estimates range between 36 and 407 tons per year for direct dischargers, and between 1,490 and 24,391 tons per year for indirect dischargers. For direct dischargers, loadings reductions represent between .03 to .30 percent of total Toxic Release Inventory (TRI) chemical loadings to surface waters. For indirect dischargers, loadings reductions represent between .8 and 12.8 percent of all TRI loadings transferred to POTWs. Based upon the results of this screening, and more detailed risk assessments, the estimated baseline risks associated with only four wastestreams exceed commonly assumed threshold cancer and noncancer risk levels. EPA estimated that three wastestreams containing aniline pose baseline cancer risks ranging from 1 x 10-5 to 1 x 10-4 which potentially would be reduced to between 8 x 10⁻⁸ and 3 x 10⁻⁶ under the Phase III rule. A fourth wastestream containing acrylamide poses baseline cancer risk at a level of 2 x 10-3. The proposed rule is estimated to reduce this risk to between 2 x 10-4 and 4 x 10⁻³. All four of these wastestreams are currently discharged to POTWs; if POTW treatment removes these constituents from the wastewater prior to discharge to surface water and/or if no drinking water intake is located downstream from the POTW's outfall, baseline risks will be lower than those estimated above. The Agency requests comment and any available information related to these wastestreams.

B. Regulatory Impact Analysis for Underground Injected Wastes

The Agency has completed a separate regulatory impact analysis for underground injected wastes affected by the LDR Phase III proposed rule. This analysis describes and evaluates the regulatory impacts only to the Class I injection well universe. The new proposed Phase III LDRs cover decharaterized ICR and TC organic wastes, and other newly-identified hazardous wastes that are distinctly industrial wastes injected by owners and operators of only Class I hazardous and non-hazardous injection wells.

According to the available data outlined in the RIA, indications are that of the 223 Class I injection facilities in the nation, up to 154 could be affected by the new Phase III LDRs. Of these facilities, 101 inject nonhazardous waste and 53 inject hazardous waste. Combined, these facilities may inject up to 14 billion gallons of waste annually into Class I wells. These Class I injection facilities will now be required to either treat wastes, or file no migration petitions as outlined in 40

CFR 148 (See 53 FR 28118 (July 26, 1988)) preamble for a more thorough discussion of the no migration petition review process). Additional options for compliance with the proposed Phase III LDRs, including a *de minimis* exemption and a pollution prevention option are discussed in more detail in the RIA.

Of these newly affected Class I facilities, 38 already have no migration exemptions approved by EPA, but may face additional requirements requiring some modifications of their petitions due to the proposed LDR Phase III rule. For the facilities which do not have approved no migration exemptions, today's proposed rule will add compliance costs to those currently incurred as a result of previous rulemakings. The Agency analyzed costs and benefits for today's rule by using the same approach and methodology developed in the Regulatory Impact Analysis of the Underground Injection Control Program: Proposed Hazardous Waste Disposal Injection Restrictions used for the final rule (53 FR 28118) and subsequent rulemaking. An analysis was performed to assess the economic effect of associated compliance costs for the additional volumes of injected wastes attributable to this proposed rule. In general, Class I injection facilities

affected by the LDR Phase III rule will have several options. As previously mentioned, some facilities will modify existing no migration petitions already approved by the Agency, other facilities may submit entirely new petitions, and still others may accept the prohibitions and either continue to inject wastes after treatment or cease injection operations altogether, EPA assessed compliance costs for Class I facilities submitting nomigration petitions, employing alternative treatment, and/or implementing pollution prevention measures. Although facilities using pollution prevention/waste minimization to comply with the Phase III LDRs will likely lower overall regulatory compliance costs, these situations are site-specific and, therefore, EPA cannot estimate these cost savings

For Class I facilities opting to use alternative treatment, the Agency derived costs for both treating wastes on-site, and/or shipping wastes and treating them off-site at a commercial facility. However, the Agency believes that transportation of large volumes of liquid wastes off-site is not practical. This makes the off-site treatment scenario, at best, a highly conservative analysis. EPA expects most facilities that treat their wastes will do so on-site. Preliminary EPA estimates show that

the total annual compliance cost for petitions and alternative on-site treatment to industry affected by the new LDR Phase III prohibitions will range between \$9.2 million to \$13.2 million. The noncommercial facilities choosing to segregate their wastes may incur additional costs totaling \$2.98 million. The average annual compliance costs per affected facility employing onsite alternative treatment ranges from \$59,740 to \$85,714. The overall annual regulatory compliance cost to industry for petitions and alternatively treating wastes off-site will range between \$486.5 million to \$805.3 million. The range of costs for alternative treatment is the result of applying a sensitivity analysis. Only the incremental treatment costs for the new waste listings are calculated in this RIA. All of these costs will be incurred by Class I injection well owners and operators. The estimated economic impacts of the proposed rule were based on the random assignment of injection facilities to petition and treatment outcomes using a decision tree analysis method described in the RIA. The Agency requests comment as to how frequently facilities with Class I nonhazardous injection wells will be able to receive a no-migration variance. The Agency also requests comment on how frequently owners will choose to treat their waste and whether that treatment will occur on-site.

The benefits to human health and the environment in the RIA are generally defined as reduced human health risk resulting from fewer instances of ground water contamination. In general, potential health risks from Class I injection wells are extremely low. EPA conducted a preliminary quantitative assessment of the potential human health risks associated with two worstcase scenarios involving well malfunction. EPA applied the approach taken in an earlier study to measure health risks of two LDR Phase III contaminants: benzene and carbon tetrachloride. The results of this preliminary analysis show that all of the cancer and noncancer risks calculated are below regulatory concern, with the exception of the cancer risk and hazard index calculated for carbon tetrachloride, assuming an abandoned borehole is near the injection well, drinking water pumping is occurring, and the local geology is typical of the East Gulf Coast Region. The assumptions used in deriving these results were based on conservative, upper-bound estimates. The Agency intends to expand this analysis in the final rule to include other constituents