

PRETREATMENT CORNER

First-Time Industrial Facility Inspections - What To Look For

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While you have been doing your annual inspections at the local electroplater or pharmaceutical manufacturer or chemical manufacturer for many years now, what about the 20-person machine shop down the street that just moved into the neighborhood? Have you conducted an inspection at this facility yet, and, if you did, what did you look for, what questions did you ask, and did you see the entire facility's operations? Even when it appears you asked the right questions, the facility representative may not understand that you are also interested in non-regulated wastestreams such as cleaning operations, especially if they are not integral to the primary categorical operation that has been identified through the inspection.

Let's take a look at a hypothetical situation and do a walk-through of a small machine shop. Take a blank discharge permit application, inspection report or field notebook with you to record information as you tour the facility. If allowed by the facility, take a camera with you as well. Upon arrival, sit down with the facility representative and review basic facility information such as contact persons, major production activities and production rates, products or services provided by the facility, number of employees, operating hours and whether the industrial wastewater discharge is batch or continuous. Ask the facility representative if records are maintained for water use for the various operations within the facility, such as boiler feed or cooling tower use, sanitary use, process water use, equipment washdown and water contained in product or evaporated.

Next, discuss where wastewater may be generated, such as the following: paint spraying, dipping or other coating operations; plating or finishing operations; air control devices, such as scrubbers or paint spray booth water curtains; cleaning or degreasing operations; printing or photographic operations; drinking water fountains (installed prior to the PA Plumbing System Lead Ban and Notification Act of 1989-33); boiler or cooling tower blowdown; and any other manufacturing operation. Determine a water balance between water use and water loss/wastewater discharge.

Gather copies of raw material and chemical inventories, including concentrations of chemicals used in process operations; MSDSs for raw materials and chemicals used in the manufacturing and pretreatment operations, including cleaning compounds, surfactants and boiler and cooling tower chemicals; standard operating procedures for operations generating wastewater; water and sewer piping diagrams, process schematics, building layouts and pretreatment system descriptions; description of liquid and solid waste disposal protocol; residual and hazardous waste reports; and any analytical testing that has not yet been provided by the facility to the POTW. Discuss spills or releases that may have occurred during the past five years; the use of pesticides, herbicides and fertilizer on the premises; and any other state or federal environmental permits held by the facility.

Many times it helps to walk through a facility from start to finish; just as a piece of metal may travel through the manufacturing operation. Pay close attention to any operations that generate wastewater or use water, as well as tracking the path of floor drains and sumps present throughout the facility to the facility's pretreatment system, or directly to the public sewer system, if pretreatment does not exist. Verify that pretreatment facilities are functional and that adequate monitoring equipment is maintained onsite to measure flow, pH and temperature, at a minimum, and request copies of equipment calibration. Note effluent clarity during the inspection.

During the walk-through, make sure to inspect the following areas for potential impact of spills or releases through floor drains, sumps or even manholes, into the sewer system: chemical storage areas; residual or hazardous waste storage areas; and aboveground and underground storage tanks. If applicable, determine if spill prevention procedures have been implemented. Determine the most appropriate location for sampling. If no other non-regulated wastestreams exist, then end-of-process may be appropriate for sampling.

Take a walk outside to view storm water swales and outfalls, the manhole to which the facility may discharge, and exterior storage areas that have potential for runoff to the sewer system.

Refer to EPA's 1994 *Industrial User Inspection and Sampling Manual for POTWs* for more detailed information and suggested inspection checklists as you prepare for future industrial inspections.