

Non Dyes and/or Pigments Waste Generators: Five of the eight constituents of concern⁷⁰ are not currently on Appendix VIII. These are: o-anisidine, p-cresidine, 2,4-dimethylaniline, 1,2-phenylenediamine, and 1,3-phenylenediamine. The proposed listing would also add five chemicals with the standards in Table VI-1 to the UTS, namely: o-anisidine, p-cresidine, 2,4-dimethylaniline, 1,3-phenylenediamine, and toluene-2,4-diamine. The proposed rule will result in the addition of these constituents to Appendix VIII and establishment of the additional UTS standards. This would be a direct impact of the rule potentially affecting an expanded universe of facilities.

We examined the TRI database, Material Safety Data Sheets (MSDS), Chemchannels.com⁷¹ and Biennial Report System (BRS) data in an effort to identify other facilities that may be generating hazardous wastes containing any of the constituents of concern.

Based on available data, we identified 13 non dye and/or pigment facilities that may be impacted by the expanded scope of this proposed rule. The constituents of concern appear to be contained in other hazardous organic nonwastewaters and currently managed by either energy recovery or incineration. This is the common management procedure for these wastes. This procedure is assumed to continue after the rule is promulgated given that it will comply with the LDR requirements. Incremental costs to impacted expanded scope facilities are expected to be limited to additional sampling and analysis requirements necessary to fully characterize the wastes. We estimate that the additional sampling and analysis costs would average \$2,183.50 per facility, per year. The total cost for all 13 facilities is estimated to be no more than \$28,400 per year.

Remediation of Hazardous Waste Sites: Adding constituents to Appendix VIII, by itself, is not expected to have a significant impact on remediation of hazardous waste sites. The RCRA regulations in 40 CFR Part 264 establish management standards for hazardous waste treatment, storage and disposal facilities. Subpart F of 264 sets standards for addressing releases from solid waste management units. Appendix VIII is identified in section 264.93 of Subpart F as the list from

which facility-specific groundwater protection standards are developed as part of a compliance monitoring program under 264.99. These groundwater protection standards are comprised of the Appendix VIII constituents that are "reasonably expected to be in or derived from waste contained in a regulated unit." The addition of these substances to Appendix VIII, therefore, would only potentially affect those facilities in compliance monitoring that (1) would reasonably be expected to use or make these chemicals, or (2) manage these wastes. Throughout the remainder of this Subpart, the Agency directs permit writers to Appendix IX, a list specifically designed to be used in monitoring groundwater. We are not proposing to add any constituents to Appendix IX.

We have addressed the potential impact on the first category of facilities (*i.e.*, those that would reasonably be expected to use or make these chemicals, beyond the Dye and Pigment industries we evaluated) explicitly in our expanded scope analysis. For the second category of facilities, those that manage hazardous wastes that might contain the constituents being added to Appendix VIII, we believe these costs to be negligible. Our analysis indicates that these compounds are not widely used in commerce, and thus be unlikely to trigger the 264.93 standard of "reasonably expected to be in or derived from waste contained in a regulated unit" standard. Adding chemicals to Appendix VIII may also result in the remediation of these constituents at Superfund sites. However, for the same reasons noted above, we believe that the addition of these constituents to Appendix VIII will have a very limited impact (if any) on Superfund cleanups.

i. Lead as a Potential K181 Constituent

We have considered whether a K181 lead standard may significantly change our assessment of the costs and economic impacts estimated for the Agency Preferred Approach. Our preliminary assessment indicates that there would be no substantive impacts. Three facilities were found to generate wastes that may contain toluene-2,4-diamine. These three facilities were assumed to generate this constituent above nonconditional loading levels under our "high" analytical scenario for the Agency Preferred Approach. If we add lead as a K181 constituent, any of these facilities with lead in their wastes would need to stabilize post incineration residuals to comply with land disposal restrictions. Assuming all waste is incinerated, the maximum

aggregate incremental costs associated with stabilization, if required, are likely to be insignificant for these facilities on an individual basis. Aggregate cost impacts for all three facilities would be no more than \$340,000 per year.

We also considered the potential impact of a K181 standard for lead for Eastman and Engelhard (Harshaw Chemical). Both of these facilities have reported significant quantities of lead in the Toxic Release Inventory (TRI). We believe that Eastman currently combusts its commingled (largely non-dyes) wastes, and then manages the resultant residues in an onsite landfill. Based on available data, this landfill does not appear to meet the description of the exempt landfill cells, as detailed in the listing description (*i.e.*, it is not a municipal solid waste landfill or a Subtitle C landfill). Eastman, therefore, may pursue one of a variety of actions. These include: Segregating the wastes in the least costly manner feasible, eliminating the waste altogether, or sending all affected ash to a \$258.40 compliant MSW landfill. Eastman also has a Subtitle C landfill onsite, which could be used for some or all of the incinerated waste of concern. We have not assessed cost impacts associated with these options. Based on 1999 Biennial Reporting data, Engelhard already manages the majority of their lead-bearing wastes as hazardous, while the remainder appears to go to a MSW landfill. We believe, therefore, that the Engelhard facility is not likely to incur any additional costs of concern. Section 5.3 of the Economic Assessment background document provides a more complete discussion of these findings.

j. Risk Assessment and Benefits

As described in detail in Section III, we set the levels for nonwastewaters by modeling disposal in MSW landfills using several liner assumptions. We set the baseline loading limits using the results from clay-lined landfills, and we used the composite-liner results to set the loading limit for one constituent in MSWLFs meeting the liner design criteria in \$258.48. The mass loading limits are based on risks from residential use of groundwater from wells positioned near the landfills.

Groundwater generally moves relatively slowly, such that the constituents of concern are not expected to reach the nearby wells for a number of years. For the eight chemicals for which we are proposing loading limitations, we examined the groundwater travel times to the receptor wells for the 90th percentile runs of the Monte Carlo simulations (these runs were the bases of the loading limits).

⁷⁰ The eight constituents of concern are: aniline, o-anisidine, p-cresidine, 4-chloroaniline, 2,4-dimethylaniline, 1,2-phenylenediamine, 1,3-phenylenediamine, and toluene-2,4-diamine.

⁷¹ <http://www.chemchannels.com/chemchannel/default.asp>.