

The 1972 CWA directed EPA to promulgate effluent guidelines that reflect pollutant reductions that can be achieved by categories or subcategories of industrial point sources through the implementation of available treatment and prevention technologies. The effluent guidelines are based on specific technologies (including process changes) that EPA identifies as meeting the statutorily prescribed level of control (see CWA sections 301(b)(2), 304(b), 306, 307(b), and 307(c)). Unlike other CWA tools, effluent guidelines are national in scope and establish pollution-control obligations for all facilities that discharge wastewater within an industrial category or subcategory. In establishing these controls, under the direction of the statute, EPA assesses, for example, (1) the performance and availability of the best pollution-control technologies or pollution-prevention practices for an industrial category or subcategory as a whole; (2) the economic achievability of those technologies, which can include consideration of the affordability of achieving the reduction in pollutant discharge; (3) the cost of achieving effluent reductions; (4) non-water-quality environmental impacts (including energy requirements); and (5) such other factors as the EPA Administrator deems appropriate.

Creating a single national pollution-control requirement for each industrial category based on the best technology the industry can afford was seen by Congress as a way to reduce the potential creation of “pollution havens” and to set the nation’s sights on eliminating the discharge of pollutants to waters of the U.S. Consequently, EPA’s goal in establishing national effluent guidelines is to ensure that industrial facilities with similar characteristics, regardless of their location or the nature of their receiving water, will at a minimum meet similar effluent limitations representing the performance of the best pollution control technologies or pollution prevention practices.

In addition to establishing technology-based effluent limits, effluent guidelines provide the opportunity to promote pollution prevention and water conservation. This may be particularly important in controlling persistent, bioaccumulative, and toxic pollutants discharged in concentrations below analytic detection levels. Effluent guidelines and standards also control pollutant discharges from industrial facilities and cover discharges directly to surface water (direct discharges) and discharges to publicly owned treatment works (POTWs) (indirect discharges).

The Effluent Guidelines Program has helped reverse the water quality degradation that accompanied industrialization in this country. Permits developed using the technology-based industrial regulations are a critical element of the nation’s clean water program and reduce the discharge of pollutants that have serious environmental impacts, including pollutants that:

- Kill or impair fish and other aquatic organisms;
- Cause human health problems through contaminated water, fish, or shellfish; and
- Degrade aquatic ecosystems.

EPA has promulgated effluent guidelines for 58 industrial categories (see Table 7-1 below, also all 58 industrial categories are described at <http://water.epa.gov/scitech/wastetech/guide/industry.cfm>); these regulations apply to between 35,000 and 45,000 facilities that discharge directly to the nation’s waters, as well as another 12,000 facilities that discharge to POTWs. The regulations have prevented the discharge of more than 700 billion pounds of toxic pollutants each year.

2.2 Effluent Guidelines Review and Planning Process

In addition to establishing new regulations, the CWA requires EPA to review existing effluent guidelines annually. EPA reviews all point source categories subject to existing effluent guidelines and pretreatment standards to identify potential candidates for revision, consistent with CWA sections 304(b), 301(d), and 304(g). EPA also reviews industries consisting of direct-discharging facilities not currently subject to effluent guidelines to identify potential candidates for effluent guidelines rulemakings, pursuant to CWA section 304(m)(1)(B). Finally, EPA reviews industries consisting entirely or almost entirely of indirect-discharging facilities that are not currently subject to pretreatment standards to identify potential candidates for pretreatment standards development under CWA sections 307(b).

In the effluent guidelines planning process, EPA is guided by the following goals:

- Restore and maintain the chemical, physical, and biological integrity of the nation's waters; and
- Provide transparent decision-making and involve stakeholders early and often during the planning process.

EPA uses four major factors in prioritizing existing effluent guidelines or pretreatment standards for possible revision. These factors were developed in EPA's draft National Strategy, described at <http://water.epa.gov/scitech/wastetech/guide/strategy/fs.cfm>.

The first factor EPA considers is the amount and type of pollutants in an industrial category's discharge and the relative hazard posed by that discharge. Using this factor enables the Agency to prioritize rulemakings to achieve significant environmental and health benefits.

The second factor EPA considers is the performance and cost of applicable and demonstrated wastewater treatment technologies, process changes, or pollution prevention alternatives that could effectively reduce the concentrations of pollutants in the industrial category's wastewater and, consequently, reduce the hazard to human health or the environment associated with these pollutant discharges.

The third factor EPA considers is the affordability or economic achievability of the wastewater treatment technology, process change, or pollution prevention measures identified using the second factor. If the financial condition of the industry indicates that it would not be affordable to implement expensive and stringent new requirements, EPA might conclude a less stringent, less expensive approach to reduce pollutant loadings would better satisfy applicable statutory requirements.

The fourth factor EPA considers is an opportunity to eliminate inefficiencies or impediments to pollution prevention or technological innovation, or opportunities to promote innovative approaches such as water-quality trading, including within-plant trading. This factor might also prompt EPA, during annual reviews, to decide against revising an existing set of effluent guidelines or pretreatment standards where the pollutant source is already efficiently and effectively controlled by other regulatory or non-regulatory programs.

2.2.1 Annual Review Process

Beginning in 2011, EPA revised its annual review process to include an odd- and even-year annual-review cycle, which was reflected in the 2011 and 2012 Annual Reviews. This approach more cohesively and comprehensively addresses the factors laid out in EPA's draft National Strategy. In the odd-year reviews, EPA screens industrial dischargers through a toxicity ranking analysis (TRA) that identifies and ranks those categories whose pollutant discharges pose a substantial hazard to human health and the environment. For the TRA, EPA relies on discharge monitoring report (DMR) and Toxics Release Inventory (TRI) data to rank industrial discharge categories by toxic-weighted pound equivalents (TWPE) released. Figure 2-1 details how EPA uses the TRA to identify existing ELGs that may warrant revision. Figure 2-2 shows how EPA addresses new categories that may warrant regulation, as identified from the TRA. See Section 3 of the Preliminary 2012 Plan for further details on EPA's odd-year annual review process and methodology (78 FR 48159).

In the even years, EPA reviews additional hazard data sources and conducts alternate analyses to enhance the identification of industrial categories for which new or revised ELGs may be appropriate, beyond those that traditionally rank high in the TRA. This is consistent with the Government Accountability Office's (GAO) recommendation that EPA's annual review approach include additional industrial hazard data sources to augment its screening-level review of discharges from industrial categories.¹ Furthermore, EPA recognizes the need to consider in the screening phase the availability of treatment technologies, process changes, or pollution-prevention practices that can reduce the identified hazards. Specifically, in its even-year reviews, EPA is targeting new data sources that will provide information on other considerations not previously captured as part of the TRA, including, but not limited to:

- Industrial process changes.
- Emerging contaminants of concern.
- Advances in treatment technologies and pollution prevention practices.
- Availability of new, more sensitive analytical methods.
- Other hazard data and information not captured through the TRA and/or suggested by stakeholders or from public comments.

Figure 2-3 illustrates the even-year review process. See Section 3 of this Final 2012 Plan for details on the methodology used specifically for EPA's 2012 Annual Review.

EPA also conducts a more detailed preliminary category review of those industrial discharge categories that rank highest in terms of TWPE (i.e., pose the greatest hazard to human health and the environment) in the TRA or are identified as warranting further review during the even-year analyses. If EPA determines that further review is appropriate for an industrial category, EPA may complete a preliminary or detailed study of the point source category (see

¹ GAO's recommendations for the review of additional hazard data sources were published in GAO's September 2012 report, *Water Pollution: EPA Has Improved Its Review of Effluent Guidelines but Could Benefit from More Information on Treatment Technologies*, available online at: <http://www.gao.gov/assets/650/647992.pdf>.

Section 2.2.1.1 and Section 2.2.1.2, respectively), which may eventually lead to a new or revised guideline.

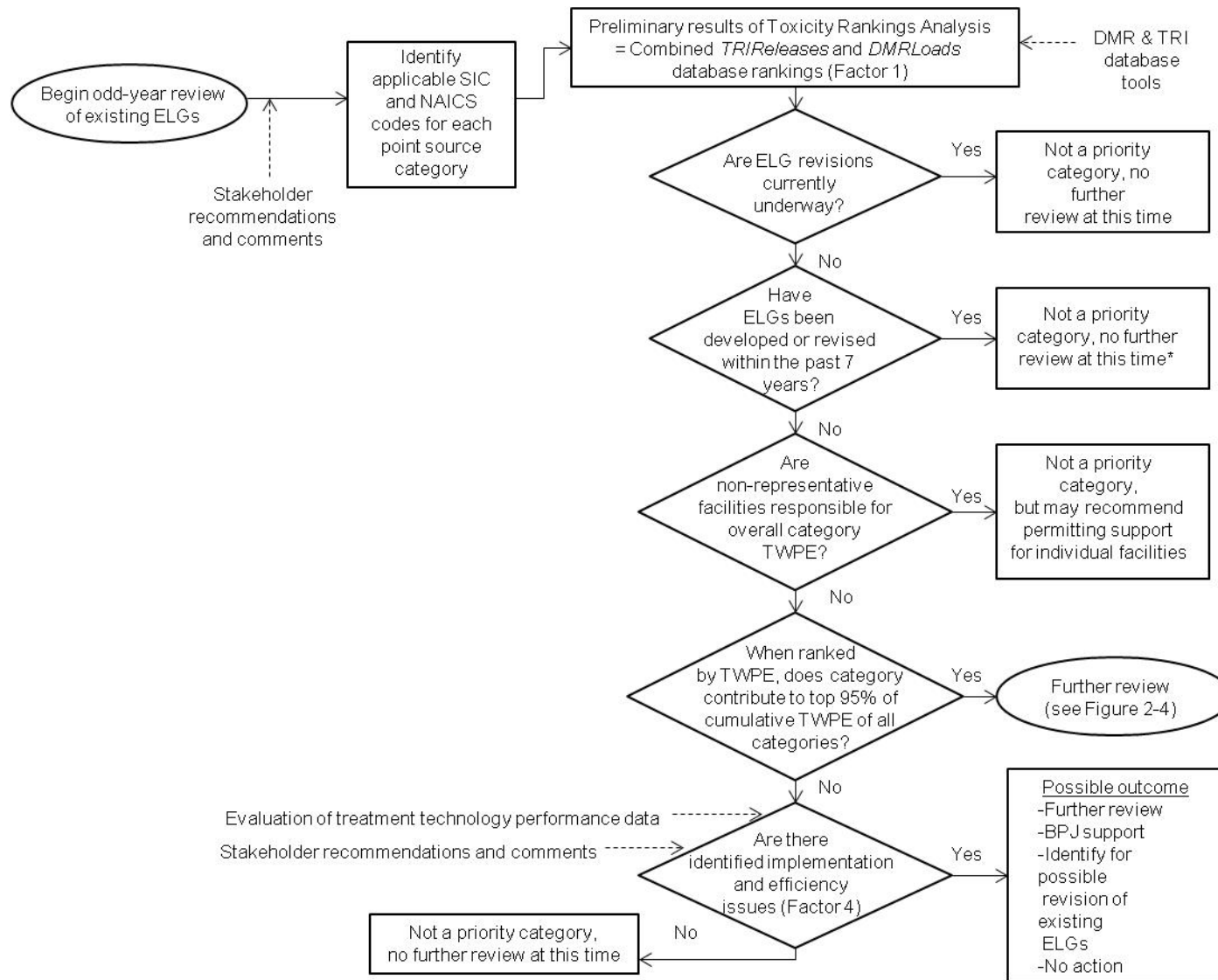
2.2.1.1 Preliminary Category Reviews

For the industrial categories with the highest hazard potential identified in the TRA, or identified as a priority from any of the even-year review analyses, EPA may conduct a preliminary category review, particularly if it lacks sufficient data to determine whether regulatory action would be appropriate, as illustrated in Figure 2-4. EPA will complete preliminary category reviews as part of the odd- or even-year review cycle depending on the industrial categories warranting review at that time. In its preliminary category reviews EPA typically examines the following: (1) wastewater characteristics and pollutant sources, (2) the pollutants driving the toxic-weighted pollutant discharges, (3) availability of pollution prevention and treatment, (4) the geographic distribution of facilities in the industry, (5) any pollutant discharge trends within the industry, and (6) any relevant economic factors. First, EPA attempts to verify the toxicity ranking results and fill in data gaps. Next, EPA considers costs and performance of applicable and demonstrated technologies, process changes, or pollution-prevention alternatives that can effectively reduce the pollutants in the point source category's wastewater. Finally, and if appropriate based on the other findings, EPA considers the affordability or economic achievability of the technology, process change, or pollution prevention measure identified using the second factor. These assessments provide an additional level of quality assurance on the reported pollutant discharges and number of facilities that represent the majority of toxic-weighted pollutant discharge.

During a preliminary category review, EPA may consult data sources including, but not limited to: (1) the U.S. Economic Census, (2) TRI and DMR data, (3) trade associations and reporting facilities that can verify reported releases and facility categorization, (4) regulatory authorities (states and EPA regions) that can clarify how category facilities are permitted, (5) NPDES permits and their supporting fact sheets, (6) EPA effluent guidelines technical development documents, (7) relevant EPA preliminary data summaries or study reports, and (8) technical literature on pollutant sources and control technologies.

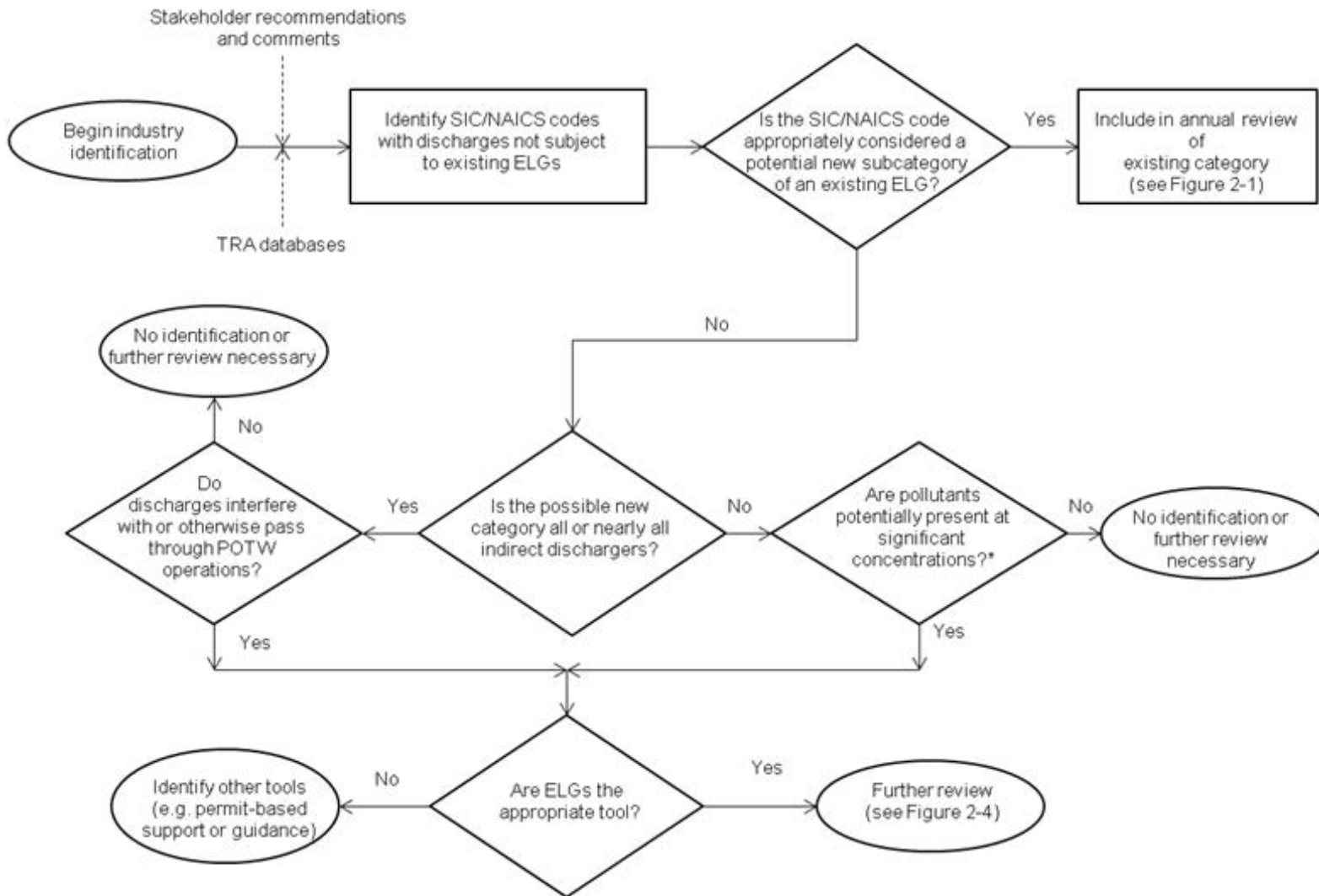
2.2.1.2 Preliminary and Detailed Studies

After conducting the preliminary category reviews, as shown in Figure 2-4, EPA may next conduct either a preliminary or detailed study of an industrial category. Typically these studies profile an industry category, gather information about the hazards posed in its wastewater discharges, gather information about availability and cost of treatment and pollution prevention technologies, assess economic achievability, and investigate other factors in order to determine if it would be appropriate to identify the category for possible effluent guidelines revision. During preliminary or detailed studies, EPA typically examines the factors and data sources listed above for preliminary category reviews. However, during a detailed study, EPA's examination of a point source category and available pollution prevention and treatment options is generally more rigorous than the analyses conducted during a preliminary category review or a preliminary study and may include primary data collection activities (such as industry questionnaires and wastewater sampling and analysis) to fill data gaps.



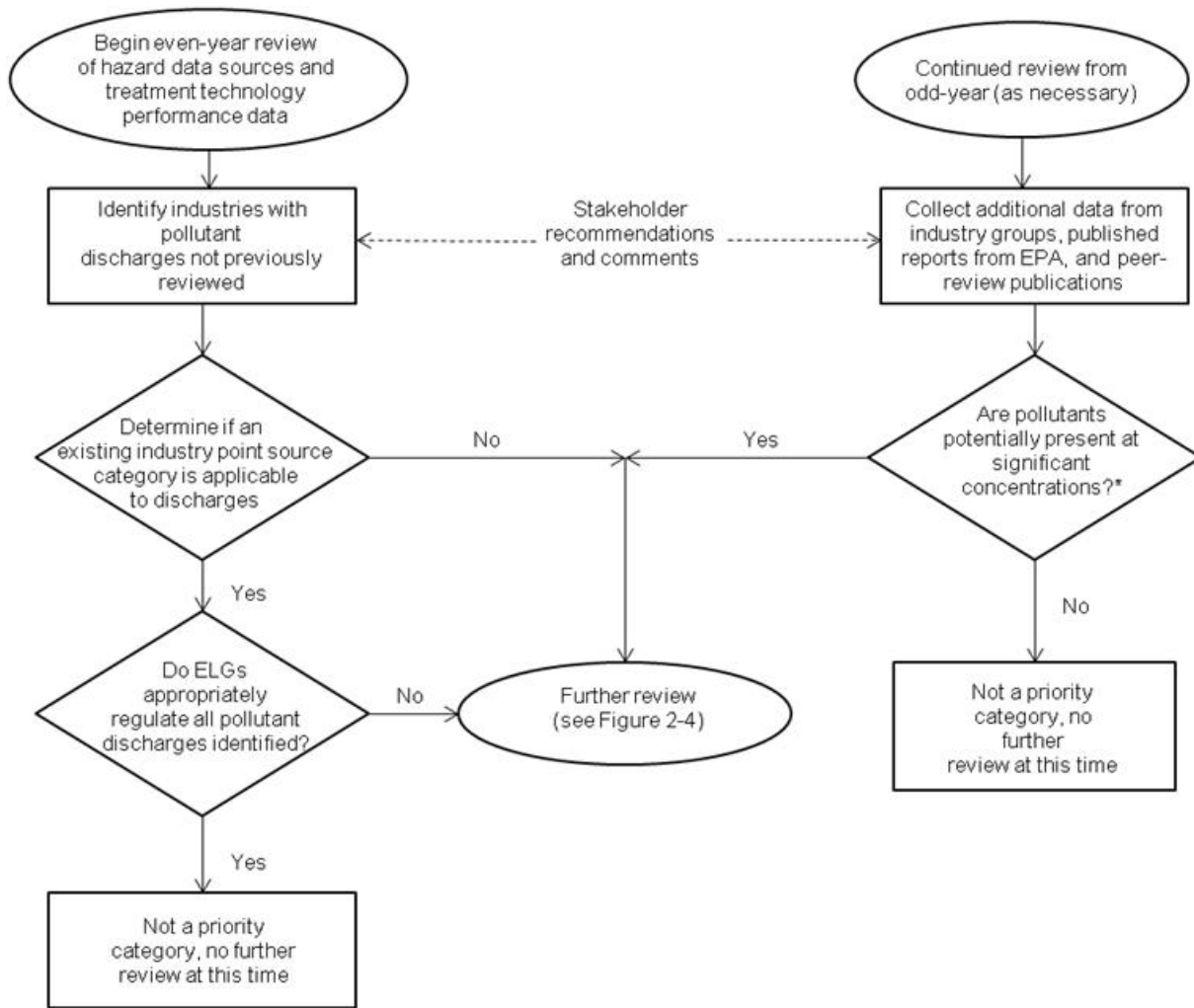
* If EPA is aware of new segment growth within such a category or new concerns are identified, EPA may do further review.

Figure 2-1. Odd-Year Annual Review of Existing ELGs



*Significant concentrations include levels above minimum levels from 40 CFR Part 136 or other EPA-approved methods, levels above treatability levels, or at levels of concern to human health and toxicity.

Figure 2-2. Odd-Year Identification of Possible New ELGs



*Significant concentrations include levels above minimum levels from 40 CFR Part 136 or other EPA-approved methods, levels above treatability levels, or at levels of concern to human health and toxicity.

Figure 2-3. Even-Year Annual Review of Existing ELGs and Identification of Possible New ELGs

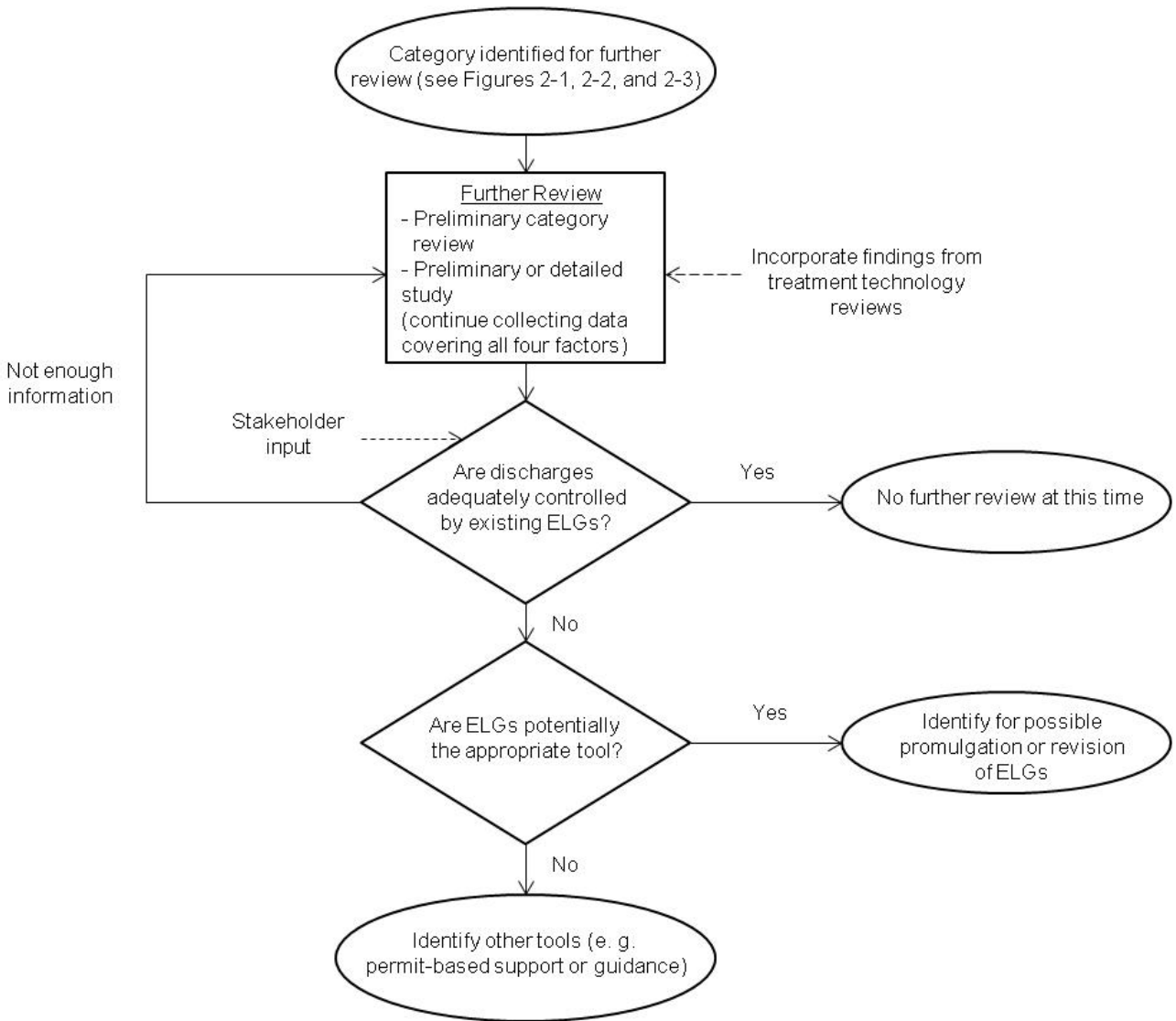


Figure 2-4. Further Review of Industrial Categories Identified During Odd- and Even-Year Annual Reviews

2.2.2 Effluent Guidelines Program Plans

CWA section 304(m)(1)(A) requires EPA to publish an Effluent Guidelines Program Plan (Plan) every two years that establishes a schedule for the annual review and revision, in accordance with section 304(b), of the effluent guidelines that EPA has promulgated under that section. EPA's *2012 Annual Review Report* presents the results of the section 304(b) reviews (U.S. EPA, 2014a).

Under the even- and odd- year annual-review approach described above in Section 2.2.1, EPA works to coordinate its annual reviews of existing effluent guidelines under section 304(b) with its publication of Preliminary and Final Plans under CWA section 304(m). As a result, Final Plans present the compilation of the odd- and even- year reviews and public comments received on the Preliminary Plan. EPA may initiate, continue, or complete preliminary category reviews or in-depth studies during the odd- or even-year reviews, depending upon when it identifies a category warranting further review. Additionally, EPA may publish the conclusions from these studies as part of the Preliminary or Final Plan, based on when during the planning cycle the study or review is completed.

EPA is coordinating its annual reviews under section 304(b) with publication of Plans under section 304(m) for several reasons. First, the annual reviews are inextricably linked to the planning effort because the results of each year of review can inform the content of the Preliminary and Final Plans (e.g., by identifying candidates for effluent guidelines revision, or by identifying point source categories for which EPA has not promulgated effluent guidelines). Second, even though it is not required to do so under either section 304(b) or section 304(m), EPA believes it can serve the public interest by periodically describing to the public the annual reviews (including the review process used) and the results of the reviews. Doing so at the same time as publishing the Preliminary and Final Plans makes both processes more transparent. Third, by requiring EPA to review all existing effluent guidelines each year, Congress appears to have intended for each successive review to build upon the results of earlier reviews.

2.3 Effluent Limitation Guidelines and Pretreatment Standards Overview

The national clean water industrial regulatory program is authorized under sections 301, 304, 306, and 307 of the CWA. The CWA directs EPA to promulgate categorical regulations through six levels of control:

1. Best practicable control technology currently available (BPT);
2. Best available control technology economically achievable (BAT);
3. Best conventional control technology (BCT);
4. New source performance standards (NSPS);
5. Pretreatment standards for existing sources (PSES); and
6. Pretreatment standards for new sources (PSNS).

For point sources that discharge pollutants directly into the waters of the U.S. (direct dischargers), the limitations and standards promulgated by EPA are implemented through National Pollutant Discharge Elimination System (NPDES) permits. See CWA sections 301(a), 301(b), and 402. For sources that discharge to POTWs (indirect dischargers), EPA promulgates pretreatment standards that apply directly to those sources and are enforced by POTWs and state

and federal authorities. See CWA sections 307(b) and (c). Figure 2-5 illustrates the relationship between the regulation of direct and indirect dischargers.

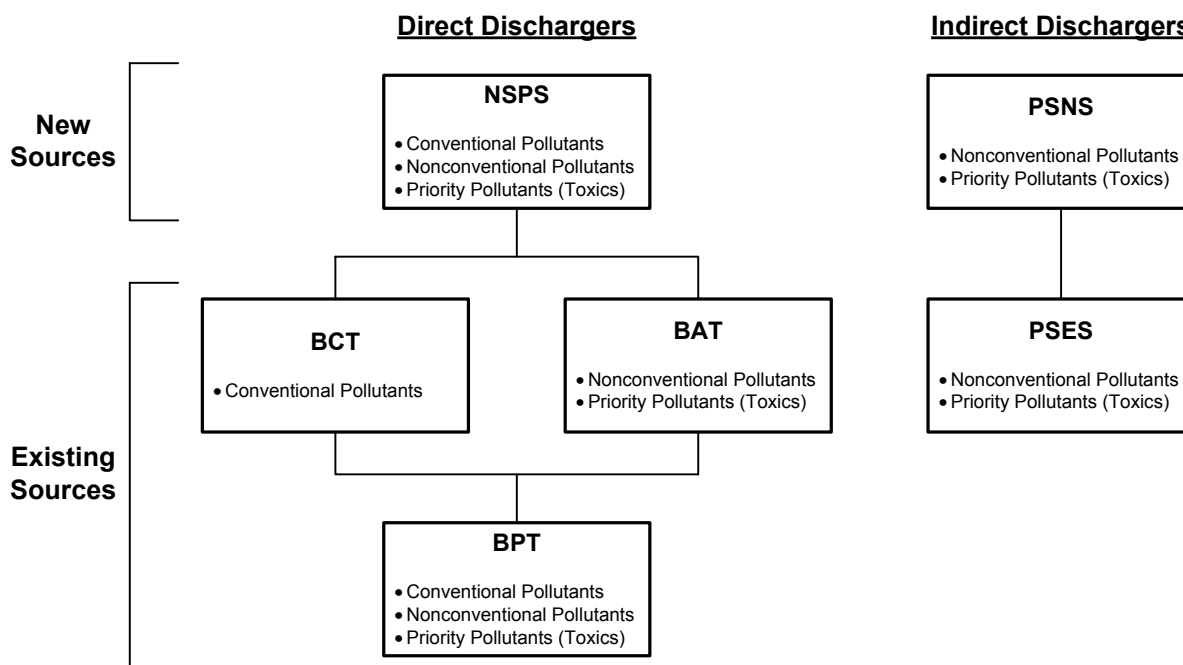


Figure 2-5. Regulations of Direct and Indirect Wastewater Discharges

2.3.1 Best Practicable Control Technology Currently Available (BPT) — CWA Sections 301(b)(1)(A) and 304(b)(1)

EPA develops effluent limitations based on BPT for conventional, toxic, and nonconventional pollutants. CWA section 304(a)(4) designates the following as conventional pollutants: biochemical oxygen demand (BOD₅), total suspended solids, fecal coliform, pH, and any additional pollutants defined by the Administrator as conventional. The Administrator designated oil and grease as an additional conventional pollutant on July 30, 1979 (see 44 FR 44501). EPA has identified 65 pollutants and classes of pollutants as toxic pollutants, of which 126 specific substances have been designated priority toxic pollutants. See Appendix A to Part 423, reprinted after 40 CFR Part 423.17. All other pollutants are considered to be nonconventional.

In specifying BPT, EPA looks at a number of factors. EPA first considers the total cost of applying the control technology in relation to the effluent reduction benefits. The Agency also considers the age of the equipment and facilities, the processes employed and any required process changes, engineering aspects of the control technologies, non-water-quality environmental impacts (including energy requirements), and such other factors the EPA Administrator deems appropriate. See CWA section 304(b)(1)(B). Traditionally, EPA establishes BPT effluent limitations based on the average of the best performances of facilities within the industry of various ages, sizes, processes, or other common characteristics. Where existing

**PART II: FINAL 2012 EFFLUENT GUIDELINES
PROGRAM PLAN**

3. 2012 EFFLUENT GUIDELINES PLANNING PROCESS AND METHODOLOGY

This section provides a summary of the process EPA used in its 2012 Annual Review to identify industrial categories for potential development of new or revised effluent limitations guidelines and standards (ELGs) and the data sources and limitations used to complete this review. In future even-year reviews, EPA intends to use this same process. This process consists of:

- Considering public comments on the Preliminary Plan and other stakeholder input.
- Continuing any ongoing preliminary category reviews (e.g., collecting more data, contacting permit writers, evaluating available treatment technology information) of specific point source categories that EPA identified for additional review in the odd-year review.
- Identifying and evaluating additional data sources and conducting supporting analyses to:
 - identify new wastewater discharges or pollutants not previously regulated; and
 - identify wastewater discharges that industry can more effectively treat or eliminate.

3.1 Summary of the 2012 Annual Review Methodology

This section provides a brief summary of the methodology EPA used for its 2012 Annual Review. For more information and details on EPA's 2012 Annual Review methodology and analyses see Part II (Sections 3 through 6) of EPA's *2012 Annual Review Report* (U.S EPA, 2014a).

3.1.1 Public Comments on the Preliminary 2012 Plan and Stakeholder Input

For the 2012 Annual Review, EPA considered public comments and stakeholder input received on the Preliminary 2012 Plan. See Section 4.2.1 for a summary of the public comments and stakeholder input received. For a detailed listing of the organizations that provided public comment and stakeholder input see DCN 07979.

3.1.2 Continued Review of Selected Point Source Categories

EPA also continued its review of three point source categories that EPA identified as warranting further review in the Preliminary 2012 Plan (78 FR 48159): Meat and Poultry Products (40 CFR Part 432); Petroleum Refining (40 CFR Part 419); and Pulp, Paper, and Paperboard (40 CFR Part 430). EPA's continued review consisted of collecting additional discharge data from permit writers, publicly available data sources (e.g., DMR Loading Tool), trade associations, and specific facility contacts to confirm the discharges reported in the TRA databases. Additionally, EPA collected information on available treatment technologies for specific industrial categories to compare current discharges to discharge levels that are treatable with available technologies.

4. RESULTS OF THE 2011 AND 2012 ANNUAL REVIEWS

This section briefly summarizes the results of EPA’s 2011 Annual Review and presents new findings from its 2012 Annual Review.

4.1 Summary of Results from the 2011 Annual Review

EPA published results of its 2011 Annual Review (U.S. EPA, 2012a), which consisted of the odd-year TRA, in support of the Preliminary 2012 Plan (78 FR 48159). From the 2011 Annual Review, EPA determined that additional review for three point source categories was appropriate, as announced in the Preliminary 2012 Plan: Pulp, Paper and Paperboard (40 CFR Part 430), Petroleum Refining (40 CFR Part 419), and Meat and Poultry Products (40 CFR Part 432). EPA continued to review these categories in the 2012 Annual Review.

4.2 Findings from the 2012 Annual Review

For the 2012 Annual Review, EPA evaluated public comments and stakeholder input received on the Preliminary 2012 Plan and continued its review of the three point source categories identified during the 2011 Annual Review as warranting additional review. Additionally, EPA identified additional data sources and conducted six new analyses to supplement the toxicity rankings analysis.

4.2.1 *Findings from Public Comments and Stakeholder Input*

EPA’s annual review process considers information provided by the public and stakeholders regarding new or revised effluent limitations guidelines and pretreatment standards. Public comments received on EPA’s prior reviews and Plans helped the Agency prioritize its analyses of existing effluent guidelines and pretreatment standards. This section presents a summary of the comments received on the Preliminary 2012 Plan.

EPA published its Preliminary 2012 Effluent Guidelines Program Plan (Preliminary 2012 Plan) and provided a 60-day public comment period starting on August 7, 2013 (see 78 FRN 48159). The Docket supporting this Final Plan includes a complete set of the comments submitted, as well as the Agency’s responses (see DCN 07979).

EPA received comments on the Preliminary 2012 Plan from 19 organizations representing industry, six environmental groups, one state representing organization, one publicly owned treatment works group, one tribal government, and one county government.

Comments addressed the following subject areas:

- Coalbed methane and shale gas extraction (17 comments)
- Chlorine and chlorinated hydrocarbon (3 comments)
- Oil and gas coastal subcategory (2 comments)
- Alaska offshore seafood processors (2 comments)
- Dental amalgam (1 comment)
- Effluent limitation guidelines and standards (ELGs) and Plan process in general (1 comment)

- Other (1 comment)

For coalbed methane extraction (CBM extraction), EPA received 13 comments from industry representatives and county government supporting the delisting of CBM extraction for three main reasons:

- Additional costs would further reduce the feasibility of production, due to the declining economics of the industry.
- CBM extraction production and discharges are declining.
- Discharges are already effectively permitted.

Environmental groups commented that EPA should move forward with developing regulations for CBM extraction because EPA should not rely solely on economic considerations. The environmental groups suggest that changes in gas production processes, gas demand, and wastewater treatment costs could change EPA's conclusions. The environmental groups also noted there are environmental impacts from CBM extraction discharges that need to be addressed. One commenter provided information summarizing several ongoing Department of Energy projects related to CBM extraction and potential new produced water treatment technologies. The new technologies are variations of desalination and reverse osmosis systems. These studies have not yet been completed.

For chlorine and chlorinated hydrocarbon (CCH), two industry trade groups supported the delisting for the reasons EPA presented in the Preliminary 2012 Effluent Guidelines Program Plan. One company provided a comment correcting EPA's classification of their facility in EPA's *Chlorine and Chlorinated Hydrocarbon Data Collection and Analysis Summary* report.

Two commenters, one environmental organization and one tribal government, asked EPA to remove the exemption for Cook Inlet, Alaska from the zero discharge requirements in the oil and gas coastal ELGs.

One industry trade group requested that EPA revise the requirements under the Alaska Offshore Seafood Processors General Permit AK-G2-4000. Additionally, two industry trade groups petitioned EPA to initiate a rulemaking to add a subpart to the Canned and Preserved Seafood Processing point source category, adding ELGs for discharges resulting from the processing of seafood on mobile seafood processing vessels.

For Dental Amalgam, one POTW group requested that EPA take clear action on the draft dental amalgam separator rule and expressed support for dropping it from consideration if EPA did take such action.

One organization, representing a number of states, suggested improvements to the ELGs and 304m process in general, including using additional data sources to consider improved hazard data and advances in treatment technology. The commenter suggested that EPA incorporate information from other EPA offices and states into the ELG program. The commenter also stated that the metal finishing category should be re-examined because there have been significant changes in the industry over the last few years.

One industry trade group expressed support for EPA’s conclusion that pulp and paper mills present a low risk and that the ELGs should be a lower priority for revision. A more detailed summary table of the comments can be found in the *2012 Annual Review Report* (U.S. EPA, 2014a). EPA carefully considered all public comments and information submitted in developing the Final 2012 Plan. A comment response document is also available at (DCN 07979).

4.2.2 Findings from Continued Review of Selected Point Source Categories

During the 2011 Annual Review, EPA identified three point source categories for which further review is appropriate: Meat and Poultry Products (40 CFR Part 432); Petroleum Refining (40 CFR Part 419); and Pulp, Paper, and Paperboard (40 CFR Part 430). EPA continued review of these categories as part of the 2012 Annual Review (U.S. EPA, 2014a). Below are the findings from these 2012 continued category reviews.

- **Meat and Poultry Products (40 CFR Part 432).** EPA completed further review of Toxic Releases Inventory (TRI) reported nitrate discharges and found that the majority of the top nitrate compound dischargers are in compliance with the Part 432 total nitrogen limitations or are receiving new permits to meet Part 432 total nitrogen limitations. Therefore, EPA concludes that nitrate discharges from meat and poultry products facilities are decreasing due to the 2004 Part 432 effluent guidelines revisions.
- **Petroleum Refining (40 CFR Part 419).** EPA further reviewed discharges of dioxin and dioxin-like compounds and metals, identified as pollutants of concern in the TRA for the Petroleum Refining category. For dioxins, EPA found that one facility’s reported discharges contributed to the majority (65 percent) of the dioxin and dioxin-like compound TRI TWPE, however this facility’s reported discharges are estimated (based on the number of reformer catalyst regenerations) and not directly measured. From the 2010 DMR data for dioxin and dioxin-like compounds EPA only identified one refinery reporting discharging detectable concentrations (above the Method 1613B Minimum Level (ML)), though available data indicates this facility’s dioxin discharges result largely from stormwater contaminated via aerial deposition, not the discharge of treated process wastewater. EPA has not yet determined whether dioxin is being discharged at concentrations above the 1613B Minimum Level (ML) or identified the primary source of the discharge (e.g., stormwater or process wastewater from catalytic reforming and catalyst regeneration operations).

For metals discharges, EPA reviewed DMR data from 76 refineries from across the country and identified metals present in most petroleum refineries’ effluent discharges that exceeded comparable treatability data for metals removals achieved by more recent technologies. EPA continued its examination of the petroleum refining category in 2013.

- **Pulp, Paper, and Paperboard (40 CFR Part 430).** EPA further reviewed discharges of dioxin and dioxin-like compounds and found that the majority of estimated releases reported to TRI were based on pollutant concentrations below the

Method 1613B ML. EPA concluded that dioxin and dioxin-like compounds from pulp and paper facilities are not a hazard priority at this time.

4.2.3 Findings from Additional Hazard Data Sources Supporting New Analyses

EPA identified additional data sources and conducted six new analyses as part of the 2012 Annual Review (U.S. EPA, 2014a). Below are the findings from these new analyses.

- **Identification of Industrial Pollutants in Sewage Sludge.** EPA’s review of the Targeted National Sewage Sludge Survey (TNSSS), combined with available indirect discharge data from TRI identified the Metal Finishing point source category (40 CFR Part 433) as potentially discharging high concentrations of metals, particularly chromium, nickel, and zinc, to publically owned treatment works (POTWs). These metals could transfer to sewage sludge and impact its beneficial use. Based on the TNSSS and 2009 TRI datasets, EPA could not identify for further review any new pollutants of concern or wastewater discharges from industrial categories not currently regulated by ELGs. EPA focused its review on the pollutants in the TNSSS with discharge information available in TRI since TRI provided a means to link industrial wastewater sources to the pollutants found in POTW sludge. See Section 6.1 of the *2012 Annual Review Report* (U.S. EPA, 2014a) for more information regarding this analysis.
- **Review of Chemical Action Plans.** EPA reviewed data and information from the OPPT’s available CAPs to identify new pollutants or waste streams that might warrant regulation. OPPT developed CAPs for 10 classes of chemicals that potentially create health and/or environmental hazards when manufactured in or imported into the U.S. If these potentially hazardous chemicals are currently produced and/or used in the U.S. and have the potential to be discharged in wastewater from manufacture and/or use, these wastewater discharges may warrant regulation.

From review of the CAPs, EPA identified six chemicals or classes of chemicals that are currently produced and have known or potential wastewater discharges: Benzidine dyes, Bisphenol A (BPA), Hexabromocyclododecane (HBCD), Nonylphenol and Nonylphenol Ethoxylates, Perfluorinated Chemicals (PFCs), and Phthalates. Another class of chemicals, short-chain chlorinated paraffins (SCCPs) are no longer manufactured in the U.S., but they have been used in metal working and have the potential to be discharged in wastewater from this industry.

Additionally, two of the chemicals, Methylene Diphenyl Diisocyanate (MDI) and Toluene Diisocyanate (TDI), do not have significant wastewater discharges. However, EPA identified that the hydrolysis byproducts of TDI and MDI, toluene diamine and methyl diphenyl diamine, may be present in industrial wastewater.

One chemical category is being phased out of U.S. commerce; EPA does not intend to pursue further review for Penta, Octa, and Decabromodiphenyl Ethers (PBDEs).

See Section 6.2 of the *2012 Annual Review Report* (U.S. EPA, 2014a) for more information regarding this analysis.

- **Identification of Wastewater Discharges Related to Air Pollution Control Not Currently Regulated by ELGs.** EPA identified new and revised air regulations that likely result in the generation of new wastestreams that contain metals at petroleum refineries. EPA also identified three air regulations that may result in an unregulated wastewater discharge: regulations for brick and structural clay product manufacturing; industrial, commercial, and institutional boilers; and industrial, commercial, and institutional steam generating units. In addition, EPA identified 13 industries with existing ELGs, for which new air regulations may result in the discharge of new or additional pollutants. See Section 6.3 of the *2012 Annual Review Report* (U.S. EPA, 2014a) for more information regarding this analysis.
- **Review of TRI Industry Sectors Expansion.** The TRI sector expansion rulemaking is still under development. Available information suggests that selenium discharges from phosphate mines (regulated under 40 CFR Part 136) may be a new wastewater pollutant of concern. See Section 6.4 of the *2012 Annual Review Report* (U.S. EPA, 2014a) for more information regarding this analysis.
- **Review of Analytical Methods.** EPA reviewed recent analytical method developments included in the 2012 Method Update Rule and identified that there are reduced detection limits for some metals and additions of new methods for detecting other pollutants of concern from industrial wastewater discharges, including: free cyanide, acid mine drainage, nonylphenol, and bisphenol A.

In addition, EPA identified several pesticides measured by some of the approved pesticide analytical methods (listed in 40 CFR Part 136) that do not currently have effluent limits under the Pesticide Chemicals Manufacturing, Formulating, and Packaging ELGs (40 CFR Part 455).

EPA also reviewed OGWDW and ORD drinking water analytical methods and identified two relatively new methods developed by ORD to measure concentrations of PFCs and 1,4-dioxane. OGWDW is using these methods in its Unregulated Contaminant Monitoring Rule (UCMR) to evaluate PFCs and 1,4-dioxane in drinking water. EPA has identified industrial wastewater discharges for both PFCs and 1,4-dioxane.

See Section 6.4 of the *2012 Annual Review Report* (U.S. EPA, 2014a) for more information regarding this analysis.

- **Review of Industrial Wastewater Treatment Technologies.** EPA has initiated a review of scientific literature reporting the performance of new and improved industrial wastewater treatment technologies and plans to capture these performance data in a searchable industrial wastewater treatment technology (IWTT) database. As a first step, EPA is identifying and reviewing industrial wastewater treatment technology performance data related to petroleum refining, metal finishing, and electroplating industries (and metals removal in general). See Section 6.5 of the *2012 Annual Review Report* (U.S. EPA, 2014a) for more information regarding the findings from this analysis.

5. FINAL 2012 PLAN DECISIONS

This section presents EPA's final decisions on actions proposed in the Preliminary 2012 Plan (78 FR 48159). Preliminary results of the 2013 Annual Review and proposed actions resulting from both the 2012 and 2013 Annual Reviews are presented in Preliminary 2014 Plan (see Part III of this document).

5.1 Industries for Which EPA Is No Longer Undergoing an ELG Rulemaking

Chlorine and Chlorinated Hydrocarbons (CCH) Manufacturing:

In prior year reviews, EPA considered revisions to effluent limitations guidelines and standards (ELGs) for the Organic Chemicals, Pesticides, and Synthetic Fibers (OCPSF) (40 CFR 414) and Inorganic Chemicals Manufacturing (40 CFR 415) point source categories for facilities that produce chlorine and chlorinated hydrocarbons (CCH). EPA proposed to discontinue a revised ELG for facilities that produce chlorine and chlorinated hydrocarbons (CCH) in the preliminary 2012 plan, and after considering public comments, EPA has decided not to move forward with a rulemaking for this industry.

EPA began an ELG rulemaking for the CCH Manufacturing Industry in March 2005, after issuing the 2004 Effluent Guidelines Program Plan (69 FR 53705). In the 2004 Effluent Guidelines Program plan, EPA selected the vinyl chloride (a type of chlorinated hydrocarbon) manufacturing segment of the organic chemicals industry for possible revision because preliminary analysis showed that the segment discharged significant quantities of toxic weighted pound-equivalents. In addition, because many chlorine manufacturers are co-located with vinyl chloride manufacturing and because these facilities discharge significant quantities of TWPEs, EPA also selected the chlorine manufacturing segment of the inorganic chemicals industry for possible revision. Also, polyvinyl chloride (PVC) manufacturers were considered to be part of the vinyl chloride manufacturing segment due to frequent co-location.

As part of the initial industry assessment, both industry and EPA collected samples to measure dioxins being generated and discharged in the wastewater at CCH facilities. First, EPA completed 13 site visits to determine sampling possibilities at facilities with potential BAT wastewater treatment technology. Ultimately, four sampling episodes were completed by EPA. Additionally, 12 sampling episodes were completed by the Vinyl Chloride Producers (VCP) as part of the voluntary plan established in February 2007 as an alternative to completing an EPA questionnaire or further EPA sampling. EPA designed the sampling plans for each of the 12 facilities.

After thoroughly reviewing all of the dioxin sampling data and evaluating public comments received on the Preliminary 2012 Plan, EPA has decided not to move forward with the development of effluent limitations guidelines for the CCH manufacturing industry. Very low TWPE annual discharges were calculated for all PVC manufacturers for which data were available. Similarly, very low TWPE annual discharges were calculated for all but one of the chlorine manufacturing facilities for which data were collected. Although the chlorinated hydrocarbon manufacturers that manufacture vinyl chloride discharge a maximum of 1.1 million TWPEs, one facility accounts for the vast majority of this TWPE and the associated discharge of dioxins. Also, almost all chlorinated hydrocarbon manufacturing facilities that manufacture vinyl

chloride already have wastewater treatment technology that would potentially represent "best available technology" for the industry. EPA therefore has determined that it would be best to address the few facilities with significant dioxin discharges through permitting rather than through the development of national effluent guidelines (U.S. EPA, 2012c).

Coalbed Methane (CBM) Extraction Industry:

In its Final 2010 ELG Plan, EPA also indicated it was initiating rulemakings to revise ELGs for the Oil and Gas Extraction Point Source Category (40 CFR Part 135) to address discharges from coalbed methane and shale gas extraction. In the 2012 Preliminary Plan, EPA proposed to delist the coalbed methane extraction (CBM extraction) industry from the effluent guidelines plan and to discontinue the rulemaking. EPA proposed to delist the CBM extraction industry from the effluent guidelines plan based on new information regarding the declining economic viability of CBM extraction production at a national level, which affects the economic achievability of controls for the CBM extraction industry as a whole. The reduced economic viability of CBM extraction production results from declining natural gas prices, due in large part to the increased extraction of natural gas from other sources, such as shale formations. (U.S. EPA, 2013a; U.S. EPA, 2013b). The initial decision to identify this industry for rulemaking was based on the results of a detailed industry study and comments from the public indicating at that time that CBM extraction was a growing industry and that treatment technologies were available to address pollutants discharged by the industry. However, since initiating the rulemaking, more recent data on the quantity and projected levels of CBM extraction production and CBM extraction production economics indicate otherwise. After reviewing financial data pertaining to this industry collected through the Detailed Questionnaire for the Coalbed Methane Extraction Sector, and natural gas price projections through 2040 from the U.S. Energy Information Administration (EIA), wastewater quality/quantity data and the cost of available wastewater treatment options, EPA was not able to identify a wastewater treatment technology that would be economically achievable for this industrial subcategory as a whole. Although potential treatment technologies exist, are demonstrated, and may be affordable for some sites, these technologies do not appear to be economically achievable for the CBM extraction industry as a whole due, in part, to the decrease in gas prices as a result of the recent boom in development of shale gas resources. EPA's analysis found that the cost of treatment technologies would likely lead to early shutdown of existing wells, with associated loss of CBM extraction gas production to society; in addition, EPA's analysis found that new CBM extraction wells may not be economically viable for a substantial period into the future, and that imposing an additional cost for new treatment technologies at this time would further extend the time in which new CBM extraction wells could become economically viable.

EPA received comments on its proposal to delist the CBM extraction industry from industry, environmental groups, and a local government official. In general, environmental groups opposed EPA's proposal primarily because CBM extraction discharges may have negative impacts; these comments argued that EPA's decision should not be driven by costs to the industry and/or the associated economic impacts. These commenters did not disagree with the EIA projections of natural gas prices that underlie EPA's economic analyses; rather, they focused on the inherent uncertainty in predicting gas prices. They assert that because of the uncertainty, EPA should not base decisions on it. They also noted that the potential for CBM

extraction development remains, and increases in demand could once again shift the projections for this subcategory.

Others supported EPA's proposal based on the declining economic condition of the industry since EPA's announcement and previous data collection, and/or provided additional company-specific information regarding the effect of gas prices on the company's current and projected operation.

After reviewing all of the comments and its rulemaking record, EPA concludes that it did not receive any data or information to alter its former findings. EPA concludes that while effective technologies exist, are demonstrated, and may be affordable for some sites, these technologies are not economically achievable for the CBM extraction industry as a whole. This applies to existing and new CBM extraction wells based on current and future economic conditions. See "Economic Analysis for Existing and New Projects in the Coalbed Methane Industry" (U.S. EPA, 2013a).

EPA's decision to delist the CBM extraction industry based on economic achievability is appropriate. Indeed, the statute specifically provides that for toxic and non-conventional pollutants, limitations be based on the "best available technology *economically achievable*," thus requiring a consideration of economic achievability in establishing effluent limitation guidelines based on BAT. CWA Section 301(b)(2)(A), 33.U.S.C. 1311(b)(2)(A) (emphasis added). If EPA is unable to identify an available technology that is economically achievable for the industry as a whole, EPA does not have a basis for establishing effluent guidelines for this industry. Generally, the EPA determines economic achievability on the basis of the projected effect of cost of compliance with BAT limitations and pretreatment standards on the overall industry and subcategory financial conditions, as discussed in the Economic Analysis. Similarly, in establishing NSPS and PSNS, EPA is directed to take into consideration the "cost of achieving the effluent reductions" (CWA section 306(b)(1)(B), 33. U.S.C. 1316(b)(1)(B)), and EPA appropriately conducted a barrier to entry analysis in considering such costs, as discussed in the Economic Analysis.

EPA is not mandated to make decisions on perfect information, but rather on the best information and data available to the Agency. Therefore, while the EPA acknowledges that EIA projections of natural gas prices are uncertain, EIA's projections are regarded as high quality, unbiased projections from a credible government source. The commenters did not provide any other sources of natural gas price projections. EPA continues to find that EIA's projections provide a sufficient basis for its regulatory determinations. Additionally, EPA did not receive any information or data to refute its other data sources or its economic analyses. Rather, the Agency received additional data that supports its analysis.

EPA is not suggesting that direct and indirect wastewater discharges associated with CBM extraction may not have negative environmental impacts and do not ever need to be controlled. On the contrary, EPA notes that in establishing NPDES permits, permitting authorities, in the absence of applicable ELGs, must establish technology-based effluent limits on a case-by-case basis using best professional judgment (BPJ), considering the same factors that EPA would consider in establishing an effluent guideline (40 CFR 125.3(c)(2)). Additional limitations based on water quality standards are also required to be included in the permits in

certain circumstances to protect water quality should specific facilities' discharges be found to cause, or have the reasonable potential to cause, violations of state water quality standards. Nothing in the record for today's decision precludes a permitting authority from making the determination on a site-specific basis that a technology is available and economically achievable upon which to base technology-based limitations using BPJ. In fact, EPA's record demonstrates that on a site-specific basis, technologies are already being employed to control pollutant discharges associated with CBM extraction. The record demonstrates that at this time, these requirements should not be established on a uniform basis across the entire industry, but should instead continue to be appropriately established on a site-specific BPJ basis.

The data that EPA evaluated to come to this decision, including public comments received on its proposal to delist the coalbed methane extraction industry in the Preliminary 2012 Plan, are available for review in the Federal Data Management System Docket EPA-HQ-OW-2010-0824, available at www.regulations.gov.

5.2 Industries Previously Identified for Further Review for Which EPA is Taking No Action

In the Preliminary 2012 Plan (78 FR 48159), EPA announced its continued review of dioxin and dioxin-like compounds for the Pulp, Paper, and Paperboard (40 CFR Part 430) and nitrate discharges for the Meat and Poultry Products (40 CFR Part 432) point source categories. Based on the findings from the 2012 Annual Review (U.S. EPA, 2014a) related to these categories, EPA has concluded that no further review of these discharges is warranted and is taking no further action related to these categories at this time.

Meat and Poultry Products Manufacturing:

For Meat and Poultry Products, EPA determined that a majority of the top nitrate compound dischargers are in compliance with the Part 432 total nitrogen limitations or are receiving new permits to meet Part 432 total nitrogen limitations. Therefore, EPA concludes that nitrate discharges from meat and poultry products facilities are decreasing due to the 2004 Part 432 effluent guidelines revisions.

Pulp, Paper, and Paperboard Manufacturing:

For Pulp, Paper, and Paperboard, EPA determined that a majority of the estimated dioxin and dioxin-like compound releases reported to TRI were based on pollutant concentrations below the Method 1613B ML. Therefore, EPA concluded that dioxin and dioxin-like compounds from pulp and paper facilities are not a hazard priority at this time.

5.3 Potential Indirect Dischargers for Pretreatment Standards

5.3.1 Evaluation of Pass-Through and Interference of Toxic and Non-Conventional Pollutants Discharged to POTWs

All indirect dischargers are subject to general pretreatment standards (40 CFR 403), including a prohibition on discharges causing "pass-through" or "interference" (See 40 CFR 403.5). All POTWs with approved pretreatment programs must develop local limits to

implement the general pretreatment standards. All other POTWs must develop such local limits where they have experienced pass-through or interference and such a violation is likely to recur. There are approximately 1,500 POTWs with approved pretreatment programs and 13,500 small POTWs that are not required to develop and implement pretreatment programs.

In addition, EPA establishes technology-based national regulations, termed “categorical pretreatment standards,” for categories of industry discharging pollutants to POTWs that may pass through, interfere with, or otherwise be incompatible with POTW operations (Clean Water Act section 307(b)). Generally, categorical pretreatment standards are designed such that wastewaters from direct and indirect industrial dischargers are subject to similar levels of treatment. EPA has promulgated such pretreatment standards for 35 industrial categories.

One of the tools traditionally used by EPA in evaluating whether pollutants pass through a POTW is a comparison of the percentage of a pollutant removed by POTWs with the percentage of the pollutant removed by discharging facilities applying the best available control technology economically achievable (BAT). Pretreatment standards for existing sources are technology-based and are analogous to BAT ELGs. In most cases, EPA has concluded that a pollutant passes through the POTW when the median percentage removed nationwide by representative POTWs (those meeting secondary treatment requirements) is less than the median percentage removed by facilities complying with BAT effluent limitations guidelines for that pollutant.

This approach to the definition of “pass-through” satisfies two competing objectives set by Congress: (1) that standards for indirect dischargers be equivalent to standards for direct dischargers and (2) that the treatment capability and performance of POTWs be recognized and taken into account in regulating the discharge of pollutants from indirect dischargers.

The term “interference” means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both (1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use, or disposal and (2) therefore is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with applicable regulations or permits. See 40 CFR 403.3(k). To determine the potential for interference, EPA generally evaluates the industrial indirect discharges in terms of: (1) the compatibility of industrial wastewaters and domestic wastewaters (e.g., type of pollutants discharged in industrial wastewaters compared to pollutants typically found in domestic wastewaters); (2) concentrations of pollutants discharged in industrial wastewaters that might cause interference with the POTW collection system, the POTW treatment system, or biosolids disposal options; and (3) the potential for variable pollutant loadings to interfere with POTW operations (e.g., batch discharges or slug loadings from industrial facilities interfering with normal POTW operations).

If EPA determines that a category of indirect dischargers causes pass-through or interference, EPA will then consider the BAT and BPT factors (including “such other factors as the Administrator deems appropriate”) specified in section 304(b) to determine whether to develop pretreatment standards for these activities. Examples of “such other factors” include a consideration of the magnitude of the hazard posed by the pollutants discharged as measured by:

(1) the total annual TWPE discharged by the industrial sector and (2) the average TWPE discharged among facilities that discharge to POTWs. Additionally, EPA would consider whether other regulatory tools (e.g., use of local limits under Part 403) or voluntary measures would better control the pollutant discharges from this category of indirect dischargers. For example, EPA relied on a similar evaluation of “pass-through potential” in its prior decision not to promulgate national categorical pretreatment standards for the Industrial Laundries industry. See 64 FR 45071 (August 18, 1999). EPA noted in this 1999 final action that, “While EPA has broad discretion to promulgate such (national categorical pretreatment) standards, EPA retains discretion not to do so where the total pounds removed do not warrant national regulation and there is not a significant concern with pass through and interference at the POTW.” See 64 FR 45077 (August 18, 1999).

During the 2012 Annual Review, EPA’s review of the Targeted National Sewage Sludge Survey (TNSSS), combined with available indirect discharge data from TRI, identified the Metal Finishing Point Source Category (40 CFR Part 433) as potentially discharging high concentrations of metals, particularly chromium, nickel, and zinc, to POTWs. These metals could transfer to sewage sludge and impact its beneficial use.

5.4 Industries for Which EPA is Currently Undergoing an ELG Rulemaking

EPA is currently undergoing a rulemaking that would revise ELGs for the Steam Electric (40 CFR 423) Point Source Category. Because the Steam Electric rulemaking is underway, EPA excluded discharges from these facilities from analysis under the 2011 and 2012 Annual Reviews since a guideline was already underway.

EPA also has been undergoing a rulemaking to develop potential pretreatment requirements for discharges of mercury from the dental industry. Based on information submitted in prior annual reviews (2004, 2006, and 2008), commenters raised concerns about discharges of mercury from dentists facilities and urged EPA to consider establishing effluent guidelines and pretreatment standards for such discharges. EPA announced the dental amalgam rulemaking to regulate mercury discharges from dentists’ offices in the Final 2010 Plan.

EPA also indicated in its Final 2010 ELG Plan (76 FR 66286) that it was initiating two separate rulemakings to potentially revise ELGs for the Oil and Gas Extraction Point Source Category (40 CFR Part 435) to address discharges from coalbed methane and shale gas extraction. As discussed above, after proposing not to go forward with a rulemaking pertaining to the coalbed methane extraction industry and considering public comments on this proposal, EPA has decided to delist the coalbed methane extraction industry from the effluent guidelines plan. However, EPA is continuing the rulemaking to potentially revise the ELGs for the Oil and Gas Extraction Point Source Category to address pretreatment standards for shale gas extraction.

5.4.1 *EPA’s Current Schedule for ELG Actions*

Steam Electric Power Generation:

-Proposed Rule	June 7, 2013
-Final Rule	September 2015

Dental Amalgam:

-Proposed Rule	September 2014
-Final Rule	March 2016

Unconventional Extraction in the Oil and Gas Industry

-Proposed Rule (Shale Gas Extraction)	October 2014
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5.5 Results of Solicitation for Innovation and Technology in the Effluent Guidelines Program

Innovation and technology have played key roles in improving the strength of the U. S. economy while at the same time vastly improving public health and the environment. The U. S. leads the way in the environmental technology arena that has become a worldwide market of over \$800 billion. The environmental technology sector employs about 1.7 million Americans.

EPA solicited public comments in the Preliminary 2012 Plan to provide the public with an opportunity to advance the dialogue about ways EPA can foster innovative technologies while fulfilling its obligations under Sections 304(m), 301(d), 304(b), 304(g), and 307(b) of the Clean Water Act. EPA sought public input and comment on the following questions and related themes:

- Are there new, innovative pollution control or pollution prevention technologies that can be used by any of the existing 58 categories of industry with effluent limitations guidelines?
- Are there innovative manufacturing approaches that can be used by industries to reduce or prevent their wastewater discharges?
- How can EPA's effluent limitations guidelines program enhance technology transfer to catalyze and harness innovation to solve industrial wastewater problems, both now and in the future?
- How can EPA better foster consideration of innovative technologies through the effluent guidelines planning process?

EPA did not receive any public comment or stakeholder input on this solicitation.

**PART III: PRELIMINARY 2014 EFFLUENT
GUIDELINES PROGRAM PLAN**

6. SUMMARY OF FINDINGS FROM THE 2013 ANNUAL REVIEW AND EPA’S PRELIMINARY 2014 EFFLUENT GUIDELINES PROGRAM PLAN

This section presents a summary of the findings from EPA’s 2013 Annual Review and EPA’s Preliminary 2014 Plan. EPA developed the Preliminary 2014 Plan based on information gathered as part of EPA’s 2011, 2012, and 2013 Annual Reviews, including information from stakeholders and public comment received on the Preliminary 2012 Plan. EPA is requesting public comment on the Preliminary 2014 Plan, particularly on the potential actions and next steps related to the specific industries or target pollutants identified. EPA will consider public comment as it develops the Final 2014 Effluent Guidelines Program Plan.

6.1 Findings from EPA’s 2013 Annual Review

In its 2013 Annual Review, consistent with the odd-year review methodology, EPA conducted a toxicity ranking analysis (TRA) to identify and rank categories with pollutant discharges that may pose a substantial hazard to human health and the environment (see Section 3 of the Preliminary 2012 Plan (78 FR 48159) for details on the odd-year annual review methodology). For the 2103 TRA, EPA relied on 2011 discharge monitoring report (DMR) and Toxics Release Inventory (TRI) data to rank industrial discharge categories by toxic-weighted pound equivalents (TWPE) released. From the data, EPA prioritized for further review those industrial categories accounting for 95 percent of the cumulative combined DMR and TRI TWPE. The results of the TRA are presented in Table 6-1 below. The TRA is the basis of EPA’s 2013 Annual Review and supports the proposed actions presented in this Preliminary 2014 Plan.

The full results of the 2013 Annual Review are published in the 2013 Annual Review Report. The 2013 Annual Review Report details the TRA methodology, data sources and limitations, facility-specific data errors and corrections, and specific findings from EPA’s preliminary category reviews of each of the categories identified in the table below (U.S. EPA, 2014b).

Table 6-1. Results of EPA’s 2013 Toxicity Ranking Analysis

40 CFR Part	Point Source Category	TRI TWPE	DMR TWPE	Total TWPE	Cumulative Percentage of Total TWPE	Rank
414	Organic Chemicals, Plastics And Synthetic Fibers ^a	148,000	1,540,000	1,690,000	13.1%	1
430	Pulp, Paper And Paperboard	651,000	1,030,000	1,690,000	26.3%	2
419	Petroleum Refining	681,000	752,000	1,430,000	37.4%	3
NA	Drinking Water Treatment	1,640	1,380,000	1,390,000	48.2%	4
440	Ore Mining And Dressing	1,230,000	110,000	1,340,000	58.6%	5
420	Iron And Steel Manufacturing ^a	82,900	1,170,000	1,250,000	68.4%	6
418	Fertilizer Manufacturing	6,670	599,000	606,000	73.1%	7
415	Inorganic Chemicals Manufacturing ^a	327,000	142,000	469,000	76.7%	8
421	Nonferrous Metals Manufacturing	42,900	383,000	426,000	80%	9
455	Pesticide Chemicals	374,000	19,300	393,000	83.1%	10

7. SUMMARY TABLE OF FINDINGS FOR EXISTING GUIDELINE CATEGORIES FROM THE 2011, 2012 AND 2013 ANNUAL REVIEWS

Table 7-1 summarizes the findings from EPA’s 2011, 2012 and 2013 Annual Reviews of existing point source categories. EPA uses the following codes to describe its findings and potential next steps for each industrial category:

1. Effluent guidelines or pretreatment standards for this industrial category were recently promulgated or revised through an effluent guidelines rulemaking, or a rulemaking is currently underway. Or, EPA recently completed a preliminary study or a detailed study, and no further action is warranted at this time.
2. Revising the national effluent guidelines or pretreatment standards is not the best tool to control toxic and non-conventional pollutant discharges because most discharges result from one or a few facilities in this industrial category. EPA will consider assisting permitting authorities in identifying pollution-control and pollution-prevention technologies for the development of technology-based effluent limitations during the development of individual permits.
3. Not identified as a priority based on data available at this time because (1) the category was not among industries that cumulatively compose 95% of discharges as measured in units of TWPE in the 2011 and 2013 Annual Reviews, (2) EPA did not identify during the 2011 and/or 2013 preliminary category reviews that revisions to the national effluent guidelines or pretreatment standards are warranted, or (3) EPA did not identify during the 2012 Annual Review that revisions to the national effluent guidelines or pretreatment standards are warranted.
4. EPA intends to start, or continue to conduct, a preliminary category review of the pollutant discharges from this category.
5. EPA intends to start or continue either an in-depth category study of this industry in its 2014 Annual Reviews to determine whether to identify the category for effluent guidelines rulemaking.
6. EPA is identifying this industry for a potential revision of an existing effluent guideline.

Table 7-1. Summary of Findings from EPA’s 2011, 2012 and 2013 Annual Reviews of Existing Industrial Categories

No.	Industry Category (listed alphabetically)	40 CFR Part	Findings
1	Airport Deicing	449	(1)
2	Aluminum Forming	467	(3)
3	Asbestos Manufacturing	427	(3)
4	Battery Manufacturing	461	(3)
5	Canned and Preserved Fruits and Vegetable Processing	407	(3)
6	Canned and Preserved Seafood Processing	408	(3)
7	Carbon Black Manufacturing	458	(3)
8	Cement Manufacturing	411	(3)

