

User charges will be determined as follows:

A. Class I Users (Residential): Flow is to be based on federal and state standards on a unit basis.

(2.25 persons/unit) (70 gallons/person/day) (365 days/year) = 65,000 gallons/unit/year

B. Class II Users (Commercial): Flow will be determined on the basis of actual metered water consumption, as per the Torrington Water Company, minus any water discharges under the federal National Pollutant Discharge Elimination System (NPDES) permit. (NOTE: if there should be a commercial establishment discharging to the system with a private water supply, flow will be determined the same as one (1) residential unit [sixty-five thousand (65,000) gallons] minimum. Any commercial establishment with a private water supply determined by the Water Pollution Control Authority to discharge above the normal in quantity and/or strength will be calculated and charged under Class III users, as appropriate. Any commercial establishment with a private water supply and consisting of more than one (1) establishment, such as commercial and residential flow, will be based on each establishment being considered as a separate residential unit [sixty-five thousand (65,000) gallons] and will be charged as two (2 units, three (3) establishments, three (3) units, etc.).

C. Class III-A User (Industrial - Sanitary Only) [under five thousand (5,000) gallons per day]: Flow will be determined on the basis of actual metered water consumption as per the Torrington Water Company, minus any water discharged under federal permit.

D. Class III-B (Industrial - High Volume) [over five thousand (5,000) gallons per day]: Flow will be determined on the basis of actual metered water consumption as per the Torrington Water Company, minus any waters discharged under federal permit.

E. Class III-C User (Industrial - Surcharge): Flow will be determined on the basis of actual metered water consumption as per the Torrington Water Company, minus any waters discharged under federal permit. (NOTE: Surcharge is calculated on the basis of state or independent testing and is charged under separate agreement.)

F. Any industry with a private water supply will be required to meter all water supply sources and/or discharge to sanitary sewer, river or other surface water. (NOTE: The City of Torrington may, at its option, require a sewer user to meter any private water supply source and/or discharge to sanitary sewer, river or other surface waters.)

§ 170-6. Sewer user charge formula.

A. An annual sewer user charge shall be fixed and imposed on every sewer user. The sewer user charge shall be based on the following formula:

Where:

C = 1,000 x U/V
C = Charge per 1,000 gallons

U = Amount to be raised by user fee (= total money needed for O & M funds from other sources

V = Volume of flow from users (based on estimated residential and previous years commercial and industrial billing)

B. In any instance in which the city determined that biological oxygen demand (BOD), suspended solids (SS) or other pollutant concentration from a user exceeds the range of concentrations of these pollutants in normal sewage, the city shall increase the user charge computed in accordance with the following formula:

C_{ub} = (V_u) (8.34) x (B_c) (B-250)

C_{us} = (V_u) (8.34) x (S_c) (S-300)

C_{up} = (V_u) (8.34) x (P_c) $(P-P_n)$

Where:

C_{ub} = User's annual charge of treating pollutant surcharge for BOD (dollars per year).

C_{us} = User's annual charge of treating pollutant surcharge for SS (dollars per year).

C_{up} = User's annual charge of treating pollutant surcharge for additional pollutant (dollars per year).

V_u = User's total annual volume to treatment plant (millions of gallons per year).

B_c = O & M cost to treat BOD (dollars per pound).

B = User's concentration of BOD (milligrams per liter).

S = User's concentration of SS (milligrams per liter).

P_c = O & M cost to treat additional pollutant (dollars per pound)

P = User's concentration of additional pollutant (milligrams per liter)

NOTE: In no case shall any calculated pollutant surcharge be a negative value.

C. The minimum annual sewer user charge for each residential, commercial or industrial user shall be equal to the charge for one (1) single-family residence.

§ 170-7. Tax Collector designated as collector of sewer use charges [Added 2-19-1991]

A. The Tax Collector of the City of Torrington shall be the collector of the sewer use charges pursuant to Section 7-258 of the Connecticut General Statutes.

B. The Tax Collector shall be responsible for issuing the bills for the sewer use charges.

§ 170-8. Administrator of Water Pollution Control Authority.

A. [Amended 2-19-1991] There shall be an Administrator of the Water Pollution Control Authority who shall serve under the direction and supervision of the Water Pollution Control Authority of the City of Torrington.[2] The Administrator shall be responsible for:

(1) Calculating the user rate charges as per § 170-6 of this Article.

(2) Posting notice of proposed and established charged with the City Clerk as required by Section 7-255 of the Connecticut General Statutes.

(3) Determining metered water flow, when necessary.

[2] Editor's Note: See Ch. 65. Water Pollution Control Authority

(4) Performing such other functions as are necessary for the implementation and operation of this Article.

B. On or before July 1, 1987, the Mayor, with the advice and consent of the Water Pollution Control Authority, shall appoint an Administrator of the Water Pollution Control Authority. Said Administrator shall devote full time to his duties and shall serve for a term of four (4) years and until his successor s appointed and qualified. Said Administrator shall be a management-level employee and shall be selected on the basis of his experiences, qualifications and abilities.

C. The Mayor shall have the same authority to suspend said Administrator as provided in § C3-2 of the Charter of the City of Torrington.

§ 170-9. Payment of charges; collection; appeals.

A. Municipal establishments. The sewer user charge for all municipal establishments will be paid out of the city general fund.

B. Dates.

(1) Sewer user charges shall be calculated for the current fiscal year and shall be issued by July 1 of each and every year and shall be issued in two (2) equal parts. The first part shall be due and payable by July 1 and the second part shall be due and payable by the following January 1 of each and every year.

(2) If any property has not been connected for the entire billing period, the user charge shall be prorated on a monthly basis for the actual number of months within the stated period that he property was connected. A period of less that fifteen (15) days shall be disregarded, and a period in excess of fifteen (15) days shall be deemed a full month. The minimum prorated charge shall be twenty dollars ($20).

C. Liability of owner. The owner of record, as of July 1, of each property on which a building is located and which is connected to the sewerage system shall be liable for the payment of sewer user of charges.

D. Lien and collection. Bills not paid within thirty (30) days of the due date are delinquent and are subject to late charges at the rate of one and one-half percent (1½%) per month [eighteen percent (18%) per year] from the due date for each part of the annual bill. A period of less than fifteen (15) days shall be disregarded and a period in excess of fifteen (15) days shall be deemed a full month. Partial payments shall not be accepted, except as provided in

Subsection B above. Sewer user charges, together with interest thereon, shall constitute a lien upon the property on which the building is located, and such lien may be foreclosed and such charges may be collected in the manner as provided in Section 7-258 of the Connecticut General Statutes and other applicable statutes.

E. Sewer user charges shall be collected by the Tax Collector and turned over to the Sewer Authority and deposited in a special account separate from other city funds designated the "Sewer Use Account" and used solely to operate and maintain the sewerage system and for any other use required and/or permitted by law. **[Amended 1-29-1991]**

F. Invalidity. The invalidity of any portion of this regulation shall not affect the remainder thereof, and this regulation may be amended at such time or times, pursuant to statute, as the Water Pollution Control Authority judgement considers necessary.

G. The user charge system shall generate sufficient revenue to offset the cost of all treatment works operation and maintenance provided by the City of Torrington. Shortfalls will be made up in the next fiscal year.

H. Appeals.

(1) Any person aggrieved by any user charge may appeal, in writing, to the Administrator of the Water Pollution Control Authority within thirty (30) days of the issuance of the bill. The Administrator may sustain the appeal, dismiss the appeal or modify the user charge owed and shall decide the appeal within ten (10) working days of its receipt.

(2) An aggrieved party may further appeal, in writing, to the Water Pollution Control Authority for the City of Torrington within thirty (30) days of the issuance of the administrator's decision. Payment in full of the disputed charge must accompany the appeal. The Water Pollution Control Authority shall hear and decide said appeal within thirty (30) days of receipt. Late charges and penalties shall not accrue during aforesaid appeal period. The Water Pollution Control Authority may sustain the appeal, dismiss the appeal or modify the user charge owed.

(3) Any person aggrieved by any decision of the Water Pollution Control Authority may appeal to the Superior Court for the Judicial District of Litchfield in accordance with Section 7-255 of the Connecticut General Statutes.

ARTICLE II
Sewer Use
[Adopted 7-16-1990[3]]

§ 170-10. Purpose and applicability; enforcement official.

A. This Article established the procedures for making connections to the public sewer in the City of Torrington. It also established specific limits for pollutant discharges which, by their nature or by their interaction with sewage, will be detrimental to the public health, cause damage to the public sewer or the water pollution facility, pollute the water of the state or otherwise create a public nuisance.

B. This Article is intended to:

(1) Inform the public as to the technical and administrative procedures to be followed in obtaining connection to the City of Torrington's sewer system.

(2) Prevent the introduction of pollutants into the sanitary sewer system which will interfere with the collection and/or treatment system.

(3) Prevent the introduction of pollutants into the treatment system which will pass through the system, inadequately treated, into the waters of the state or the atmosphere or otherwise be incompatible with the system.

(4) Improve the opportunity to recycle and reclaim wastewaters and sludges from the system.

C. This Article shall apply to the City of Torrington and to persons outside the City of Torrington who are users of the public sewer. Except as otherwise provided herein, the Director of Public Works of the City of Torrington shall implement and enforce the provisions of this Article.

D. This Article is also supplemented by Article III, for those facilities that generate and discharge fats, oils and grease into their wastewater.

§ 170-11. Definitions.

A. As used in this Article, the following shall have the meanings indicated:

[3] Editor's Note: This ordinance also repealed former Art. II, Sewer Use, adopted 7-6-1988, as amended.

ACT or THE ACT - The Federal Water Pollution Control Act, also known as the "Clean Water Act," as amended, 33 U.S.C. § 1251 et seq.

BIOCHEMICAL OXYGEN DEMAND (BOD) - The amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions for five (5) days. The determination of "BOD" shall be performed in accordance with the procedures prescribed in the latest edition of Standard Methods for the Examination of Water and Wastewater.

BUILDING - Any structure used or intended for supporting or sheltering any use of occupancy.

BUILDING DRAIN - That part of the lowest horizontal piping of an building's plumbing which received the discharge from soil, waste and other drainage pipes inside the walls of the building and conveys it to the building sewer, beginning five (5) feet [one and five-tenths (1.5) meters] outside the inner face of the building wall.

BUILDING SEWER - The extension from the building drain to the public sewer or other place of disposal. It may also be called a "house connection."

CAPACITY - The maximum amount of sewage that can be carried by part or all of the sewage collection system. Said "capacity" shall be determined by actual field measurements of flows or by use of a suitable computer model. If field measurements are use, they must not be more than twelve (12) months old, and they must be compared to flows at the WPCF during the same period. If computer modeling is used, the following parameters shall be used:

Peaking Factor	Based on current TR-20 curves
Pipe m = value	Existing = 0.015 to 0.0175 Proposed = 0.013
Minimum velocity	2.0 feet per second at design flow (check at start-up for adequacy)
Maximum velocity	12.0 feet per second
Infiltration allowance	40 gallons per average day
Gallons per capita per day	70
R-40 Density	2.5 persons per acre
R-15 Density	7.5 persons per acre
R-10 Density	10.0 persons per acre
LB/CR Density	15.0 persons per acre
Industrial	3.000 gallons per average day
Percentage of development of all tracts	80%

CATEGORICAL STANDARDS - The National Categorical Pretreatment Standards or pretreatment standards.

COMBINED SEWER - A sewer intended to receive both sewage and storm or surface water. These are expressly forbidden within the City of Torrington and in areas outside of the city tributary to the Torrington Sanitary Sewer System.

COMMISSIONER - The Commissioner of Environmental Protection for the State of Connecticut.

COMPATIBLE POLLUTANT - The biochemical oxygen demand, suspended solids, pH and fecal coliform bacteria, plus any additional pollutants identified in the water pollution control facility's NPDES permit, where the water pollution control facility is designed to treat such pollutants and, in fact, does treat such pollutants to the degree required by the NPDES permit.

COMPOSITE SAMPLE - A mixture of aliquot samples obtained at regular intervals over a time period. The volume of each aliquot is proportional to the discharge flow rate for the sampling interval. The minimum time period for composite sampling shall be four (4) hours.

COOLING WATER - Process water in general used for cooling purposes to which the only pollutant added is heat and which has such characteristics that it may be discharged to a natural outlet in accordance with federal and state laws and regulations.

DIRECTOR - The Director of Public Works of the City of Torrington.

DOMESTIC SEWAGE - Sewage that consists of water and human excretions or other waterborne wastes incidental to the occupancy of a residential building or nonresidential building but not wastewater from water-softening equipment, commercial laundry wastewater and blowdown from heating and cooling equipment.

DWELLING UNIT - A single unit providing complete independently owned living facilities for one (1) or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

FLOATABLE OIL - Oil, fat or grease in a physical state such that it will separate by gravity from sewage by treatment in an approved pretreatment facility.

FOG - FATS, OILS, AND GREASE - Animal and plant derived substances that may solidify or become viscous between the temperatures of 32°F and 150°F (0°C to 65°C), and that separate from wastewater by gravity. Melted animal fat, any edible substance identified as grease per the most current EPA method as listed in CFR 136.3.

GARBAGE - The animal or vegetable waste resulting from the handling, preparation, cooking or serving of foods.

GRAB SAMPLE - A sample which is taken from a waste stream on a one-time basis with no regard to the flow in the waste stream and without consideration of time.

HOLDING TANK WASTE - Any waste from holding tanks such as vessels, chemical toilets, campers, trailers and septage hauling trucks.

INCOMPATIBLE POLLUTANT - All pollutants other than compatible pollutants as defined above.

INDUSTRIAL WASTEWATER - All wastewater from industrial processes, trade or business and is distinct from domestic sewage.

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT - A permit issued pursuant to Section 402 or the Act (33 U.S.C. § 1342).

PERSON - Any individual, partnership, copartnership, firm, company, corporation, association, joint-stock company, trust, estate, governmental entity or any other legal entity or their legal representatives, agents or assigns. The masculine gender shall include the feminine, and the singular shall include the plural where indicated by the context.

pH - The logarithm of the reciprocal of the hydrogen-ion concentration. The concentration is the weight of hydrogen ions, in grams, per liter of solution.

PRETREATMENT OR TREATMENT - The reduction of the amount of pollutants, the elimination of pollutants or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into a water pollution control facility. The reduction or alteration can be obtained by physical, chemical or biological process, except as prohibited by Title 40. Code of Federal Regulations, Section 403.6(d).

PROPERLY SHREDDED GARBAGE - The wastes from the preparation, cooking and dispensing of food that has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half (1/2) inch [one and twenty-seven hundredths (1.27) centimeters] in any dimension.

PUBLIC SEWER - A common sanitary sewer controlled by a governmental agency or public utility.

SANITARY SEWER - A sewer which collects and conveys domestic sewage from residences, public buildings, commercial establishments, industries, institutions and permitted industrial wastewater. A "sanitary sewer" may not collect ground - storm - or surface waters.

SEPTAGE - The liquids and solids which are removed from a tank used to treat domestic sewage.

SEWAGE - Human and animal excretions and all domestic and such manufacturing wastes as may tend to be detrimental to the public health.

SEWAGE COLLECTION SYSTEM - The structures and equipment required to collect and convey sewage to the water pollution control facility.

SLUG - Any sudden or excessive discharge which exceeds permitted levels either in terms of pollutant concentration or instantaneous flow rate in such manner as to adversely affect the sewage collection system and/or the water pollution control facility.

SOLUBLE OIL - Oil which is of either mineral or vegetable origin and disperses in water or sewage at temperatures between zero degrees and twenty degrees Celsius (0º and 20º C.) For the purposes of this Article, emulsified oil shall be considered as "soluble oil."

STORM SEWER - A sewer which collects and conveys stormwater or groundwater.

SUSPENDED SOLIDS (SS) - The solid matter, measured in milligrams per liter, which may be in suspension, floatable or settleable and is removable by laboratory filtering as prescribed in the latest edition of Standard Methods for the Examination of Water and Wastewater.

TOXIC POLLUTANT – Any pollutant or combination of pollutants listed as toxic in regulations promulgated by the Administrator of the Environmental Protection Agency under the provisions of §307(a) of the Act of other Acts.

USER – Any person who contributes, causes or permits the contribution of sewage into the City of Torrington’s sewer system.

WATERCOURSE – A natural or artificial channel for the passage of water, either continuously or intermittently.

WATER POLLUTION CONTROL AUTHORITY (WPCA) – The Board of councilmen in accordance with Chapter 65 of this Code.

WATER POLLUTION CONTROL FACILITY (WPCF) – An Arrangement of Devices for the treatment of sewage and sludge.

B. Word usage. The word “shall” is mandatory, “may “ is permissive.

§170-12. Use of public sewers required.

A. The owner(s) of all houses, buildings or properties used for human occupancy, employment, recreation or other purposes situated within the City of Torrington and abutting on any street, alley or right-of way in which there is now located or may in the future be located a public sanitary sewer of the City of Torrington may, at the option of the City of Torrington and at the Owner(s) expense, be required to install a building sewer to connect their building drain to the public sewer in accordance with the provisions of this Article within ninety (90) days after date of official notice to do so.

B. It shall be unlawful for any person to construct or repair any privy, privy vault, septic tank, cesspool or other facility intended for the disposal of sewage if public sewers are available.

C. It shall be unlawful for any person to place, deposit or permit to be deposited in any unsanitary manner on public or private property with the city or in any area under the jurisdiction of said city any human or animal excrement, garbage or other objectionable waste.

D. It shall be unlawful to discharge to any natural outlet within the city any sewage, industrial wastes or other polluted waters, except by special permission of the Commissioner.

E. The discharge of sewage, industrial wastes and any other wastes generated on or discharged from real property lying outside the bounds of the City into the city sewage system shall be made only with express consent of the Water Pollution control Authority setting forth the terms and conditions for such discharge in accordance with the regulations of the State Department of Health.

§ 170-13. Sewer connections; permits and fees; construction requirements.

A. No unauthorized person(s) shall uncover, make any connections with or opening into, use, alter, repair or disturb any public sewer or appurtenance thereof.

B. Any person proposing a new discharge into the public sewer system or a substantial change in the volume or character of pollutants that are being discharged into the public sewer shall notify the Public Works Director at least fourty-five (45) days prior to the proposed change or connection.

C. Any person proposing to extend the public sewer shall, in addition to the provisions of this § 170-13, file the plan or design of the same with the commissioner in accordance with Section 22a-416 of the Connecticut General Statutes. No such extension shall be constructed until the plan for the same has been approved by the Commissioner.

D. A person intending to connect a building drain from his property to the public sewer shall first obtain a permit to connect from the Public Works Director. The application shall be made on forms provided by the Public Works Director and it shall be accompanied by a sketch or plan showing the proposed installation in sufficient detail to enable the Public Works Director to determine that the proposed installation meets the requirements of this regulation and other applicable specifications, codes and laws. The application shall be signed by the owner of the premises to be served or his authorized agent and by the qualified contractor (see Subsection O) who has been chosen to perform the work. Upon approval of the application and plan and payment of the applicable fees as set forth in Subsection G below, a permit shall be issued to have the work performed by the stated contractor. In the event that the premises changes ownership before the work is completed or if another contractor is chosen to perform or finish the work, the original permit becomes void and a new permit must be obtained by the new parties in interest. Permits shall be valid for a period not to exceed sixty (60) days and are nonrenewable.

E. A connection to the public sewer will be made only after the building's plumbing has been approved by the City Building Inspector in order to ensure that minimum standards are met for the installation. All plumbing shall be in good working order. No trench containing a building drain or connection to the sanitary sewer shall be backfilled until the Public Works Director or his designated representative has completed an inspection of and approved the work. The water level in the trench shall be maintained at a level below the sewer connection before the cap is removed and while the connection is being made and until such time as it has been inspected, approved and backfilled. The contractor shall notify the Engineering Department forty-eight hours before starting any work authorized under this permit.

F. Permits to connect to the public sewer may be denied or annulled by the Public Works Director for such cause and at such time as he may deem sufficient. No permit to connect to the public sewer shall be issued unless capacity exists to accommodate the additional discharge. The City of Torrington shall be held harmless as a consequence of said denial or revocation or cause thereof. All other parties in interest shall be deemed to have waived the right to claim damages from the City of Torrington, its agents, servants or employees on account of such revocation.

G. Costs and expenses; connection fee.

(1) All costs and expenses incidental to the installation and connection of the building sewer shall be borne by the owner(s). A connection of the building sewer shall be charged to the owner(s) for connecting to the public sewer, payable to the City of Torrington, in accordance with the following schedule:

(a) Residential dwelling unit [sixty-five thousand (65,000) gallons per year]: two thousand five hundred dollars ($2,500).

(b) Commercial, industrial and retail buildings: flows will be determined using actual flow data or Department of Environmental Protection data for the particular use. Total flow so derived will be divided by sixty-five thousand (65,000) to determine the proportionate fee. In no case will the fee be less than two thousand five hundred dollars ($2,500).

(c) When the connection fee charged the owner is in excess of ten thousand dollars ($10,000), the owner may apply to the Water Pollution Control Authority to pay said fee in installments. The WPCA shall have the authority to approve an installment payment schedule and may provide for interest payments thereon in accordance with Section 7-253 of the Connecticut General Statutes. Where an installment payment plan is agreed upon, the WPCA shall cause the Town Clerk to record on the land records a certificate of such fact in a form substantially in compliance with the form provided for by Section 7-253 of the Connecticut General Statutes.

(2) All fees collected under this section shall be deposited in a separate sewer fund account to be used solely for the construction and rehabilitation of public sewer facilities.

H. A separate and independent building drain shall be provided for each premises which requires a certificate of occupancy. Building sewers extending through

lands of others will require appropriate easements being filed in the Torrington Land Records. The City of Torrington's responsibility as to maintenance and repair of building sewers will end at either the street line or at the limit of a record sanitary sewer easement.

I. Existing building sewers may be used in connection with new buildings only when they are found, on examination and test by the Public Works Director, to meet all requirements of this Article.

J. The size, slope, alignment, materials of construction of the building sewer and the methods to be used in excavating, placing of the pipe, jointing, testing, backfilling and connection of the building sewer to the public sewer shall all conform to the requirements of the Building and Plumbing Code or other applicable rules and regulations of the City of Torrington.[4] In the absence of code provisions or in amplification thereof, the materials and procedures set forth in appropriate specifications of the American Society for Testing and Materials and WPCF Manual of Practice No. 9 shall apply.

K. Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any floor elevation is too low to permit gravity flow to the public sewer, sanitary sewage shall be lifted by an approved means and discharged to the building sewer. Duplex lift systems shall be provided for commercial and industrial buildings.

L. No person(s) shall make or allow connection of roof downspouts, foundation drains, areaway drains or other sources of surface runoff or groundwater to a building sewer or building drain which, in turn, is connected directly or indirectly to a public sewer.

M. All excavations for building sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the City of Torrington in accordance with Chapter 180 Article III.

N. No building sewer shall be constructed within twenty-five (25) feet of a water supply well. If a building sewer is constructed within twenty-five (25) to seventy-five (75) feet of a water supply well, it shall be constructed in accordance with all applicable guidelines promulgated by the Commissioner.

[4] Editor's Note: See Ch. 85, Building Construction.

O. All building sewers shall be installed by a qualified contractor who possesses a valid license issued under Chapter 393 of the Connecticut General Statutes, as amended.

§ 170-14. Discharge limitation, prohibitions and permits.

A. No person shall discharge or cause to be discharged any unpolluted waters such as stormwater, groundwater, roof runoff, subsurface drainage or cooling water to any sanitary sewer.

B. Stormwater and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as storm sewers and discharged to a watercourse in accordance with all applicable state and federal laws and regulations.

C. No user shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the WPCF. These general prohibitions apply to all such users of a WPCF, whether or not the user is subject to National Categorical Pretreatment Standards or any other federal or state pretreatment standards or requirements. No user shall contribute the following substances to any WPCF.

(1) Any liquids, solids or gases which, by reason of their nature or quantity are or may be sufficient, either alone or by interaction with other substances, to cause fire or explosion or to be injurious in any other way to the WPCF or to the operation of the WPCF. At no time shall two (2) successive readings on an explosive hazard meter at the point of discharge into the sewage collection system, or at the point in the system, be more than five percent (5%) nor any single reading over ten percent (10%) of the lower explosive limit (LEL) of the meter.

(2) Solids or viscous substances which may cause obstruction to the flow in a sewer or other interference with the operation of the WPCF, including substances such as but not limited to grease, garbage with particles greater than one-half (1/2) inch in any dimension, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, wastepaper, wood, plastics, gas, tar, asphalt residues, residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes.

(3) Any sewage having a pH lower than five point five (5.5) or having any other corrosive property capable of causing damage or hazard to the structure, equipment and personnel of the WPCF. The upper limit of pH for any industrial wastewater discharge shall be established under the discharger's state discharge permit.

(4) Any sewage containing toxic pollutants in sufficient quantity, either singly or by interacting with other pollutants, to injure or interfere with any wastewater treatment process, constitute a hazard to humans, animals or plant life, create a toxic effect in the receiving water of the WPCF or to exceed the limitation set forth in a categorical pretreatment standard. A toxic pollutant shall include but not be limited to any pollutant identified pursuant to Section 307(a) of the Act.

(5) Any noxious or malodorous sewage, gases or solids which, either singly or by interaction with other sewage, are sufficient to prevent entry into the public sewers for their maintenance and repair.

(6) Any sewage which, by interaction with other sewage in the public sewer, releases obnoxious gases, forms suspended solids which interfere with the collection system, creates a condition which may be deleterious to structures and treatment processes or which may cause the effluent limitations of the WPCF's NPDES permit to be exceeded.

(7) Any substance which may cause the WPCFs effluent or any other product of the WPCF, such as residues, sludges or scums, to be unsuitable for reclamation process where the WPCF is pursuing a reuse and reclamation program. In no case shall a substance discharged to the WPCF cause the facility to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under Section 405 of the Act or any criteria, guidelines or regulations affecting sludge use or disposal developed pursuant to the Resource conservation and Recovery Act, the Clean Air Act, the Toxic Substances Control Act or state criteria applicable to the sludge management method being used.

(8) Sewage containing substances which are not amenable to treatment or reduction by the wastewater treatment process employed or are amenable to treatment only to such degree that the WPCF effluent cannot meet the limits stipulated in the City of Torrington's NPDES permit.

D. The following described substances, materials, waters or waste shall be limited to discharges to public sewers in concentrations or quantities which will not harm either the sewers or the WPCF, will not have an adverse effect on the receiving stream or will not otherwise endanger public property or constitute a nuisance. The Commissioner may set lower limitations if necessary to meet the water quality standards of the receiving stream. The following materials or characteristics of sewage discharged to the public sewer are not acceptable:

(1) Sewage having a temperature higher than one hundred fifty degrees Fahrenheit (150°F.) [Sixty-five degrees Celsius (65°C.)]

(2) Sewage containing fat, wax, grease, petroleum or mineral oil, whether emulsified or not in excess of one hundred (100) milligrams per liter, with floatable oil not to exceed twenty (20) milligrams per liter or containing substances which may solidify or become viscous at temperatures between thirty-two degrees and one hundred fifty degrees Fahrenheit (32°F and 150°F.) [Zero degrees and sixty-five degrees Celsius (0°C and 65°C.)]

(3) Garbage grinders may not be connected directly to sanitary sewers in facilities required to pretreat for FOG as detailed in § 170 Article III. However, no shredded garbage shall be discharged to a fats, oils, and grease pretreatment system as described by Article III.

(4) Any sewage containing odor-producing substances exceeding limits which may be established by the Commissioner.

(5) Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Commissioner in compliance with all applicable state and federal regulations.

(6) Materials which exert or cause:

(a) Unusual concentrations of inert suspended solids (such as but not limited to sodium chloride and sodium sulfate).

(b) Excessive discoloration (such as but not limited to dye wastes and vegetable tanning solutions).

(c) Unusual BOD, chemical oxygen demand or chlorine demand in such quantities as to constitute a significant load on the water pollution control facility.

(d) Unusual volume of flow or concentrations of wastes constituting a slug as defined in §170-11A.

(7) Overflow from holding tanks or other receptacles storing organic wastes.

(8) Sewage with a concentration of pollutants in excess of the following limits:

Pollutant*	Concentration in Parts per million (mg/l)
Arsenic as As	0.05
Barium as Ba	5.0
Boron as B	5.0
Cyanides as CN (amenable)	0.1
Fluoride as F	20
Chromium (total)	1.0
Chromium (Cr + 6)	0.1
Magnesium as Mg	100.00
Manganese as Mn	5.0
Copper as Cu	1.0
Zinc as Zn	0.1
Cadmium	0.1
Lead	0.1
Tin	2.0
Silver	0.1
Mercury	0.01
Nickel	1.0

*NOTE: All metals are to be measured as total metals.

E. Permit required.

(1) In accordance with Section 25-54i of the Connecticut General Statutes, as amended,[5] a permit from the Commissioner of Environmental Protection is required prior to the initiation of discharge of any of the following wastewaters to a public sewer:

(a) Industrial wastewater of any quantity

(b) Domestic sewage in excess of five thousand (5,000) gallons per day through any individual building sewer to a public sewer.

[5] Editor's Note: For current provisions see Section 22a-430 of the General Statutes of Connecticut.

(2) A potential discharger must submit a permit application to the Department of Environmental Protection not later than ninety (90) days prior to the anticipated date of initiation of the proposed discharge.

F. Rejection of waste or pretreatment.

(1) If any sewage is discharged or is proposed to be discharged to the public sewers which contains the substances or possesses the characteristics enumerated in Subsection D above and which, in the judgment of the Commissioner, may have deleterious effects upon the wastewater facilities processes, equipment or receiving waters or which otherwise may create a hazard to life or constitute a public nuisance, the Commissioner may, in accordance with Section 25-54i(b) of the Connecticut General Statures as amended.[6]

(a) Reject the discharge of the wastes.

(b) Require pretreatment to an acceptable condition for discharge to the public sewers.

(c) Require control over the quantities and rates of discharge.

(2) If the Commissioner permits the pretreatment or equalization of waste flows, the design and installation of the equipment shall be subject to the review and approval of the Commissioner subject to the requirements of all applicable codes, ordinances and laws.

G. The Public Works Director shall have the right to reject the discharge of any wastes or require more stringent effluent limitations than required by the user's Section 25-54i permit,[7] the decision of the Commissioner notwithstanding.

H. Grease, oil and gross particle separators shall be provided when, in the opinion of the Commissioner, they are necessary for the proper handling of sewage containing floatable grease in excessive amounts, as specified in Subsection D(2), or any flammable wastes, sand or other harmful substances, except that such separators shall not be required for private living quarters or dwelling units. All separators shall be of the type and capacity approved by the Commissioner and as provided for in § 170 Article III and shall be located as to be readily and easily accessible for cleaning and inspection. In the maintaining of these separators, the owner(s) shall be responsible for the proper removal and disposal by appropriate means of the captured material and shall maintain records of the dates and means of disposal which are subject to review by the

[6] Editor's Note: For current provisions, see Section 22a-430(b) of the General Statutes of Connecticut.
[7] Editor's Note: For current provisions, see Section 22a-430 of the General Statutes of Connecticut

Commissioner. Any removal and hauling of the collected materials shall be performed by a waste disposal firm which possesses a valid permit from the Commissioner under Section 25-54hh of the Connecticut General Statutes, as amended.[8]

I. Where pretreatment or flow-equalizing facilities are provided or required for any sewage, they shall be maintained continuously in satisfactory and effective operation by the owner at this expense.

J. When required by the Commissioner, the owner of any property serviced by a building sewer carrying industrial wastes shall install a suitable structure together with such necessary meters and other appurtenances in the building sewer, to facilitate observations, sampling and measurement of the wastes. Such structure when required, shall be accessible and safely located and shall be constructed in accordance with plans approved by the Commissioner. The sampling structure shall be located at a point along the industrial waste stream where a representative sample of the industrial wastewater may be obtained prior to its being diluted by domestic sewage in the building sewer. The structure shall be installed by the owner at his expense and shall be maintained by him so as to be safe and accessible at all times.

K. All industries discharging into a public sewer shall perform such monitoring of the discharge as required by the Commissioner in any state discharge permit issued pursuant to Section 25-54i of the Connecticut General Statutes, as amended,[9] including but not limited to installation, use and maintenance of monitoring equipment, keeping records and reporting the results to the Commissioner. Such records shall be made available upon request of the Commissioner or the Public Works Director.

L. All measurements, tests and analyses of the characteristics of sewage to which reference is made in this Article shall be determined in accordance with the latest edition of Standard Methods for Examination of Water and Wastewater, published by the American Public Health Association. Sampling methods, locations, times, durations and frequencies are to be determined on an individual basis subject to the stipulations and general conditions of the discharger's state discharge permit.

M. No statement contained in this Article shall be construed as preventing any special agreement or arrangement between the City of Torrington and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the City of Torrington for treatment, provided that such

[8] Editor's Note: For current provisions, see Section 22a-454 of the General Statutes of Connecticut
[9] Editor's Note: For current provisions, see Section 22a-430 of the General Statutes of Connecticut.

agreements do not contravene any requirements of existing state and federal regulations and are compatible with any user charge and industrial cost recovery system in effect.

N. Upon the promulgation of the federal categorical pretreatment standard for a particular industrial subcategory, the federal standard, if more stringent than limitations imposed under this Article for sources in the subcategory, shall supersede the limitations imposed under this Article.

O. No user shall increase the use of process water in an attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in the federal categorical pretreatment standards or in any specific pollutant limitation which may be developed by the Commissioner.

P. Each user shall provide protection from accidental discharge of prohibited materials or other substances regulated by this Article. Facilities to prevent accidental discharge or prohibited materials shall be provided and maintained at the owner's or user's own cost and expense. The Commissioner may require that plans showing facilities and operating procedures be submitted for review and approval prior to construction of the facilities.

Q. Within five (5) days following an accidental discharge, the user shall submit to the Public Works Director and the Commissioner a detailed written report describing the cause of the discharge and the measures to be taken by the user to prevent similar future occurrences. Such notification shall not relieve the user of any expense, loss, damage or other liability which may be incurred as a result of damage to the WPCF, fishkills, aquatic plants or any other damage to persons or property, nor shall such notification relieve the user of any fines, civil penalties or other liability which may imposed by this Article or other applicable law.

R. A notice shall be permanently posted on the user's bulletin board or other prominent place advising employees whom to call in the event of a dangerous discharge. Employers shall ensure that all employees are advised of the emergency notification procedure.

§ 170-15. Protection from damage

No unauthorized person shall maliciously, willfully or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment which is part of the sewage collection system or WPCF.

§ 170-16. Power and authority of inspectors

A. The Public Works Director and other duly authorized employees of the City of Torrington bearing proper credentials and identification shall be permitted to enter all properties for the purposes of inspection, observation, measurement, sampling and testing in accordance with the provisions of this Article and Article III.

B. While performing the necessary work in private properties referred to in Section A above, the Public Works Director or duly authorized employees of the City of Torrington shall observe all safety rules applicable to the premises established by the user. The user shall be held harmless for injury or death to the City of Torrington's employees, and the City of Torrington shall indemnify the user against loss or damage to its property by the City of Torrington's employees and against liability claims and demands for person injury or property damage asserted against the user and caused by the gauging and sampling operation, except as such may be caused by negligence or failure of the user to maintain safe conditions as required in § 170-14J.

C. The Public Works Director and other duly authorized employees of the City of Torrington bearing proper credentials and identification shall be permitted to enter all private properties through which the City of Torrington holds a duly negotiated easement for the purpose of repair and maintenance of any portion of the sewage works lying within said easement. All entry and subsequent work, if any, on said easement shall be done in full accordance with the terms of the duly negotiated easement pertaining to the private property.

§ 170-17. Penalties for offenses.

A. Any person found to be in violation of any provisions of this Article or Article III, except § 170-15, shall be served by the City of Torrington with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violations. Any and all notices required to be given under this section or under any other provision of this Article shall be sent by certified or registered mail, return receipt requested.

B. Any person who continues any violation beyond the time limit provided for in Section A or who violates § 170-15 of this Article shall be guilty of a misdemeanor and, on conviction thereof, shall be fined in the amount not exceeding one hundred dollars ($100.) for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

C. Any person who is found to be in violation of any of the provisions of this Article or Article III shall become liable to the City of Torrington for any expense, loss or damage occasioned by the City of Torrington by reason of such violation.

D. Any person who is found to be in violation of Section 25-54i of the Connecticut General Statutes, as amended,[10] shall be subject to monetary penalty or forfeiture under Section 25-54q of the statutes.[11]

§ 170-18. Appeals.

Any decision or order issued by the Public Works Director may be appealed to the Water Pollution Control Authority within fifteen (15) days of receipt of notice of the decision or order. The appeal must be in writing, specifically setting forth the grounds for the appeal and the relief requested and shall be filed with the City Clerk. The Water Pollution Control Authority shall hold a hearing on the appeal within fifteen (15) days of its receipt and shall issue its decision within thirty (30) days thereafter. The decision of the Water Pollution Control Authority shall be final for purposes of an appeal to the Superior Court.

ARTICLE III
Fats, Oils and Grease Pretreatment
[Adopted]

§ 170-19. Purpose.

The purpose of this Article is to outline the wastewater pretreatment requirements for Food Preparation Establishment and other commercial and industrial facilities that discharge fats, oils, and grease in their wastewater flow. All new and existing facilities that generate and discharge fats, oils, and grease in their wastewater flow shall install, operate and maintain FOG Management Equipment. The requirements of this Article shall supplement and be in addition to the requirements of Article II.

§ 170-20. Definitions.

AGENT – Authorized representative of the City of Torrington.

[10] Editor's Note: For current provisions, see Section 22a-430 of the General Statutes of Connecticut.
[11] Editor's Note: For current provisions, see Section 22a-438 of the General Statutes of Connecticut

CONTACT PERSON - The Contact Person shall mean the individual responsible for overseeing daily operation of the Food Preparation Establishment and who is responsible for overseeing the Food Preparation Establishment's compliance with the FOG Pretreatment Program as established herein.

FOG - FATS, OILS AND GREASE (FOG) - Animal and plant derived substances that may solidify or become viscous between the temperatures of 32°F and 150°F (0°C to 65°C), and that separate from wastewater by gravity. Any edible substance identified as grease per the most current EPA method as listed in 40-CFR 136.3.

FOG INTERCEPTOR - A passive tank installed outside a building and designed to remove fats, oils and grease from flowing wastewater while allowing wastewater to flow through it, and as further defined herein.

FOG MANAGEMENT EQUIPMENT- Refers to properly installed and operated FOG Interceptors and Alternate FOG Management Equipment as approved by the City of Torrington Director of Public Works.

FOOD PREPARATION ESTABLISHMENTS - Food Preparation Establishments include establishments that use food preparation processes and that are regulated by the local Health Department or Health District and classified as a Class III or Class IV facility, or are regulated by the Connecticut Department of Consumer Protection. These facilities including but are not limited to restaurants, hotel kitchens, hospitals, school kitchens, bars, factory cafeterias and clubs. Industrial Food Processing Facilities are not regulated by this Ordinance.

GREASE RECOVERY UNIT (GRU) - All active indoor mechanical systems designed to remove fats, oils and grease by physical separation from flowing wastewater, as further defined herein.

NOTIFICATION OF APPROVED ALTERNATE FOG MANAGEMENT EQUIPMENT- Written notification from the City of Torrington Public Works Director for authorization to install and/or operate Alternate FOG Management Equipment as defined herein.

RENDERABLE FATS, OILS, AND GREASE – Refers to fats, oils, and grease not contaminated by contact with wastewater, and which can be recycled by a rendering company. Renderable fats, oils, and grease sources include but are not limited to fryolators, grills and exhaust hoods.

RENDERABLE FATS, OILS AND GREASE CONTAINER - Refers to a closed, leak-proof container for the collection and storage of food grade fats, oils, and grease.

REGIONAL FOG DISPOSAL FACILITY- A facility for the collection and disposal of non-renderable FOG approved by the Connecticut Department of Environmental Protection.

§ 170-21. Application to Install FOG Management Equipment.

A. FOG Management Equipment shall be provided for:

(1) All new and existing Food Preparation Establishments, including restaurants, cafeterias, diners, and similar non-industrial facilities using food preparation processes that have the potential to generate FOG in wastewater at concentrations in excess of the limits defined in this ARTICLE.

(2) New and existing facilities which, in the opinion of the Public Works Director, require FOG Management Equipment for the proper handling of wastewater containing fats, oils, or grease, except that such FOG Management Equipment shall not be required for private living quarters or dwelling units.

B. All new Food Preparation Establishments which generate and discharge wastewater containing fats, oils, and grease and which will require FOG Management Equipment, as determined by the Public Works Director, shall include the design and specifications for the FOG Management Equipment as part of the sewer connection application as described in § 170-13.

C. All existing Food Preparation Establishments which generate, and discharge wastewater containing fats, oils, and grease, and which require new FOG Management Equipment, as determined by the Public Works Director, shall submit an application for the installation of new FOG Management Equipment within twelve (12) months of adoption of this ARTICLE. The application shall be in accordance with § 170-13. The approved FOG Management Equipment shall be installed within three (3) years of adoption of this ARTICLE.

D. Existing Food Preparation Establishments which generate, and discharge wastewater containing fats, oils, and grease, and which have existing non-complying FOG Management Equipment may, as determined by the Public Works Director, operating the existing FOG Management Equipment. Such facilities shall submit an application for “Alternate FOG Management Equipment” as described in § 170-24C. Such application shall be submitted within twelve (12) months of adoption of this ARTICLE.

E. All costs and related expenses associated with the installation and connection of the FOG Interceptor(s) or GRU(s) shall be borne by the Food Preparation Establishment. The Food Preparation Establishment shall indemnify the City of Torrington and its Agents for any loss or damage that may directly or indirectly occur due to the installation of the GRU.

§ 170-22. Discharge Limits

A. No facility shall discharge or cause to be discharged any wastewater with a FOG concentration in excess of one hundred (100) milligrams per liter, as determined by the currently approved test for total recoverable fats and grease listed in 40 CFR 136.3, or in concentrations or in quantities which will harm either the sewers or the Water Pollution Control Facility, as determined by the Public Works Director.

§ 170-23. Management Equipment Requirements.

A. An Application for the design and installation of FOG Management Equipment shall be subject to review and approval by the Public Works Director per § 170-13, and subject to the requirements of all other applicable codes, ordinances and laws.

B. Except as provided by § 170-24, the wastewater generated from Food Preparation Establishments shall be treated to remove FOG using a FOG Interceptor or GRU meeting the requirements of the Connecticut DEP's *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*.

C. Every structure at the subject facility shall be constructed, operated and maintained, in a manner to ensure that the discharge of food preparation wastewater is directed solely to the FOG interceptor, or Alternate FOG Management Equipment. No valve or piping bypass equipment that could prevent the discharge of food preparation wastewater from entering appropriate treatment equipment shall be present.

D. The Contact Person at each Food Preparation Establishment shall notify the Public Works Director when the FOG Management Equipment is ready for inspection and connection to the public sewer. The connection and testing shall be made under the supervision of the plumbing inspector, and/or Agent.

E. All applicable local plumbing/building codes shall be followed during the installation of the FOG Management Equipment.

F. FOG Interceptor Requirements.

(1) The FOG Interceptor shall be installed on a separate building sewer servicing only kitchen flows and shall meet all the requirements of the Connecticut DEP's *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*.

(2) The inlet and outlet piping shall be PVC ASTM D 1785 Schedule 40 with rubber compression gaskets or solvent weld couplings. The joints must meet ASTM 3212 specifications. The authorized agent may approve other piping materials for use. The minimum diameter of the inlet and outlet piping shall be four inches. The inlet and outlet shall utilize a tee-pipe fitting on the interior of the grease trap/interceptor. The tee-pipe of the inlet and outlet shall extend to within twelve inches of the bottom and at least five inches above the liquid level of the tank.

(3) When it is not practical for the Food Preparation Establishment to install an outdoor in-ground FOG Interceptor per Section § 170-23, a GRU may be utilized. The installation of the GRU must meet the requirements as provided in the Connecticut DEP's *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*.

§ 170-24. Alternate FOG Management Equipment.

A. Other Alternate FOG Management Equipment

(1) Other Alternate FOG Management Equipment that does not meet the requirements of § 170-23E or § 170-24D, may be considered for approval by the Public Works Director on a case-by-case basis. The application shall include:

(a) Documented evidence that the Alternate FOG Management Equipment will not discharge FOG concentrations that exceed the discharge limits per § 170-22.

(b) Plans and specifications for the proposed system including plans and profile of system installation, manufacturer's literature, documentation of performance and any other information detailing the alternate system.

(c) A written Operation and Maintenance Plan, which shall include the schedule for cleaning and maintenance, copies of maintenance log forms, a list of spare parts to be maintained at the subject facility, and a list of contacts for the manufacturer and supplier. Following receipt of written Notification of Approved Alternate FOG Management Equipment from the Public Works Director, the Operation and Maintenance Plan shall be maintained on the premises. The plan shall be made available for inspection on demand by the Agent.

(d) A written FOG Minimization Plan, which shall include procedures for all Food Preparation Establishment employees to minimize FOG entering the wastewater collection system.

(e) Description of a FOG Pretreatment Training Program for Food Preparation Establishment employees in minimization procedures.

(2) A Notification of Approved Alternate FOG Management Equipment may be granted for a duration not to exceed three (3) years, with extensions, when demonstrated to the satisfaction of the Public Works Director that the Alternate FOG Management Equipment, Operation and Maintenance Plan, FOG Minimization Plan and FOG Pretreatment Training Program are adequate to maintain FOG concentration in the wastewater discharge below the limits set in § 170-22.

§ 170-25. Pretreatment Equipment Maintenance

A. The FOG Management Equipment shall be maintained continuously in satisfactory and effective operation, at the Food Preparation Establishment's expense.

B. The Contact Person shall be responsible for the proper removal and disposal, by appropriate means, of the collected material removed from the FOG Management Equipment.

C. A record of all FOG Management Equipment maintenance activities shall be maintained on the premises for a minimum of three (3) years.

D. Chemical and/or biological additives that could cause the fats, oils and grease fraction to be released from the FOG Management Equipment are not permitted without the written approval of the Public Works Director.

E. The Contact Person shall ensure that the FOG Interceptor is inspected when pumped to ensure that all fittings and fixtures inside the interceptor are in good condition and functioning properly. The depth of grease inside the tank shall be measured and recorded in the maintenance log during every inspection along with any deficiencies, and the identity of the inspector.

F. The Contact Person shall determine the frequency at which its FOG Interceptor(s) shall be pumped according to the following criteria:

(1) The FOG Interceptor shall be completely cleaned by a licensed waste hauler when 25% of the operating depth of the FOG Interceptor is occupied by solids or a minimum of once every three (3) months, whichever is more frequent.

(2) If the Contact Person can provide data demonstrating that less frequent cleaning of the FOG Interceptor will not result in grease and settled solids level in excess of 25% of the operating depth of the FOG Interceptor, the Public Works Director may allow less frequent cleaning. The Contact Person shall provide data including pumping receipts for four (4) consecutive cleanings of the FOG Interceptor, complete with a report from the FOG hauler indicating the grease level at each cleaning, and the FOG Interceptor maintenance log.

(3) A maintenance log shall be maintained on the premises, and shall include the following information: dates of all activities, volume pumped, grease depth, hauler's name, location of the waste disposal, means of disposal for all material removed from the FOG Interceptor, and the name of the individual recording the information. The maintenance log and waste hauler’s receipts shall be made available to the Agent for inspection on demand. Interceptor cleaning and inspection records shall be maintained on file a minimum of three (3) years.

G. All removal and hauling of the collected materials must be performed by State licensed waste hauler. Pumped material may be disposed of at the Torrington Wastewater Treatment Facility Regional FOG Disposal Facility. Pumping shall include the complete removal of all contents, including floating materials, wastewater and settled sludge. Decanting back into the FOG Interceptor shall not be permitted. FOG interceptor cleaning shall include scraping excessive solids from the wall, floors, baffles and all piping.

H. The Contact Person shall be responsible for the cost and scheduling of all repairs to FOG Management Equipment components. Repairs required by the Agent shall be completed within thirty (30) days after the date of written notice of violation is received by the Contact Person.

§ 170-26. FOG Minimization.

A. The Contact Person shall make every practical effort to reduce the amount of FOG contributed to the sewer system.

B. Renderable FOG shall not be disposed of, in any sewer, septic tank or FOG Interceptor. All renderable FOG shall be stored in a separate, covered, leak-proof, Renderable FOG Container, stored out of reach of vermin, and collected by a renderer.

C. Small quantities of FOG scraped or removed from pots, pans, dishes and utensils shall be directed to the municipal solid waste stream for disposal.

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DOCUMENT 6

EXAMPLES OF PUBLIC INFORMATION AND EDUCATION BROCHURES

There is a varied array of publicly available resources related to FOG pretreatment. The purpose of public information includes:

- Educating the public about the reasons for the development of FOG pretreatment programs;
- Defining the elements of a FOG pretreatment program;
- Providing a basic understanding of what FOG is;
- Increasing public understanding of the reasons FOG is a problem constituent of wastewater;
- Identifying the methods available to treat FOG;
- Increasing public awareness of the dangers of non-compliance; and
- Encouraging public acceptance of this important program.

It is important to understand that no single explanation can get the point across to all levels of society. Different approaches are necessary to inform different groups of people. Because different techniques provide varying levels of effectiveness, a variety of techniques need to be used simultaneously to accomplish the largest positive outcome. For this reason, this section provides links to an array of approaches that address different areas of society.

These approaches vary from the entertaining use of cartoons like the "Grease Avenger" comic used in Los Angeles California, to the technically and thorough online sewer ordinance from the Town of Ocean City, Maryland. Each is written for a different group to address different aspects of a public information program.

A balanced approach requires targeting a variety of levels of expertise and user information needs. This section includes a compiled list of resources that address different groups. When viewed as a whole these resources can be used to develop a meaningful and effective public information campaign. Table 5-1 provides a list of the information sources available from other jurisdictions and organizations in the United States.

Table 6-1
Characteristics of Public Information Materials

Information Source	Target Group	Treatment	BMPs	Health issues	Compliance	Disposal	Rules	Contacts
Boston, MA	Food Prep.	X			X	X	X	X
City of Bellevue, WA	Food Prep.	X	X			X		X
New York City DEP	Food Prep.				X		X	X
Georgia Division of Public Health	Food Prep.				X		X	X
State of Oregon	Pretreatment Staff	X	X		X	X	X	X
City of Palo Alto CA	Food Prep.	X	X		X	X	X	X
City of San Diego	Food Prep.	X			X	X	X	X
City of Los Angeles	All	X	X	X	X	X	X	X
Ocean City Maryland	Pretreatment Staff						X	
Boulder Colorado	Food Prep.	X	X	X	X	X	X	X
St. Petersburg Florida	Pretreatment Staff						X	
Lexington Lafayette Urban KY	General Public	X	X	X	X	X	X	X
Water Environment Federation	General Public	X	X	X				

Boston Water and Sewer Commission

Boston Water and Sewer Grease Control Program
http://www.bwsc.org/mainpage.html

This web site does not have a specific area for the Grease Control Program but includes this information as a part of the larger sewer use regulations. The Grease Control information can be located under the Water and Sewer Commission icon. Information includes regulations, grease control equipment sizing and maintenance requirements.

City of Bellevue Utilities

Fats, Oils & Grease Best Management Practices Manual
http://www.ci.bellevue.wa.us/page.asp?view=3080

This manual was written to provide restaurant and fast food business managers and owners with information about animal and vegetable-based oil and grease pollution prevention techniques focused on their businesses, effective in both reducing maintenance costs for business owners, and preventing oil and grease discharges to the sewer system. The manual provides answers to frequently asked

questions, explanations of how grease traps operate and maintenance requirements as well as information for haulers and recyclers.

New York City DEP

Preventing Grease Discharges Into Sewers, Guidelines for New York City Businesses
http://nyc.gov/html/dep/html/grease.html

This site is geared towards business owners. This document provides compelling reasons for grease removal systems and a detailed explanation of the costs of non-compliance, and contact information. It does not give an explanation of the various options available but suggests contacts through the yellow pages.

City of San Diego, California

Sewer Spills Reduction Program
http://www.sandiego.gov/mwwd/sewerspill/fewd.shtml#fewd

This single page document is written for business owners. It provides a brief explanation of the City's Grease Discharge Program what a grease trap is and why they are required.

City of Los Angeles Sewer Overflows

City San Early Notification (ENS) page
http://www.lacity.org/SAN/ens-2e_IWMD.pdf

This site provides a description of the City's FOG regulations and frequently asked questions. Other web pages provide brochures that define the problem, health issues and how to get more information.
http://www.lacity.org/SAN/sewerfog.pdf
http://www.lacity.org/SAN/sewer_comic.pdf

Boulder Colorado

Food Service Facilities - Grease Removal Devices
http://www.ci.boulder.co.us/publicworks/depts/utilities/water_quality/industrial/preatreatment/ipt_grease/index.html

This set of web pages addresses all areas of Boulders FOG program in a well-organized and attractive set of documents.

St. Petersburg Florida

Grease Management Program
http://www.stpete.org/grease.htm

This website contains a copy of the grease ordinance, application and reporting forms.

Lexington Lafayette Urban County Government Kentucky

Grease Interceptor Program
http://www.lfucg.com/Sewers/Grease.asp

A thorough and well-organized explanation of their existing FOG program.

Water Environment Federation (WEF)

Fat Free Sewers (bill stuffer)
The Water Environment Federation offers a bill stuffer informing the general population about the problems associated with grease and proper disposal techniques. Product numbers HP1902, HS1000, and HS1100.

What is an automatic grease recovery unit? Automatic grease recovery units are relatively small pretreatment units that can be located inside a kitchen facility. These units allow animal fat and cooking oils to accumulate within their separation chamber while skimmers or pumps remove the fat and oil from the unit and deposit this material in a separate container for disposal.

What are the maintenance requirements for an automatic grease recovery unit? After each automatic skimming cycle, the material in the collection container should be emptied into a larger designated non-renderable grease container. When the designated non-renderable grease container is full, a grease trap/interceptor cleaner that specializes in disposal of fat and oils from grease recovery units should be called to remove the material.

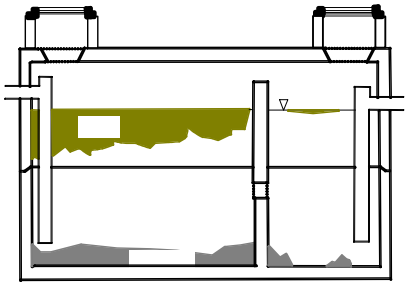
Material from the solids screening basket must be discarded in the trash after each operating cycle. Each cleaning of the grease recovery unit must be recorded in an operation and maintenance logbook.

INDOOR ACTIVE GREASE RECOVERY UNIT

What is an outdoor passive grease interceptor? An outdoor passive grease interceptor is a large, usually concrete tank that is located underground, typically behind the kitchen facility or under the parking lot. Grease interceptors are installed in the sewer piping between the kitchen and the public sewer line. The interceptor collects animal fat and cooking oil that is discharged in the wastewater from a kitchen. However, the tank allows water to pass through it to the public sewer collection system. By collecting the fat and oil prior to the public sewer lines, the possibility of clogging in the sewer lines is decreased.

Many facilities currently have a grease interceptor installed. If the location or size of the unit is unknown, a review of the building plumbing plans or a visual review of the area around your facility can often locate these units. A grease trap/interceptor cleaner can clean the unit and provide information on the size and design of the unit.

What are the maintenance requirements for an outdoor passive grease interceptor? The animal fat and cooking oils that accumulate in the outdoor passive grease interceptors must be removed periodically. The new regulations require that cleaning occur once every three months. Cleaning consists of removing the accumulated grease, water, and settled solids. Cleaning of the grease interceptor must be preformed by a grease trap/interceptor cleaner. All repairs and cleaning activities should be recorded to document ongoing maintenance.



OUTDOOR PASSIVE GREASE INTERCEPTOR

FOOD PREPARATION ESTABLISHMENT'S GUIDE TO THE *GENERAL PERMIT FOR THE DISCHARGE OF WASTEWATER ASSOCIATED WITH FOOD PREPARATION ESTABLISHMENTS*

In September 2005 a new state regulation (DEP-WATERP&S-GP-001)* went into affect. The title of this new regulation is, *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*. This new regulation requires the installation and maintenance of grease traps/interceptors or grease recovery units at all Food Preparation Establishments to keep animal fat, vegetable oils, and similar material from entering public sewer systems. This regulation is intended to protect communities' waterways, sewage collection systems, homes, and businesses from sewage spills. This pamphlet provides basic information on the *General Permit*.

Contact your local Water Pollution Control Authority or building official for a program registration application and additional information.

*A copy of (DEP-WATERP&S-GP-001) can be obtained from the CT DEP or on-line at http://www.dep.state.ct.us/pao/download/watrdown/fog_gp.pdf.

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Who does this new regulation affect? All Food Preparation Establishments that discharge wastewater to public sewer systems are required to have grease traps or grease interceptors. Food Preparation Establishments are defined as:

- Facilities that have Class III or Class IV food service licenses such as restaurants, hotel kitchens, hospital kitchens, school kitchens, bars, factory cafeterias, retail bakeries, clubs, and similar facilities; or
- Facilities that are regulated by the Department of Consumer Protection such as prison cafeterias and commercial bakeries.

Facilities with Class I or Class II food service licenses are not significant dischargers of fat and oils and therefore are not required to install grease pretreatment equipment.

Facilities that discharge to on-site sewer systems (septic systems) are not affected by this new regulation. Facilities that discharge to on-site systems are encouraged to consider the installation and maintenance of grease interceptors or grease traps as continued discharge of this material may decrease the service life of their on-site sewer system.

Fat and oils discharged in wastewater from industrial food production facilities are already restricted by Industrial Pretreatment Standards and are not affected by this *General Permit*.

What are the requirements of this State program? Food Preparation Establishments are required to install (where not already in place) either:

- An outdoor passive grease interceptor; or
- An indoor automatic grease recovery unit.

Outdoor passive grease interceptors must be the larger of:

- 1,000 gallons; or
- The volume of the maximum daily water usage in the kitchen facility.

Outdoor passive interceptors must meet local setback restrictions from property lines, water lines, wells, building foundations, and other applicable local setbacks.

In locations where there is insufficient space for outdoor passive grease interceptors, indoor units must be used. Indoor grease traps need to be automatic grease recovery units. Indoor passive grease traps do not meet the new guidelines.

Which kitchen fixtures must discharge through a grease recovery unit or outdoor grease interceptor?

The *General Permit* requires kitchen fixtures to discharge to grease pretreatment equipment. These fixtures include:

- Pot sinks;
- Pre-rinse sinks;
- Any sink into which fat or oil is likely to be introduced;
- Wok stations;
- Soup kettles or similar devices;
- Floor drains or sinks into which kettles may be drained;
- Automatic hood wash units;
- Dishwashers without pre-rinse sinks; and
- Any other fixture or drain that is likely to allow fat or oil to be discharged.

Other kitchen fixtures and restroom facilities are prohibited from discharging through the grease pretreatment equipment.

When are the Program deadlines? Local program registration deadlines may be sooner than State installation deadlines. Contact your local Water Pollution Control Authority for registration details.

Equipment installation deadlines are as follows:

- Food Preparation Establishments that began operations after September 30, 2005 are required to have grease pretreatment equipment installed and operational prior to opening for business.
- Existing facilities that change ownership after September 30, 2005 must have the grease pretreatment equipment installed within 60 days of change in ownership.
- Food Preparation Establishments that perform qualifying renovations must install grease pretreatment equipment as part of the renovation. Qualifying renovations include improvements to food preparation areas, food service areas, and/or dining areas:
  - In excess of $20,000 in any one calendar year, or
  - A cumulative renovation cost of $40,000 from September 30, 2005 to July 1, 2011.
- Food Preparation Establishments located within designated problem areas must install grease pretreatment equipment within 1 year of designation. Contact your local Water Pollution Control Authority to determine if your facility is located in a designated problem area.
- All Food Preparation Establishments must have appropriate grease pretreatment equipment installed by July 1, 2011.

How to locate professionals to assist in the installation and maintenance of grease pretreatment equipment.

Professionals who install outdoor passive grease interceptors are most easily located through your local telephone book under the category “Septic Tank & Systems”. Professionals that provide maintenance and cleaning of these units may be located in the telephone book under “Septic Tank & Systems Cleaning”.

A list of approved manufacturers for indoor automatic grease recovery units may be obtained from your local Grease Program Administrator.

Some communities may allow less frequent cleaning of outdoor grease interceptors at facilities that can demonstrate a low generation rate of non-renderable grease. Separate disposal of renderable and non-renderable grease and following the Good Management Practices described here can lower grease generation rates.

What is the difference between renderable and non-renderable fat and oil? Renderable fat and oil is material that comes directly from the cooking process and is not contaminated with wash water, detergents, chemicals, or other substances that would prevent it from being converted into other products. Renderable fat and oil is typically collected directly from fryers, skillets, and exhaust hood drip-pans. Renderable fat and oil can be used in a wide variety of products including soaps, lubricants, rubber, plastics, and animal feed.

Non-renderable fat and oil has come in contact with wash water, detergents, or chemicals. These contaminants prevent recycling of this material into other products. In Connecticut, non-renderable fat and oil is separated from the wastewater by grease trap/interceptors or automatic grease recovery units. This material is used as an alternative fuel for incineration of other waste products.

Use the services of a rendering company. Service contracts can be set up with rendering companies to periodically remove waste fat and oil from a facility. Renderers typically provide containers for outdoor storage.

WHENEVER POSSIBLE, ANIMAL FAT AND COOKING OIL SHOULD BE DISPOSED OF AS RENDERABLE MATERIAL.

Within Connecticut, two rendering companies currently accept waste fat and oil. These are:

- Darling International at (8000 842-5927; and
- Western Mass Rendering at (413) 569-6265.

Other renders may be used when they provide service in Connecticut.

Use the services of a grease trap/interceptor cleaner. Contracts can be set up with grease trap/interceptor cleaners to service grease interceptors on a prearranged schedule. This type of arrangement is the best method to ensure that outdoor grease interceptors are maintained on a regular basis.

Some grease trap/interceptor cleaners specialize in the disposal of grease from automatic grease recovery units. Consult your local phone book or Water Pollution Control Authority to determine who in your area accepts this material.

FOOD PREPARATION ESTABLISHMENT'S GUIDE TO DISPOSAL OF ANIMAL FAT AND COOKING OIL

In September 2005 a new state regulation (DEP-WATERP&S-GP-001)* went into affect. The title of this new regulation is, *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*. This new regulation requires the installation and maintenance of grease traps/interceptors or grease recovery units at all Food Preparation Establishments to minimize the volume of animal fat, cooking oils, and similar material entering the sewer system. This regulation is intended to protect the community's waterways, sewage collection system, homes, and businesses from sewage spills. This pamphlet provides guidance on minimizing the volume of animal fat and cooking oil collected in pretreatment equipment and disposal methods for renderable and non-renderable fat and oil.

*A copy of (DEP-WATERP&S-GP-001) can be obtained from the CT DEP or on-line at http://www.dep.state.ct.us/pao/download/watrdown/fog_gp.pdf.

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GOOD MANAGEMENT PRACTICES FOR ANIMAL FAT AND COOKING OIL

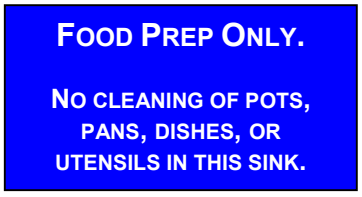
The following procedures are recommended to reduce the volume of fat and oil that needs to be disposed of.

1. **Perform dry clean up.** Renderable fat and oils generated during cooking should be poured into a renderable fat and oil collection container. A pot scraper or paper should be used to scrape uneaten food into the trash prior to rinsing.

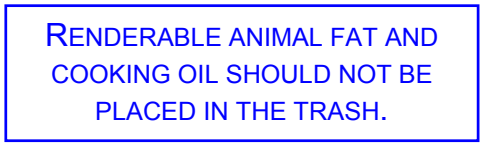
2. **Place screens over all drain lines.** Screens should be placed over all prep sink and pot sink drains. Screens provide an easy way to prevent clogged drains.

3. **Remove garbage grinders.** The *General Permit* does not allow the use of garbage grinders. Remove garbage grinders to ensure that food scraps do not clog the grease recovery unit's inlet screens or accumulate in grease interceptors.

4. **Place signs at all sinks.** Signs placed above all sinks are a reminder to employees that fat and oil minimization procedures need to be followed. Signs should state the activities that are permitted at each sink. In facilities with active grease recovery units some drains may not discharge into pretreatment equipment.



5. **Place used grease in the correct container.** Grease used in cooking and generated during the cooking process can be rendered if it does not come in contact with wastewater. This material should be placed in a separate container for renderable fat and oil. Many facilities place a small grease collection container by the stove for using during cooking. This material may be transferred to a larger container at the end of each shift. This material should never be poured down a drain.



6. **Maintain the hot water temperature between 125°F and 150°F.** The Public Health Code requires that hot water used in Food Service Establishments be maintained between 125°F and 150°F for sanitation purposes and to prevent scalding. This is also the optimum temperature range for grease pretreatment.

7. **Clean exhaust hood filters in the pot sink or employ a service.** Exhaust hood filters should be cleaned in pot sinks that discharge to Grease Pretreatment Equipment. In no case should these filters be cleaned outside as this may allow the fat and/or oil to enter local rivers and streams by way of storm drains. Services that clean exhaust hood filters are available in some areas of the State.

8. **Properly store waste fat and oil.** When stored improperly, waste fat and oil can attract rodents, flies, stray animals, and produce unpleasant odors. When space is available, placing renderable fats containers in a refrigerated space can eliminate many nuisance conditions. When space is not available in a refrigerated space, the renderable fats container is typically placed outside with other waste collection containers.

   The renderable fats container should be clearly marked and have a secure lid to prevent rain from mixing with the fat and oil. The lid must remain closed when fat and oil are not being added. The area around the container should be level and away from storm drains.

9. **Other** The procedures and equipment at kitchens are as varied as the menus they offer. Food Preparation Establishment managers are encouraged to review their operations and determine what other fat and oil handling methods apply to their facility.

DOCUMENT 8

FOG PRETREATMENT INFORMATION

The following FOG pretreatment regulations were developed to supply Food Preparation Establishment owners, managers, and other interested parties information on the FOG Pretreatment Program. This document answers the following basic questions about the FOG Pretreatment Program:

- Which facilities must comply with the Pretreatment Program requirements;
- Why the Pretreatment Program was adopted;
- What facility must do to comply with the Pretreatment Program; and
- What can happen if a facility does not comply with the Pretreatment Program.

The document is not intended to be a technical document and therefore does not include detailed information on installation of FOG pretreatment systems. It does however, serve to remind Food Preparation Establishment owners and managers of the basic FOG management practices their facility should already be practicing.

Information packages such as this are an important part of the public education element of the FOG Pretreatment Program and should be updated regularly to include new techniques and equipment for FOG management.

Some municipalities may find that information packages are needed in multiple languages to adequately meet the needs of the community served.

Additional information that may assist facilities in meeting the Program requirements include the names of:

- System designers (engineers that design these systems);
- Equipment vendors;
- Companies that provide cleaning of grease traps; and
- Renderers servicing the area.

Finally, the General Permit does not require registration of Food Preparation Establishments with the DEP or any other state or local agency. Requirements for registration are at the discretion of the local agency setting up the program. While most municipalities will find implementing any program will require registration, small communities with only a few Food Preparation Establishments may find a less complex approach meets their needs and staffing capabilities.

Torrington Area Health District
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Phone (860) 489-0436 Fax (860) 496-8243 (TAHD)

James B. Rokos
M.S., M.P.H.
Director of Health

"Since 1967"

Gilbert Roberts
B.A., R.S.
Director of Environmental Health

FOG PRETREATMENT INFORMATION

Introduction

This information package includes instructions for meeting the requirements of the City of Torrington's Fats, Oils and Grease Pretreatment Program.

Regulations

The Connecticut Department of Environmental Protection's General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments (DEP-WATERP&S-GP-001) and the City of Torrington's, Sewer Use Ordinance Article III govern the discharge of wastewater from Food Service Establishments to municipal treatment systems. This ordinance requires the installation of FOG pretreatment equipment to minimize the discharge of grease to wastewater disposal systems. The Torrington Area Health District (TAHD) has been charged with the responsibility of overseeing the pretreatment program for the 18 communities located within the District.

Regulated Food Service Establishments

Class I and Class II Food Service Establishments are currently not required to install FOG pretreatment equipment due to the nature of activities performed at these establishments.

Class III and Class IV Food Service Establishments prepare foods by processes that, in most cases, result in the generation of fats, oils, and grease, a portion of which will be discharged with wastewater to the disposal system. These establishments must pretreat wastewater generated in the kitchen as outlined here, and as required by local ordinances and the State regulation listed above.

The Purpose of the FOG Pretreatment Program

The FOG Pretreatment Program was implemented to reduce the volume of animal fat, cooking oils, and frying grease discarded in wastewater. Grease discharged to municipal wastewater collection systems may accumulate at any location within the collection system. Over time, this accumulation can decrease the capacity of the sewer lines or entirely block the sewer lines, causing untreated sewage to overflow the sewer system, contaminating the surrounding soil and possibly entering businesses, and homes. Sewage overflowing the collection system can pose a threat to human health and the environment. The clean up of sewage, the removal of the grease blockage, as well as replacement of damaged property costs the taxpayers of Connecticut

hundreds of thousands of dollars each year. The member communities of the TAHD have chosen to address this problem at the point of generation.

FOG Management Requirements

The FOG Pretreatment Program consists of two elements, FOG minimization procedures and wastewater pretreatment. Minimization procedures include grease-handling practices that reduce the volume of grease coming in contact with wastewater. All Food Preparation Establishments are encouraged to develop a FOG Minimization Plan. Facilities that operate Alternate FOG Pretreatment Systems may be required to submit a written FOG Minimization Plan. The FOG Minimization Plan is to consider the items listed below.

FOG Minimization Procedures

- Training programs for new and existing employees on proper FOG management procedures;
- Posting of signs by sinks not protected by grease pretreatment equipment, clearly stating permitted activities in all applicable languages. For example:

- Dry scraping of pots, pans, dishes, and utensils prior to rinsing at the pre-rinse sink or placing in a dishwasher so that residual food is disposed of with the trash rather than with wastewater;
- Emptying of all exhaust-hood drip pans and waste grease from grills into a renderable grease collection container; and
- All facilities that utilize a fryolater must use the services of a renderer for disposal of waste frying oil.

Food Service Establishment managers are encouraged to review their operations periodically and update FOG minimization procedures and confirm that employees are implementing proper grease handling techniques.

Wastewater Pretreatment Requirements

Review of current technologies for FOG pretreatment of wastewater has revealed that both passive outdoor and automatic indoor grease recovery units can consistently reduce FOG levels in wastewater. Passive indoor grease traps were determined to be too labor intensive to reliably meet pretreatment standards and will only be considered as alternative equipment in special circumstances. Continued use of passive indoor grease traps will be evaluated on a case-by-case basis. Complete details on obtaining approval for operating Alternate FOG Pretreatment Systems is provided later in this document under the heading, Procedure for Obtaining Approval of Alternate FOG Pretreatment Equipment or Alternative Maintenance. For operation and maintenance of passive outdoor grease traps and automatic indoor grease recovery units, the procedure for meeting the City of Torrington's Sewer Use Ordinance include the following items.

- Registration with the TAHD;
- Installation of passive outdoor grease traps or automatic indoor grease recovery units, where not currently installed;
- Routine pumping of the entire contents of the outdoor grease traps; or daily maintenance of automatic indoor grease recovery units or as recommended by the manufacturer; and
- Documentation of all FOG pretreatment equipment operation and maintenance activities.

Details for complying with these requirements are given below.

Registration with the TAHD

The registration process includes completing the registration form included in this information package and attaching the following plans and details.

Site Plan
The site plan shall include:
- Facility name and building address;
- The lot size and dimensions;
- The location of the building on the lot;
- The location of the wells or public waterlines
- The location of public sewer lines; and
- The location of the outdoor grease trap (if applicable).

Kitchen Plumbing Plan
Kitchen plumbing plans shall be drawn to scale and shall include:
- The location and name of all kitchen fixtures and equipment;
- Plumbing lines and connections;
- Employee restrooms; and
- Location of automatic grease recovery units (if applicable).

Passive Outdoor Grease Trap Detail
Sectional detail of each external grease trap shall include:
- Invert elevation at the building, grease trap inlet, grease trap outlet, and sewer connection;
- Ground water elevation;
- Diameter of inlet and outlet Tees and material of construction;
- Trap/tank volume and material of construction; and
- Sizing calculations.

(Outdoor grease trap sizing calculations are to include documentation of previous water usage rate if available or calculated water usage for new establishments.)

Automatic Indoor Grease Recovery Units (AGRU)
The details of grease recovery units to be included with the registration application shall include Manufacturer's literature on the automatic grease recovery unit:
- Materials of construction;
- Confirm the presence of a screening basket;
- Volume of grease collection container; and

- Sizing calculations (including volumes of all connected kitchen fixtures, volume of automatic grease recovery unit, and hydraulic retention time).

Design and Installation Requirements for Outdoor Grease Traps

The specific design requirements are given in the City of Torrington's Sewer Use Ordinance Article III. Installation of an outdoor grease trap requires a licensed septic tank installer. A licensed plumber is required to make the connection from the outdoor grease trap to the municipal sewer.

Licensed septic tank installers and plumbers will be familiar with the details of grease trap installation to meet the ordinance referenced above. In general, the requirements for outdoor grease traps are:

- Outdoor grease traps shall have a retention time of at least twenty-four hours at the maximum daily flow from the establishment, based on water meter records or other calculation method as approved by the TAHD or a minimum capacity of at least 1,000 gallons, whichever is greater.
- Outdoor grease traps shall have a minimum liquid depth of 36 inches.
- Outdoor grease traps must meet all local setback restrictions for property lines, wells, and water lines.
- Outdoor grease traps must be installed on a separate building sewer servicing only kitchen flows and shall only be connected to those fixtures listed below under, Kitchen Fixtures Required to be Connected to Pretreatment Equipment.

Design and Installation of Automatic Indoor Grease Recovery Units

Automatic indoor grease recovery units should be installed and operated in those locations where the size of the lot the facility is located on is insufficient to meet the installation requirements (setback restrictions) for outdoor units. Approval for automatic indoor grease recovery units may also be granted for existing facilities where kitchen and sanitary wastes are combined. New facilities, those constructed after (*Insert date of Adoption of SUO Article III*), must maintain separate sewers for kitchen and sanitary wastewater. Automatic grease recovery units may be of the timer activated or sensor activated types. The requirements for either of these types of automatic grease recovery units are as follows:

- Automatic grease recovery units must have integral heater and solids screening basket;
- Automatic grease recovery units must use an external FOG collection container; and
- Automatic grease recovery units must receive flow only from those fixtures listed below under, Kitchen Fixtures Required to be Connected to Pretreatment Equipment. Some facilities may find that multiple treatment units are needed to meet this requirement.

Kitchen Fixtures Required to be Connected to Pretreatment Equipment

The kitchen equipment and fixtures that are to be connected to FOG pretreatment equipment are given below.

- Pot sinks;

- Pre-rinse sinks or dishwasher without pre-rinse sinks;
- Any sink into which fats, oils, or grease may be introduced;
- Tilt kettles or similar devices;
- Floor drains or sinks into which kettles may be drained;
- Wok station drains;
- Automatic hood-wash units;
- Dishwashers without pre-rinse sinks; and
- Any other fixtures or drains that can allow fats, oils, and grease to be discharged into the sewer.

Restroom facilities must not discharge to FOG pretreatment equipment.

Routine Cleaning of FOG Pretreatment Systems

All grease traps must be cleaned regularly to ensure proper operation. The frequency of cleaning will vary depending on the type of grease trap installed (indoor or outdoor) the size of the unit installed, and the volume of grease discharged to the unit.

Cooking operations located in rented facilities should ensure adequate access to the grease trap is available for maintenance of the unit, or coordinate access with the facility owner. **Food service establishments are responsible for grease trap maintenance regardless of whether the facility is rented or owned.**

Outdoor Grease Trap Maintenance

All outdoor grease traps must be cleaned by a Grease Trap/Interceptor Cleaner once every three (3) months or when the grease and settled solids layer in the trap reaches 25 percent of the liquid depth of the trap. (25 percent of a standard grease trap having a liquid depth of 36 inches is nine (9) inches of grease and settled solids.) To be properly cleaned, the entire contents of an outdoor grease trap, including the grease and scum layer, the liquid, and the settled solids, must be removed.

Less frequent cleaning of grease traps may be approved by the Community's Water Pollution Control Authority if a low rate of FOG accumulation can be demonstrated to the satisfaction of the Community's Water Pollution Control Authority. See Procedure for Obtaining Approval of Alternative FOG Pretreatment Equipment or Alternate Maintenance

Automatic Indoor Grease Recovery Unit Maintenance

All automatic indoor grease recovery units, whether installed at a Class III or Class IV food service facility, must be cleaned once each day the facility is in operation, or once per operation cycle of the grease recovery unit, whichever is more frequent. Proper cleaning of an automatic indoor grease recovery unit requires the contents of the grease collection container to be emptied into a proper disposal receptacle. The screening basket must be cleaned, and the inlet and outlet grease discharge ports must be checked to ensure they are clear. Automatic grease recovery units must be in full working order and energized at all times when not being serviced. All grease recovery unit maintenance activities must be recorded on a clearly identified maintenance log.

Documentation of All FOG Pretreatment Equipment Maintenance Activities

Food Service Establishments must maintain an on-site equipment maintenance log. An entry must be made in this log each time the equipment is inspected or cleaned (see attached examples). Each unit must have a dedicated maintenance log. Maintenance logs are to be clearly marked with labels such as "Outdoor Grease Trap Log – Front Parking Lot" or "Indoor Grease Trap – Pre-rinse Station" to identify the pretreatment unit for which information is being recorded.

Inspections of FOG Pretreatment Equipment

Inspections of grease pretreatment equipment will be conducted by the TAHD as part of routine food service inspections. The Food Service Establishment is responsible for furnishing the tools and labor necessary to open grease traps for inspection by TAHD personnel. These inspections may include:

- Review of maintenance log documentation;
- Review of receipts from Grease Trap/Interceptor Cleaners;
- Review of FOG minimization plan; and
- Inspection of the pretreatment equipment.

Violations noted during inspections are divided into categories as shown below. Installation violations are deficiencies in equipment such as not having a FOG pretreatment system, automatic grease recovery unit not hard wired to electrical system, missing or broken system components, and similar equipment related violations. Operational violations include failure to properly maintain pretreatment equipment and failure to comply with the FOG minimization plan. All violations must be corrected within the time shown in the following table.

Violation	Days from Inspection to Correct Violation
Equipment not Registered	30 days
Installation Violations (Outdoor and Indoor)	90 days
Operational Violations	30 days

Food Service Establishments will be notified in writing at the time of inspection for first time operational violations. If the deficiencies are not corrected within 30 days, the Food Service Establishment and local Water Pollution Control Authority or Town Official overseeing the program will be notified in writing. Food Service Establishments will be notified of installation violations by mail on the first offense with the second offense reported to the Food Service Establishment, local Water Pollution Control Authority or Town Official overseeing the program. Repeated failure to comply with the FOG Pretreatment Program may result in enforcement action by the Water Pollution Control Authority, a Town Official, or the Connecticut Department of Environmental Protection.

Procedure for Obtaining Approval of
Alternative FOG Pretreatment Equipment or Alternate Maintenance

Applications for alternative pretreatment equipment or alternate maintenance are considered by the Water Pollution Control Authority on an individual basis. Approval may be granted for no longer than 3-year periods for alternative FOG pretreatment systems, or reduced cleaning frequency of outdoor traps. Failure to adhere to the policies and procedures agreed to as a condition of the approval, or changes in the conditions or procedures in the Food Service Establishment's kitchen may result in the withdrawal of the approval. Requirements for this approval are as follows.

Alternative Pretreatment Equipment
Approvals for Alternative equipment may be granted for facilities that are classified as Class III or Class IV Food Service Establishments but perform no cooking or cleaning of pots, pans, or utensils on-site.

Pretreatment equipment other than passive outdoor grease traps and indoor automatic grease recovery units may be considered on a case-by-case basis where special circumstances exist.

Existing passive outdoor grease traps not meeting the requirements provided in this document may be considered as alternative equipment subject to restrictions such as but not limited to additional FOG minimization practices within the kitchen or increased frequency of maintenance.

Itinerant vendors such as sandwich carts, which are not connected to the public sewer system are not required to install FOG pretreatment systems but are required to register with the FOG Pretreatment Program.

Alternative Maintenance Schedule
Implementation of a FOG minimization plan is encouraged at all Food Service Establishments. Strict adherence to a FOG minimization plan may reduce the volume of grease discharged to outdoor grease traps. When reduced grease accumulation can be demonstrated to the satisfaction of the Water Pollution Control Authority or Town Official, to warrant a less frequent grease trap pumping schedule, an alternative maintenance schedule (reduced frequency of pumping) may be approved. Methods of demonstrating the total grease accumulation rates are as follows.

- Installation of approved automatic grease/scum level monitoring devices in outdoor passive traps.
- One year of monitoring records demonstrating that grease/scum accumulation does not generate a grease and settled solids layer greater than 25 percent of the liquid depth of the grease trap in six months or longer.

TORRINGTON AREA HEALTH DISTRICT

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Phone (860) 489-0436 ♦ Fax (860) 496-8243 ♦ E-mail info@tahd.org ♦ Web Address www.tahd.org

"Promoting Health & Preventing Disease Since 1967"

FATS, OILS, AND GREASE PRETREATMENT PROGRAM REGISTRATION FORM

1. **FACILITY NAME** _____
   STREET ADDRESS _____

2. **ESTIMATED KITCHEN WATER USAGE PER YEAR:** (Refer to water bill for this information.)
   _____ gallons or _____ cubic feet

3. **IS FOOD COOKED OR ARE COOKING UTENSILS CLEANED AT YOUR FACILITY?** ___ Yes ___ No

IF YOU ANSWERED NO TO THE ABOVE QUESTION, THE REMAINDER OF THE APPLICATION DOES NOT APPLY TO YOUR FACILITY. PLEASE RETURN THIS REGISTRATION FORM TO THE HEALTH DISTRICT. IF YOU ANSWERED YES PLEASE COMPLETE ALL QUESTIONS.

4. CHECK EACH OF THE ITEMS BELOW THAT ARE PRESENT IN YOUR KITCHEN FACILITIES:

A.	Fryolators	____ No	____ Yes	If yes, how many	____
B.	Grills	____ No	____ Yes	If yes, how many	____
C.	Ovens	____ No	____ Yes	If yes, how many	____
D.	Tilt Kettles	____ No	____ Yes	If yes, how many	____
E.	Garbage Grinder	____ No	____ Yes	If yes, how many	____
F.	Three-Bay Pot Sink	____ No	____ Yes	If yes, how many	____
G.	Two-Bay Sink	____ No	____ Yes	If yes, how many	____
H.	Single-Bay Sink	____ No	____ Yes	If yes, how many	____
I.	Pre-rinse Sink	____ No	____ Yes	If yes, how many	____
J.	Dishwasher	____ No	____ Yes	If yes, how many	____
K.	Mop Sink	____ No	____ Yes	If yes, how many	____
L.	Wok Station	____ No	____ Yes	If yes, how many	____

5. **FATS, OILS, AND GREASE PRETREATMENT EQUIPMENT IS** ____ Currently Installed ____ Proposed.

6. PROVIDE THE FOLLOWING INFORMATION ON EACH GREASE TRAP. IF THERE IS MORE THAN ONE GREASE TRAP, PLEASE INCLUDE INFORMATION ON EACH GREASE TRAP ON ADDITIONAL PAGES.

___ Outdoor Passive, with a capacity of _____ gal ___ Indoor Mechanical, with a capacity of _____ gpm

___ Indoor Passive, with a capacity of _____ gpm ___ Don't Know _____

Installation Location _____

(i.e., under three-bay sink, in basement, or outside in-ground, etc.)

7. WHO IS RESPONSIBLE FOR COORDINATING MAINTENANCE OF FOG PRETREATMENT UNITS?

___ The Landlord of a leased Facility; ___ The Owner of a Business located in a leased Facility ___ The Business/ Facility Owner

8. HOW OFTEN IS THE FOG PRETREATMENT EQUIPMENT CLEANED? Please choose one:

___ Daily; ___ Quarterly; ___ Don't have a grease trap; ___ Other Frequency _____

(Attach a copy of the *Alternate FOG Pretreatment Equipment Installation or Alternate Maintenance Application* if applicable.)

FATS, OILS, AND GREASE PRETREATMENT PROGRAM REGISTRATION FORM (Page 2)

9. WHAT IS THE DISPOSAL METHOD FOR GREASE REMOVED FROM THE FOG PRETREATMENT UNIT?

___ Grease from AGRU is taken to an approved regional disposal site

___ Grease from AGRU is mixed with renderable grease

___ Grease Trap/Interceptor Cleaner pumps the outdoor tank and disposes of grease

___ Other, provide location _____

10. IF A CONTRACTOR CLEANS THE GREASE TRAP, PROVIDE THE COMPANY'S NAME AND PHONE NUMBER.

Company Name _____ Phone Number _____

11. DOES YOUR FACILITY RECYCLE GREASE WITH A RENDERER? ___ Yes ___ No

IF THE GREASE IS RENDERED, PROVIDE THE RENDERING COMPANY'S NAME AND PHONE NUMBER.

Company Name _____ Phone Number _____

ATTACH A SITE AND KITCHEN PLUMBING PLAN, GREASE TRAP OR AUTOMATIC GREASE RECOVERY UNIT DETAIL, AND SIZING CALCULATIONS SEE TAHD FOG PRETREATMENT REGULATIONS FOR DETAILS ON THESE ITEMS.

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

_____ _____

APPLICANT'S SIGNATURE **DATE**

_____

PRINT NAME

TAHD USE ONLY

o Approved Date _____

o Revise Reviewed by_____

REVIEW COMMENTS _____

ALTERNATE FOG PRETREATMENT EQUIPMENT INSTALLATION
OR ALTERNATE MAINTENANCE APPLICATION

Date Submitted _____

1. FACILITY NAME _____
STREET ADDRESS _____
PHONE No. _____

Please Indicate Business Mailing Address If Different From Above:

2. CONTACT _____ **STREET ADDRESS** _____
PHONE No. _____ **CITY/STATE/ ZIP** _____
FAX No. _____ _____

3. DOES THE FOOD SERVICE OWN ITS FACILITY? ___ YES ___ NO

4. NAME OF FOOD PREPARATION ESTABLISHMENT MANAGER / OWNER _____

5. PLEASE CHECK THE APPROPRIATE MENU CLASSIFICATION:

___ CLASS I – Commercially prepackaged foods and/or hot and cold beverages only.
___ CLASS II – Cold ready to eat commercially processed food and /or hot/cold beverages.
___ CLASS III – Preparation of hot food items which are consumed within 4 hours.
___ CLASS IV – Preparation of hot food items which are held for more than 4 hours.

If you need assistance in determining the appropriate classification please call T.A.H.D. @ (860) 489-0436.

6. IS FOG PRETREATMENT EQUIPMENT CURRENTLY INSTALLED AT YOUR FACILITY? ___ YES ___ NO

7. DOES THE INSTALLED FOG PRETREATMENT EQUIPMENT MEET THE 2005 FOG PRETREATMENT ORDINANCE? ___ YES ___ NO

8. WHAT IS THE REASON FOR REQUESTING APPROVAL OF ALTERNATE?

A ___ No cooking or washing of pots, pans, dishes, or utensils is done at this facility.

B ___ Kitchen and sanitary sewers are combined.
Approximate date of building construction is _____

C ___ Reduced pumping frequency is requested.
Available grease accumulation data from _____
Maximum Grease accumulation rate _____

D ___ Other _____

Applications for alternates must be accompanied by documentation of proposed equipment or maintenance.

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

TORRINGTON AREA HEALTH DISTRICT

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APPLICANT'S SIGNATURE

PRINT NAME

TAHD USE ONLY
O Approved Date _____
O Revise Reviewed by
_____

CHECKLIST FOR FOG PRETREATMENT

Registration for the Torrington Area Health District FOG Pretreatment Program is required for all Class III and Class IV Food Service Establishments.

_____ 1. Complete the Fats, Oils, and Grease Pretreatment Program Registration Form.

_____ 2. Attach site plan.

_____ 3. Attach a kitchen plumbing diagram.

_____ 4. Attach a detail sketch of the proposed or existing grease trap/interceptor.

_____ 5. Provide sizing calculations.

_____ 6. Attach a copy of the menu.

_____ 7.Where applicable, attach a copy of the *Alternate Grease Pretreatment Equipment Installation or Alternate Maintenance* A*pplication*.

_____8. Documentation required for the *Alternate Grease Pretreatment Equipment Installation or Alternate Maintenance* A*pplication* may include one or more of the following.

_____ A. Proof of installation of approved automatic grease/scum monitoring devices.

_____ B. Monthly monitoring records demonstrating total grease accumulation is less than ¼ of the liquid depth over six months.

_____ C. A copy of a signed and dated FOG Minimization Plan.

_____9. Sign all applications.

_____10. Include a check or money order for the amount of all registration fees made payable to **TAHD – FOG Pretreatment Program**.

Daily Operation and Maintenance Plan/Log for Automatic Grease Recovery Unit _____

Permit Number_____

Facility Name and Address_____

Month/Year _____ Contact Name and Phone _____

This grease trap is to be cleaned once each day. Grease removed from the unit is to be stored in the non-renderable grease container located_____. When the non-renderable container is approximately 2/3 full, the Manager is to call _____ at phone number (____)____-_____ to remove the contents.

DATE/TIME	INITIALS	EMPTY BASKET	CLEAN TROUGH	WIPER BLADES	GREASE VOLUME	DISPOSAL
1/						
2/						
3/						
4/						
5/						
6/						
7/						
8/						
9/						
10/						
11/						
12/						
13/						
14/						
15/						
16/						
17/						
18/						
19/						
20/						
21/						
22/						
23/						
24/						
25/						
26/						
27/						
28/						
29/						
30/						
31/						

Operation and Maintenance Plan/Log for Grease Trap _____
Permit Number_____
Facility Name and
Address_____
Contact Name _____ Phone Number _____

DATE	GREASE TRAP/INTERCEPTOR CLEANER	GREASE THICKNESS	VOLUME REMOVED
MARCH 2006			
JUNE 2006			
SEPTEMBER 2006			
DECEMBER 2006			
MARCH 2007			
JUNE 2007			
SEPTEMBER 2007			
DECEMBER 2007			
MARCH 2008			
JUNE 2008			
SEPTEMBER 2008			
DECEMBER 2008			
MARCH 2009			
JUNE 2009			
SEPTEMBER 2009			
DECEMBER 2009			
MARCH 2010			
JUNE 2010			
SEPTEMBER 2010			
DECEMBER 2010			
MARCH 2011			
JUNE 2011			
SEPTEMBER 2011			
DECEMBER 2011			
MARCH 2012			
JUNE 2012			
SEPTEMBER 2012			
DECEMBER 2012			

This grease trap is to be cleaned quarterly. The Manager is to call_____at phone number (___)____-_____ between the 1st and 15th of months shown above for servicing of the grease trap. Provide one copy of the Grease trap cleaner's service bill to accounting and place the second copy in the attached envelope. Return this form and the envelope to the shelf by the timecards.

RECORD OF GREASE MINIMIZATION ACTIVITIES

FACILITY NAME _____ Permit Number (s) _____

Date _____

Trainer: _____

Attendees:

_____

_____

_____

Topics Covered:

_____

_____

_____

_____

Status of Equipment:

_____

_____

_____

_____

_____

DOCUMENT 9A

EXAMPLE APPLICATION
AUTOMATIC GREASE RECOVERY UNIT

This section includes:

1. An example application package for an automatic grease recovery unit (AGRU) including application attachments (pages 9A-2 through 9A-12); and
2. Comments on each item required on the application are provided at the end of this section. This section is provided for guidance and clarification. The Comments Section included here is NOT part of the application package.

This example is for a school that was designed for 320 students. For schools and other facilities that have a rated capacity and set hours of operation, the design population should be used to prevent under sizing of the unit.

Torrington Area Health District

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"Promoting Health & Preventing Disease Since 1967"

1. FATS, OILS AND GREASE PRETREATMENT PROGRAM REGISTRATION FORM

FACILITY NAME: Terrill School

STREET ADDRESS: 32 Florida Lane, Mabel, CT 06000

2. ESTIMATED KITCHEN WATER USAGE PER YEAR: (Refer to water bill for this information.)

173,000 gallons or 23,000 cubic feet

3. IS FOOD COOKED OR ARE COOKING UTENSILS CLEANED AT YOUR FACILITY? X Yes ___ No

IF YOU ANSWERED NO TO THE ABOVE QUESTION, THE REMAINDER OF THE APPLICATION DOES NOT APPLY TO YOUR FACILITY. PLEASE RETURN THIS REGISTRATION FORM TO THE HEALTH DISTRICT. IF YOU ANSWERED YES PLEASE COMPLETE ALL QUESTIONS.

4. CHECK EACH OF THE ITEMS BELOW THAT ARE PRESENT IN YOUR KITCHEN FACILITIES:

A.	Fryolators	X	No		Yes	If yes, how many	
B.	Grills		No	X	Yes	If yes, how many	1
C.	Ovens		No	X	Yes	If yes, how many	2
D.	Tilt Kettles		No	X	Yes	If yes, how many	1
E.	Garbage Grinder	X	No		Yes	If yes, how many	
F.	Three-Bay Pot Sink		No	X	Yes	If yes, how many	1
G.	Two-Bay Sink		No	X	Yes	If yes, how many	1
H.	Single-Bay Sink		No	X	Yes	If yes, how many	2
I.	Pre-rinse Sink		No	X	Yes	If yes, how many	1
J.	Dishwasher		No	X	Yes	If yes, how many	1
K.	Mop Sink	X	No		Yes	If yes, how many	
L.	Wok Station		No	X	Yes	If yes, how many	1

5. IS THE PRETREATMENT EQUIPMENT ___ Currently Installed X Proposed

6. PROVIDE THE FOLLOWING INFORMATION ON EACH GREASE TRAP. IF THERE IS MORE THAN ONE GREASE TRAP, PLEASE INCLUDE INFORMATION ON EACH GREASE TRAP ON ADDITIONAL PAGES.

___ Outdoor Passive, with a capacity of ___ gal

X Indoor Mechanical, with a capacity of 25, 75, & 50 gpm

___ Indoor Passive, Capacity ___ gpm

___ Don't Know

Installation Location: AGRU#1 at pre-rinse station; AGRU#2 at 3-bay sink; AGRU#3 at tilt kettle

(i.e., under three-bay sink, in basement, or outside in-ground, etc.)

7. WHO IS RESPONSIBLE FOR COORDINATING MAINTENANCE OF FOG PRETREATMENT UNITS?

___ The Landlord of a leased Facility; ___ The Owner of a Business located in a leased Facility X The Business/ Facility Owner

8. HOW OFTEN IS THE FOG PRETREATMENT UNIT CLEANED? Please choose one:

X Daily; ___ Quarterly; ___ Don't have a grease trap; ___ Other Frequency ___

(Attach a copy of the *Alternate FOG Pretreatment Equipment Installation or Alternate Maintenance Application* if applicable.)

FATS, OILS AND GREASE PRETREATMENT PROGRAM REGISTRATION FORM (Page 2)

9. WHERE IS THE DISPOSAL LOCATION FOR GREASE REMOVED FROM THE FOG PRETREATMENT UNIT?

___ Trash

___ Mix with other grease stored on premise (i.e. fryolator grease, etc.)

X Grease Trap/Interceptor Cleaner disposes of grease

10. IF A CONTRACTOR CLEANS THE GREASE TRAP, PROVIDE THE COMPANY'S NAME AND PHONE NUMBER.

Company Name Rick's Removal Service Phone Number (203) 555-1125

11. DOES YOUR FACILITY RECYCLE GREASE WITH A RENDERER? X Yes ___ No

IF THE GREASE IS RENDERED, PROVIDE THE RENDERING COMPANY'S NAME AND PHONE NUMBER.

Company Name Hialeah Renderers Phone Number (860) 555-1031

ATTACH A SITE AND KITCHEN PLUMBING PLAN, GREASE TRAP OR AGRU DETAIL, AND SIZING CALCULATIONS. SEE TAHD FOG PRETREATMENT INFORMATION FOR DETAILS ON THESE ITEMS.

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

APPLICANT'S SIGNATURE

PRINT NAME

TAHD USE ONLY

O Approved Date _____

O Revise Reviewed by_____

REVIEW COMMENTS

AGRU Sizing information

AGRU #1
Dishwasher:
The dishwasher is used continuously from the beginning of lunch until all dishes, pots, pans and utensils have been cleaned. The unit is a 40-gallon dishwasher. The flow rate from this unit, per Table 11-2 of the Resource Document Number 11 is 25 gpm.

Therefore, the unit provided has a rate capacity of 25 gpm.

AGRU #2
Three-bay sink:
Each bay is 24" long by 24" wide by 12" deep. From Table 11-2 the 2-bay sink with dimensions 24" x 24" x 12" can be used provide the volume of a three bay sink with the same bay dimensions by 44.9 gpm x 3 bays/2 bays – 67.3 gpm. Flow from this unit for a 2-minute discharge period is 67.3 gpm/2 = 33.7 gpm.

Another way of performing the same calculation is,

$3(24" \times 24" \times 12") = 20{,}736\ in^3$

$20{,}736\ in^3 \times \frac{1\ gallon}{231\ in^3} = 89.8$ gallons (full capacity)

89.8 x 0.75 = 67.3 gallons (excluding water displaced by dishes)

67.3 gallons/ 2 minutes = 33.7 gpm

Automatic hood:
The manufacture of the automatic cleaning hood indicates that the water usage of the hood is 1 gpm/linear foot of hood length. The hood is 28 feet long. The controls of the hood allow it to be set to clean at a designated time of day. To reduce the size of the AGRU that will be installed under the three-bay sink, the hood will be set to operate at night when other kitchen equipment is not in operation.

Wok station:
The single wok station is used intermittently and for small groups. Typical use of the wok station would be to produce 30 meals on a given day. From Table 11-2 the flow rate is 20 gpm.

Adding the flow rate from the various fixtures to be connected to the AGRU, the total flow rate is found as,

Two-bay sink	33.7 gpm
Wok station	20 gpm
Total	53.7 gpm.

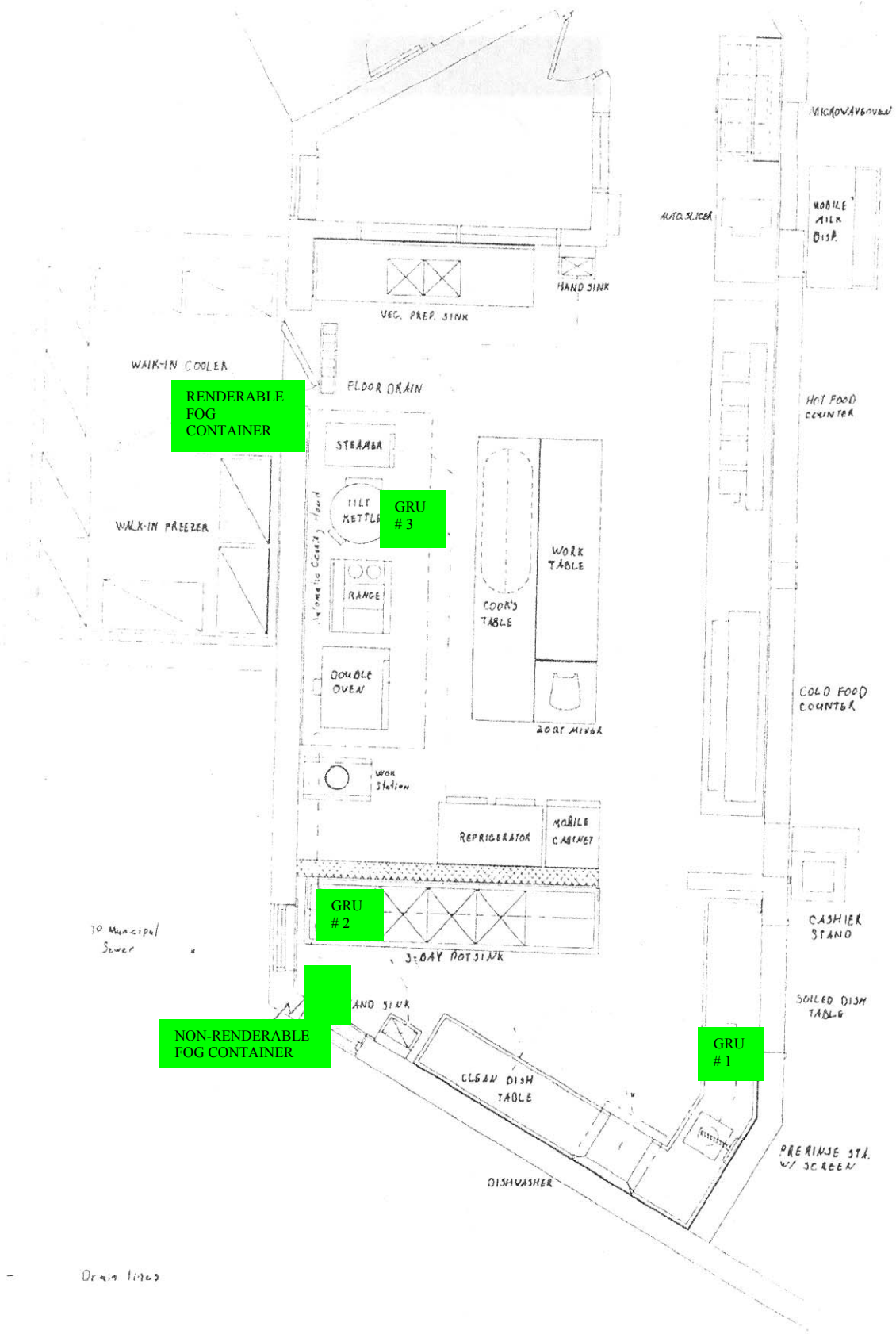
Automatic hood	28.0 gpm

The automatic hood will be set to operate at night when other kitchen equipment is not in use. AGRU #2 could be operated twice per day if the FOG collected during a single day becomes too large for single operation. The AGRU is sized for 75 gpm.

AGRU #3

This unit serves only the 40-gallon tilt kettle. Discharge from this unit is of low volume and intermittent.

The AGRU is sized for 50 gpm.

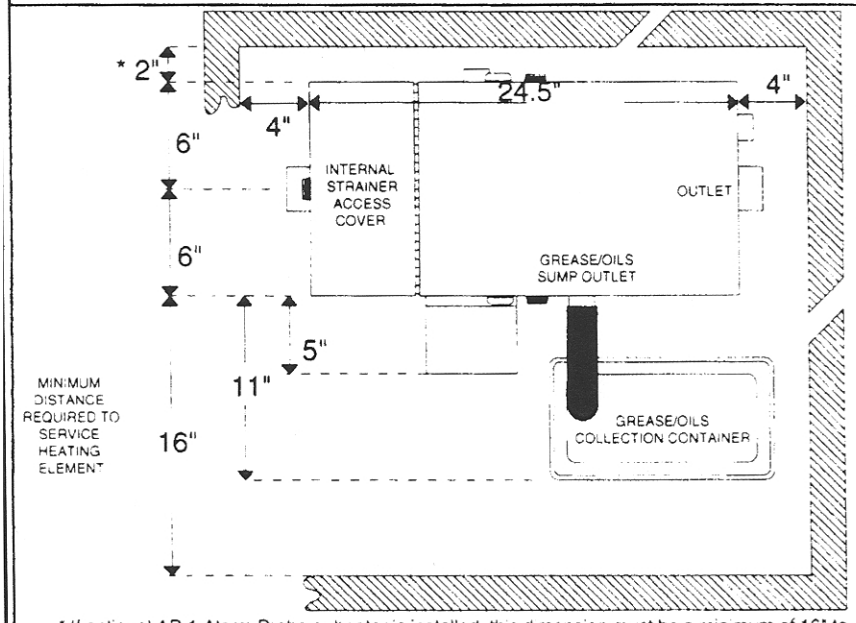

MICROWAVE OVEN
AUTO. SLICER
MOBILE MILK DISP.
HAND SINK
VEG. PREP. SINK
WALK-IN COOLER
FLOOR DRAIN
RENDERABLE FOG CONTAINER
HOT FOOD COUNTER
STEAMER
TILT KETTLE
GRU # 3
WALK-IN FREEZER
WORK TABLE
RANGE
COOK'S TABLE
DOUBLE OVEN
COLD FOOD COUNTER
20 QT MIXER
WOK Station
REFRIGERATOR
MOBILE CABINET
GRU # 2
CASHIER STAND
3-BAY POT SINK
SOILED DISH TABLE
NON-RENDERABLE FOG CONTAINER
GRU # 1
CLEAN DISH TABLE
PRERINSE STA. W/ SCREEN
DISHWASHER
Drain lines

Thermaco BIG DIPPER

BIG DIPPER® AUTOMATIC GREASE RECOVERY SYSTEM

"IS"

INSTALLATION INFORMATION



* If optional AP-1 Alarm Probe or heater is installed, this dimension must be a minimum of 16" to allow room for servicing.

DO . . .

READ instruction manual included with system before doing anything.

Install unit allowing for the minimum clearances shown.

Make sure the height above the Internal Strainer Access Cover is enough to remove the strainer.

Use optional **PS-10** Grease/Oils Pump for remote installations.

Make piping connections with rubber "No Hub" connectors.

Keep outlet piping as straight as possible. Use only "sweep" connections.

Install vent on outlet piping.

Fill the tank with water before energizing the power to the motor and heater.

Set Programmable Time Controllers for proper operating times.

DON'T . . .

Install "P" trap on outlet connection of tank. (Note: the unit already has an internal gas trap).

Reduce pipe size on outlet piping.

Note:
Installations must comply with all applicable local, state, and national codes for your area.

Job Specification:

Grease and oil separator(s) shall be Thermaco ***BIG DIPPER*** automatic grease/oil recovery system as manufactured by Thermaco, Inc., Asheboro, North Carolina as noted on plans.

Separator Specifications:

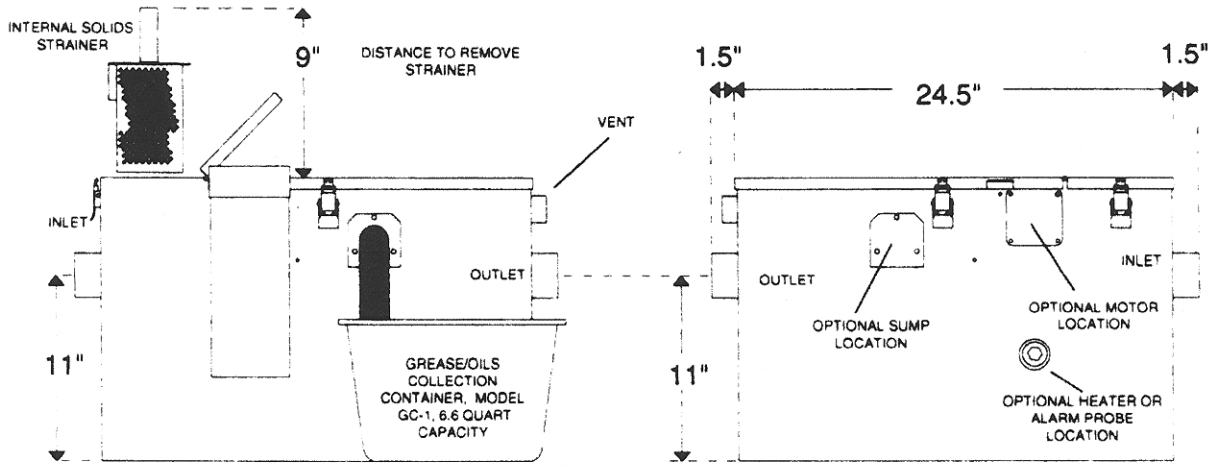
Furnish and install __ Thermaco ***BIG DIPPER*** Model No. W-250-IS, bright finish type 304 stainless steel automatic self-cleaning grease and oil recovery separator(s) for floor mounted or partially recessed installation, rated at 25 gallons per minute peak flow, 53.4 pounds of grease capacity and including as an integral part of the unit, 1 rotating gear hydrophobic wheel assembly for automatic grease/oil removal, an integral flow control device, self-regulating enclosed electric immersion heater, a vessel vent, an integral gas trap, an integral programmable 24 hour multi-event time control, a field reversible motor location, a field reversible grease/oil sump outlet pipe, quick release stainless steel lid clamps, a gasketted and fully removable 304 stainless steel lid with safety switch, a hinged lift out strainer access, an internal stainless steel strainer basket for collection of coarse solids, and a separate grease and oils collection container. Electric assembly shall be tested to comply with pertinent sections of the Standards for Safety ANSI/UL 73 and/or ANSI/UL 1004. Electric motor shall be equipped with thermal overload protection with automatically resettable switch.

Thermaco BIG DIPPER

BIG DIPPER® AUTOMATIC GREASE RECOVERY SYSTEM

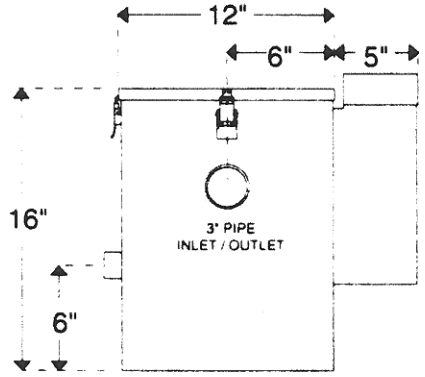
"IS"

Model: W-250-IS



FRONT VIEW

BACK VIEW



INLET END

FEATURES

Fully automatic self-cleaning cycle. Removes collected grease/oils from tank without any operator assistance.

Reversible electrical enclosure and grease trough design allows easier installation.

Constructed of corrosion resistant materials suitable for installation in virtually any location.

Comes complete with Grease Collection Container and 24 hour Time Control.

TECHNICAL DATA

Materials:	16 Gauge, 304 Stainless Steel, Bright Finish
Electrical:	115 VAC 60 Hz 1500 Watts (13 amps)
Maximum Inlet Flow Rate:	
Number of Skimming Wheels:	1
Skimming Rate:	30 Pounds Per Hour
Grease Retention Capacity:	53.4 Pounds
Internal Solids Strainer Capacity:	1.16 Gallons

AGI-15 - 100 Automatic Grease Interceptors

Lowe Engineering

UL LISTED
1D42
WASTE DISPOSER

AGI Automatic Grease Interceptors

Lowe Engineering Model AGI Automatic Grease Interceptors are designed to intercept and remove large quantities of fats, oils, and grease (FOG) discharged from food service facilities and large commercial/institutional kitchens, which might interfere with the proper drainage and treatment of municipal wastewater.

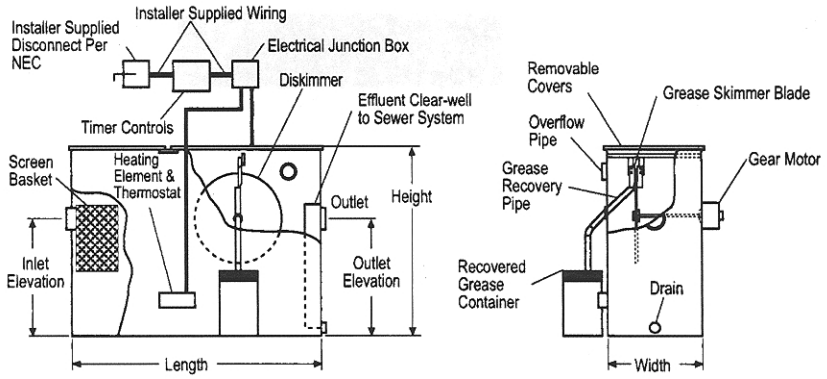
Model AGI Automatic Grease Interceptors are relatively small, allowing installation in a kitchen under a sink or other limited space. Model AGI Automatic Grease Interceptors incorporate an electrically powered grease-skimming device.

During operation, the grease is separated by gravity floatation. Since grease is lighter than water, it floats and can be skimmed off the top surface of the water on a time or event controlled basis. The skimmed grease is essentially scraped or wiped from the skimmer surface, removed from the interceptor, and collected in a waste disposal container. The accumulated grease and oils can be disposed of or recycled.

Proven Performance

- Recovers, removes and recycles fats, oils and grease.
- Tested by the U.S. Testing Co. to conform to Plumbing and Drainage Institute (PDI) PDI-G101 (IAMPO PS 13-89)
- Extremely low maintenance - only one moving part!
- Quality design and construction
- The Lowe Engineering Automatic Grease Interceptor - The Original Automatic - Still the best available interceptor!

General Arrangement



Model Capacity	Dimensions Length	Width	Height	Static Water (Gallons)	[1]Grease Holding Capacity (lbs.)	Inlet / Outlet Diameter	Inlet / Outlet Height
AGI- 15	1'10.25"	1'0"	1'4.5"	9	50	2"/2"	9"/9"
AGI- 20	2'2.25"	1'2"	1'6"	13	69	2"/2"	9"/9"
AGI- 25	2'9"	1'4"	1'6"	17	91	3"/3"	9"/9"
***AGI- L25**	3'4"	1'10"	1'6"	23	124	3"/3"	6"/6"
***AGI- H25**	3'0"	1'5"	1'7"	19	82	3"/3"	10"/10"
AGI- 30	3'0"	1'5"	1'7"	23	124	3"/3"	17"/17"
AGI- 35	3'0"	1'6"	2'2"	44	253	3"/3"	17"/17"
AGI- 50	3'4"	1'6"	2'8.25"	50	292	4"/4"	18"/18"
AGI- 100	5'0"	1'8"	2'11.75"	104	636	4"/4"	22"/22"

[1] National Plumbing Code requires a minimum 2 lbs. of grease retention for each GPM of flow. Grease holding capacity at breakdown is determined by a minimum 85% efficiency rating in real life applications and installed according to specification.
* L - Low inlet/outlet height, H - High inlet/outlet height.
** Inlet can be directed through top or back of unit. Minimal height adjustment can be specified - consult factory for assistance.

Advantages

- Removes and recovers nearly 100% of the fats, oils and grease from kitchen and food processing drains.
- Removes grease automatically - timed or by event.
- Constructed of stainless steel and other corrosion resistant materials - suitable for installation in almost any location.
- Includes an electric immersion heater to maintain grease temperature and consistancy for effective removal.
- Recovered grease is collected in an external Waste Grease Container.
- Easy access to interior for maintenance and cleaning.
- Eliminates costs of cleaning pipes and/or holding tanks inside and outside of the building.
- Removable screen basket collects and contains solids.
- Automatic timing device assures removal of grease on a daily basis.
- Removal of grease quickly eliminates decomposition and rancid chemical reactions.
- Reduces Total Suspended Solids (TSS) and Biological Oxygen Demand (BOD) loading.
- Recycled grease conforms to most environmental protection programs.
- Extensive range of standard sizes and capacities; Custom manufacuring is available.

Please visit us at www.highlandtank.com

One Highland Road
Stoystown, PA 15563
814-893-5701
FAX 893-6126

4535 Elizabethtown Road
Manheim, PA 17545
717-664-0600
FAX 664-0617

958 19th Street
Watervliet, NY 12189
518-273-0801
FAX 273-1365

2700 Patterson Street
Greensboro, NC 27407
336-218-0801
FAX 218-1292

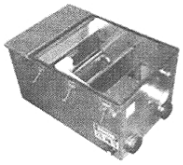
2225 Chestnut Street
Lebanon, PA 17042
717-664-0602
FAX 664-0631

1510 Stoystown Road
Friedens, PA 15541
814-443-6800
FAX 444-8662

Ecologix Environmental Systems

Automatic Grease Recovery System (AGRS)

(AGRS) Features PDF | Electronic Grease Level Detector (EGLD) | System Diagram PDF | Internal Compents Diagram PDF | AGRS Models & Dimensions | AGRS Sizing Methods | AGRS Operating Manual



Automatic Grease Recovery System (AGRS)

The AGRS utilizes the patented Electronic Grease Level Detector (EGLD) to automatically detect and remove nearly 100% of all fats, oil and grease routinely discharged from commercial kitchens, restaurants and food processing facilities. The AGRS combines industry proven methods, superior design and the quality assurance that you deserve.

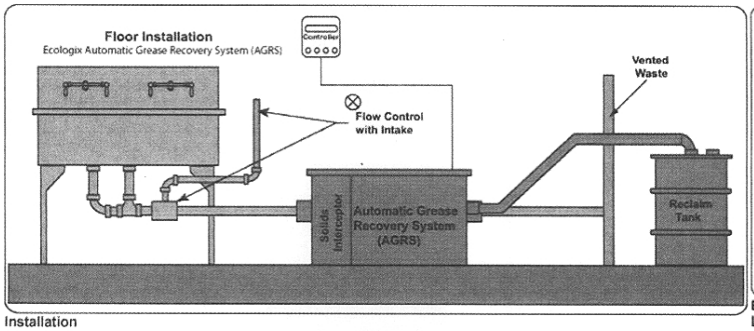
Self Cleaning

The AGRS offers superior operating features to those of any other competitive product on the market. The controller features an LCD Display which clearly displays the system's operating status and easy to use controls. The programmable controller senses the amount of grease held in the AGRS storage tank. Once the amount reaches the unit's pre-set level the controller will automatically activate the heating elements to liquefy the congealed grease. When the grease is liquefied to a set temperature, the controller will activate the internal pump, which discharges the grease to a reclaim tank. The data is then sent to a NEMA-4 encased controller with an LCD display and LED indicators to provide current system status. The microprocessor records and displays clean cycles on a daily, weekly, monthly and yearly basis.

Quality Construction

Constructed of 304 grade 12gauge Stainless Steel with integrated solids interceptor, removable basket, stainless steel draw latches and non-adhesive "U" channel gasket. May be floor mounted, partially recessed, or below grade in vaulted enclosure.

Click to view AGRS Models & Dimensions



Electronic Grease Level Detector (EGLD)

Installation

The AGRS is as simple to install as it is operate. The plumbing installation of the unit is the same as any other grease interceptor. The controller is encased in NEMA-4 rated enclosure that mounts directly to the wall with four screws. Power requirements are 220/208 VAC, single phase, with a ground fault interrupter (GFI). All electrical components are safe reliable and UL listed.

AGRS Selection Table

Model(GPM)	Grease Lbs.	Inlet Size
AGRS 25	50	2"
AGRS 35	70	2"
AGRS 75	150	3"
AGRS 100	200	3"
AGRS 150	300	4"
AGRS 200	400	4"
AGRS 250	500	5"
AGRS 350	700	5"
AGRS 500	1000	6"

Features:

- Fully automatic Grease Recovery System - (Containment and Removal)
- Patented probe measures and monitors grease levels.
- Controller has permanent memory in the event of power loss. The microprocessor records clean cycles, displays current status, sounds alarms and fully operates the AGRS.
- Heating elements liquefy congealed grease within the AGRS.
- Integral Solids Interceptor.
- High velocity pump discharges grease into a remote reclaim tank.
- AGRS manufactured in 12 gauge stainless steel.
- Controller encased in NEMA 4 rated enclosure.
- Optional modem feature to monitor unit from remote location.

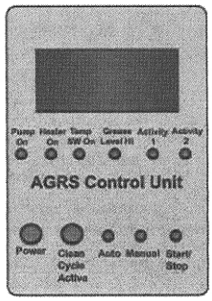
Options:

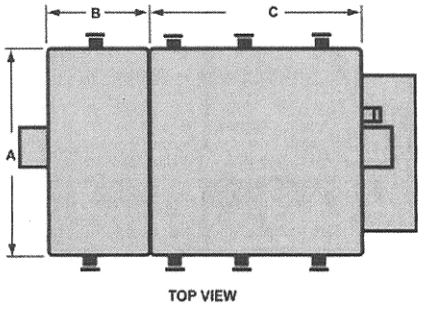
- Reclaim Tank Alarm
- Extended Warranty Package -Powder Coated Steel Interceptor
- 15 Gallon Stainless Reclaim Tank
- Automatic Solids Interceptor -55 Gallon Stainless Reclaim Tank
- Recessed Adjustable Frame and Cover
- Remote Monitoring Package -Macerator Pump for AGRS 25 through AGRS 75

Sizing Table for the AGRS		
Drain Outlet or Trap Size	Drainage Fixture Unit Valve	Drainage GPM Equivalent
1 - 1/4"	1	7.5
1 - 1/2"	2	15.0
2"	3	22.5
2 - 1/2"	4	30.0
3"	5	37.5
4"	6	45.0

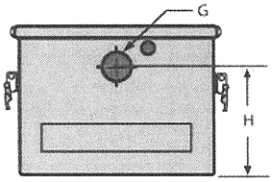
Sizing the AGRS is based on volume of wastewater in gallons per minute (GPM) that can be discharged from the drainage fixtures and equipment to be served. Selection of the AGRS is dependent on the AGRS rated capacity in GPM, which must be suitable to handle the drainage flow requirement. The inlet and the outlet size of the selected AGRS determine the size of the connecting pipe. The National Plumbing code and other codes list fixture-unit values for various plumbing fixtures. For fixtures not listed, the code will show a fixture-unit value based on the fixture outlet size or trap size. **(see sizing table)**

Ecologix Automatic Grease Recovery System (AGRS)

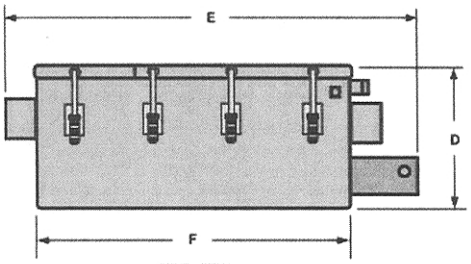




TOP VIEW



FRONT VIEW

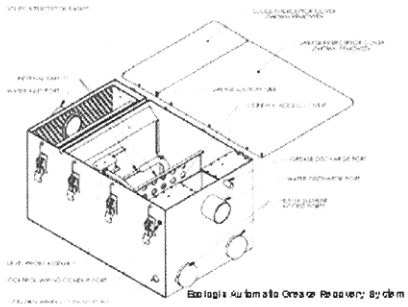


SIDE VIEW

STANDARD OPTIONS
15 Gal. Stainless Reclaim Tank
55 Gal. Stainless Reclaim Tank
55 Gal. Steel Reclaim Tank

ADDITIONAL OPTIONS
Powder coated steel interceptor
Automatic solids interceptor
Recessed adj. frame & cover
Remote monitoring package
Extended warranty package

MODEL	GPM	LBS.	A	B	C	D	E	F	G	H
AGRS 25	25	50	24 3/8"	9"	23"	16"	32 3/8"	25 5/8"	2"	11"
AGRS 35	35	70	24 3/8"	9"	24 3/8"	20"	38"	31 1/2"	4"	15 1/2"
AGRS 75	75	150	25 7/8"	9"	43 3/4"	26"	53 1/2"	46 3/4"	4"	21 1/2"
AGRS 100	100	200	35"	9"	55"	31"	64 3/4"	58"	4"	23"
AGRS 150	150	300	39"	9"	66 1/2"	37 1/4"	77"	69 1/4"	4"	32"
AGRS 200	200	400	43"	9"	75 3/4"	49"	82"	77"	6"	31 1/2"
AGRS 250	250	500	47"	9"	72"	51"	88"	82"	6"	44"
AGRS 350	350	700	47"	9"	80"	51"	96"	90"	6"	44"
AGRS 500	500	1000	47"	9"	100"	51"	126"	120"	6"	44"



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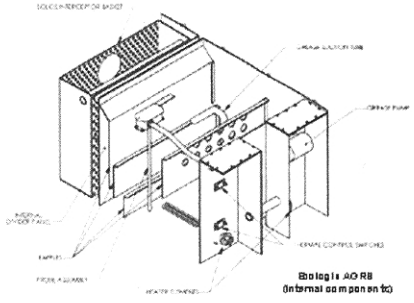

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Activated Carbon | Air Purification | Bag Filters | Chemicals | Dissolved Air Flotation | Dust Collection | Evaporators | Grease Traps | Flocculation | Inline Filter Vessels | Odor Control | Ozone | Oil Water Separators | Sewage Systems | Smog & Oil Mist | Liquid and Vapor Phase Vessels | Wet Scrubbers

FOG MINIMIZATION PLAN
FOR
TERRILL SCHOOL

1. **Dry clean-up will be used;** Food and grease from all pots, pans, and cooking and eating utensils will be scraped into the trash prior to entering the pre-rinse station or pot sinks.
2. **Garbage grinders;** Garbage grinders will not be installed in the kitchen at this facility.
3. **Strainers will placed in all drain lines;** Drain strainers will be placed in all prep sinks, hand sinks, pot sinks, wok station drains, floor drains, and dish table drains. Material collected in these strainers will be discarded in the trash.
4. **Signs will be posted at all sinks;** Signs will be placed above each sink stating activities that are permitted at that sink.
5. **Used grease will be stored according to whether it is renderable or non-renderable FOG;** Waste grease generated during cooking that can be removed from the cooking vessel by pouring will be placed in the renderable FOG container.
6. **The Services of a Renderer will be used;** Hialeah Renderers has been employed to remove renderable grease from the facility as needed.
7. **The Services of a Grease Trap/Interceptor Cleaner will be used;** Rick's Removal has been employed to remove non-renderable grease from the facility weekly.
8. **Storage of used FOG;** The renderable FOG container will be placed in the walk-in cooler.
9. **Hot water temperature;** The water temperature will remain below 150°F.
10. **AGRUs will be cleaned daily;** All AGRUs will be cleaned at the start of each day. Each cleaning of the AGRUs will be recorded in the AGRU maintenance logbook.
11. **Area around AGRUs;** The area around the AGRU will be maintained free of other equipment and supplies
12. **Training of kitchen staff;** All new kitchen staff will receive training in FOG minimization techniques in addition to other kitchen procedures.
13. **Exhaust hood filter cleaning;** The exhaust hood at this site is self-cleaning. The drain from this unit is connected to an AGRU.
14. **Tilt Kettle cleaning;** Food remaining in the tilt kettle after serving will be drained from the kettle and discarded in the trash. Only wash water will be drained to AGRU #3. The FOG collected in AGRU#3 will be deposited in the non-renderable FOG collection container for removal by Rick's Removal.

_____ _____

APPLICANT'S SIGNATURE **DATE**

GUIDANCE AND COMMENTS ON COMPLETION OF THE AGRU APPLICATION PACKAGE

The following notes refer to questions on the attached AGRU example application.

Fats, Oils, and Grease Pretreatment Program Registration Form

1. **Facility Name/Street Address.** The name of the facility preparing the food and the street address of the facility should be given. This information will be entered into the Fats, Oils, and Grease Pretreatment Program database for tracking purposes.

2. **Estimated kitchen water usage per year.** In this example, the water bill is available; however, it includes water usage in other parts of the school. Therefore, the water usage in the kitchen needs to be determined separately from the rest of the school. The calculation for water usage in a school is as follows.

   The school is in session 9 months/year, 20 days/month for a total of 180 days/year

   320 students x 3 gallons/student/day x 180 days/year = 172,800 gallons/year.

   $\frac{172{,}800 \text{ gallons}}{7.481 \text{gallons/ft}^3} = 23{,}100 \text{ ft}^3$.

3. **Is food cooked or are cooking utensils cleaned at your facility.** Some facilities may serve food that is cooked at another location then brought to a site where it is held for a period of time before serving. In addition to not cooking at the facility, if no pots, pans, dishes, or utensils are cleaned on-site (if they are returned to the location where cooking occurs), a grease trap would not be required at that facility.

4. **Check each of the items that are present in your kitchen facilities.** All equipment and fixtures installed in the kitchen have been identified on the application and on the kitchen-plumbing diagram so that the permit reviewer can determine if all appropriate fixtures are connected to FOG pretreatment equipment.

5. **Is the pretreatment equipment currently installed or proposed.** This application is used for both existing facilities and new construction.

6. **Type of grease trap, capacity, and location.** The type of trap and volume are to be recorded on the application. The sizing calculations for all fixtures connected to each AGRU must be provided as an attachment to the application.

7. **Who is responsible for coordinating maintenance of FOG pretreatment units?** Many food preparation establishments rent their facility. These facilities are encouraged to have a written agreement with the property owner concerning FOG pretreatment equipment to ensure access to outdoor units for routine cleaning and to ensure maintenance on structural items or other arrangements as are appropriate for the circumstances.

8. **How often is the FOG pretreatment unit cleaned?** AGRUs are to be cleaned each day the facility is in operation. Fixtures such as tilt kettles or wok stations may not be used everyday. AGRUs serving this equipment must be cleaned when any connected fixture is used.

9. **Where is the disposal location for grease removed from the FOG pretreatment unit?** Grease removed from AGRUs is relatively clean and may be recycled by some renderers. Only after discussing the options with your render should the AGRU grease be added to a renderable grease container. In some locations, wastewater haulers will accept this material.

10. **If a Contractor cleans the grease trap, provide the company's name and phone number.** Provide the name of the Contractor(s) that are providing FOG removal services will enable the application reviewer to track those companies that are providing services in the area.

11. **Does your facility recycle grease with a renderer? If the grease is rendered, provide the rendering company's name and phone number.** Providing the name of the Contractor(s) that are providing FOG removal services will enable the application reviewer to track those companies that are providing services in the area.

Attachments
Kitchen Plan
AGRU Details
Automatic Cleaning Hood Details
FOG Minimization Plan

DOCUMENT 9B

OUTDOOR EXAMPLE APPLICATION

This section includes:

1. An example application package for an outdoor passive grease interceptor with application attachments; and
2. Comments on each item required on the application are provided at the end of this section. This section is provided for guidance and clarification. It is not part of the application package.

This example is for a school that was designed for 320 students. For schools and other facilities that have a rated capacity and set hours of operation, the design population should be used to prevent under sizing of the unit. This application includes an application for Alternate Maintenance. Applicable attachments are included.

See the Checklist for FOG Pretreatment for a complete listing of supporting documents that may be required.

FATS, OILS, AND GREASE PRETREATMENT PROGRAM REGISTRATION FORM

1. **FACILITY NAME** Terrill School

   STREET ADDRESS 32 Florida Lane, Mabel, CT 06000

2. **ESTIMATED KITCHEN WATER USAGE PER YEAR:** (Refer to water bill for this information.)

   173,000 gallons or 23,000 cubic feet

3. **IS FOOD COOKED OR ARE COOKING UTENSILS CLEANED AT YOUR FACILITY?** X Yes ___ No

IF YOU ANSWERED NO TO THE ABOVE QUESTION, THE REMAINDER OF THE APPLICATION DOES NOT APPLY TO YOUR FACILITY. PLEASE RETURN THIS REGISTRATION FORM TO THE HEALTH DISTRICT. IF YOU ANSWERED YES PLEASE COMPLETE ALL QUESTIONS.

4. CHECK EACH OF THE ITEMS BELOW THAT ARE PRESENT IN YOUR KITCHEN FACILITIES:

A.	Fryolators	No		Yes	If yes, how many	
B.	Grills	No	X	Yes	If yes, how many	1
C.	Ovens	No	X	Yes	If yes, how many	2
D.	Tilt Kettles	No	X	Yes	If yes, how many	1
E.	Garbage Grinder	No		Yes	If yes, how many	
F.	Three-Bay Pot Sink	No	X	Yes	If yes, how many	1
G.	Two-Bay Sink	No	X	Yes	If yes, how many	1
H.	Single-Bay Sink	No	X	Yes	If yes, how many	2
I.	Pre-rinse Sink	No	X	Yes	If yes, how many	1
J.	Dishwasher	No	X	Yes	If yes, how many	1
K.	Mop Sink	No		Yes	If yes, how many	
L.	Wok Station	No	X	Yes	If yes, how many	1

5. **FATS, OILS, AND GREASE PRETREATMENT EQUIPMENT IS** X Currently Installed ___ Proposed.

6. PROVIDE THE FOLLOWING INFORMATION ON EACH GREASE TRAP. IF THERE IS MORE THAN ONE GREASE TRAP, PLEASE INCLUDE INFORMATION ON EACH GREASE TRAP ON ADDITIONAL PAGES.

X Outdoor Passive, with a capacity of 2,000 gal ___ Indoor Mechanical, with a capacity of ___ gpm

___ Indoor Passive, with a capacity of ___ gpm ___ Don't Know ___

Installation Location Between kitchen service drive and the kitchen, by the dumpsters

(i.e., under three-bay sink, in basement, or outside in-ground, etc.)

7. WHO IS RESPONSIBLE FOR COORDINATING MAINTENANCE OF FOG PRETREATMENT UNITS?

___ The Landlord of a leased Facility; ___ The Owner of a Business located in a leased Facility X The Business/ Facility Owner

8. HOW OFTEN IS THE FOG PRETREATMENT EQUIPMENT CLEANED? Please choose one:

___ Daily; ___ Quarterly; ___ Don't have a grease trap; X Other Frequency 2/year

(Attach a copy of the *Alternate FOG Pretreatment Equipment Installation or Alternate Maintenance Application* if applicable.)

FATS, OILS, AND GREASE PRETREATMENT PROGRAM REGISTRATION FORM (Page 2)

9. WHAT IS THE DISPOSAL METHOD FOR GREASE REMOVED FROM THE FOG PRETREATMENT UNIT?

___ Grease from AGRU is taken to an approved regional disposal site

___ Grease from AGRU is mixed with renderable grease

X Grease Trap/Interceptor Cleaner pumps the outdoor tank and disposes of grease

___ Other, provide location _____

10. IF A CONTRACTOR CLEANS THE GREASE TRAP, PROVIDE THE COMPANY'S NAME AND PHONE NUMBER.

Company Name Rick's Removal Service Phone Number (203) 555-1125

11. DOES YOUR FACILITY RECYCLE GREASE WITH A RENDERER? X Yes ___ No

IF THE GREASE IS RENDERED, PROVIDE THE RENDERING COMPANY'S NAME AND PHONE NUMBER.

Company Name Hialeah Renderers Phone Number (860) 555-1031

ATTACH A SITE AND KITCHEN PLUMBING PLAN, GREASE TRAP OR AUTOMATIC GREASE RECOVERY UNIT DETAIL, AND SIZING CALCULATIONS SEE TAHD FOG PRETREATMENT REGULATIONS FOR DETAILS ON THESE ITEMS.

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

_____ _____

APPLICANT'S SIGNATURE **DATE**

_____

PRINT NAME

TAHD USE ONLY

o Approved Date _____

o Revise Reviewed by_____

REVIEW COMMENTS

ALTERNATE FOG PRETREATMENT EQUIPMENT INSTALLATION
OR ALTERNATE MAINTENANCE APPLICATION **Date Submitted** 10-4-02

1. FACILITY NAME Terrill School
STREET ADDRESS 32 Florida Lane Mabel, CT 06000
PHONE No. (203) 860-1000

Please Indicate Business Mailing Address If Different From Above:

2. CONTACT Mr. J. Baker **STREET ADDRESS** 30 Florida Lane
PHONE No. (203) 860-1100 **CITY/STATE/ ZIP** Mabel, CT 06000
FAX No. (203) 860-0000

3. DOES THE FOOD SERVICE OWN ITS FACILITY? X YES ___ NO

4. NAME OF FOOD PREPARATION ESTABLISHMENT MANAGER / OWNER Mr. J. Baker, Manager

5. PLEASE CHECK THE APPROPRIATE MENU CLASSIFICATION:
___ CLASS I – Commercially prepackaged foods and/or hot and cold beverages only.
___ CLASS II – Cold ready to eat commercially processed food and /or hot/cold beverages.
X CLASS III – Preparation of hot food items which are consumed within 4 hours.
___ CLASS IV – Preparation of hot food items which are held for more than 4 hours.
If you need assistance in determining the appropriate classification please call T.A.H.D. @ (860) 489-0436.

6. IS FOG PRETREATMENT EQUIPMENT CURRENTLY INSTALLED AT YOUR FACILITY? X YES ___ NO

7. DOES THE INSTALLED FOG PRETREATMENT EQUIPMENT MEET THE 2005 FOG PRETREATMENT ORDINANCE? X YES ___ NO

8. WHAT IS THE REASON FOR REQUESTING APPROVAL OF ALTERNATE?
A ___ No cooking or washing of pots, pans, dishes, or utensils is done at this facility.

B ___ Kitchen and sanitary sewers are combined.
Approximate date of building construction is _____

C ___ Reduced pumping frequency is requested.
Available grease accumulation data from 6-18-01 to 6-10-02
Maximum Grease accumulation rate 5.3 inches/quarter

D X Other Facility operates 9 months per year and grease trap is twice the required volume.

Applications for alternates must be accompanied by documentation of proposed equipment or maintenance.

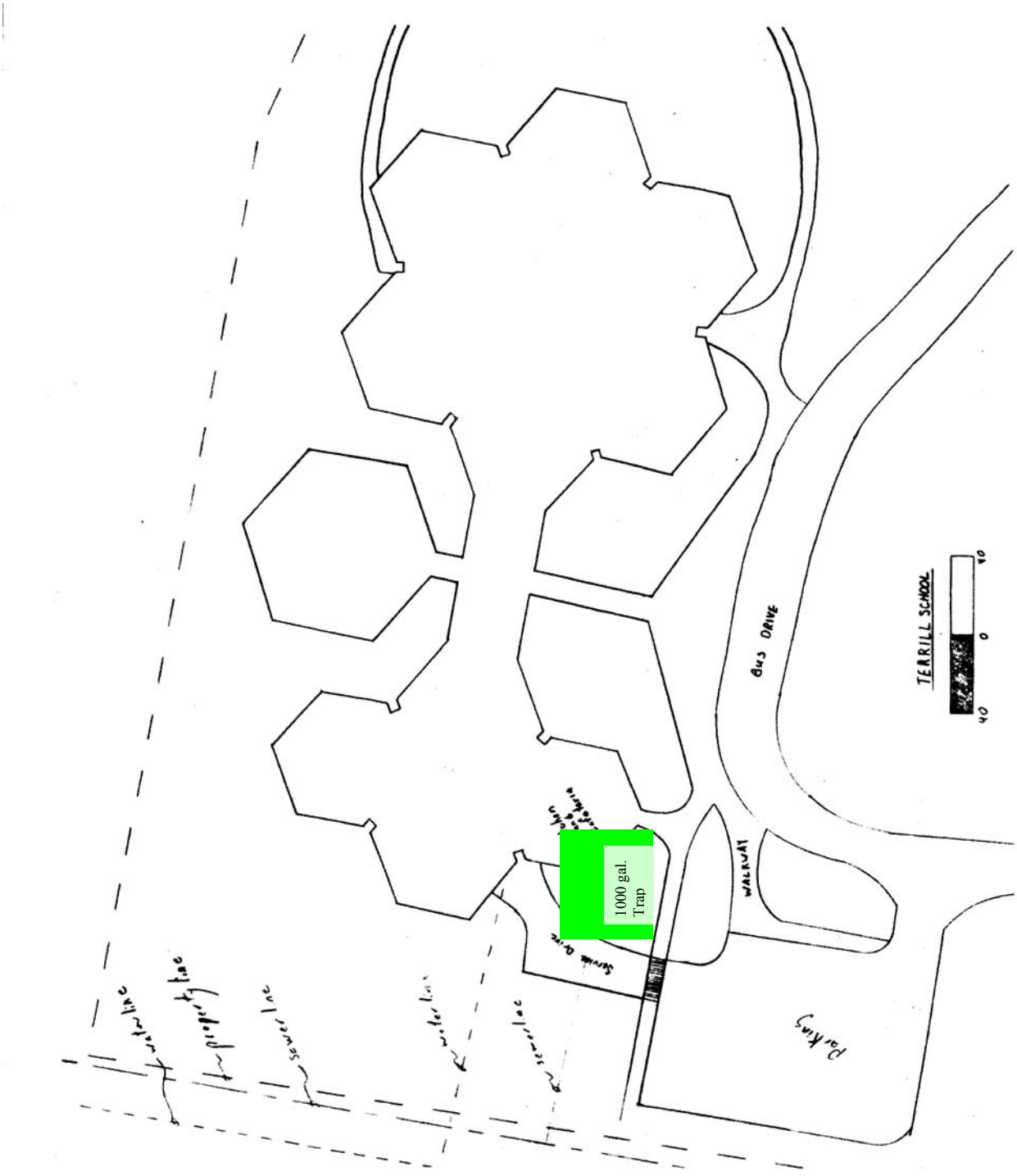
I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

APPLICANT'S SIGNATURE

PRINT NAME

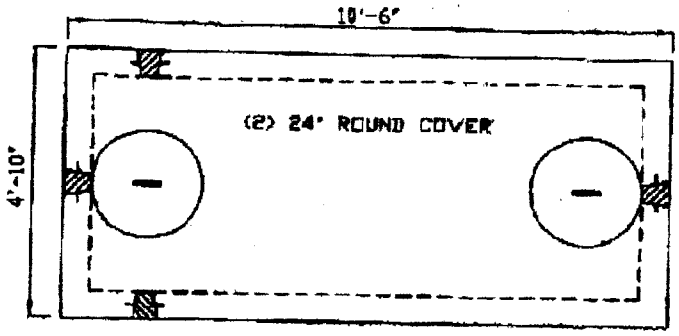
TAHD USE ONLY
○ Approved
○ Revise
Date: _____
Reviewed by:
_____

1000 Gallon
1000 Gallon



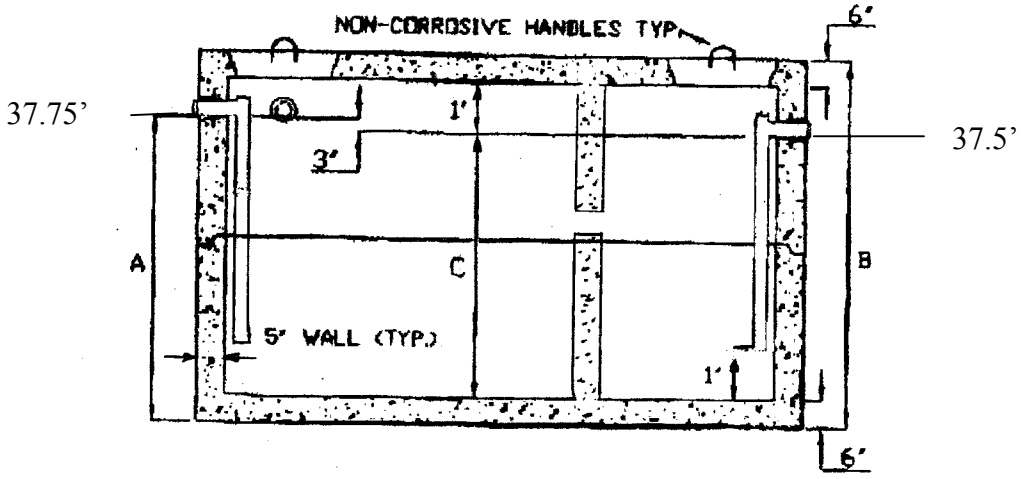
Site Plan

Joe's Precast Products, Inc.
79 Maple Avenue
Sardis, CT 06999
(230) 860- 9999



PLAN VIEW

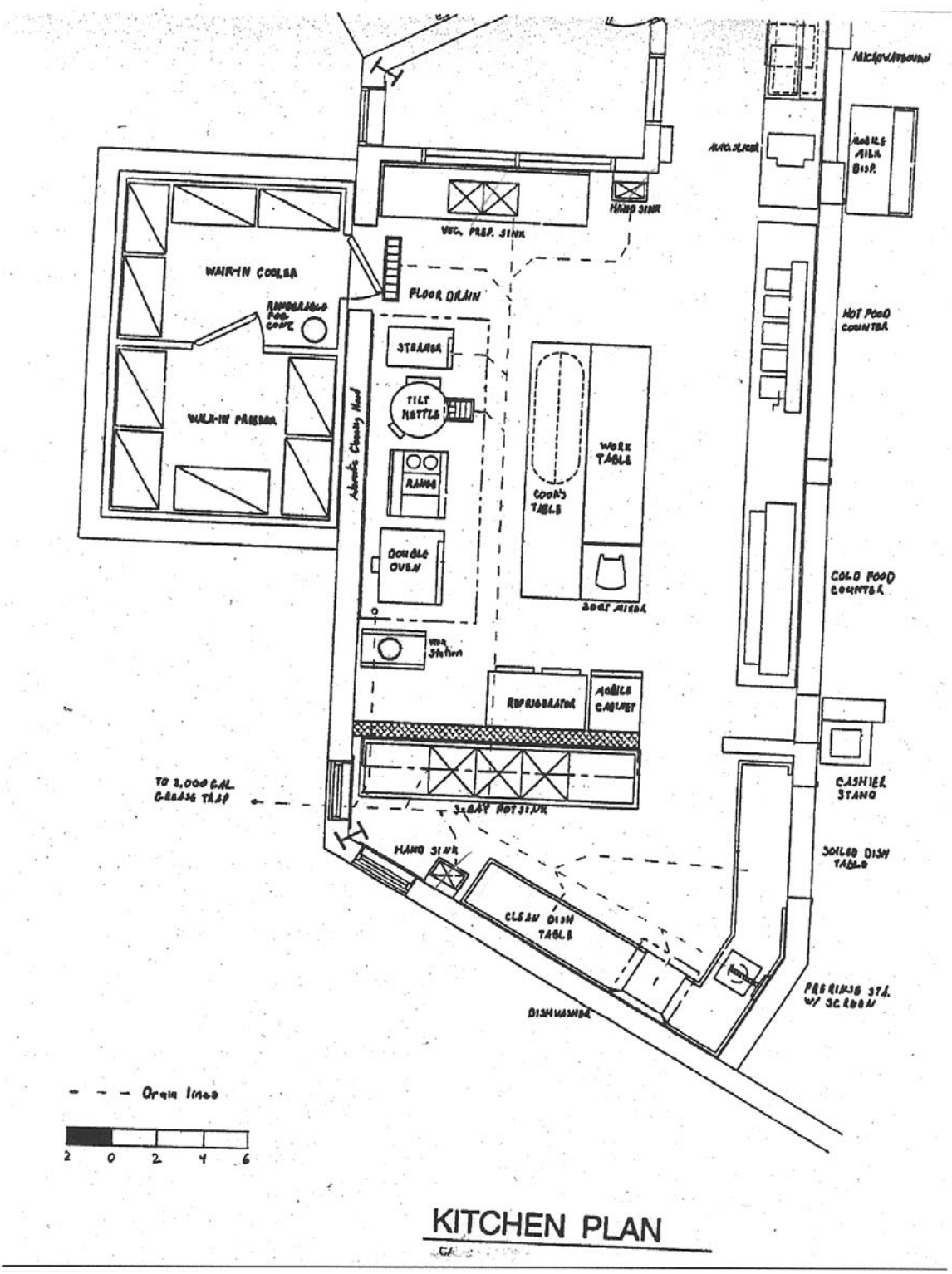
Grade 40'



ELEVATION

DESIGN NOTES
1. CONCRETE-5000 PSI @ 28 DAYS
2. REINFORCEDMENT-ASTM, A-615, GR 60
3. LOADING-HS20-44
4. JOINT-ASTM C-990-91 BUTLY SEALANT
5. BAFFLE TEE'S SUPPLIED BY OTHERS

PRODUCT	A	B	C
1000 GALLON	4'-3"	5'-6"	3'-6"
1250 GALLON	5'-1"	6'-4"	4'-4"
1500 GALLON	5'-11"	7'-2"	5"-2"
4' X 9'8" GREASE TRAP			



KITCHEN PLAN

Sizing Calculations

The Terrill School is designed for 300 students plus a staff of 20. The cafeteria would therefore prepare a maximum of 320 meals per day.

(320 meals/day) x (a maximum of 3 gallons/meal of water used) = 960 gallons.

The existing grease trap has a volume of 2,000 gallons which is twice the minimum volume required under the FOG Pretreatment Program.

FOG MINIMIZATION PLAN
FOR
TERRILL SCHOOL

1. **Dry clean-up will be used;** Food and grease from all pots, pans, and cooking and eating utensils will be scraped into the trash prior to entering the prerinse station of pot sinks.
2. **Garbage grinders;** Garbage grinders will not be installed in the kitchen at this facility.
3. **Drain Strainers will be placed in all drain lines;** Drain strainers will be placed in all prep sinks, hand sinks, pot sinks, wok station drains, floor drains, and dish table drains. Material collected in these strainers will be discarded in the trash.
4. **Signs will be posted at all sinks;** Signs will be placed above each sink stating activities that are permitted at that sink.
5. **Used grease will be stored according to whether it is renderable or non-renderable FOG;** Waste grease generated during cooking that can be removed from the cooking vessel by pouring will be placed in the renderable FOG container.
6. **The Services of a Renderer will be used;** Hialeah Renderers has been employed to remove renderable grease from the facility as needed.
7. **The Services of a Grease Trap/Interceptor Cleaner will be used;** The facility has a service contract with Rick's Removal to pump the grease interceptor twice per year.
8. **Storage of used FOG;** The renderable FOG container will be placed in the walk-in cooler.
9. **Hot water temperature;** The water temperature will remain below 150°F.
10. **Training of kitchen staff;** All new kitchen staff will receive training in FOG minimization techniques in addition to other kitchen procedures.
11. **Exhaust hood filter cleaning;** The exhaust hood at this site is self-cleaning. No emulsifiers will be used in this system and the water temperature will remain below 150°F.
12. **Tilt Kettle cleaning;** Food and grease remaining in the tilt kettle after serving will be drained from the kettle and discarded in the trash. Only wash water will be discharged to the grease trap.

_____ _____

APPLICANT'S SIGNATURE **DATE**

Rick's Removal

Inv # 103

8711 Sardis Road
Otter Creek, CT 06004

Service Date *June 18, 2001*

Grease Trap Condition

Cover *good , A locking cover is recommended*

Baffles *good*

Tees *good*

Concrete *good*

Volume Removed *2,000* gal

Grease Accumulation *6* inches

Service Provider *John*

Payment Received *$ 350*

Rick's Removal

Inv # 486

8711 Sardis Road
Otter Creek, CT 06004

Service Date *January 30, 2002*

Grease Trap Condition

Cover *good*

Baffles *good*

Tees *good*

Concrete *good*

Volume Removed *2,000* gal

Grease Accumulation *7* inches

Service Provider *Mark K.*

Payment Received *$ 380*

Rick's Removal

Inv # 872

8711 Sardis Road
Otter Creek, CT 06004

Service Date *June 10, 2002*

Grease Trap Condition

Cover *good*

Baffles *good*

Tees *good*

Concrete *good*

Volume Removed *2,000* gal

Grease Accumulation *7* inches

Service Provider Skip

Payment Received 400

GUIDANCE AND COMMENTS ON COMPLETION OF THE OUTDOOR PASSIVE GREASES INTERCEPTOR APPLICATION PACKAGE

The following notes refer to questions on the attached example application.

Fats, Oils, and Grease Pretreatment Program Registration Form

1. **Facility Name.** The name of the facility and other information provided in the application will be entered into the Fats, Oils, and Grease Pretreatment Program database for tracking purposes.

2. **Estimated kitchen water usage per year.** In this example, the water bill is available; however, it includes water usage in other parts of the school. Therefore, the water usage in the kitchen needs to be determined separately from the rest of the school. The calculation for water usage in a school is as follows.

The school is in session 9 months/year, 20 days/month for a total of 180 days/year

320 students x 3 gallons/student/day x 180 days/year = 172,800 gallons/year.

$\frac{172{,}800 \text{ gallons}}{7.481 \text{gallons/ft}^3} = 23{,}100 \text{ ft}^3$.

3. **Is food cooked or are cooking utensils cleaned at your facility.** Some facilities may serve food that is cooked at another location then brought to a site where it is held for a period of time before serving. In addition to not cooking at the facility, if no pots, pans, dishes or utensils are cleaned on-site, a grease trap would not be required at that facility.

4. **Check each of the items that are present in your kitchen facilities.** All equipment and fixtures installed in the kitchen should be identified on the application and on the kitchen plumbing diagram so that the permit reviewer can determine if all appropriate fixtures are connected to FOG pretreatment equipment.

5. **Is the pretreatment equipment currently installed or proposed.** This application is used for both existing facilities and new construction.

6. **Type of grease trap location and capacity.** The type of trap and capacity should be indicated on the application. For existing facilities the size of the trap may not be known. In this example the volume of the grease trap may be determined from the volume of material removed from the grease interceptor as shown on the interceptor cleaner's receipts. The minimum volume grease trap as required by the FOG Pretreatment Ordinance can be determined as follows.

- The maximum daily water usage may be calculated as:

  320 students x 3 gallons/student/day = 960 gallons/day maximum.

- According to the sizing procedure in Document 11 a peaking factor of 1.5 would be applied to the average daily flow to determine the maximum daily flow. However, use of 3 gallons per meal is the maximum water usage per meal for a school.

- From the above calculation the minimum volume grease trap for this facility is 1,000 gallons; however, the school has an existing 2,000-gallon grease trap.

- The location of the grease trap must be indicated both on the application and on the site plan so that inspectors can locate the unit.

7. **Who is responsible for coordinating maintenance of FOG pretreatment units?** Many food preparation establishments rent their facility. These facilities are encouraged to have a written agreement with the property owner concerning FOG pretreatment equipment to ensure access to outdoor units for routine cleaning and to ensure maintenance on structural items or other arrangements as are appropriate for the circumstances.

8. **How often is the FOG pretreatment unit cleaned?** Outdoor grease traps are required to be cleaned quarterly. In this example, the school is only in operation 9 months of the year so that cleaning of the grease trap during the quarter when no meals are served and no grease is accumulating, provides no benefit.

The school in this example has receipts indicating the grease accumulation rate during one year is less than 9" per quarter. The school has attached an application for alternative maintenance.

9. **Where is the disposal location for grease removed from the grease pretreatment unit?** Because the grease interceptor at this facility is an outdoor unit, the interceptor cleaner should be licensed to remove and transport wastewater to an approved disposal site.

10. **If a contractor cleans the grease trap, provide the Company's Name and Phone number.** Providing the name of the contractor(s) that are providing FOG removal services will enable the application reviewer to track those companies that are providing services in the area.

11. **Does your facility recycle grease with a renderer? If the grease is rendered, provide the rendering company's name and phone number.** Providing the name of the contractor(s) that are providing FOG removal services will enable the application reviewer to track those companies that are providing services in the area.

Attachments
Kitchen plan showing plumbing
Site plan showing location of grease trap
Detail of grease trap showing volume, features and invert elevations

Alternate FOG Pretreatment Equipment Installation or Maintenance Application

1. **Facility Name, Address, and Phone No.** The name of the business should appear on all material supplied with the registration form so that the information can be properly recorded.

2. **Contact Name, Address, Phone, Fax.** The Contact should be the individual who is responsible for day-to-day operation of the Food Service Establishment or who will be responsible for scheduling maintenance of the FOG pretreatment equipment. This information will allow the application reviewer to contact you with any questions about the application.

3. **Does the food service own its facility?** Many Food Preparation Establishments rent their facility. When the facility is rented the business owner in some cases may not have access to the grease interceptor to allow cleaning of the unit. When this is the case, Food Preparation Establishment Owners are encouraged to have a written agreement with the Property Owner to ensure regular cleaning of the grease pretreatment equipment or adequate access to the grease interceptor. In the case of this example, the Property Owner and the Business Owner are the same entity, the Village of Mabel, Board of Education.

4. **Menu Classification.** Food Preparation Establishments classified as Class I and Class II are not required to install FOG Pretreatment Equipment.

5. **Is FOG pretreatment equipment currently installed at your facility?** This question refers to all FOG pretreatment equipment rather or not it meets the new pretreatment standard.

6. **Does the installed FOG pretreatment equipment meet the 2005 FOG Pretreatment Ordinance?** Some existing pretreatment equipment may not meet the new pretreatment standard. In those cases, where the existing equipment does not meet the pretreatment ordinance, the equipment will need to be replaced or approval will be needed for alternate equipment.

7. **What is the reason for requesting approval of an alternate?** All applicable reasons for requesting alternate equipment or maintenance should be checked.

(1) **No cooking or washing of pots, pans, dishes or utensils is done at this facility.** As in item three above, if no activities that generate FOG in the wastewater are conducted at the site, a facility may receive approval for not installing FOG pretreatment equipment.

(2) **Kitchen and sanitary sewers are combined.** Some existing facilities may have combined kitchen and sanitary sewers. If these facilities also have outdoor grease traps, these facilities are not in compliance with the FOG Pretreatment Ordinance. These facilities should consider methods to separate the sewers or installation of AGRUs. Many disposal facilities no longer accept material having a combination of FOG and sanitary wastes. Disposal of this material will become increasingly more difficult and expensive.

(3) **Reduced pumping frequency is requested.** The pumping frequency may be reduced if a facility diligently observes best management practices for handling and disposal of grease. A facility must produce records spanning at least one year indicating a FOG accumulation rate of less than 9 inches in their grease trap during any quarter of the year. Note that 9 inches is based on ¼ of the depth of a standard 36" liquid level grease trap. Grease traps with greater liquid depth

may be allowed to have greater accumulation up to but not exceeding 25% of the liquid depth. In this example, the 2,000-gallon grease trap has a liquid depth of 5'4". (Dimension "A" for the 2,000-gallon grease trap is 6'1" minus 6" thickness of the concrete bottom of the tank minus the 3" difference in inlet and outlet inverts.) The maximum grease accumulation in this tank at 25% of the liquid depth is 16".

(4) **Other reasons:** There may be a variety of other reasons that a facility may request reduced pumping frequency or alternate FOG pretreatment equipment. In this example, the school is requesting that they not be required to clean their grease trap during the quarter when the school is closed. Additionally, the grease trap is 1,000 gallons larger than the required 1,000-gallon grease trap. They have previously pumped their grease trap twice per year (as indicated on the registration form). From consulting the grease pumping receipts it can be seen that the maximum grease accumulation during any quarter was 5.3" and did not exceed 25% of the tank depth. This calculation is as follows.

From June 18, 2001 to January 30, 2002 the school was only in operation for 5 months. The grease accumulation was 7" (from receipt no. 486). The average for this period was;

$$\frac{7 \text{ inches}}{5 \text{ months}} = 1.4 \text{ inches per month}$$

Over three months (one quarter of the year) the accumulation would be

1.4 inches per month x 3 months = 4.2 inches/quarter.

In a similar manner the accumulation for the period from January 30 to June 10 is 5.3 inches/ quarter. (Note that the starting date for the grease accumulation as shown on receipt 103 is not known.)

Attachments
FOG Minimization Plan
Waste hauler's receipts

DOCUMENT 10

PASSIVE AND ACTIVE FOG PRETREATMENT SYSTEMS

FATS, OILS, AND GREASE PRETREATMENT

The purpose of fats, oils, and grease (FOG) pretreatment equipment is to remove FOG from the liquid wastewater stream. While it is not possible to remove all FOG from the waste stream, equipment is available that can significantly reduce the oil contaminant load to downstream wastewater systems.

These FOG pretreatment systems separate the FOG from the other components in the wastewater stream. The separated FOG is temporarily stored in the unit for later disposal off-site. The following discussion addresses the operation, construction, advantages, and disadvantages of passive pretreatment systems. Passive systems have no moving parts and operate without any form of energy input, other than the flow of the wastewater.

PASSIVE PRETREATMENT SYSTEMS

Theory of Operation

Both passive and active FOG pretreatment systems rely on the difference in density of FOG and wastewater to provide the separation of FOG from the other components of wastewater. These pretreatment units provide a zone, prior to the wastewater collection system, where FOG, which is lighter than water, can rise and collect at the surface of the wastewater. The units are designed to allow FOG to accumulate and be stored temporarily at the top of the unit, so that the wastewater can flow out of the unit at the bottom away from the accumulated FOG.

FOG Interceptors

FOG interceptors are large passive units, typically installed outside in-ground. They are the oldest and most common form of FOG pretreatment device. FOG Interceptors should be connected to all wastewater lines from the food preparation area. Discharge from FOG interceptors should discharge to the wastewater collection system. A typical passive FOG interceptor is sized for the maximum flow during any 24-hour period or a minimum of 1,000 gallons. This volume allows time for warm wastewater to cool, which increases the efficiency of separation.

Most FOG interceptors are constructed of pre-cast concrete although fiberglass or plastic are acceptable materials. Steel units are not recommended as steel can rust and develop leaks. FOG interceptors are typically installed below grade, outside. They should have a minimum liquid depth of 36 inches. In larger installations with wastewater flows greater than 2,000 gallons per day, multiple tanks may be used. Two-tank systems should be constructed with the tanks connected in series, causing flow to pass through both units.

Because the separate FOG accumulates in the top of the unit, over time the accumulated FOG occupies a significant volume of the tank so that additional FOG cannot be stored. To ensure that the storage capacity of the unit is not reached and the unit can function efficiently at all times the FOG and settable solids need to be periodically removed by pumping out the contents of the tank. If the accumulated FOG and settled solids are not removed the FOG may pass through the unit and clog sewer lines downstream. When the sewer lines become clogged sewage may pass through the lines slower possibly causing drainage problems in the building connected to the line. In some cases the sewer lines may become completely blocked so that wastewater backs up into the building served by the sewer lines.

Inline Grease Interceptors

In addition to the large outdoor FOG interceptors described above, smaller capacity in-line passive grease interceptors are also available and in common use. These units may be allowed in some circumstances but will require approval of the local FOG Pretreatment Program's Authorized Agent. These units have historically been installed at the point of use, directly adjacent to the fixture they are servicing, either in the floor or below the fixture. The small storage volume requires daily cleaning which is difficult making routine maintenance unrealistic for most applications. The *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments* allows these units ***only with special approval*** of the local Authorized Agent (the local Water Pollution Control Authority (WPCA) or where no WPCA exists, the local building official).

ADVANTAGES AND DISADVANTAGES OF PASSIVE PRETREATMENT SYSTEMS

Table 10-1 presents a list of some of the advantages and disadvantages of passive pretreatment systems. Each item includes a short description of some of the key aspects to be considered.

Table 10 - 1
ADVANTAGES AND DISADVANTAGES OF PASSIVE PRETREATMENT SYSTEMS

Advantages of Passive Pretreatment Systems	
Proven track record	FOG interceptors have been in use since the late 1800s, which is longer than any other FOG management tool. The proven reliability promotes a high level of comfort for regulators, inspectors, operators, and the general public.
Requires little maintenance	Simplicity of design decreases the possibility of failure of the units. However, routine removal of accumulated material and occasional repairs are required.
No external energy input	Flow is maintained by gravity, without the need for pumping. No moving parts or supplemental heat is required to operate passive units. Only when emptying and cleaning is energy expended.

Advantages of Passive Pretreatment Systems	
Simplicity of design	The simple design leads to fewer problems and easier troubleshooting and repair when problems do occur. The design concept is easily understood, providing a level of comfort while simplifying both construction and operations.
No moving parts	With no moving parts, capital, operations, and maintenance costs are all reduced. There are few components to wear or break and no mechanical wear and tear.
Minimal maintenance needs	Maintenance is limited to occasional inspections, and routine pumping. There are no mechanisms or electrical systems to inspect and maintain on a regular basis.
Maintained by unskilled personnel	The simplicity of design and lack of mechanical and electrical components makes routine maintenance consist of a visual inspection and estimation of the depth of FOG prior to pumping.
Not generally effected by sudden high volume of flow or high temperatures	The large storage volume reduces the impact of sudden increases in flow. Smaller systems may be adversely affected by the introduction of wastewater at a high flow rate or high temperature. The large storage volume of FOG interceptors allows temperature equalization to buffer against large temperature fluctuations.
Larger detention times can trap a larger percentage of emulsified FOG	The volume of FOG interceptors results in long detention times. With these detention times the grease that has emulsified will have time to coalesce and float to the surface of the wastewater, increasing the amount of grease captured.

Disadvantages of Passive Pretreatment Systems	
Requires more space than other technologies	The large volume of FOG interceptors requires more space for the unit than alternative technologies. In addition to the spaced required for the tank, limits to how close an interceptor can be installed to wells, property lines, water lines, and other structures (setback restrictions) increases the area required for installation of a FOG interceptor.
Excavation required for installation	Excavation costs for the installation of a FOG interceptor can be high depending on the existing conditions. Excavation at a site with significant rock may be expensive and a retrofit or expansion can have hidden costs, such as inconvenience to customers, repaving costs, etc.

Disadvantages of Passive Pretreatment Systems	
Expansion costs high	Expansion costs can be much higher than the costs of the initial installation. In some retrofits other elements of the existing site may be affected. Other utilities may be located in the area of expansion requiring relocation of these utilities.
Safety concerns	The need for access openings to below grade structures can create exceptionally dangerous conditions. Safety procedures must be understood and followed when the tank covers are opened for any reason.
Potential odor problems	Long detention times and anaerobic conditions, (the absence of oxygen), can result in the development of odors and potentially dangerous gases. While the majority of odor problems are associated with the pumping and cleaning of the trap, improper use, neglect and disturbances to the trap can also create nuisance odors.
Specialized pumping equipment required for emptying	Specialized pumping equipment and vehicles are required to remove the accumulated FOG for transport off-site.
Cleaning requires coordination with an outside party	Because of the equipment requirements and disposal rules, an outside party is required to remove and dispose of the accumulated FOG.
Collected FOG can harden making removal difficult	Because the accumulated FOG may be any combination of many different types of fats, oils, or grease, it can be stored in the unit as a liquid or a solid. Cold weather and the age of the accumulated FOG have a significant influence on the consistency and ease of removal.

PASSIVE TANK INSTALLATION PROCEDURES AND COSTS

The essential components of a FOG interceptor include the tank, piping connecting the kitchen drain line to the tank, and the piping from the tank to the sewer system. Wastewater from restroom fixtures should be piped directly to the municipal sewer system and must not enter the FOG interceptor.

The minimum permitted size for a FOG interceptor is 1,000 gallons. A typical 1,000-gallon unit is between nine and eleven feet in length, five to six and one-half feet wide, and four to five and one-half feet in height. It will weigh between eight and eleven thousand pounds on delivery to the site. Due to the effects of freezing, the kitchen drain line entering the tank will normally be approximately three-feet deep, thus the tank needs to be buried at the same depth so that the wastewater will flow through it by gravity. The bottom of the excavation for the tank will include a minimum of six inches of crushed stone for the tank to rest on. This means the typical bottom of the excavation may be anywhere from seven to ten feet deep. The width of the excavation depends on the soil type and the slope of the sides of the excavation that will allow

safe entry into the area by the installer. The area of the excavation may be as large as twice the depth of the excavation.

During the normal construction of a building, large equipment is on-site and available to provide these kinds of excavations. During a retrofit, and especially in congested areas, it may be difficult and expensive to bring equipment to the site. This can have a significant impact on capital costs, in terms of inconvenience to customers, temporary loss of parking space during construction, and aesthetic implications in the vicinity of the construction.

Along with the excavation for a FOG interceptor, wastewater piping that connects the FOG interceptor to the kitchen needs to be installed as well as the discharge pipe from the FOG interceptor to the municipal sewer. The covers on the FOG interceptor should be raised to grade to provide access for inspection and pumping. Finally, the installation must be performed by a licensed wastewater system installer.

Once the tank is installed, the area around the system is backfilled and compacted. If the system is in a driveway or parking area, the area may be paved leaving access to the cover.

Additional Construction Considerations

Additional costs may include inside plumbing changes to separate the kitchen and bathroom fixtures to divert the discharge from kitchen fixtures to the FOG interceptor. This could include work below the existing floors and cutting holes through the foundation. All piping work performed inside the building must be performed by licensed professionals.

Paved areas outside the excavated area may be damaged during construction from the heavy construction equipment.

Care should be taken to determine what the excavation equipment could impact during the work. In some cases, overhead power lines, overhanging trees, and street or parking lot fixtures will limit where the equipment can be positioned during the work. It may also be wise to temporarily move ornamental plantings in the area and replace them after work is completed. Decorative items around the facility may also need to be moved prior to the start of construction and replaced after the work is completed. Prior to starting the work, an inspection by the contractor can alleviate many problems.

Construction Costs

While the cost of installing a FOG interceptor will vary significantly for all of the reasons previously mentioned, a typical installation in 2005, without the constraints outlined above is estimated to cost between $5,000 and $9,000. Excluding site specific issues and the caveats previously discussed, the cost of excavation and the length of the sewer pipe connections will have the largest impact on costs for a typical system, representing more than half of the cost.

ACTIVE PRETREATMENT SYSTEMS

Theory of Operation

In an active pretreatment system, the separation of FOG from other components of wastewater makes use of the differences in physical characteristics described previously.

Active Grease Recovery Units

Most active systems incorporate a baffled chamber, solids strainer, heating element, and a skimmer mechanism or pump. Operation is similar to the passive system; the FOG floats to the top of the liquid in the FOG collection compartment. A timer or grease level sensor controls the frequency and duration of the unit's active removal of FOG from the separation compartment. At the preset time or grease accumulation level, the removal cycle begins by first energizing the heating element to liquefy any FOG that has solidified. When the coagulated FOG has liquefied, either the skimmer is energized to skim the top surface of the wastewater, collecting the floating liquid FOG or a pump removes the FOG from the collection compartment. Once collected, the liquid FOG is deposited in a collection pipe that drains into a FOG storage vessel.

Table 10-2 presents advantages and disadvantages of active FOG pretreatment systems.

Table 10 - 2
Advantage and Disadvantages of Active Pretreatment Systems

Advantages of Active Pretreatment Systems	
Small size	Active systems tend to be smaller, reducing the footprint of the unit.
Can be conveniently located	The small size permits more options for installation locations. Most units are designed to be located directly beneath or beside the fixture they service.
Can be located indoors	These units are designed for installation indoors providing easier access especially during inclement weather.
Ease of installation	These units can be installed under or next to the fixture they service.
Minimal plumbing changes required	Because the units can be located directly adjacent to the kitchen fixtures, the length and complexity of plumbing changes needed to connect the unit are lower. This translates into lower costs and shorter downtime for the fixture.
No ground excavations required	These units are designed for indoors above ground installation.
Ease of monitoring	Easy access to the units makes monitoring simple and direct. Most units make use of a clear plastic storage container so that it is easy to see the volume of grease collected.

Advantages of Active Pretreatment Systems	
Easy access to parts	Units are designed to make access to critical parts as easy as possible.
Relatively clean FOG collected	The unit's close proximity to the fixture reduces contamination from other sources helping to ensure a relatively clean material for collection.
Easy access to the unit	With the unit located indoors, examining the unit for maintenance and cleaning is simplified.
Avoids many of the odor problems associated with outdoor traps	The relatively short storage time and isolation from other wastewater sources reduces odor problems.
Minimal safety concerns	The units are small enough that everything is accessible from outside of the unit. The units are intended for location out of the way and the mechanisms are simple and relatively safe to handle.
Cleaning by unskilled personnel	Removal of FOG from the collection container requires no specialized equipment or training.

Disadvantages of Active Pretreatment Systems	
Electrical service required	The pump or motor driven skimmer and the heating unit require electrical service.
Skilled technician required for maintenance	While the units are not complicated, electrical problems will require an electrician or manufacturer's representative to make the repair.
Mechanical systems fail	Through use, parts become worn, requiring replacement. This wear increases when maintenance schedules are not followed. Electrical devices and motors can be damaged in the wet atmosphere of a food preparation area.
Requires electricity to operate	While passive systems do not require electricity, active units require electricity, for both heating the FOG and to operate the skimmer or pump presenting an added operating cost.
Frequent monitoring required	The solids screens must be cleaned daily to ensure that the screen is not clogged and that materials that could damage the skimmer or pump do not pass into the separation chamber. The FOG collection container needs to be monitored and emptied daily.
High temperature can cause grease to pass through the system	Because of the close proximity to the kitchen fixtures, and the small storage volume, active systems are more likely to be adversely affected by temperature. Hot wastewater can reduce the effectiveness of the separation increasing the volume of FOG discharged.
Possible decreased effectiveness	Short detention times along with use of chemicals including detergents, degreasers and low pH products reduce the effectiveness of FOG removal.

ACTIVE SYSTEM INSTALLATION PROCEDURES AND COSTS

Active pretreatment equipment is smaller and lighter than outdoor passive FOG interceptors. Additionally, active pretreatment equipment provides more flexibility for retrofitting an existing facility. However, this flexibility can increase the cost of retrofitting a facility with AGRUs above the costs included in this section. Retrofitting an existing facility has many more variables to consider than a new facility. Because these units do not require excavation and can generally be installed in existing plumbing additional costs for retrofitting would not be expected to rise to the levels that could occur during the installation of a FOG interceptor. However, multiple active pretreatment units may be required to provide pretreatment for all kitchen fixtures.

Most systems are designed to fit beneath a standard food preparation sink or pre-wash station. Because these areas are not normally used for storage, they are usually available so the new unit will not displace existing equipment. It is important to realize that the units require space above the unit for access to the internal parts of the unit. The clearance needs vary with each unit, but the covers need to be removed to perform inspections and maintenance as well as removal of the internal strainer for cleaning.

The system has to be positioned to permit gravity flow from the equipment or fixture being serviced, through the unit then into the wastewater collection system. Plumbing changes include first disconnecting the existing fixture drain from the building drain and connecting the fixture drain to the AGRU's inlet. The unit's discharge is then connected to the building drain. This work requires a licensed plumber. In situations where more than one fixture is connected to the unit, the work may be more extensive.

Active units require power input. While smaller units operate on 115-Volt service with less than 20-amp power requirements, some larger units require 208 or 240 Volt and 50-amp service. The majority of installations will require only a 115-Volt service. A circuit breaker will be needed in the existing service box, and conduit and wire will need to be installed from the existing service box through any adjoining rooms, ceiling space or hallways to connect the pretreatment unit.

Construction Costs

Actual installation costs will vary significantly for different facilities. In 2005, the typical range of installation costs without the constraints outlined above is $4,000 to $8,000. Excluding kitchen specific issues and the caveats previously discussed, the cost of equipment has the largest impact on overall costs for a typical system.

AGRU Manufacturers

Few FPEs currently have active grease recovery units installed. Because most FPEs and program administrators are not familiar with this type of equipment, efforts were made to identify units that provide automatic operation. The following units were identified; however, these units may not meet local building, plumbing, or other codes. Local program administrators and building officials may use the following units as a starting point for considering which AGRUs are acceptable for the local FOG program. The following units were not reviewed for quality or reliability but only for automated removal of FOG from the unit. There may be additional AGRU

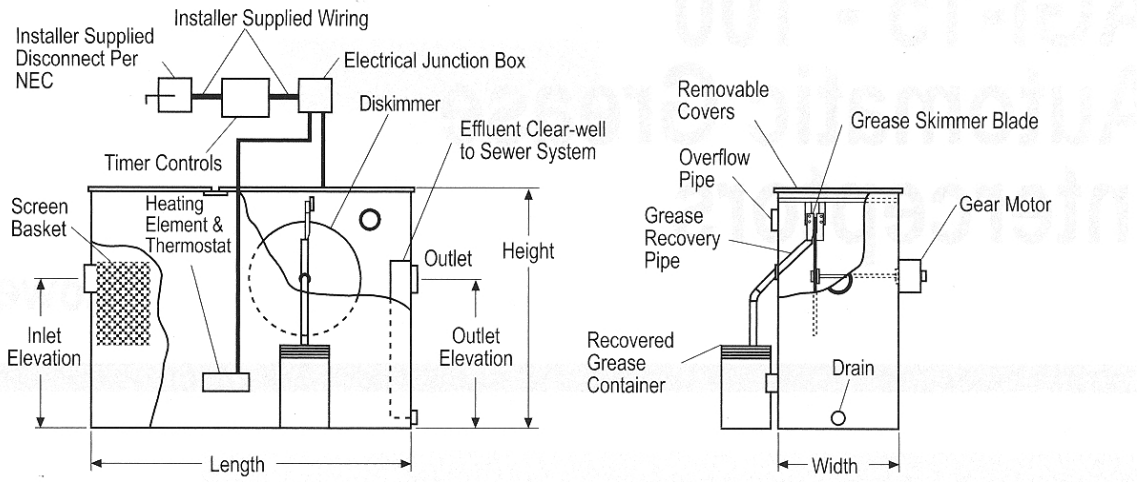
manufacturers of which we are not aware. All AGRUs approved for installation under the *General Permit* should be certified for the intended operation through third party testing.

LOWE ENGINEERING AUTOMATIC GREASE INTERCEPTOR (AGI)

Description: (Units sized for flows ranging from 15 gpm to 150 gpm. For information on larger units or custom sizing please see contact information). The main components of these AGRUs are integral flow control and screen baskets, separation chamber, direct drive motor(s), digital timers, disc skimmer and external grease collection bucket. The screen basket and separation chamber are constructed of 16ga 304 stainless steel. The standard unit is designed for 120volt, 60hz @ 20amps single phase, electrical wall plug connection or hard wire option.

Water flows into the unit through the screen basket and into the separation chamber where oil and grease accumulate. Water passes out of the unit through an effluent clear well that retains FOG within the unit. The unit is activated by a digital timer so that the heating element energizes, liquefying the FOG. Once the FOG has liquefied, the skimmer is activated to remove the FOG from the separation chamber and transfer to the FOG collection container. The unit is designed for above floor installation,

Figure 10-1
Lowe Engineering's AGI Models 15 to 100



Available Sizes: A range of models is available with capacities from 15-800 gpm.

Certifications: UL 1D42, PDI-G101, ASME 112.14.3 & ASME 112.14.4

Manufacturer: Lowe Engineering a Highland Tank Company 1510 Stoystown Rd. Friedens, PA 15541 Tel (814) 443-6800, www.lowe-engineering.com

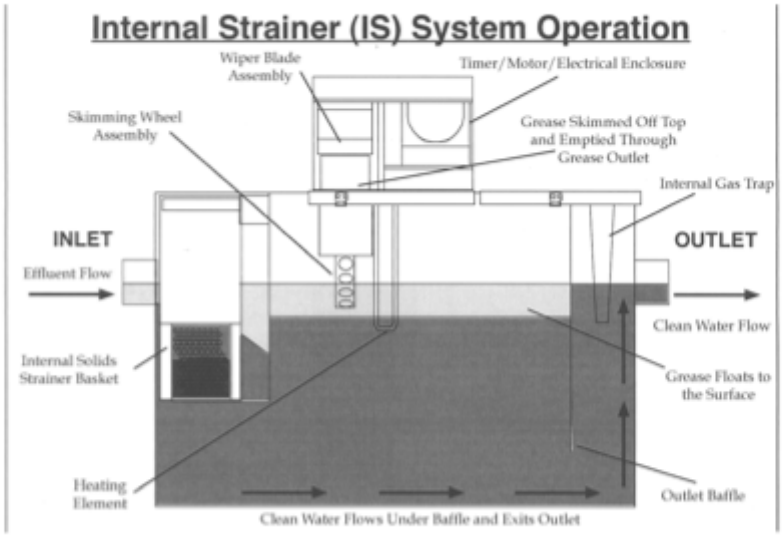
Contact: Michael Gauthier 108 Londonderry Trpk Auburn, NH 03032
Tel (603) 647-6646, mgauthier@highlandtank.com

BIG DIPPER

Description: The main components of this AGRU are an integral solids strainer basket, a separation chamber, and collection container. The unit is constructed of a polyethylene tank with external 304 stainless steel wrap. The units require 120V, 20 amp, single-phase wall plug electrical connection.

Water flows through the solids strainer basket and into the separation chamber where oil and grease accumulate. Water is allowed to pass through a series of baffles and out of the unit. When the unit is activated by means of a timer, the heating element energizes, liquefying the FOG so that the skimmer can remove the FOG from the separation chamber and deposit it in the external collection container. The unit is designed for above-floor installation.

Figure 10-2
Operation of the Big Dipper



Available sizes: Models range in size from 15 gpm to 125 gpm.

Certifications*: IAPMO, PDI-G101, NSF (ASME A112.14.3), ASME A112.14.3 and 14.4, CSA CAN/CSA-C22.2 No. 68-92 and CAN/CSA-C22.2 No. 88-1958 *Check with Thermaco, Inc. for listings

Manufacturer: Thermaco, Inc., P.O. Box 2548, Asheboro, NC 27204, Tel 800-633-4204, E-mail: info@thermaco.com, Online: www.big-dipper.com.

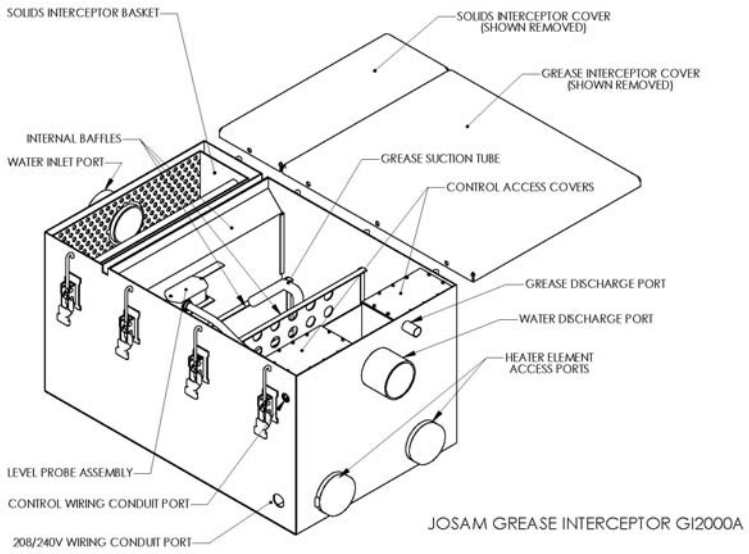
Contact: Mitch Baser, 20 Spring Valley Road, Woodbridge, CT 06525, Tel 203-393-2020

JOSAM 60300A SERIES AUTOMATIC GREASE REMOVAL DEVICE

Description: The main components of these AGRUs are an integrated solids interceptor, a separation chamber, and removal of the grease, by automatic means, to an external recovered-grease container located at a remote location. The integrated solids interceptor and the separation chamber are constructed of 12-gauge 304 stainless steel. The standard unit is designed for 120V, 50 amp, single phase, electrical wall-plug connection; however, some smaller units maybe controlled with 120 volt and require no additional electrical connections.

Water flows into the unit through a flow control valve, with air intake, through a solids interceptor and then into the separation chamber where oil and grease accumulate. Water passes out of the unit around an effluent baffle that retains FOG within the unit. The unit is activated by a level sensor so that the heating element energizes, liquefying the FOG, if need be. Once the FOG has liquefied, the grease removal pump is automatically activated to remove the FOG from the separation chamber and deposit it in the recovered grease container. The device may be floor mounted, partially recessed or below grade in a vault enclosure. Microprocessor based controls record and display historic cleaning cycle information.

Figure 10-3
Drawing of the Josam GI2000A



Available sizes: A range of models is available with capacities ranging from 20 gpm to 500 gpm.

Certifications: PDI G101, ASME A112. 14.4, UL, UPC

Manufacturer: Josam 525 W. U.S. Hwy 20, Michigan City, IN 46360, Phone 800-365-6726, www.josam.com/catalog/JOS/GI2000A

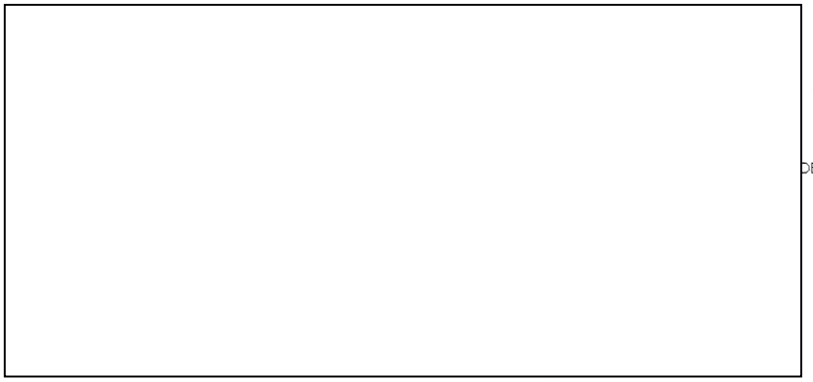
Contact: Russell Smith with Yost Associates, 224 Eastern Blvd, Glastonbury, Connecticut 06033, Phone 860-659-0301 Fax 860-659-9591.

GREASE-O-NATER

Description: The main components of this AGRU are an external solids filter, a separation chamber, and external catch container. All components are constructed of 14-gauge 304 stainless steel. The unit requires 120V, 20 amp, single phase, electrical connection, hardwired only.

Water flows through the solids filter and into the separation chamber where oil and grease accumulate. The water passes through a series of baffles and out of the unit. When the unit is activated, by an internal on/off level switch, the heating element energizes liquefying the FOG so that the skimmer can removed the FOG from the separation chamber and deposit it in the external catch container. The unit is designed for either above-floor or in-floor installation.

Figure 10-5
Drawing of the Grease-o-nator



Available sizes: single model sized for a maximum flow rate of 35 gpm

Certifications: UPC (4724) meeting ASME A112 14.3 and 14.4, UL E232189 and UL Sanitary approved E241724

Manufacturer: MDK Enterprises, Inc., 7041 North Camino Martin, Ste #201, Tucson, AZ 85741, Tel 800-310-8017, www.grease-o-nator.com

Contact: C.R. Peterson Associates, Inc., P.O. Box 295, Easton, MA 02334, Tel 800-542-3390, binky@crpeterson.com

DOCUMENT 11

FOG PRETREATMENT EQUIPMENT SIZING CRITERIA

The *General Permit for Wastewater Associated with Food Preparation Establishments*, as adopted by the State of Connecticut in September 2005, requires that outdoor FOG pretreatment equipment have a "volume equivalent to the maximum daily flow over a twenty-four hour period," but not less than 1,000 gallons. Many methods have been published for calculating grease interceptor volume. These methods fall into two general categories that can be described as "fixture-based" and "patron-based." Both of these categories are discussed below.

Fixture-based methods use typical peak flow rates from the installed fixtures and a minimum holding time within the pretreatment unit. These methods can include a holding time of as little as 12 minutes. Because the *General Permit* requires that outdoor FOG interceptors have a volume equal to the maximum daily flow, fixture-based sizing methods, which are based on the peak flow rather than the daily flow, are generally not appropriate for outdoor FOG interceptors. However, automatic grease recovery units (AGRUs) are sized by the fixture-based methods, described herein.

Patron-based methods take into account the number of meals served at a facility and the water used per meal. Some published methods include storage and loading factors which, depending on the factor, can inappropriately reduce the interceptor volume to less than the maximum twenty-four hour flow.

In addition to the above general categories of grease pretreatment sizing methods, the manufacturer's recommended sizing methods and the sizing requirements in the version of the International Plumbing Code most recently adopted by Connecticut must also be considered. The sizing of the pretreatment equipment must meet the more stringent of these methods.

The most direct method for sizing outdoor passive grease interceptors is from actual water usage in the kitchen. This method can only be used for existing facilities where a history of water usage exists. New facilities, where no water-usage history exists, should estimate the twenty-four hour maximum water usage by one of the two patron-based sizing methods presented below. Examples of both the water-usage and patron-based methods are given below. In many cases, a single FOG interceptor of the required capacity will be used. However, large units, of 2,000 gallons or more, may require that multiple units be installed in series to achieve the total volume needed. Where space is limited or where there are existing units in place, local authorities may, as allowed by Section 5(b)(3), approve smaller units; however, to ensure proper operation of the FOG pretreatment equipment, more frequent maintenance of the unit should be required as a

condition of approval. Additionally, it must be understood that garbage grinders must not discharge to grease pretreatment units. This requirement of the *General Permit*, Section 5 (d)(9), was included because large volumes of food solids clog grease pretreatment units, quickly reducing the volume within the units for grease storage, and disposal of food solids in the trash is a more effective means of disposal.

Dozens of methods have been published for sizing outdoor passive FOG interceptors. It should be understood that the sizing methods provided below are recommended to meet the criteria of the *General Permit.* Local WPCAs or building officials may include more stringent FOG pretreatment criteria in their sewer use ordinance as needed to prevent wastewater by-pass events.

Indoor FOG interceptors are sized on the peak flow rate to the unit, which is a fixture-based sizing method. Where multiple AGRUs are used, the flow from the kitchen fixtures connected to the AGRU is calculated to determine the peak flow to each AGRU at any one time. Multiple AGRUs may be required due to space limitations or plumbing considerations.

OUTDOOR FOG INTERCEPTORS

Water-Usage Method

At existing facilities, the water usage at a facility may be obtained from the water bill. However, water bills provide the total monthly water usage, including water used in toilets, showers, laundry facilities, lawn watering and any other water used at the facility during the month. Food Preparation Establishments that have significant water usage for purposes other than cooking should use one of the other methods presented below.

Food Preparation Establishments such as catering services, carryout restaurants, drive-in restaurants, and similar facilities, that have little water usage outside their kitchen facilities, should use the water-usage method for sizing outdoor grease pretreatment equipment. *Because only water that is used in food preparation and cleanup is discharged to the grease interceptor, flow originating from other sources must not be included in the estimate of maximum daily water usage in the kitchen.*

To size a passive outdoor interceptor, the maximum daily water usage within the food preparation and cleanup areas must be determined. Beginning with the volume provided on the water bill, the water volume must be divided by the number of days in the billing period. This provides the average daily water usage. A peaking factor of 1.5 must be applied to increase the flow from the average daily usage to the maximum daily usage.

Example 1: A full service restaurant that is open Tuesday through Sunday has water bills for the months of June, July, and August. These bills are for 15,000 gallons, 20,000 gallons and 16,000 gallons respectively. For the months of June, July, and August there were a total of 79 operating days.

The total water usage for the three months is:

15,000 gal + 20,000 gal + 16,000 gal = 51,000 gallons

average daily **kitchen** flow = 51,000 gallons / 79 days = 646 gallons/day

maximum daily **kitchen** flow = 646 gallons/day x 1.5 peaking factor = 970 gallons

A peaking factor of 1.5 is used to increase the flow from the average daily flow to the maximum daily wastewater flow. This facility will require a 1,000-gallon FOG interceptor.

Patron-Based Method

Schools, Nursing Homes, and Camps (Fixed Number of Meals Served per Day**)**
Patron-based water usage methods take the following general form.

Interceptor Volume (IV) = number of Meals Served (MS) x Gallons per Meal (GM).

Where; IV = Interceptor Volume
MS = Number of Meals Served (maximum facility occupancy)
GM = Gallons used per Meal (See Table 11-1)

Table 11-1
Maximum Volume of Water Usage in
Food Preparation Establishments with Fixed Maximum Occupancy[1]

Facility	Volume
Schools, per pupil	3 gallons per day
Residential camps, per person	15 gallons per day
Hospitals, per bed	15 gallons per day

[1]Adapted from the Connecticut Public Health Code, Table 4.

At facilities such as schools, nursing homes or other facilities that are designed for a specific occupancy, the maximum number of meals served is known. At these facilities the above formula can be used to determine the volume of the grease interceptor.

Many food preparation establishments do not know the number of meals that will be served each day. For facilities with a varied number of meals served each day the

number of meals must be estimated. The following method can be To size grease pretreatment equipment for these facilities a method is need to estimate the number of meals served.

Restaurants (Varied Number of Meals Served per Day)
At many new Food Preparation Establishments, the number of meals must be estimated as;

Meals Served (MS) = number of Seats (S) x Loading Factor (LF) x Hours in operation (H) / 2.

The Connecticut Health Code provides a list of the daily maximum gallons water used for various activities at different types of facilities. For the purpose of sizing grease pretreatment equipment, only flow from 'kitchens' or 'per meal' should be included.

Table 11-2
Maximum Volume of Water Usage in
Food Preparation Establishments with Varying Number of Meals Served[1]

Facility	Volume
Restaurants and bars	5 gallons per meal
Churches, per person	5 gallons per meal

[1]Adapted from the Connecticut Public Health Code, Table 4.

The formula for calculating the maximum daily water usage for a facility with a varied number of meals served per day can therefore be calculated as follows:

$IV^{1,2} = (MS) \times GM = (S \times LF \times H/2) \times GM$

Where; IV = Interceptor Volume
MS = Number of Meals Served
GM = Gallons used per Meal (See Table 11-2)
S = Number of Seats in the Facility
LF = Loading Factor[3]
= 1.25 meal/seat hour for interstate highways
= 1.0 meal/seat hour for other freeways, recreational areas and fixed number of meals
= 0.8 meal/seat hour for main highways
= 0.5 meal/seat hour for other highways and side streets
H = Hours in Operation[4]

[1]Many published patron-based interceptor sizing formulas use a retention or storage factor that reduces the volume of the grease interceptor from one day at the maximum daily flow to 12 hours or less. Formulas that use the retention factor do not meet the requirements of the *General Permit*.
[2]Control of FOG - Advanced Training Course, Workbook Part 2, WEF and EPA, Syracuse, NY, July 2002 page 8. (Original publication date not provided).
[3]The loading factor is included to account for the number of meals served per hour per seat. Factors are from the EPA manual, *Onsite Wastewater Treatment and Disposal Systems* (EPA/625/1-80-012), October 1980, publication correction July 2002.
[4]The total number of hours a facility is in operation is divided by 2 to account for decreased activity between traditional meal times.

Example 2: A restaurant is open for lunch and dinner. It has 40 seats and it is open from 11:30 AM until 10:30 PM, a total of 11 hours. It is located at an intersection of Boston Post Road and Route 95.

IV = (S x LF x H / 2) x GM

IV = (40 seats x 1.25 meal/seat hour x 11 hours / 2) x 5 gal/meal

IV = 1,375 gallons

Because a 1,375-gallon grease interceptor is not a standard size, a 1,500-gallon grease interceptor would be needed. If the facility has outdoor space that can meet the local setback restrictions including among other items, distance from property boundaries, wells or water supply lines then an outdoor unit may be used.

Grease interceptor suppliers in the area of the Food Preparation Establishments should be contacted to determine the standard grease interceptor volumes that are available locally.

It should be understood that larger grease interceptors do not necessarily provide better water/FOG separation. Excessively large grease interceptors can lead to nuisance odors and corrosion within the unit. Local FOG program administrators are encouraged to use their engineering judgment in determining when the next size larger grease interceptor is excessive. For example: if in Example 2 above, (IV) had been 1,100 gallons, and the available standard sizes are 1,000 or 1,500 gallons, a 1,000 gallon grease interceptor could be used.

AUTOMATIC GREASE RECOVERY UNIT

Indoor units, which are much smaller in total capacity then outdoor units, should be sized by a fixture-based method. Details on methods of estimating the indoor unit's size are provided below.

Fixture-Based Method

The maximum flow to an AGRU can be estimated from the connected fixtures. An inventory should be taken of the fixtures that will be connected to the AGRU, including any future expansions to the kitchen to ensure that the AGRU will not need to be replaced as part of the expansion. This initial review involves a careful inventory of the fixtures, size or capacity of the fixtures including floor drains, and the intended use of each fixture as well as consideration of fixtures that may be in use at the same time. Fixtures not listed in the *General Permit* should not be connected to the AGRU. The existing plumbing within the kitchen must also be considered to determine which fixtures can drain to the proposed location of the AGRU. In some facilities, multiple units may be required due to plumbing or space limitations.

The peak flow rate for each fixture is calculated based on either the volume of water within the unit and drainage time, or the maximum flow rate for the size of the drain piping.

The volume of a sink is calculated by multiplying the length, width, and depth of the unit, then converting the calculated value into gallons. The volume of water is then estimated as 75% of the total volume. This reduction in volume is to compensate for the volume of water displaced by the sink's contents. This water volume is then divided by the length of time required to drain the fixture, usually one or two minutes. Common size kitchen fixtures and peak flow rates are provided in Table 11-2. An alternative method is used if the fixture does not hold water but allows the water to pass through it. This method, detailed in Table 11-2, uses the capacity of the drain line to establish the flow rate from the fixture.

TABLE 11 - 3
Peak Flow Rates for Common Kitchen Fixtures
(EPA-2 Model, Modified)

Fixture Compartment Size	Number of Compartments	Drainage Load (gallons)	Peak Flow (gpm)	
			1-Minute Drain Period	2-Minute Drain Period
Sinks (inches)				
18 x 12 x 6	1	4.2	4.2	4.2
16 x 14 x 8	1	5.8	5.8	5.8
20 x 18 x 8	1	9.4	9.4	9.4
18 x 16 x 8	2	15	15	15
20 x 18 x 8	2	18.7	18.7	9.4
30 x 20 x 8	1	15.5	15.5	7.8
24 x 20 x 12	1	18.7	18.7	9.4
22 x 20 x 8	2	23	23	11.5
22 x 20 x 12	2	34	34	17
24 x 24 x 12	2	44.9	44.9	22.5
Tilt Kettle		10	10	10
Wok Range				
1 to 5 Stations		20	20	20
5^{+} Stations		25	25	25
Floor Drains/Sinks	(1)			
Automatic-Wash Hood	(2)			
Dishwashers				
0-30 Gallon		to 30	30	15
31-50 Gallon		31 – 50	(2)	(2)
51-100^{+} Gallon		51 – 100^{+}	(2)	(2)

(1) Use Flow-Rate Based on Drain Diameter
(2) Use Manufacturer's Design Flow Rate
(3) Depending on drain size and other equipment connected to the drain the drain period may vary. Typically drain periods are between 1 and 2 minutes.

For sink sizes not listed, the volume may be calculated using the procedure described previously. For units that do not hold water but allows the water to pass through it, use the diameter of the drain line and the following table to establish the maximum flow rate for the unit.

TABLE 11 – 4
Estimated Flow Rate Based on Drain Size[1]

Fixture Outlet or Trap Size (Inches)	Flow Rate (gpm)
1 ¼	7.5
1 ½	15.0
2	22.0
2 ½	30.0
3	37.5
4	45.0

[1] From PDI-G101, Plumbing and Drainage Institute.

Once the flow rate for each connected fixture is estimated, the values for all the fixtures that can be in operation at the same time are added to arrive at the minimum rated capacity of the required AGRU.

DOCUMENT 12

FOG MINIMIZATION PLAN GUIDANCE

Adherence to FOG Minimization procedures is critical to maintaining a good FOG pretreatment program. In addition to ensuring compliance with Connecticut's *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*, FOG minimization procedures are good for the environment, and can reduce water usage.

Minimization procedures include those house-keeping items that each employee must do as a matter of routine to reduce FOG in the wastewater. Every facility should review their kitchen procedures to determine if additional measures are needed at their facility. Typical minimization procedures include the following items:

1. **Perform dry clean-up;** Renderable FOG generated during cooking should be poured into a renderable FOG collection container. A pot scraper or paper should be used to scrape uneaten food from pots, skillets, and plates into the trash prior to rinsing. This material can collect in drain lines and lead to slow draining of sinks, backup of wastewater into the kitchen, or spills of wastewater into city streets and waterways.

2. **Remove garbage grinders;** The *General Permit* does not allow the use of garbage grinders. Remove garbage grinders to ensure that food scraps do not clog AGRU inlet screens or accumulate in grease interceptors.

3. **Place screens over all drain lines;** In prep sinks and pot sinks, even after scraping most of the residual food into the trash, small bits of food will still be washed into the sink. Screens should be placed over all drains. Screens provide an easy way to prevent clogged drains.

4. **Place signs at all sinks;** Signs are to be placed above all sinks stating what activities are permitted at that sink. In some facilities (those with AGRUs) not all kitchen drains will be protected with FOG pretreatment equipment. Placing signs above all sinks is a reminder to employees that FOG minimization procedures need to be followed.

5. **Place used grease in the correct container;** Grease used in cooking and obtained during the cooking process can be rendered if it does not come in contact with wastewater. This material should be placed in a separate container for renderable FOG. Many facilities place a small container by the stove for using during cooking. This material should be transferred to a larger container at the end of each shift. This material should never be poured down the drain.

6. **Use the services of a rendering company;** Service contracts can be set up with rendering companies to periodically remove waste FOG from a facility. This material

can be used to make animal feed, cosmetics, biodiesel fuel, lubricants and many other products. Renderers typically provide containers for outdoor storage.

7. **Use the services of a Grease Trap/Interceptor Cleaner;** Contracts can be set up for Grease Trap/Interceptor Cleaners to service FOG interceptors on a prearranged schedule. This type of arrangement is the best method to ensure that outdoor FOG interceptors are maintained on a regular basis.

8. **Properly store waste FOG;** When stored improperly, used FOG can attract rodents, flies, and stray animals and produce unpleasant odors. When space is available, containers for renderable oil should be placed in a refrigerated space. This eliminates many nuisance conditions. When space is not available in a refrigerated space, the renderable oil container is typically placed outside. The container should be clearly marked as a renderable FOG container. The container must have a secure lid to prevent rain from entering the container. This lid must remain closed when material is not being added. The area around the container should be level and away from storm drains. Renderable FOG should not be placed in the trash. Trash collection trucks are not designed for large volumes of liquids. Additionally, containers of grease can cause problems in trash incinerators.

9. **Maintain a hot water temperature between 125°F and 150°F;** The Public Health Code requires that hot water used in Food Preparation Establishments be maintained between 125°F and 150°F for sanitation purposes and to prevent scalding. This is also the optimum temperature range for FOG pretreatment.

10. **Clean AGRUs daily;** AGRU or Automatic Grease Recovery Units are generally designed to operate once or twice each day the Food Preparation Establishment is in operation. These units should be cleaned daily by pouring FOG from the collection container into a designated non-renderable FOG container. When the designated non-renderable FOG container is full, a Grease Trap/Interceptor Cleaner that specializes in disposal of AGRU grease should remove the grease. It is often easiest to remove the grease from the AGRU collection container soon after the AGRU has operated so that the material is liquid and pours easily. AGRUs have solids screening baskets that must be cleaned each day. Material from the solids screening basket should be placed in the trash. Each cleaning of the AGRU must be recorded in the AGRU operation and maintenance logbook.

11. **Maintain areas around FOG interceptors and AGRUs open for easy access;** FOG interceptors are typically located below grade either behind the kitchen or in the parking lot. Dumpsters, rendering containers, or other material that could prevent access should not be located over the outdoor FOG interceptor.

    AGRUs must be cleaned daily. To facilitate cleaning, an open area around and immediately above the unit must be maintained. Products such as detergents, pot scrapers, and other material should be stored in a different area.

12. **Routine training for all kitchen staff;** Kitchen staff should be reminded from time to time of FOG best management practices as well as other sanitation procedures and kitchen policies, to ensure that all employees follow the same practices.

13. **Reduce the volume of cooking oil used and reuse cooking oil when possible;** Reducing and reusing cooking oil reduces the volume of oil that must be purchased and is a good business practice in addition to reducing waste.

14. **Clean exhaust hood filters in the pot sink or employ a service;** Some areas of the state have companies that provide cleaning services for exhaust hood filters. In areas where these services are not available, exhaust hood filters should be cleaned in pot sinks that discharge to FOG Pretreatment Equipment. In no case should these filters be cleaned outside. Cleaning of these filters outside may allow the FOG to enter local rivers and streams via a storm drain.

15. **Other;** The procedures and equipment at kitchens are as varied as the menus they offer. Food Preparation Establishment managers are encouraged to review their operations and determine what methods apply to their kitchen.

FOG Minimization Plans should be signed and dated by the person responsible for kitchen activities. Facilities that have dedicated maintenance staff responsible for cleaning AGRUs or scheduling grease interceptor cleaning should discuss FOG minimization techniques and coordinate their efforts with the kitchen staff.

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DOCUMENT 13

INSPECTION CHECKLIST

This document provides the basis for inspection of Food Preparation Establishments in the TAHD. **Guidance is provided on each of the inspection points listed on the inspection checklist provided at the end of this Document.** This discussion is not intended to be a thorough presentation of activities occurring during an inspection.

Food Preparation Establishment Inspection Guidance

One of the primary challenges to overcome in any grease pretreatment program is continuance of FOG management techniques at facilities with high employee turnover. This high turnover will require continuing training. Typically some degree of training occurs concurrently with the inspection. The following guidance is provided on facility inspections to aid the inspector in providing this training to Food Preparation Establishment staff, as well as provide training for the inspector.

General Information (Checklist Items 1-4)

1. Registered Pretreatment Equipment – Every Class III and Class IV facilities must have a permit for FOG pretreatment equipment. Facilities that do not cook or wash dishes at their site must file an application for alternate equipment or maintenance.

2. Properly Installed FOG Pretreatment Equipment – Grease pretreatment equipment, includes an outdoor FOG interceptor, an AGRU, or alternate pretreatment equipment. Passive indoor traps are permitted only as alternative FOG pretreatment equipment. Kitchen sewer lines are to be separate from sanitary sewer lines. If a facility is thought to have connections between the kitchen and sanitary sewer, dye tablets may be used to confirm a cross connection. Inspectors should confirm that FOG interceptors are installed in the proper orientation. It is not uncommon for outdoor and indoor FOG interceptors to be installed backwards (kitchen drain connected to the trap outlet and the trap inlet connected to the municipal sewer). Improper installation allows FOG to be released to the sewer system and reduces the capacity of the unit.

The following kitchen fixtures must be connected to FOG pretreatment equipment:

- Pot sink;
- Pre-rinse sink or dishwashers without pre-rinse sinks;
- Any other sinks into which FOG may be introduced;
- Tilt kettles or tilt braising pans;
- Floor drains or sinks into which kettles may be drained;
- Wok station drains;
- Automatic hood wash units;
- Dishwashers without pre-rinse sinks; and
- Any other fixtures or drains that can allow fats, oils and grease to be discharged into the sewer.

3. Was FOG Interceptor Inspected? – It may not be practical to open outdoor FOG interceptors on every visit to a facility. This item is included on the inspection checklist to allow tracking of the date of the last inspection of the inside of the FOG interceptor.

4. FOG Interceptor Accessible for Maintenance? – All FOG management equipment must be accessible for maintenance. Outdoor traps must not have dumpsters, tables or other fixtures or equipment located above them. Indoor FOG management equipment must not have items stacked on them or have shelves or other kitchen fixtures placed in locations that would prevent access for maintenance. Indoor traps should be installed at an elevation that allows access. Common inconvenient locations include behind piping, suspended just below the ceiling in basements, and under sinks that provide insufficient clearance to remove the lid. Installation in these inconvenient locations should be avoided to allow routine maintenance.

Major Violations Outdoor FOG Interceptors (Checklist Items 5-9)

Food Preparation Establishments (FPEs) are required by the Municipal Sewer Use Ordinance to admit properly identified FOG inspectors into their facilities. FPEs are further required to provide the labor to open FOG pretreatment equipment. FPEs will not typically open outdoor FOG interceptors themselves but rely on the Grease Trap/Interceptor Cleaner to open, clean and inspect these units for them. It is suggested that inspectors have basic tools for opening outdoor grease traps available. A list of recommended tools and equipment is located at the end of this document. Inspections should be conducted during normal work hours and preferably not during peak business hours. Observation during peak hours can provide insight into normal operations; however, interference with FPE operations should be kept to a minimum.

5. Manhole Covers Brought to Grade, and Labeled – The manhole covers should be brought to grade for easy maintenance access. In some locations locking manhole lids may be required for security and safety reasons. Appropriate tools may be required to remove these lids including socket wrenches or screwdrivers.

Labels or signs should be securely attached and readable. These signs are intended to remind Grease Trap/Interceptor Cleaners and FPE staff of the dangers of working around an outdoor FOG interceptor. FPE staff members in most cases will not be familiar with confined space terminology or procedures.

6. Does Pumping Frequency Meet Permit? – The maintenance log should be reviewed to ensure that maintenance is occurring once every quarter for outdoor FOG interceptors. If grease accumulation is greater than ¼ of the interceptor depth (typically 9 inches) at the time of inspection, pumping should be scheduled as soon as possible.

An alternative maintenance schedule may have been granted if the FOG accumulation in outdoor FOG interceptors has been documented and approved by the regulatory authority to be significantly less than one quarter of the interceptor depth (typically 9 inches) of FOG accumulation in three months. FOG minimization practices in the kitchen must be maintained at all times for continued approval of the reduced pumping frequency.

7. Baffles in Good Condition – The baffle should extend a minimum of three inches above the water level. If the baffle is submerged this may indicate that the passage through the baffle is plugged. The inspector must observe confined space procedures and NOT place their head in the

FOG interceptor to check the baffle or any other interior part of the FOG interceptor. A mirror on a pole in a good method of checking the interior parts of the FOG interceptor.

8. Inlet and Outlet Tees in Place – Inlet and outlet tees must be in place and located below the manholes to allow observation. No liquid should be flowing over the top of either the inlet or outlet tee. Caps should **not** be placed on the tees. No visible fats, oils, or grease should be observed leaving the FOG interceptor at the outlet tee.

9. Grease Less than One Quarter Depth of Unit - The requirement for pumping grease interceptors is a maximum depth of one quarter of the liquid depth of FOG and settled solids. However, it may not always be possible to determine the liquid depth of the FOG interceptor. In these cases, the volume of the interceptor should be reviewed either from permit records or from the maintenance log to determine the allowed depth of solid material in the grease interceptor. Allowable FOG accumulation in most 1,000-gallon grease interceptors is 9 inches. During inspection, the thickness of the grease layer seen should be consistent with the time since the last cleaning of the tank. (i.e., If the tank was pumped a few days prior to the inspection, the grease layer should be visible only as a thin layer or film at the top of the water layer.) A thick grease layer accompanied by receipts for recent FOG pumping might indicate improper cleaning procedures by the grease trap/interceptor cleaner or excessive FOG being wasted to the collection system. The walls of the tank should be in good condition.

Major Violations Indoor FOG Interceptor (Items 10-15)

Both passive and active indoor traps must be properly vented to work properly. This is most easily noticed by an unusually low water level within the unit. When these units are not vented properly, a siphon can form that will lower the operating level below the desired level. Usually the vent is located within a few feet of the unit.

10. Unit Maintained Daily – Indoor passive traps must be cleaned every day that the facility is operating. GRUs must be operated daily. Poor accessibility or lack of equipment to clean the trap will decrease the likelihood of proper maintenance. Inspectors should review the maintenance log and inquire with the individual cleaning the FOG interceptor where the material removed is discarded. FPEs may ask about methods for cleaning indoor passive traps.

11. Unit Energized – All AGRUs are to be energized at all times. AGRUs are typically wired to be plugged into a wall outlet. The Connecticut *General Permit* requires units to be hardwired to the electricity to prevent accidental unplugging of the units.

12. Screening Basket and Baffles in Place – The screening basket for catching food particles and flow diversion baffles should be installed in their correct position. If these items are not installed they should be located and reinstalled. If these items are missing or broken replacement parts must be ordered.

13. Skimmer/Pump in Working Order – The skimmer on some AGRUs consists of the motor that turns the skimmer wheel, the skimmer wheel, and the wiper blades. All of these items must be in working order. The outlet where FOG is discharged into the collection container should be checked to ensure it is not clogged. Those AGRUs that use sensors to detect the volume of FOG in the

separation chamber typically use either a pump or valving and gravity to remove FOG from the unit. The pump or valving should be checked for proper operation.

14. Heater Element in Working Order – The heater element requires 5 to 10 minutes to heat the unit contents. It may be most efficient in facilities where AGRUs are installed to turn the heating element on at the beginning of the inspection then return to the AGRU after the Food Service part of the inspection (where FOG pretreatment and Food Service Inspections are conducted at the same time). This will allow the heating element to warm up. Note that some units have two timers, one for the heating element and a second for the skimmer wheel. The heating element should energize at least 30 minutes prior to the skimmer energizing so that the FOG accumulated in the unit will have sufficient time to liquefy.

15. Grease Collection Container in Place – The FOG collection container should be in the correct position to receive FOG from the AGRU and easily accessible for cleaning. Disposal to a floor drain is not allowed. The inspector should inquire where the collected grease is discarded. Disposal locations should be at facilities designated for AGRU grease collection or with a Grease Trap/Interceptor Cleaner. Renderers typically do not pick up this material as it has been in contact with detergents and wastewater. However, conditions for acceptance vary with different renderers.

Minor Violations (Checklist Items 16-24)

While water temperatures above 150°F is not a violation of the Sewer Use Ordinance, the Health Department has regulations limiting the upper temperature of water used at FPEs. Water temperatures in excess of 150°F will solubilize FOG and decrease the efficiency of FOG management equipment.

16. FOG Interceptor Maintenance Log Available – All FPEs are required to maintain a log of maintenance activities for each FOG interceptor and AGRU. When more than one FOG pretreatment unit is installed at a facility, each pretreatment unit should have its own maintenance log that is clearly marked indicating which unit's information it holds. The maintenance log should include the name of the person cleaning the unit, the date, condition of the components, and volume of material removed at each cleaning.

17. Signs Posted at All Sinks – Signs are to be posted on sinks indicating the activities that are allowed at each sink. Signs are a good method of instructing new employees on proper procedures particularly when employee turnover is high.

18. Pots, Pans, Dishes and Utensils Scraped – Grease that can be rendered should be poured into a renderable FOG container. All other food particles, grease, and other material is to be scraped into a trash container. Garbage grinders should not be installed and pre-rinse sinks should have screens to catch food particles.

19. Adequate Renderable FOG Storage – The renderable grease container and non-renderable grease container, if applicable, should be covered to ensure they are protected from spills or overflow during rain events. Grease collection containers should be placed to avoid grease entering floor drains or storm drains. The preferred location for rendering containers is in a walk-in freezer, if possible, to reduce the exposure to rodents, flies, and other nuisance conditions. However, many facilities have no choice but to place rendering containers outside.

20. Exhaust Hood Properly Cleaned – Inspectors should inquire where and how often exhaust hood filters are cleaned. Some facilities have contractors who clean these filters off-site. A common, but not permitted, method is to clean these filters outside where grease can flow into storm drains and enter nearby streams. Exhaust hood filters are to be cleaned in a sink that is connected to FOG Pretreatment Equipment.

21. Renderable Grease Recycled – Inspectors should note facilities that use large volumes of grease. Facilities that have fryolators should use a rendering service. However, rendering companies charge a fee to accept renderable grease. This material should not be discarded in the trash as large volumes of grease can attract rodents, flies, cause odors and possibly cause problems in municipal waste incinerators as well as other nuisance conditions.

22. No Additives Used – The use of enzymes, bacteria, chemicals, and other wastewater system additives is not permitted. These materials may temporarily loosen or liquefy the FOG layer in FOG interceptors. But, this material can then travel downstream, re-solidify and block sewer laterals or sewer lines. The Municipal Sewer Use Ordinance includes provisions to recover the cost of emergency cleaning and fines, from facilities discharging unauthorized materials to the collection system.

23. FOG Equipment Capacity – The capacity of the FOG equipment should be consistent with accepted sizing criteria. The capacity of the equipment should be routinely recorded or compared to information recorded in the program registration database.

24. Non-Renderable FOG Disposal Location – This question is included to ensure proper FOG disposal and also to estimate capacity required at FOG disposal facilities.

25. Grease Trap/Interceptor Cleaner's Information - The name of the non-recyclable grease trap/interceptor cleaner and the rendering company used should be recorded to allow tracking of the FOG from its source to disposal.

Other Notes

Inspection of areas unrelated to the kitchen, such as the restroom, storm drains and the dumpster, can reveal inappropriate FOG disposal methods. This is usually visible by grease stains around the area of disposal.

Letters notifying Food Preparation Establishments of major violations are typically mailed from the office of the regulatory authority on the first major violation. Letters notifying the municipality in which the facility is located along with a letter to the Food Preparation Establishment may be mailed if the violation has not been corrected within the required time. Continued failure to correct the violation may result in referral to the Connecticut Department of Environmental Protection for enforcement.

An individual representing the Food Preparation Establishment should sign a copy of the inspection checklist and receive a copy when minor violations at a facility are recorded. Letters are generally not sent from the regulatory authority's office on the first report of minor violations. Letters notifying the FPE of minor violations are typically sent following subsequent inspections with repeated minor violations.

Recommended Items for Inspection

Photo identification card
Manhole hook
Mirror on a pole
Large flat head screwdriver
Socket wrench
Flashlight
Plastic measuring tape
Rubber or latex gloves
Thermometer
Inspection forms
Grease program informational brochures
Facility records

Dye tablets may also be needed to determine if restroom facilities discharge through the grease trap/interceptor.

Inspection Checklist

Date: _____
Inspector: _____
Establishment: _____
Address: _____
Contact Name: _____ Signature: _____
Phone: _____

	TRAP NUMBER					
General Information	**#1**		**#2**		**#3**	
1. Registered Pretreatment Equipment	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
2. Properly Installed Equipment	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
3. Was grease trap Inspected	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
4. Grease trap accessible for maintenance	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Major Violations Outdoor Grease Traps						
5. Manhole cover brought to grade, and labeled	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
6. Does pumping frequency meet permit	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
7. Baffles in good condition	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
8. Inlet and Outlet Tees in place	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
9. Grease less than 1/4 depth of unit	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Major Violations Indoor Grease Trap						
10. Unit maintained daily	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
11. Unit Energized	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
12. Screening basket in place	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
13. Skimmer in working order	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
14. Heater in working order	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
15. Grease collection container in place	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Minor Violations						
16. Grease trap maintenance log available	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
17. Signs posted at all sinks	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
18. Pots, pans, dishes, and utensils scraped	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
19. Adequate renderable FOG container storage	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
20. Exhaust hood properly cleaned	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
21. Renderable FOG recycled	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
22. No additives used	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
23. FOG Equipment Capacity	_____		_____		_____	

24. Non-Renderable FOG Disposal Location ☐ Trash ☐ Contractor ☐ Other

25. Grease Trap/Interceptor Cleaner's Information — Renderer's Information

Name: _____ Name: _____

Address: _____ Address: _____

Phone: _____ Phone: _____

Comments: _____

DOCUMENT 14

COLLECTION OF RENDERABLE AND NON-RENDERABLE FOG

RENDERABLE FAT, OILS, AND GREASE

The cleaning of utensils, cookware, equipment, grills, deep fat fryers (fryolators), and all equipment that comes into direct contact with food from the preparation stage to the final cleanup of eating utensils are potential sources of FOG in wastewater. The materials collected in the grease traps/interceptors are from both animal and vegetable sources. Animal sources include drippings from cooked meats, butter, lard, and other animal based cooking materials. Vegetable sources include nuts, cooking oils, grain oils, and cereals. Renderable FOG includes the FOG that is not exposed to other wastes. It includes fryolator oil, grease and oil from exhaust hoods, and materials taken directly from utensils and pans.

The process of rendering is used to separate different classes of these products for reuse and resale. Rendering services process the FOG separating the recyclable components for reuse.

RENDERABLE FOG COLLECTION

Companies that collect FOG from food industries are listed in the following table. These companies provide a pick-up service for the FOG generated at the Food Preparation Establishments. They provide storage containers for use on-site and usually provide a regular collection schedule. They view the collected FOG as a commodity that can be sold for reuse. In most cases, the material is delivered to a rendering plant where it is tested to determine the properties and check for contaminants. After the material has been tested it is filtered, processed both mechanically and chemically, and ultimately resold for use in a variety of products including cosmetics, soaps, lubricants, and animal feed.

Table 14-1 provides a list of the known companies that provide rendering within the State.

Table 14-1
Companies that Collect Renderable FOG Generated within Connecticut[1]

Name	Location	Phone
Western Mass Rendering Co.	Southwick, MA	(413) 569-6265
Darling International	Newark, NJ	(800) 842-5927

[1]February 2006

NON-RENDERABLE FAT, OILS, AND GREASE

Non-renderable FOG includes all FOG materials that are not renderable, including FOG exposed to sewage or other wastes, and FOG contaminated with toxic materials. Materials that may be found in non-renderable FOG include human wastes, heavy metals, pesticides, cleaning

compounds, or other toxic materials. When these substances are found, the material is not suitable for rendering and must be disposed of by other means.

COLLECTION

Grease Trap/Interceptor Cleaners collect non-renderable FOG from FOG interceptors and transport it to Regional FOG Disposal Facilities for storage and thickening prior to disposal. The thickening process reduces the volume of the final product that will be disposed of, by removing much of the water. Thickening can significantly decrease the volume, lowering the cost of transportation and disposal and making the material more suitable for use as a supplemental fuel in sludge incinerators.

Table 14-2
Regional FOG Disposal Facilities[1]

Name	Location	Phone
New Haven WPCF	New Haven, CT	(203) 466-5263
Torrington WPCF	Torrington, CT	(860) 485-9166
Windham WPCF	Willimantic, CT	(860) 465-3078

[1]February 2006

DOCUMENT 15

INFORMATION FOR GREASE TRAP/INTERCEPTOR CLEANERS

This information on the City of Torrington/Torrington Area Health District FOG Pretreatment Program is intended for Grease Trap/Interceptor Cleaners or Septic Tank Cleaners who may be interested in cleaning grease traps. This document provides general information on the program and specific requirements for discharging FOG at the Torrington Regional FOG Disposal Facility. This information will allow Grease Trap/Interceptor Cleaners to make any changes necessary in their operation. They should take this opportunity to inform their clients, who are Food Preparation Establishment, of any changes in interceptor cleaning procedures that may affect them.

As the FOG Pretreatment Program has not been fully implemented, the program dates are not included in the following document. These are marked as {Date} for easy location.

INFORMATION FOR GREASE TRAP/INTERCEPTOR CLEANERS ON THE CITY OF TORRINGTON'S FATS, OILS, AND GREASE PRETREATMENT PROGRAM

Changes to the City of Torrington's Sewer Use Ordinance

On {Date}, the City of Torrington adopted a new Sewer Use Ordinance. This new Ordinance prohibits the discharge of Fats, Oils, and Grease (FOG) to the municipal sewage system in concentrations greater than 100 mg/L and requires the installation and maintenance of grease pretreatment equipment, if not already installed, to achieve this concentration.

Who will be Affected by the Changes

All Food Preparation Establishments that generate waste grease will be required to install and maintain FOG Pretreatment Equipment (grease traps or grease interceptors). Food Preparation Establishments include, but are not limited to, restaurants, hotel kitchens, hospitals, school kitchens, and bars. The Ordinance allows three (3) years for existing facilities to install the necessary equipment to comply with the Ordinance. Following installation, outdoor in-ground grease interceptors are to be pumped a minimum of once every three (3) months unless approval of an alternative schedule has been approved by the Torrington Water Pollution Control Authority. This new program will affect Food Preparation Establishments holding a Class III or Class IV food service license and discharging wastewater to the municipal sewage systems.

Changes in Operation at the Torrington Water Pollution Control Plant

In accordance with the one (1) year period to install the required equipment, the Torrington Water Pollution Control Plant will no longer routinely accept loads of mixed grease and septage after {Date}. There will be no change in the current procedure for receiving septage at the septage receiving station or in the procedure for receiving grease at the frac. tank. However, septic tank pumpings that contain significant volumes of grease or grease trap pumpings that contain septage will only be accepted under special circumstances. Additional fees may apply.

What this Means for Grease Trap/Interceptor Cleaners

While the City of Torrington is making efforts to inform Food Preparation Establishments of the new requirements, Grease Trap/Interceptor Cleaners are encouraged to discuss the new requirements with their customers.

Grease Trap/Interceptor Cleaners should make efforts to maintain grease loads brought to the Torrington WPCF FOG facility free of paper, rags, and other solid material that is incompatible with the operation of the FOG receiving facility. When pumping grease traps after July 1, 2011, Grease Trap/Interceptor Cleaners will be required to provide a receipt to their customers with a duplicate receipt provided to the Water Pollution Control Facility. The receipt is to include the following information:

- Grease Trap/Interceptor Cleaner's Name
- Date of Service
- Customer's Name (Facility)
- Disposal Site (Torrington frac. tank or name of other WPCF)
- Volume of Material Removed (1,000 gallons, etc.)
- Approximate depth of grease layer (6 inches etc)
- Condition of the grease trap including:
    - Tank walls, bottom and lid (OK or cracked lid, etc.)
    - Baffles; and
    - Tees.

Statewide FOG Program

These new requirements are part of the Fats, Oils, and Grease Pretreatment Program that the City of Torrington is implementing in preparation of the Statewide FOG Pretreatment Program. FOG disposal sites are being set up at selected locations throughout the State to address the disposal issues associated with FOG.

As of February 2006, FOG disposal sites are located at the following wastewater facilities;

- New Haven;
- Torrington; and
- Windham.

FOG disposal sites are currently being considered at;

- Danbury;
- Bristol;
- Meriden; and
- Other Municipalities.

Additional receiving facilities may be added to the program at a later date.

DOCUMENT 16

NOTICE OF VIOLATION LETTER

The following is a sample violation letter provided to assist FOG Pretreatment Program developers in writing notices of violations for their program.

TORRINGTON AREA HEALTH DISTRICT

350 Main Street ♦ Suite A ♦ Torrington, Connecticut 06790
Phone (860) 489-0436 ♦ Fax (860) 496-8243 ♦ E-mail info@tahd.org ♦ Web Address www.tahd.org

"Promoting Health & Preventing Disease Since 1967"

Borough of Bantam
Bethlehem
Cornwall
Goshen
Harwinton
Kent
Borough of Litchfield
Litchfield
Morris
Norfolk
Plymouth
Salisbury
Thomaston
Torrington
Warren
Watertown
Winsted

{*DATE*}

{*NAME*}
{*ADDRESS*} TAHD FOG Pretreatment Program

Dear {CONTACT}:

On {*DATE}* {INSPECTOR} of the Torrington Area Health District conducted an inspection of the grease handling and disposal methods at your facility located at {*LOCATION}* for compliance with the City of Torrington's FOG Pretreatment Program. At that time violations as shown on the attached Inspection Summary were noted.

Failure to properly maintain fats, oils, and grease pretreatment equipment in accordance with the permitting requirements of the City of Torrington can result in fines, loss of your food service license, or enforcement action for the Connecticut Department of Environmental Protection. The deficiencies noted in the Inspection Summary must be corrected within the following timetable.

Violation	**Days from Inspection to Correct Violation**
Equipment not Registered	30 days
Equipment not Properly Installed	90 days
Major Violations (Outdoor and Indoor)	30 days
Minor Violations	90 days

If additional information is needed on the TAHD Fats, Oils, and Grease Pretreatment Program requirements, an information package titled FOG Pretreatment Regulations is available at the TAHD offices.

Sincerely,

Gilbert A. Roberts
Director of Environmental Health

CC: {Municipality}
Connecticut Department of Environmental Protection

PS 99(3)

Tax Exemptions for Certain Water Pollution Control Equipment

PURPOSE

The purpose of this Policy Statement is to describe the procedures for making purchases of water pollution control equipment exempt from sales and use taxes pursuant to Conn. Gen. Stat. §12-412(21). This Policy Statement also provides information about a municipal property tax exemption in Conn. Gen. Stat. §12-81(51) and explains the qualification process for such exemption.

This Policy Statement lists certain water pollution control equipment which has been designated as approved by the Commissioner of the Department of Environmental Protection for use, incorporation or consumption in water pollution control facilities. If an item of tangible personal property appears on the list contained in this Policy Statement, it is not necessary for a purchaser to obtain advance written approval from the Department of Environmental Protection (DEP) in order to qualify for the exemption from sales and use taxes on the purchase of such item or to qualify for the municipal property tax exemption.

EFFECTIVE DATE: Effective for tax periods beginning on or after January 1, 1998.

STATUTORY AUTHORITY: Conn. Gen. Stat. §§12-412(21) and 12-81(51).

BACKGROUND

An exemption from sales and use taxes is available under Conn. Gen. Stat. §12-412(21) for purchases of tangible personal property certified by DEP, which are acquired for incorporation into or used and consumed in the operation of facilities for the treatment of industrial waste before the discharge thereof into any waters of the state or into any sewerage system emptying into such waters, the primary purpose of which is the reduction, control or elimination of pollution of such waters. ***Industrial waste*** means any harmful thermal effect or any liquid, gaseous or solid substance or combination thereof resulting from any process of industry, manufacture, trade or business, or from the development or recovery of any natural resource. This exemption applies **only** to purchases of tangible personal property, and is not available for purchases of taxable services.

An exemption from municipal property taxes is available under Conn. Gen. Stat. §12-81(51) for structures and equipment acquired for the treatment of industrial waste before the discharge thereof into any waters of the state or into any sewerage system emptying into such waters, the primary purpose of which is the reduction, control or elimination of pollution of such waters, that are certified as approved for such purpose by DEP.

REPEAL OF THE CORPORATION BUSINESS TAX CREDIT

Effective for income years beginning on or after January 1, 1998, the corporation business tax credit under Conn. Gen. Stat. §12-217d for certain expenses for treating industrial waste is repealed. Any corporation eligible for this tax credit may carry any remaining tax credit forward as the provisions of this section would have allowed prior to repeal. (1997 Conn. Pub. Acts 295, §§ 21 and 24)

PROCEDURES FOR QUALIFYING PURCHASES FOR SALES AND USE TAX EXEMPTION PURSUANT TO CONN. GEN. STAT. §12-412(21)

If an item of tangible personal property appears on the list of water pollution control equipment contained in this Policy Statement and is intended to be incorporated into or used and consumed in the operation of facilities in Connecticut for the treatment of industrial waste before the discharge thereof into any waters of the state or into any sewer system emptying into such waters, the primary purpose of which is the reduction, control or elimination of pollution of such waters, the purchaser need only present the retailer of such item with a copy of a properly

completed **CERT-124**, *Certificate for Purchases of Tangible Personal Property Incorporated Into or Consumed in Water Pollution Control Facilities.*

NOTE: Persons using CERT-124 to make exempt purchases of tangible personal property (or for any other purpose specified in this Policy Statement) must be prepared to provide to the Department of Environmental Protection or the Department of Revenue Services, or both, on demand, a detailed list of all items purchased, and to prove that such items were used in facilities, the primary purpose of which was water pollution reduction, control or elimination, and not another purpose.

In the event that an item of tangible personal property does not appear on the list in this Policy Statement, but the purchaser intends to use or consume it in the operation of facilities for the treatment of industrial waste before the discharge thereof into any waters of the state or into any sewerage system emptying into such waters, the purchaser must receive written approval from the Commissioner of the Department of Environmental Protection indicating that such item of tangible personal property is approved for use in a water pollution control facility. Such written approval must be attached to **CERT-124** and the procedures for use of that certificate should be followed once such written approval has been secured.

PROCEDURES FOR QUALIFYING STRUCTURES AND EQUIPMENT FOR MUNICIPAL PROPERTY TAX RELIEF PURSUANT TO CONN. GEN. STAT.§12-81(51)

The Commissioner of Revenue Services does not directly administer Conn. Gen. Stat. §12-81(51), which is a municipal property tax statute allowing an exemption from property tax for certain water pollution control equipment. However, in order to facilitate the procedures for qualifying equipment for such an exemption, **CERT-124,** when properly completed, serves as the certification of approval by the Commissioner of the Department of Environmental Protection as required by Conn. Gen. Stat. §12-81(51) that such equipment has the primary purpose of reducing, controlling or eliminating water pollution.

NOTE: Persons using CERT-124 to receive a municipal property tax exemption for purchases of certain water pollution control equipment must provide the item number and description listed in this publication to the assessor of the municipality in which the water pollution control equipment or structure is located. This information must be included on the *Declaration of Personal Property* to qualify the item for exemption from municipal property tax.

In the event that the equipment purchased does not appear on the list in this Policy Statement, but the purchaser intends to use or consume it in the operation of facilities for the treatment of industrial waste before the discharge thereof into any waters of the state or into any sewerage system emptying into such waters, the purchaser must attach to **CERT-124** written approval from the Commissioner of the Department of Environmental Protection indicating that such equipment is approved for use in a water pollution control facility.

In order to qualify for the exemption, the taxpayer should file a copy of **CERT-124** with the assessor of the municipality in which the water pollution control equipment or structure is located, on or before the first day of November in such assessment year. Any inquiries regarding that exemption should be addressed to the municipal assessor.

LIST OF WATER POLLUTION CONTROL EQUIPMENT AND CONSUMABLES DESIGNATED AS APPROVED FOR USE, CONSUMPTION OR INCORPORATION IN WATER POLLUTION CONTROL FACILITIES

1. Activated Carbon Filters
2. Air Stripping/Off Gas Treatment Systems
3. Ammonia Removal Systems
4. Bag and Strainer Filters
5. Biological Wastewater Treatment Systems (Activated Sludge, Trickling Filters, RBCs, etc.)
6. Chemical Feed and Storage Tanks
7. Color Removal Systems for Waste Water
8. Cyanide Destruction Systems
9. Dechlorination Chemicals (sulfur dioxide, sodium sulfite, etc.)
10. Dechlorination Equipment
11. Defoamers
12. Diffusers
13. Disinfection Chemicals (chlorine, bromine, ozone, etc.)
14. Disinfection Systems (e.g., oxidation, ultra-violet)
15. Dissolved Air Flotation Systems
16. Electrolytic Recovery Systems
17. Equalization Tanks
18. Evaporators

19. Flow Meters and Recorders
20. Gravity Clarifiers
21. Grit Separators
22. Heat Exchangers
23. Hexavalent Chromium Reduction Systems
24. Ion Exchange Equipment and Materials
25. Liquid Level Sensing Devices and Alarms
26. Membrane Filtration Systems
27. Metals Precipitation Systems
28. Mixers and Agitators
29. Neutralization Tanks and Systems
30. Oil/Water Separators
31. Oily Waste Demulsification Chemicals (sulfuric acid, calcium chloride, etc.)
32. Oily Waste Demulsification Systems
33. ORP Meters
34. Oxidizing Agents (calcium hypochlorite, chlorine gas, etc.)
35. pH Adjustment Chemicals (lime, caustic, acid, etc.)
36. pH Adjustment Systems
37. pH Meters and Recorders
38. Phase Separation Systems
39. Phosphorous Removal Equipment and Chemicals
40. Recycling Systems for Non-Contact Cooling Water
41. Reducing Agents (sodium metabisulfate, sulfur dioxide, ferrous sulfate, etc.)
42. Reverse Osmosis Systems for Waste Water Reuse or Discharge
43. Sand and Multimedia Filters
44. Settling and Flocculating Agents (alum, lime, ferric chloride, polymers, etc.)
45. Settling Tanks and Sedimentation Basins
46. Sludge Collection and Conveyance Systems
47. Sludge Dewatering Devices and Conditioning Chemicals
48. Sludge Handling and Storage Facilities Used Solely for Sludge (tanks, pumps, agitators, etc.)
49. Sludge Incinerators and Composting Facilities
50. Sludge Stabilization and Conditioning Systems (anaerobic digestion, heat treatment, etc.)
51. Spill Control Equipment and Structures including only: Underground Seepage Protection, Cathodic Protection of Underground Tanks, Leak Detection Equipment, Liquid Level Sensing Devices, Automatic Solenoid Valves, Alarms, Collision Protection, Diversionary Structures, Dikes, Berms, Retention Basins and Slick Booms
52. Temperature Meters and Recorders
53. Wastewater Analysis Equipment
54. Wastewater Collection and Conveyance Systems for process wastewater* and blowdown from heating and cooling equipment, where minor inputs of sanitary sewage are understood to be present and acceptable.

*As defined in Conn. Agencies Regs. §22a-430-3. THIS DEFINITION DOES NOT INCLUDE STORMWATER.

NOTE: The above list includes equipment and chemicals that may be used for purposes other than water pollution control. Equipment and chemicals that are used in the normal course of business for purposes other than water pollution control are not eligible for tax relief. Taxpayers may apply for the sales and use tax and municipal property tax exemptions under the statutory provisions listed in this Policy Statement *only* for items purchased for the primary purpose of the reduction, control or elimination of water pollution.

HOW TO OBTAIN WRITTEN APPROVAL FOR WATER POLLUTION CONTROL EQUIPMENT NOT LISTED IN THIS POLICY STATEMENT

Call the Permitting, Enforcement and Remediation Division of DEP's Water Management Bureau at 860-424-3848.

Mail written requests to:

Permitting, Enforcement and Remediation Division
Bureau of Water Management
Connecticut Department of Environmental Protection
79 Elm Street
Hartford CT 06106-5127

EFFECT ON OTHER DOCUMENTS

This document modifies and supersedes **PS 96(8)**, *Tax Credits and Exemptions for Certain Water Pollution Control Equipment.*

EFFECT OF THIS DOCUMENT

A Policy Statement is a document that explains in depth a current Department policy or practice affecting the liability of taxpayers.

FOR FURTHER INFORMATION

Please call the Department of Revenue Services during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday:

- **1-800-382-9463** (toll-free from within Connecticut), or
- **860-297-5962** (from anywhere).

TTY, TDD and Text Telephone users only may transmit inquiries 24 hours a day by calling 860-297-4911.

FORMS AND PUBLICATIONS

Forms and publications are available all day, seven days a week:

- **Internet:** preview and download forms and publications from the DRS web site**: www.state.ct.us/drs**
- ***DRS TAX-FAX***: call **860-297-5698** from the handset attached to your fax machine and select from the menu, or
- **Telephone:** Call **1-800-382-9463** (toll-free from within Connecticut) and select **Option 2** from a touch-tone phone, or **860-297-4753** (from anywhere).

PS 99(3)
Sales and use taxes
Corporation Business Tax
Issued 6/28/99

State of Connecticut
Department of Revenue Services
25 Sigourney Street
Hartford CT 06106-5032

CERT-124

Certificate for Purchases of Tangible Personal Property Incorporated Into or Consumed in Water Pollution Control Facilities

Conn. Gen. Stat. §§12-412(21) and 12-81(51)

General Purpose: This certificate is to be used by the purchaser to claim exemption from sales and use taxes under Conn. Gen. Stat. §12-412(21). The exemption is for purchases of tangible personal property acquired for incorporation into or used and consumed in the operation of facilities for the treatment of industrial waste before the discharge thereof into any waters of the state or into any sewerage system emptying into such waters, the primary purpose of which is the reduction, control or elimination of water pollution, certified as approved for such purpose by the Commissioner of the Department of Environmental Protection. The Commissioner may certify to a portion of the tangible personal property acquired for incorporation into such facilities to the extent that such portion has as its primary purpose the reduction, control or elimination of water pollution.

This certificate may also be used to certify that for purposes of the municipal property tax exemption under Conn. Gen. Stat. §12-81(51), the tangible personal property has been approved for incorporation into or used and consumed in the operation of water pollution abatement facilities. For information on either of these provisions, see **Policy Statement 99(3).**

Repeal of the Corporation Business Tax Credit: Effective for income years beginning on or after January 1, 1998, the corporation business tax credit under Conn. Gen. Stat. §12-217d for certain expenses for treating industrial waste is repealed. Any corporation eligible for this tax credit may carry any remaining tax credit forward as the provisions of this section would have allowed prior to repeal. (1997 Conn. Pub. Acts 295, §§ 21 and 24)

Purchases of Items Not Listed in PS 99(3): The purchaser must obtain and attach to this certificate written approval from the Commissioner of the Department of Environmental Protection indicating that an item of tangible personal property is approved for use in a water pollution control facility. For information on how to obtain written approval from the Department of Environmental Protection (DEP), see **PS 99(3)**.

Instructions for the Purchaser: This certificate is to be issued and signed by an owner or officer of a business that purchases tangible personal property to be incorporated into or consumed in the operation of facilities for the treatment of industrial waste before the discharge thereof into any waters of the state or into any sewerage system emptying into such waters, the primary purpose of which is the reduction, control or elimination of water pollution, certified as approved for such purpose by the Commissioner of the Department of Environmental Protection. In order for the purchaser to qualify for the exemption from sales and use taxes under Conn. Gen. Stat. §12-412(21), the purchaser must present this certificate to the retailer at the time of purchase of the qualifying tangible personal property.

In order to obtain the municipal property tax exemption under Conn. Gen. Stat. §12-81(51) which may be available for qualifying structures or equipment, the taxpayer must file a properly completed copy of this certificate with the assessor of the municipality in which the structures or equipment are located, after confirming that municipality's procedures for qualifying for such exemption.

Instructions for the Seller: Acceptance of this certificate, when properly completed, shall relieve the seller from the burden of proving that the sale of tangible personal property is not subject to sales and use taxes when such tangible personal property will be used or consumed in the operation of facilities for the treatment of industrial waste before the discharge thereof into any waters of the state or into any sewerage system emptying into such waters, the primary purpose of which is the reduction, control or elimination of water pollution, and is certified as approved for such purpose by the Commissioner of the Department of Environmental Protection.

The certificate is valid only if taken in good faith from a person who is an owner or officer of a business that will use tangible personal property being purchased as provided in Conn. Gen. Stat. §12-412(21). For example, the good faith of the seller will be questioned if such seller has knowledge of facts that give rise to a reasonable inference that the purchaser will not use the tangible personal property for water pollution abatement or that the tangible personal property cannot be used for such purpose, or that the tangible personal property has not been approved by DEP. This certificate together with proof that the tangible personal property is approved for use or consumption in water pollution abatement, and bills or invoices to the purchaser, must be maintained by the seller for a period of at least six years from the date on which the items were purchased. The bills, invoices or records covering purchases made under this certificate must be appropriately marked to indicate that an exempt purchase has occurred. The words ***Exempt Under CERT-124*** will satisfy the requirement.

This certificate may be used for individual exempt purchases, in which event the box marked **Certificate for One Purchase Only** must be checked. This certificate may also be used for a continuing line of exempt purchases, in which event the box marked **Blanket Certificate** must be checked. A blanket certificate shall remain in effect for a three-year period, unless a written revocation is made by the purchaser prior to the expiration of the period.

For Further Information: Call Taxpayer Services at 1-800-382-9463 (toll-free from within Connecticut) or 860-297-5962 (anywhere). TTY, TDD and Text Telephone users **only** may transmit inquiries 24 hours a day by calling 860-297-4911.

CONTINUED ON REVERSE

NAME OF PURCHASER	ADDRESS	CT TAX REGISTRATION NUMBER (If NONE, explain below)	FEDERAL EMPLOYER ID NUMBER
NAME OF SELLER	ADDRESS	CT TAX REGISTRATION NUMBER (If NONE, explain below)	FEDERAL EMPLOYER ID NUMBER

CHECK ONE BOX:

❒ Blanket Certificate ❒ Certificate for One Purchase Only

CHECK APPLICABLE BOX(ES):

❒ Water Pollution Equipment ❒ Supplies/Consumables

ITEMIZED DESCRIPTION OF ITEMS PURCHASED (FOR MUNICIPAL PROPERTY TAX EXEMPTION INCLUDE DATE ACQUIRED, DATE INSTALLED AND PURCHASE PRICE. THESE ITEMS MUST ALSO BE INCLUDED ON THE *DECLARATION OF PERSONAL PROPERTY*):

DECLARATION BY PURCHASER

The item(s) described above are tangible personal property to be used or consumed by a business in the operation of facilities for the treatment of industrial waste before the discharge thereof into any waters of the state or into any sewerage system emptying into such waters, the primary purpose of which is the reduction, control or elimination of water pollution, certified as approved for such purpose by the Commissioner of the Department of Environmental Protection.

In accordance with Conn. Gen. Stat. §12-412(21), the purchase of these item(s) is exempt from sales and use taxes.

In accordance with Conn. Gen. Stat. §12-81(51), these items may be exempt from municipal property tax. Describe the items above and include on the *Declaration of Personal Property*.

I declare under penalty of false statement that I have examined this Certificate and, to the best of my knowledge and belief, it is true, complete and correct. (The penalty for false statement is imprisonment not to exceed one year or a fine not to exceed two thousand dollars, or both.)

_____
Name of purchasing business

BY: _____ _____ _____
Authorized signature of owner or officer Title Date