

Definitions of Seven Core Environmental Goals

50% Water Reduction

This goal is met when a facility has an annual water usage that is 50% or less of its baseline (1992) water usage, adjusted for any changes in the facility's level of production. Companies with zero discharge for the current year automatically achieve this goal.

Companies may select to base progress on either the volume of water purchased or volume of metal finishing process wastewater discharged. Water purchased is a more accurate measurement because it is easily tracked using water bills and/or totaling water meters. However, many companies have a significant disparity between volume purchased and volume of process wastewater discharged. This is due to evaporative losses plus non-metal finishing process uses of water such as lavatories, cooling, and the presence of non-metal finishing industrial processes. In these cases, companies may submit calculated values for discharges based on total water purchased and subtracting out non-process water uses.¹ In any event, the same methodology should be used for completing the baseline and current year worksheets. The company should retain supporting records or calculations.

25% Energy Reduction

This goal is achieved when a facility's total annual energy consumption is 25% less than its baseline (1992) total energy consumption. Captive metal finishing facilities may choose to track progress on the 25% reduction in energy use goal on a facility-wide basis or just for the metal finishing portion of their plant.

Progress on the 25% energy reduction goal is based on all sources of energy purchased by the facility, including electricity, natural gas, fuel oil, and propane. A reduction of each energy source is not necessary to achieve this goal. To calculate progress, the value of each energy source is converted to BTUs and summed. The goal is met if the sum of BTUs for the current year are 25% or less than the baseline year.

50% Reduction in Land Disposal of Hazardous Sludges and an Overall Reduction in Sludge Generation

This goal is achieved when a facility reduces its baseline (1992) annual quantity of hazardous wastewater treatment sludge (F006, F019) that is disposed of in landfills by 50% or more and achieves an overall reduction in the quantity of wastewater treatment sludge generated. Companies with zero wastewater sludge generation for the current year automatically achieve this goal.

Companies may achieve the 50% reduction goal by decreasing the quantity of sludge shipped to landfills, recycling sludge off-site, and/or delisting their sludge. Sludge quantity is calculated on a dry weight basis.

¹ When there is a very significant difference between volume of water purchased and water discharged, meeting the 50% goal through recycling can be difficult or even impossible. For example, a company purchasing 2,500,000 gpy of water and discharging 1,000,000 gpy will not be able to reduce water use by 50% based on water purchased, even if they are able to achieve zero discharge of metal finishing wastewater.

50% Reduction in Metals Emissions to Water and Air

This Goal is achieved when the sum of annual emissions of TRI metals and cyanide to air and water from a facility are reduced by 50% from the baseline year (1992) quantity. Companies with zero emissions for the current year automatically achieve this goal.

To achieve this goal it is not necessary to reduce emissions for each individual metal or cyanide. The comparison of baseline and current year data is based on the sum of all TRI metals plus cyanide.

98% Metals Utilization

This goal can be achieved in one of two ways: (1) a facility is land-disposing 2% or less of TRI metals used or (2) a facility reduces their overall wastewater treatment sludge generated by 50% or more from their baseline year (1992) quantity.

The optional sludge reduction measurement was recently implemented because many companies operate processes that do not lend themselves to the utilization calculation. For example, processes such as etching and electropolishing remove metal from the parts, which makes tracking utilization difficult or impossible. Companies are free to select either method of tracking progress toward the 98% utilization goal.

The “land-disposing of 2% or less” method does not require baseline data; the calculation is based on current year data only. The following rules help to define this goal:

- Land disposing includes discharging to a POTW and disposing of metals in landfills (includes disposal of hazardous or non-hazardous sludges, spent solutions, and other forms of wastes).
- Metals recycled off-site are considered as utilized.
- “Metals used” are defined as the quantity of TRI metal used for finishing purposes (i.e., added to a tank as anodes or chemical compounds). It does not include the base metal (i.e., part being plated).
- Cyanide is not considered in the utilization calculation; only TRI metals are considered.
- When chemical compounds are used, the quantity is expressed as “metal.” For example 100 lbs. of chromic acid flakes (CrO_3) contains 52 lbs. of chromium as metal.
- 98% utilization of each TRI metal is not necessary to achieve this goal. The weights of all TRI metals are summed during the utilization calculation.

The overall 50% sludge reduction method is based on a comparison of baseline and current year data. Sludge quantity is determined on a dry weight basis. Companies with zero sludge generation for the current year automatically achieve this goal.

90% Reduction in Organic TRI Emissions

This Goal is achieved when sum of the annual emissions of TRI organic compounds to air and water from a facility are reduced by 90% from the baseline year (1992) quantity. Companies with zero emissions for the current year automatically achieve this goal.

It is not necessary to achieve 90% reduction for each TRI organic compound used. The weights of all TRI organics are summed during the utilization calculation.

Reduction in Human Exposure to Toxic Materials in the Facility and the Surrounding Community

This Goal is achieved when a company has performed or updated all actions identified in the “reduction in human exposure to toxic chemicals” section of the worksheet in the reporting year. Note that this goal does not compare the baseline and current year activities. If a particular action is not applicable (e.g., solvent tanks are covered when not in use”) it is counted as achieved.