



Fats, Oils & Grease (FOG) Management Program

Grease Interceptor
and
Grease Trap
Certification Class

January 14, 2009

Certification Class Agenda

- Powerpoint Presentation
- Questions from Class Attendees
- Test
 - 15 questions
 - Multiple choice and True/False
- Issuance of Certification Cards

Objective of Certification Class

- Training of grease waste haulers, plumbers and engineers to be able to accurately identify improper grease interceptor and grease trap operation and components, and to *properly correct any problems*.
- Ultimately, to prevent Sanitary Sewer Overflows and decrease City of Clarksville's sewer maintenance costs

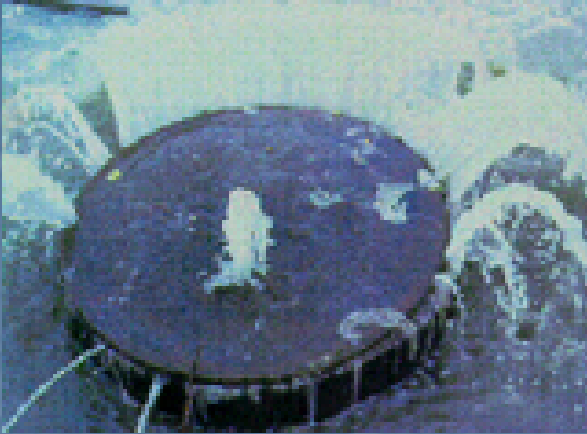
FEDERAL LEVEL

What is CMOM?

- C – Capacity
- M – Management
- O – Operation
- M – Maintenance of
sanitary sewer collection systems

EPA Region IV has conducted CMOM audits in Tennessee. Fines have been issued and cities have to implement required actions, which have included increased focus on Fats, Oils & Grease (FOG) Programs.

Sanitary Sewer Overflows due to FOG



With FOG discharge, SSO is inevitable



Recent SSOs due to improper grease interceptor operation

- No Access to effluent (or outlet T), Outlet T not attached and sanitary sewer line connected to the grease interceptor.



GREASE CONTROL EQUIPMENT

Grease Interceptor
or "Outside,
underground
tank"



Grease Trap or "Inside,
under-the-sink units",
"floor traps", and
"outdoor floor traps"



Grease Interceptors

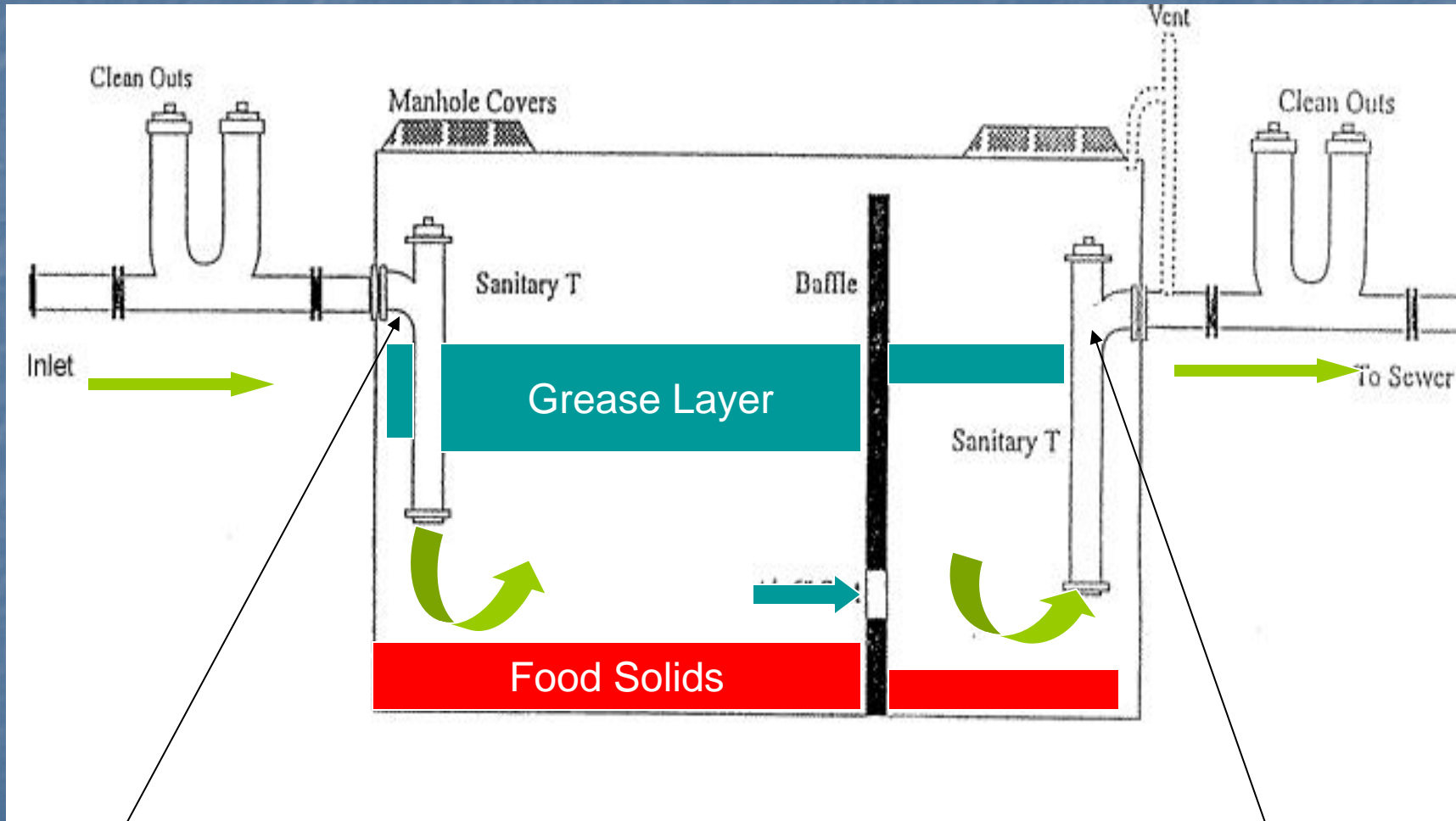


Review Form A: Grease
Interceptor Certification
Form



Grease Control Equipment

Grease Interceptor



Influent T

Effluent T

Grease Interceptor Certification – Form A

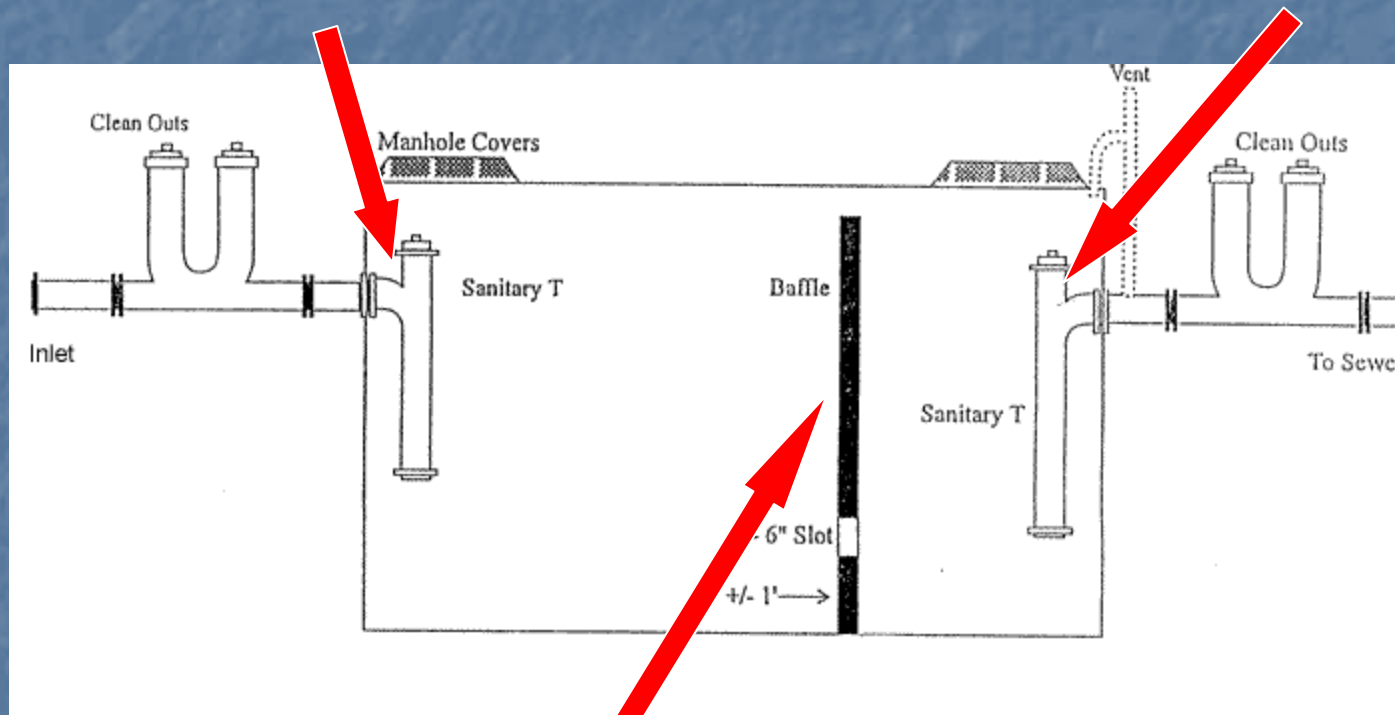
(New Pass or Fail Form)

- 1. Interceptor completely emptied and cleaned before inspection (or anytime it is pumped)
 - FOG layer on top as well as food solids layer on bottom of interceptor will prevent interceptor from operating efficiently
 - The City of Clarksville FOG Ordinance requires complete pump of contents

2. Access to all interceptor chambers for cleaning

Inlet (Influent) T

Outlet (Effluent) T



IDENTIFY the parts

Inlet T, Outlet T,
Mid wall baffle

Baffle wall w/ hole

If no access to all chambers then the
interceptor FAILS, and written
response is necessary

Access to All Chambers? If not
then must mark "FAIL"



Grease Interceptor Certification – FORM A

- #3 Influent (Inlet) T is attached and extends downward at least 2/3 depth of tank.
- #4 Effluent (Outlet) T is attached and extends downward to within 12" of tank bottom.
 - Effluent T is VERY IMPORTANT

No Inlet T = "Fail"

- Does not allow for proper retention time
- Clogs, backups in facility are more likely
- Shortcircuiting of kitchen wastewater occurs



FOG layer itself will block inlet wastewater flow

This Effluent T (or lack of one) is NOT Acceptable. This is "Fail" on Certification Form



NO Effluent T, means to check
"FAIL" on certification form

NO T !!!



Effluent T is too short = “Fail” on Certification Form



These PVC Ts would be too short for a 4 ft deep interceptor. FOG would escape the interceptor

Short (only 13" extension) concrete Effluent T = "FAIL"



One manufacturer of septic tanks also sells these as grease interceptors. This is a concrete effluent baffle wall. The problem is that the baffle only extends down 13"...so only approximately 8" will be below the wastewater surface.
SHORT CIRCUIT=FOG

#5 Effluent (Outlet T) made of non-collapsible material that does not easily flex or bend, and is secure, not allowing FOG to escape around edges.

PASS = Schedule 40 PVC pipe securely attached to outlet pipe

FAIL = Thin plastic, SD35, aluminum, etc...attached to wall of interceptor

Outlet T material



PASS



FAIL

#6 Interceptor tank does NOT have any visible holes or leaks?

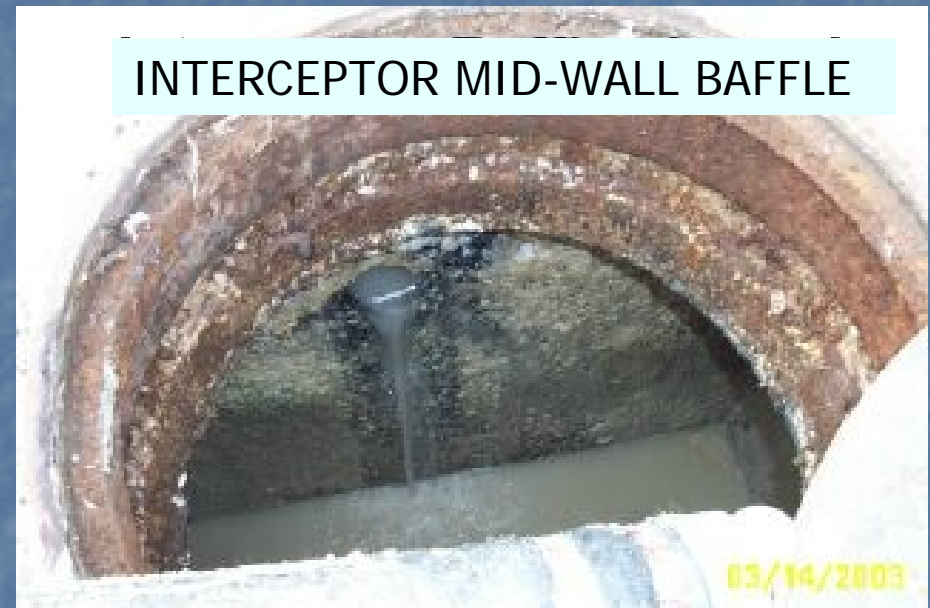


If leaks or holes identified = "FAIL"

#7 Interceptor Mid-wall baffle is secure and operational?



FAIL



PASS

* Important-Make note on Interceptor certification form is mid-wall baffle is a "Hanging Baffle Wall" (meaning it is open at bottom, wall does not go to floor of tank)

Mid-Wall Baffle Deterioration = Fail

Baffle irregular, not consistent, deteriorating



- #8 Interceptor maintaining structural integrity?

- Possible parking lot collapse
- Half of concrete gone
- Wastewater depth not reaching outlet T, or partially filled interceptor after 30, 60 or 90 day interval.



#9 Sewer Clean-out Covers Missing or Damaged?

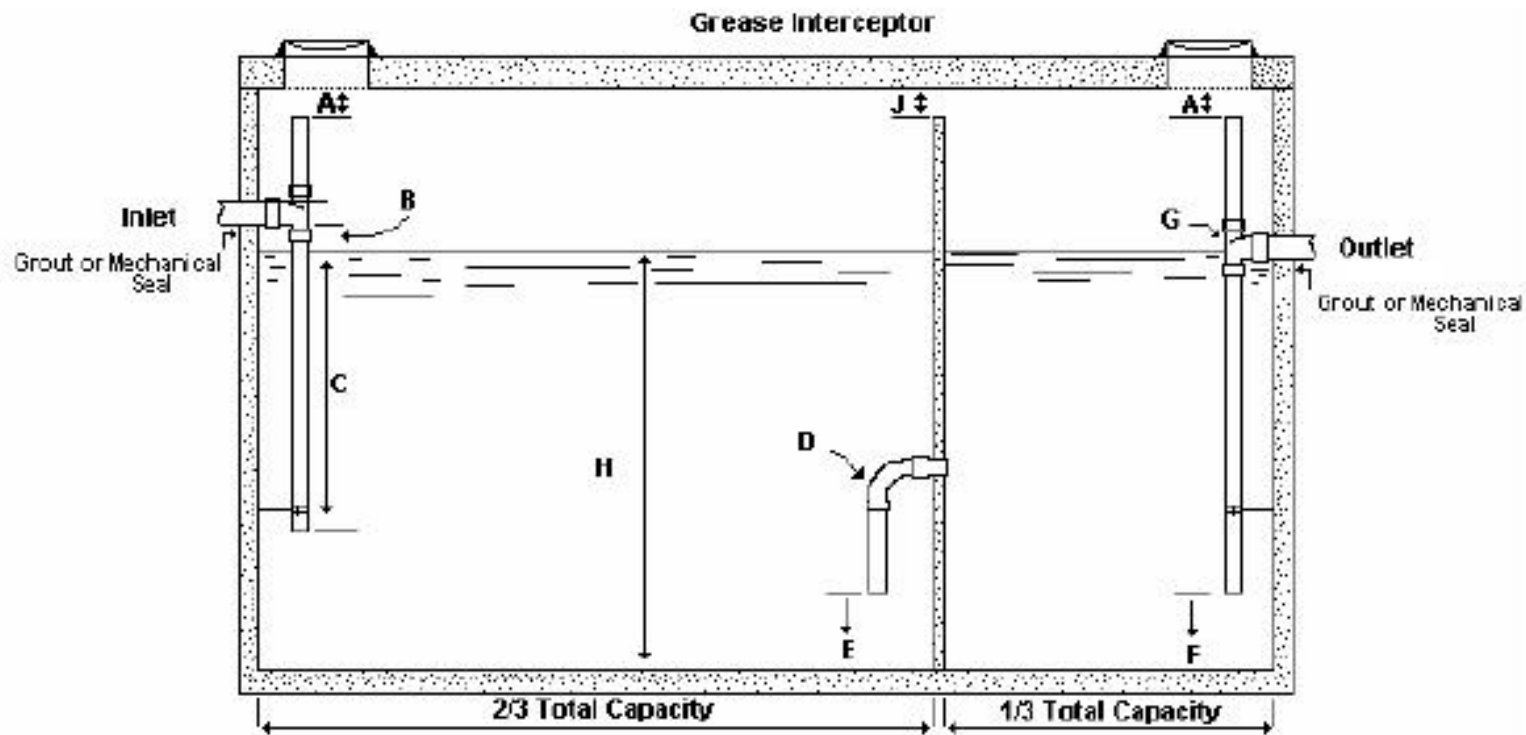


All missing or damaged sewer cleanout covers need to be replaced.

Interceptor Pumping Frequency

- Minimum of every 90 days, or
- When FOG layer and food solids layer are 25% of the interceptor tank depth
 - Example: FOG layer 5 inches, food solids layer 7 inches = 12 inches. The depth of the interceptor tank is 4 ft or 48". Thus, the FOG and food solids layer is 25% ($12" / 48"$) of the tank depth.
- Complete pump of all interceptor contents
 - No Partial pumping

Diagram of Grease Interceptor on back of Certification Form



- A.) Minimum 6", but not less than pipe diameter.
- B.) Inlet pipe invert to be 2 1/2" above liquid surface.
- C.) Inlet pipe to terminate 2/3 depth of water level.
- D.) 90 degree Sweep, minimum size - 6".
- E.) 12" from floor to end of sweep.
- F.) 12" from floor to end of outlet pipe.
- G.) Outlet pipe no smaller than inlet pipe, minimum - 4".
- H.) Minimum depth of liquid capacity - 42".
- J.) Maximum distance from ceiling - 6".

RESPONSE COMMENTS

- Required to complete “Response Comments” Section on back of Certification Form
 - Clearly identify problem
 - State corrective action to be taken
 - Provide Date that corrective action will be taken

Very Important to identify problem, state corrective action and provide date corrective action will be taken. Will cause your client more headaches if not done properly the first time.

ORIGINAL COPY

*Only the original certification form is acceptable to submit to City of Clarksville Fats, Oils and Grease Management Program

IMPORTANT: Be sure to completely fill in all information. Some individuals do not include the size of the interceptor or trap and this is necessary.

RECORDS

- Grease Interceptor cleaning record or manifest must include facility name, address, date pumped and volume pumped.
- Records should be kept onsite at the food service establishment for a period of no less than 3 years.

Two or more interceptors What to do?



Complete Certification form for each
Interceptor Tank

Tank 1

Tank 2

GREASE TRAPS

“Under the Sink” Units



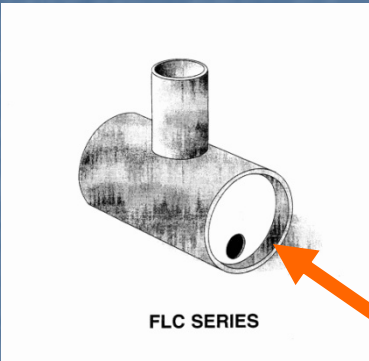
Review Form B: Grease Trap
Certification Form



Grease Trap Certification – Form B

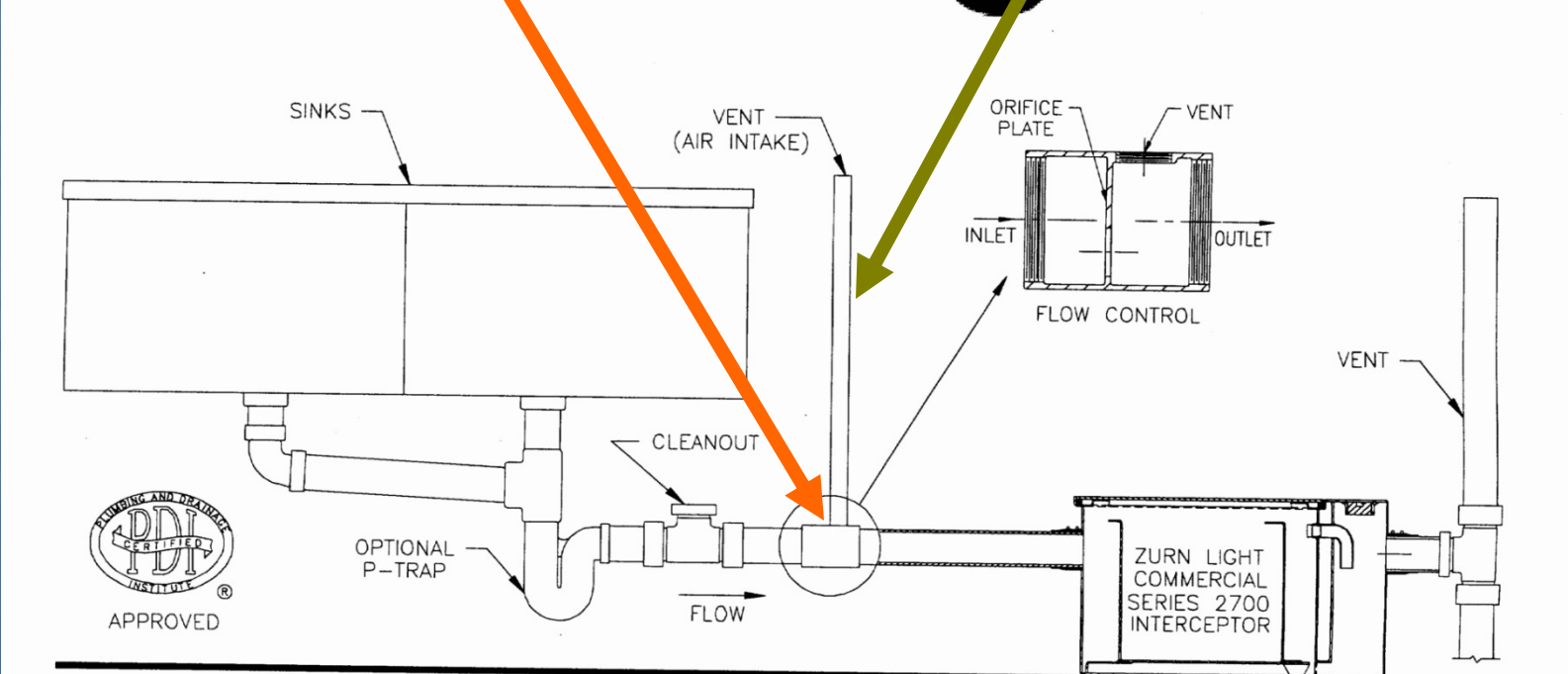
#3 & #4 FLOW RESTRICTOR DEVICE

#5 Grease Trap is Vented



Flow restrictor

Vent



GREASE TRAPS

“Under the Sink” Units

- Sizes – most common
 - 10 gpm / 20 lb capacity
 - 15 gpm / 30 lb capacity
 - **20 gpm / 40 lb capacity***
 - 25 gpm / 50 lb capacity
 - 35 gpm / 70 lb capacity
 - 50 gpm / 100 lb capacity

* 20gpm/40 lb. capacity trap is City of Clarksville minimum acceptable size

Most floor traps will have sizing (flow rate and capacity) on the under –side of the top cover

*Flow through rate as gpm and capacity of grease for the unit is lbs.

Floor Traps- Indoor & ...



Check underside of cover for
grease trap size



Outdoor "floor" Traps



Floor traps (indoor and outdoor)



FLOOR TRAPS : Write in "FLOOR TRAP" on certification Form B

Need inlet and outlet Ts

Need mid wall baffle

To prevent backups/blockages, need to clean every 2 weeks

Can advise any facilities using these that it will lead to sewer line problems.

“Failed” Certification-Reminder

- If one (1) question is marked “Fail” then the grease interceptor or grease trap certification has FAILED.
- If certification “Fails” then must 1-identify problem, 2-provide corrective action response, & 3-provide date corrective action will be taken. Include this on the back of the certification form.

Connections or Discharges to Grease Control Equipment

■ Grease Interceptor

- 3 compartment sink
- Mop sink
- Pre-rinse sink
- Floor drains
- Hood cleaning discharge**

**Recommend Pump interceptor immediately after hood cleaning discharge

■ Grease Trap (designed for one fixture unit each)

- 3 compartment sink
- Mop sink
- Pre-rinse sink (*if trap is large enough)

Traps should not have dishwasher attached, nor should any additives be used prior to the trap.



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Questions?

City of Clarksville FOG Program
Grease Control Equipment Certification



Metro Water Services' FOG Program Contractor

Email: MMSLLC@comcast.net,
Phone: 615-218-8801