The effects of direct wastewater dischargers of toxic pollutants (excluding conventional pollutants and pollutant parameters) on receiving stream water quality are evaluated at current and proposed BPT/BAT treatment levels for today's proposed rule. The potential impacts of indirect wastewater dischargers on POTWs in terms of inhibition of POTW operation, contamination of sludge and the effects of POTWs effluents on receiving stream water quality are also evaluated at current discharge levels and proposed PSES levels. Water quality models are used to project pollutant in-stream concentrations based on estimated releases at current and proposed treatment levels; the in-stream concentrations are then compared to EPA-published water quality criteria or to documented toxic effect levels where EPA water quality criteria are not available for certain pollutants. POTW models are used to estimate potential POTW inhibition and sludge contamination.

The effects on receiving stream water quality for 15 direct and 45 indirect CWT facilities discharging up to 113 pollutants to 15 receiving streams and 33 POTWs respectively, are evaluated. These analyses are first performed on subcategory-specific basis for the three CWT subcategories (i.e., metals, oils, and organics subcategories). The subcategory-specific analyses, however, consider only impacts of discharges from individual subcategories, and therefore, underestimate overall water quality impacts for facilities with multiple subcategory operations. Over 40% of facilities in the Centralized Waste Treatment Industry have operations in multiple subcategories. In order to evaluate overall benefits of the proposed BPT/BAT/PSES proposed options for pollutants (excluding conventional pollutants and pollutant parameters), the water quality and POTW analyses are also performed for multiple subcategory combinations, as appropriate for individual facilities.

The subcategory-specific modeling results for pollutants (excluding conventional and pollutant parameters) show that the proposed BPT/BAT/PSES limitations reduce current excursions of chronic aquatic life and/or human health criteria or toxic effect levels as follows: (1) for the Metals Subcategory from 19 receiving streams to four streams; (2) for the Oils Subcategory from seven receiving streams to one stream for both co-proposed options; and (3) for the Organics Subcategory from 14 receiving streams to five streams. For the multiple subcategory combinations (as applicable to

individual facilities), the modeling shows current excursions of chronic aquatic life and/or human health criteria or toxic effect levels projected for 30 receiving streams reduced to ten receiving streams for both co-proposed regulatory options.

The potential impacts of 45 indirect dischargers, which discharge up to 113 pollutants (excluding conventional pollutant and pollutant parameters) into 33 POTWs are also evaluated in terms of inhibition of POTW operations and contamination of sludge. Both, the subcategory-specific analyses for these three CWT subcategories (i.e., metals, oils, and organics subcategories), and for the multiple subcategory combinations, as appropriate for individual facilities, are performed. The subcategory-specific modeling results show the proposed PSES reduce and/or eliminate current potential POTW inhibition and sludge contamination problems as follows: (1) in the Metals Subcategory from 9 POTWs with potential inhibition problems to two POTWs, and from 11 POTWs with potential sludge contamination problems to one POTW; and (2) in the Oils Subcategory from ten POTWs with potential inhibition problems to three POTWs and from one POTW with potential sludge contamination problem to none for both co-proposed options. No potential POTW inhibition or sludge contamination problems are projected for the Organics Subcategory at any level. For the multiple subcategory combinations, the modeling shows the proposed PSES to reduce current POTW inhibition problems projected for 17 POTWs to six POTWs, and potential current sludge contamination problems projected for 13 POTWs to one POTW.

The POTW inhibition and sludge values used in this analysis are not, in general, regulatory values. They are based upon engineering and health estimates contained in guidance or guidelines published by EPA and other sources. Thus, EPA generally is not basing its regulatory approach for proposed pretreatment discharge levels upon the finding that some pollutants interfere with POTWs by impairing their treatment effectiveness or causing them to violate applicable limits for their chosen disposal methods. (Rather, the proposed discharge limits are based upon a determination of pass through as explained earlier in preamble). However, the values used in this analysis help indicate the potential benefits for POTW operations and sludge disposal that may result from the compliance with proposed pretreatment discharge levels.

E. Non-Water Quality Environmental Impacts

The elimination or reduction of one form of pollution may create or aggravate other environmental problems. Therefore, Sections 304(b) and 306 of the Act call for EPA to consider non- water quality environmental impacts of effluent limitations guidelines and standards. Accordingly, EPA has considered the effect of these regulations on air pollution, solid waste generation, and energy consumption.

1. Air Pollution

CWT facilities generate wastewater that contain significant concentrations of organic compounds, some of which are also on the list of Hazardous Air Pollutants (HAP) in title 3 of the Clean Air Act Amendments (CAAA) of 1990. These wastewater typically passthrough a series of collection and treatment units that are open to the atmosphere and allow wastewater containing organic compounds to contact ambient air. Atmospheric exposure of the organic-containing wastewater may result in significant volatilization of both volatile organic compounds (VOC), which contribute to the formation of ambient ozone, and HAP from the wastewater.

VOC and HAP are emitted from wastewater beginning at the point where the wastewater first contacts ambient air. Thus. VOC and HAP from wastewater may be of concern immediately as the wastewater is discharged from the process unit. Emissions occur from wastewater collection units such as process drains, manholes, trenches, sumps, junction boxes, and from wastewater treatment units such as screens, settling basins, and equalization basins, biological aeration basins, air or steam strippers lacking air emission control devices. and any other units where the wastewater is in contact with the air.

Today's proposed regulations for the Organics Subcategory are based on the use of air stripping equipped with a carbon adsorption air emission control device for controlling volatile organic compounds. For the Metals and Oils Subcategories, where low levels of volatile organic compounds were detected, treatment technologies are equipped air scrubbers to control emissions.

No adverse air impacts are expected to occur due to the proposed regulations. Based on raw wastewater loading estimates, air emissions of volatile pollutants would decrease by 2.0 million pounds per year due to the