

second facility (Sun Chemical/Muskegon, MI) treats its wastewaters via powdered activated carbon and biological treatment prior to discharge to a POTW.<sup>53</sup> The treatment unit in use has been subject to State air permits in the past. The facility recently obtained a waiver from permitting requirements for the treatment unit based on analysis showing that emissions (including aniline) are very low.<sup>54</sup>

Existing federal air regulations that pertain to facilities manufacturing dyes and pigments are summarized in section II.E. Aniline is regulated as a "hazardous air pollutant" (HAP) under the Clean Air Act. In general, the existing and upcoming regulations on air releases will limit the actual releases of many organic chemicals from dyes and/or pigments wastes. Based on our evaluation of the information available, we believe that air releases of aniline at dyes and/or pigments facilities are adequately controlled and such releases do not present significant risks.

We note that we could not make a TRI comparison for azobenzene because it is not a TRI constituent. Azobenzene is a degradation product associated with certain specialized dye and/or pigment production (e.g., aniline-based triarylmethane products), rather than an actual intermediate. We do not believe that azobenzene would be present in wastewaters above the mass loading limits, but expect it to be present at low levels in very few wastes. The historical analytical data support this conclusion.

As described previously in section III.G.2.d.i, we assessed the biodegradation of certain constituents by assigning them rates from structurally similar constituents. We also, as an alternative, assessed these chemicals using a default degradation rate of zero. In the wastewater analysis, the constituents affected were aniline and azobenzene. The alternate calculated allowable loadings determined for aniline were 2,000 kg/yr and 980 kg/yr for the tank and surface impoundment scenarios, respectively. The alternate values for azobenzene were 3,200 kg/yr and 1,700 kg/yr for the tank and surface impoundment scenarios, respectively.

We solicit comments on our proposed decision not to list wastewaters and set mass loading-based regulatory levels derived from the air emission pathways from tanks and/or surface

impoundments. We also request comments on an alternative approach that would list wastewaters from the production of dyes and/or pigments, establishing loading limits in a manner similar to that being proposed today for K181. We might adopt this alternative if, for example, we received data and information that these wastewaters are more likely to exceed the calculated mass loading limits than our current data indicates, or our modeling was insufficiently conservative, or that existing air regulations are not effectively controlling risks from aniline.

## 2. Groundwater Releases From Surface Impoundments

The dyes/pigments industries are known to operate a small number of surface impoundments (see section III.E.3). As a result, we modeled the management of wastewaters in unlined, clay-lined, and synthetic-lined surface impoundments for the groundwater pathway. We believe that the synthetic-lined impoundment is the most plausible management scenario for these wastes. Our analysis (see section III.G.2.g) indicates that releases to groundwater from impoundments with synthetic liners are unlikely to pose risk because the calculated allowable mass loadings all exceeded 100,000 kg/yr, an implausible loading in these wastewaters. While clay-lined impoundments are in use at one dye manufacturing site, we have not selected this scenario as plausible because these impoundments are not used to manage untreated wastes (see following discussion). We also determined that the unlined scenario for surface impoundments is not plausible for these wastes (see section III.D.2).

Our risk modeling of the clay-lined impoundment scenario indicates that the potential listing loading levels are below 100,000 kg/yr for 31 of the 35 constituents of concern (see the Risk Assessment Background Document for these results). We considered whether the one facility known to be operating clay-lined impoundments (Lobeco, located in Lobeco, SC) is likely to be managing wastewaters with constituents at levels of concern.

Lobeco indicated that their wastewater treatment system consists of neutralization, aeration with activated sludge, and holding ponds.<sup>55</sup> Staff from South Carolina's Department of Health and Environmental Control described four in-ground units at this site: An equalization unit and a digestion unit,

both concrete-lined (with secondary clay liners), and two clay-lined holding basins. The holding basins receive wastewater treated in the concrete lined units prior to discharge to surface waters under an NPDES permit. 1999 TRI data for this facility shows that they had low levels of two constituents of potential concern in the influent to their wastewater treatment facility: Formaldehyde (<1 part per billion or ppb) and naphthalene (1 ppb–1 ppm). The facility reported that the only chemical reported to be discharged to surface water was ammonia. Consequently, we conclude that the treatment in the upstream units removed the naphthalene and formaldehyde before wastewaters reached the clay-lined holding basins.

The facility's NPDES monitoring data shows that only one of the constituents of concern for this listing for which the facility conducted analysis was detected in their effluent; copper was found at 0.3–0.9 pounds/day (50–150 kg/yr), well below the copper calculated allowable loading limit of 5,600 kg/yr for clay-lined impoundments. Since we believe the water in the clay-lined holding basins closely resembles the effluent, we do not believe that these particular impoundments are likely to manage wastewaters that would contain constituents of concern at levels above the calculated allowable mass loading limits.

We request comment on our proposal not to list wastewaters from dyes and/or pigments production and not to set loading levels derived from the groundwater pathway for clay-lined surface impoundments. We also request comments on an alternative approach that would list wastewaters from the production of dyes and/or pigments that are managed in clay-lined surface impoundments, establishing mass loading limits in a manner similar to that being proposed today for K181. This alternative approach would not list as hazardous those wastewaters that are managed in synthetic-lined impoundments or in tanks. We would consider this alternative further if we receive data and information that, for example, would indicate that there are additional clay-lined surface impoundments in use by the industry or our assessment of the risks posed by wastewaters is insufficiently conservative.

## D. Scope of the Listings and the Effect on Treatment Residuals

Today's proposal would result in a new hazardous waste listing that differs from previously promulgated listed hazardous wastes in that it includes

<sup>53</sup> Contact between Dr. Robert Kayser, OSW and John Fagiolo, Remedial Project Manager, EPA, June 24, 2003.

<sup>54</sup> Contact between Dr. Robert Kayser, OSW and Tracey McDonald, Air Quality Division, Michigan Department of Environmental Quality, June 24, 2003 in the docket for today's rule.

<sup>55</sup> <http://www.lobecoproducts.com/environment.html>.