

# CASE STUDY #3

## background ...

A national “warehouse” store chain has a very extensive food service and deli program. Menu items include pizza and rotisserie cooked chickens. The chickens are broiled in a large rotisserie oven, which has a capacity of 32 birds per unit. Each store has a minimum of two such ovens, giving them the ability to cook at least 64 chickens at one time. The approximate turn-around time per batch is 90 minutes, with 1,200 to 5,000 chickens being prepared (depending upon location) during a typical week.

Needless-to-say, with 1,200 to 5,000 chickens being processed through their rotisserie ovens on a weekly basis, this store was experiencing problems associated with chicken grease and fat, which is a natural-byproduct of the broiling process. Pre and post cooking weight tests show that the average chicken “gives up” approximately 8 ounces of fat / grease!! Extrapolating that over the weekly product run shows that 600 to 2,500 pounds of chicken grease is being produced on a weekly basis. All of this grease was allowed to go straight down the drain, through an in-ground grease trap, and into the municipality’s sewer system.

## issue / problem ...

The primarily problem that the warehouse store was experiencing was an ***excess amount of effluent (FOG) being discharged*** down the drains in their deli operations.

## goals ...

There were four primary goals set by this warehouse store chain with respect to their deli operations and FOG effluent. They were:

- 1. Significantly reduce the fat, oil, and grease (FOG) effluent that is being discharged into the drain system in the deli operations***
- 2. Significantly reduce the costs associated with maintaining the drains and grease traps due to the FOG being discharged into the drains***
- 3. To recover as much FOG as possible in such a way that it can easily be recycled.***
- 4. Accelerate company-wide ongoing efforts to improve on sustainability and “greening” initiatives***

## the solution ...

The warehouse chain store contacted Goslyn, LLC and asked for their assistance in dealing with the aforementioned problem and in helping them achieve the above mentioned goals. Goslyn responded by installing, on a test basis, a GOS-40 grease recovery device. The unit (GOS-40) was installed to recover FOG only from the top rotisserie oven (input) while the outlet of the GOS-40 was connected to a water pan drain system.



**GOS - 40**

**results ...**

One full week of operating the rotisserie oven that was connected to the GOS-40 unit result in the following data:

• Test period	7 days
• Number of batches cooked during the 7 day period	25
• Number of birds (chickens) cooked per batch	32
• Total number of birds cooked during the week-long test period	800
• <b>The amount of F.O.G. recovered in the Goslyn – 40</b>	<b>120 lbs / 17.4 gallons</b>
• <b>The amount of F.O.G. NOT being discharged down the deli operation drain from just one rotisserie oven</b>	<b>120 lbs. / 17.4 gallons</b>
• <b>Quality of the FOG / Yellow grease recovered by the GOS – 40</b>	<b>98% -- 99% pure oil ≥ 1% moisture &amp; solids</b>

**Recovered FOG / Yellow Grease**

