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Resources, Community, and
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January 20, 1999

The Honorable Bud Shuster
Chairman, Committee on Transportation
and Infrastructure
House of Representatives

Subject: Water Pollution: Proposed Pretreatment Standards for Industrial Laundries

Dear Mr. Chairman:

The Clean Water Act authorizes the Environmental Protection Agency (EPA) to issue regulations that specify the extent to which industries can discharge pollutants to public wastewater treatment facilities. These regulations–called "pretreatment" standards–are established when the agency determines that pollutants being discharged by an industry are passing through wastewater treatment facilities into surface waters or otherwise interfering with the treatment processes of these facilities.

Pursuant to a January 1992 consent decree and subsequent agreements with the National Resources Defense Council, EPA published proposed pretreatment standards for industrial laundries on December 17, 1997. Through their cleaning processes, these laundries remove dirt as well as solvents, grease, and other pollutants from industrial textile items such as shop towels, printer towels, rags, and mats. Ultimately, the laundries discharge their wastewater through publicly owned wastewater treatment facilities. EPA and the Council agreed that the agency would take final action by June 1999. EPA anticipates either establishing standards or choosing a "no regulation" option by that date.

Leading to its proposed pretreatment standards, EPA conducted years of technical and economic studies, including cost-benefit analyses of pollution control alternatives. The agency's proposal stated that (1) pollutants were passing through wastewater treatment facilities and entering waters of the United States; (2) technology was available to laundries for removing the pollutants; and (3) the use of such technology was achievable economically for all but a small percentage of the laundries nationwide. In comments filed on



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the proposed regulation, the Uniform & Textile Service Association and the Textile Rental Services Association–two organizations representing industrial laundries–disputed EPA's cost and benefit analyses. The two organizations contended that EPA had underestimated compliance costs by a factor of at least 3 and overestimated benefits to an even greater extent.

EPA determined that the proposed regulation for industrial laundries is subject to the Unfunded Mandates Reform Act of 1995 (UMRA), which requires federal agencies to conduct regulatory cost-benefit analyses under certain circumstances and to select the "least costly, most cost-effective, or least burdensome" regulatory alternative.[1] EPA prepared several documents describing its cost-benefit analyses and stated in the proposed rule that it believes it has satisfied UMRA's requirements.

To aid in your oversight of water quality programs, you asked us to review the dispute between EPA and the industrial laundry industry. You also asked us to examine EPA's implementation of UMRA. Specifically, we addressed three questions in response to your inquiry:

- Why are there significant differences between EPA's and the industry's cost estimates of this proposed regulation?

- How did EPA estimate the benefits of the proposed rule and disclose the uncertainties associated with the accuracy of its estimates?

- How does EPA's analysis support its belief that the agency has chosen the least costly, most cost-effective, or least burdensome regulatory alternative?

We briefed your staff on the results of our review on December 1, 1998. (See enc. I for our results.)

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[1]The act requires each federal agency to assess, among other things, the costs and benefits of any proposed or final rule expected to require annual expenditures of $100 million or more by the private or nonfederal governmental sectors. For final rules meeting these criteria, the agency must choose the least costly, most cost-effective, or least burdensome regulatory alternative that achieves the objectives of the rule, or publish an explanation of why such an alternative was not selected.

SUMMARY

Significant differences exist between EPA's and the industry's estimates of the costs of the proposed pretreatment standards for industrial laundries because different methodologies were used.

- EPA's estimate of $136.4 million annually for compliance costs reflects an extensive analysis of the additional costs laundries would incur to comply with the rule.[2] EPA based its estimate on a stratified random sample of laundry facilities and the cost of installing and operating what the agency determined to be the best available technology–called chemical precipitation–for removing pollutants in laundries' wastewater. The industrial laundry industry raised questions about EPA's methodology. For example, the agency used 1993 data, which the industry believes do not reflect the current status of the industry. Also, EPA assumed that chemical precipitation technology requires a part-time operator, but the industry argues that the technology must be attended by a full-time operator. Furthermore, EPA sampled only one facility to estimate how efficiently chemical precipitation removes total petroleum hydrocarbons from laundries' wastewater.[3] The industry questions whether the estimate is representative of removal rates that can be achieved by other facilities. EPA decided to collect additional information to address questions about its methodology.

- The industry's cost estimate of $401 million annually for compliance costs is based on data submitted voluntarily by 204 laundries. The industry associations determined an average annual compliance cost for a single facility and multiplied this cost by the number of facilities EPA estimates will be affected by the rule. The industry's methodology has several limitations. For example, the industry's sample of laundries was not random, and the industry's survey instrument included language critical of EPA, which may have biased the responses. Also, the industry assumed that all laundries will have to "start from scratch" and install equipment to comply with the proposed standards; it is unlikely that all laundries potentially affected by the rule would have to do this.

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[2]EPA's cost estimate is expressed in 1997 dollars. Although the industry's operating and maintenance cost estimate is in 1997 dollars, its capital cost estimate is the summation of capital expenditures by various laundries in whatever year they occurred.

[3]Total petroleum hydrocarbons include many petroleum-based organic compounds with varying physical, chemical, and toxicological properties.

EPA estimated that total annual benefits range from $2.9 million to $10.6 million. Included are human health, recreational, and other benefits. EPA recognized the uncertainty in the accuracy of its estimates by presenting a range of benefit estimates and discussing limitations. The industry raised concerns, however, about key assumptions in EPA's analyses. For example, it argued against EPA's use of total petroleum hydrocarbons as an indicator[4] of the removal of other pollutants and questioned the agency's estimate of the toxicity[5] of such hydrocarbons in laundries' wastewater. EPA is collecting additional data to address these concerns.

In preparing the proposed rule, EPA followed the Office of Management and Budget's (OMB) best practices for preparing economic analyses by explaining the need for the rule, identifying alternative approaches, and analyzing costs and benefits.

- Regarding the need for the rule, EPA interpreted the pass-through provision of the Clean Water Act to mean that a pollutant "passes through" a wastewater treatment facility if an available pretreatment option removes pollutants with greater efficiency than a well-operated wastewater treatment facility does. On the basis of its data collection and analysis, EPA concluded that chemical precipitation technology removes some pollutants, including total petroleum hydrocarbons, with greater efficiency than most wastewater treatment facilities; therefore, EPA concluded that pass-through does occur.

- Considering the identification of alternative approaches, EPA examined the performance and economic achievability of five technological options and determined that chemical precipitation was the "best available technology economically achievable" for existing laundries. EPA also requested comment on a no regulation option.

- Regarding the analysis of costs and benefits, EPA recognized that the proposed pretreatment standards are not cost-effective. The agency

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[4]In determining which pollutants to regulate, EPA assessed whether certain pollutants could serve as "indicator" pollutants for others. Because many of the pollutants of concern originate from similar sources and have similar treatability properties, setting standards for some indicator pollutants would effectively control a broader set of pollutants and reduce monitoring costs.

[5]Toxicity is the degree of danger posed by a substance to human health and animal or plant life.

noted, however, that the Clean Water Act does not require EPA to directly consider cost-effectiveness in setting pretreatment standards. Instead, EPA determines whether pass-through of pollutants is occurring and, if so, identifies the best available economically achievable technology to remove the pollutants.

However, since EPA published the proposed rule in December 1997, several concerns, discussed earlier in this report, were raised about key assumptions that the agency used in its analysis of the costs and benefits. As a result, EPA collected additional information and began assessing how the new data affect its calculation of costs and benefits. By the June 1999 deadline established in a consent decree and subsequent agreements, the agency expects to have concluded its assessment and, in accordance with the Unfunded Mandates Reform Act, selected the least costly, most cost-effective, or least burdensome alternative.

## AGENCY COMMENTS AND OUR EVALUATION

We provided a draft of this report to EPA for its review and comment. We met with EPA officials, including the Branch Chief, Engineering and Analysis Division, Office of Science and Technology, Office of Water. EPA generally agreed with the information presented in the report and provided several clarifications and corrections, which we incorporated as appropriate. EPA also provided updated information on the status of the agency's additional data collection efforts and cited several preliminary findings.[6] Specifically, EPA

- noted that it significantly overstated the toxicity of total petroleum hydrocarbons;
- affirmed that total petroleum hydrocarbons are a good indicator of the removal of other pollutants;
- confirmed that its original estimates accurately measured the ability of chemical precipitation technology to remove these hydrocarbons; and

[6]EPA presented the status of its data collection and its preliminary analysis of this information in a notice of data availability published in the Federal Register on December 22, 1998. In addition to the results mentioned in this report, the notice indicates that (1) EPA is considering the option of regulating only facilities that launder shop and printer towels and (2) the organizations representing industrial laundries, to support the no regulation option, had proposed a voluntary program through which laundries would reduce pollutants in their wastewater.

- found that wastewater treatment facilities were removing about 74 percent of these hydrocarbons rather than the 65 percent EPA had originally estimated.

EPA intends to use this new information to reassess the costs, economic impacts, cost-effectiveness, and benefits of the proposed standards.

## SCOPE AND METHODOLOGY

In addressing these questions, we reviewed documents supporting EPA's cost and benefit estimates and the two industrial laundry associations' cost estimates and comments on the proposed rule. We also interviewed officials from EPA and OMB, the two industry associations, the Association of Metropolitan Sewerage Agencies, and several laundries. To assess how well EPA's analysis supported its belief about satisfying the Unfunded Mandates Reform Act, we drew on standard microeconomic principles and OMB's best practices guide on how to prepare economic analyses. We conducted our work from May through December 1998 in accordance with generally accepted government auditing standards.

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We will send copies of this report to the Administrator of EPA and to other interested parties. We will also make copies available to others on request. If you or your staff have any questions or need additional information, please call me at (202) 512-6111. Major contributors to this report were Lisa Pittelkau, Tim Guinane, Rich Johnson, Sherry Hong, and Bob Levin.

Sincerely yours,

David G. Wood

David G. Wood
Associate Director, Environmental Protection Issues

Enclosure

ENCLOSURE I

GAO Briefing for House Committee on Transportation and Infrastructure

# Proposed Pretreatment Standards for Industrial Laundries

ENCLOSURE I

# GAO Background

- Pretreatment standards specify quantities or concentrations of pollutants that specific industries may discharge to public wastewater treatment facilities.
- Standards are established when it is determined that pollutants pass through or interfere with the treatment processes or sludge disposal methods of public wastewater treatment facilities.
- The Environmental Protection Agency (EPA) is subject to a consent decree and subsequent agreements requiring the agency to take final action on guidelines and standards for industrial laundries by June 1999.
- An industrial laundry is any facility that launders industrial textile items for other business entities for a fee or through a cooperative arrangement. For this proposed rule, laundering means washing with water, including water washing following dry cleaning. This rule would not apply to laundering exclusively through dry cleaning.
- EPA published proposed pretreatment standards for industrial laundries on December 17, 1997, after several years of analysis.

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# GAO Background

- Industry's review of the proposed rule concluded that EPA underestimated compliance costs by a factor of at least 3 and overestimated benefits to an even greater extent.
- The Unfunded Mandates Reform Act (UMRA) requires agencies to prepare a written statement that includes a cost-benefit analysis for proposed and final rules with "federal mandates" of $100 million or more in any one year.
- UMRA section 205 requires agencies to select the least costly, most cost-effective, or least burdensome alternative that achieves the objective of the rule or to publish a written explanation of why such an alternative was not selected. This requirement does not apply where it is inconsistent with any other law.
- EPA prepared several documents describing its cost-benefit analysis of the proposed rule and believes it has satisfied UMRA section 205.

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# GAO Objectives

- Why are there significant differences between EPA's and the industry's cost estimates of this proposed regulation?
- How did EPA estimate the benefits of the proposed rule and disclose the uncertainties associated with the accuracy of its estimates?
- How does EPA's analysis support its belief that the agency selected the "least costly, most cost-effective, or least burdensome" regulatory alternative?

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# GAO Scope and Methodology

- We reviewed documents supporting EPA's cost and benefit estimates.
- We reviewed the industrial laundry industry's comments on the rule and its cost estimates.
- We interviewed officials from EPA, the Uniform & Textile Service Association (UTSA), the Textile Rental Services Association (TRSA), the Association of Metropolitan Sewerage Agencies (AMSA), and several laundries.
- We used the Office of Management and Budget's (OMB) "best practices" guide on how to prepare economic analyses and standard microeconomic principles to assess how well EPA's analysis supported its conclusion that it satisfied UMRA.

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# GAO Question 1: Why Do EPA's and Industry's Cost Estimates Differ?

## • Derivation of EPA's estimates

- EPA analyzed the effects of the rule on social costs,[1] posttax compliance costs,[2] facility and firm closures and failures, and national output and employment. EPA performed an extensive analysis of the incremental costs of complying with the rule.[3]
- EPA's analysis is based on a stratified, random sample from a universe of 1,960 industrial laundries.
- EPA estimated that 1,606 laundries would potentially be affected by the rule. This number excludes facilities that launder less than 1 million pounds of laundry per year and less than 255,000 pounds of shop and/or printer towels.

[1] Social costs reflect the costs to society of the proposed rule and include pretax compliance, administrative, and unemployment-related costs.

[2] Posttax compliance costs are the costs to industry to comply with the regulation, after compliance costs have been expensed or depreciated for tax purposes and income taxes have been paid on earnings.

[3] Incremental costs represent the difference between the costs of the regulatory option and the costs of the baseline or status quo.

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# GAO Question 1: Why Do EPA's and Industry's Cost Estimates Differ?

## • Derivation of EPA's estimates

- EPA sent a detailed questionnaire to a subset of the laundries (275 questionnaires) affected by the rule. These laundries reported having a range of treatment technologies in place. After gathering additional data on candidate technologies, EPA proposed chemical precipitation as the best available technology.
- Chemical precipitation is a treatment technology used to remove dissolved pollutants from process wastewater. Chemicals are added to the wastewater and cause pollutants to settle out so they can be more readily removed. EPA determined that this technology could remove pollution to a level of 15 milligrams of total petroleum hydrocarbons--a key pollutant discharged in industrial laundries' wastewater--per liter of wastewater.
- EPA based its cost estimates on incremental costs--those costs incurred using chemical precipitation technology to remove pollutants from the portion of wastewater generated by laundering industrial items only.

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# GAO Question 1: Why Do EPA's and Industry's Cost Estimates Differ?

## • Derivation of EPA's estimates

- Annual "social" costs were estimated to be $139.4 million. This consists of:
  - pretax compliance ($136.4 million),[4]
  - administrative ($2.9 million), and
  - unemployment-related costs ($0.1 million).
- EPA estimated that the total compliance cost for installing and operating chemical precipitation technology consists of:
  - 27 percent capital costs and
  - 73 percent operations and maintenance costs.
- "Economic achievability" analysis determined that:
  - 33 facilities would close and
  - 470 net jobs (0.36 percent of total industry employment) would be lost.

[4]Pretax compliance costs are the costs to industry to comply with the regulation, before costs have been expensed or depreciated for tax purposes and income taxes have been paid on earnings.

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# GAO Question 1: Why Do EPA's and Industry's Cost Estimates Differ?

- Questions about EPA's methodology
  - EPA's estimate was based on data collected in 1993, which the industry believes does not reflect the current status of the industry.[5] In response to industry comments, EPA suggested that the industry collect and submit updated information. EPA is currently evaluating this information.
  - EPA used point estimates that do not explicitly recognize the degree of uncertainty in the cost estimates for chemical precipitation and other alternatives. This implies a level of confidence in the cost estimates that may not be warranted.
  - Industry questioned the use of total petroleum hydrocarbons (TPH) as an indicator pollutant and EPA's method for measuring TPH.[6] EPA is collecting additional samples to address these concerns. The outcome could affect costs. For example, if EPA requires laundries to monitor for multiple pollutants rather than TPH, laundries' monitoring costs would likely increase.

[5] EPA's cost estimate was adjusted to account for inflation and was expressed in 1997 dollars.

[6] In determining which pollutants to regulate, EPA assessed whether certain pollutants could serve as "indicator pollutants" for others. Because many of the pollutants of concern originate from similar sources and have similar treatability properties, setting standards for some indicator pollutants would effectively control a broader set of pollutants.

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# GAO Question 1: Why Do EPA's and Industry's Cost Estimates Differ?

- Questions about EPA's methodology
  - On the basis of site visits and other information, EPA determined that (1) chemical precipitation technology requires a part-time rather than a full-time operator and (2) laundries would not need to purchase additional land to build structures to house chemical precipitation technology. Actual costs could be higher if these determinations prove to be incorrect.
  - EPA sampled only one facility to estimate how efficiently chemical precipitation technology removes TPH. Industry questioned whether the results are representative. If, as UTSA/TRSA argue, chemical precipitation technology is less efficient than EPA estimates, actual costs for meeting the standards could be higher. EPA is currently collecting more data to reassess the removal efficiency of this technology.
  - Laundries may implement less costly ways to meet the standards. For example, firms with multiple plants may consolidate the cleaning of heavily soiled items in one or more plants rather than install chemical precipitation technology in all plants.

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# GAO Question 1: Why Do EPA's and Industry's Cost Estimates Differ?

- Derivation of industry's estimates
  - UTSA/TRSA used 1997 data submitted voluntarily by 204 laundries.[7] The industry estimated compliance costs only and did not consider other factors, such as administrative and unemployment-related costs.
  - UTSA/TRSA divided the laundries into three groups and calculated average annual costs for a laundry in each group:
    - 5 laundries that currently discharge no more than 15 milligrams of TPH per liter of laundry wastewater - $237,000,
    - 149 laundries (including the above 5) that combine all wastewater and discharge between 10 and 250 milligrams of TPH per liter of laundry wastewater - $189,000, and
    - 55 laundries that treat only heavily soiled wastewater - $336,365.

[7]Although industry's operating and maintenance cost estimate is in 1997 dollars, its capital cost estimate is the summation of capital expenditures by various laundries in whatever year they occurred.

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# GAO Question 1: Why Do EPA's and Industry's Cost Estimates Differ?

- Derivation of industry's estimates
  - UTSA/TRSA summed the three cost estimates and divided the result by three to derive an average annual cost per laundry of $250,000.
  - UTSA/TRSA multiplied $250,000 by 1,606 facilities (EPA's estimated number of facilities affected by the rule) to derive a total annual cost to the industry of $401 million:
    - 22 percent of annual costs were identified as capital costs and
    - 78 percent of annual costs were identified as operations and maintenance costs, including 27 percent for chemicals and 17 percent for labor.
  - UTSA/TRSA accounted for incremental costs by assuming all laundries will have to "start from scratch" and install equipment to comply with the proposed standards.

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# GAO Question 1: Why Do EPA's and Industry's Cost Estimates Differ?

- Limitations of industry's methodology
  - UTSA/TRSA acknowledged that the 204 laundries responding to its survey did not constitute a random, stratified sample. As a result, information derived from the survey may not represent the industry as a whole.
  - The survey instrument included language critical of EPA; this may have biased the responses.
  - Industry officials acknowledged the costs incurred by the five laundries that already meet the 15 milligrams per liter TPH limit should not have been included in calculations. The standard practice for cost-benefit analysis is to include only the incremental costs required to comply with the rule.
  - Industry assumed that all 204 laundries surveyed would have to start from scratch. It is unlikely that all laundries potentially affected by the rule would have to do this.

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# Question 2: How Did EPA Estimate the Benefits of the Proposed Rule?

## • EPA's estimation of benefits

- EPA estimated the dollar value of the human health, ecological, and economic productivity benefits.
- Human health benefits pertain to cancer cases avoided; ecological benefits refer to recreational benefits and nonuse benefits (the benefits of preserving a resource for future use); economic productivity relates to reduced costs to treatment plants for sludge disposal.
- Other benefits included reductions in noncancer health effects and reduced operating costs for wastewater treatment facilities.
- EPA used a variety of data sources to estimate these benefits, including data from the agency's detailed questionnaire of industrial laundries and a separate industry survey on the presence of pollutants in discharged water.

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# Question 2: How Did EPA Estimate the Benefits of the Proposed Rule?

- EPA's estimation of benefits
  - On the basis of pollutant removals by chemical precipitation technology, total annual monetized benefits range from $2.9 million to $10.6 million.
    - Human health benefits: $0.09 million to $0.50 million,
    - Recreational benefits: $1.9 million to $6.7 million,
    - Nonuse benefits: $0.9 million to $3.4 million, and
    - Benefits to wastewater treatment facilities: $0.006 million to $0.010 million.
  - EPA estimated that pretreatment would annually prevent about 407,000 "total pound equivalents" of pollutants from reaching wastewater treatment facilities.[8]
  - EPA recognized the uncertainty in its analysis by presenting a range of benefit estimates and discussing their limitations.

[8]A pound equivalent is a measure that addresses differences in the toxicity of pollutants removed. Total pound equivalents are derived by taking the number of pounds of a pollutant removed and multiplying this number by a toxic weighting factor.

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# GAO Question 2: How Did EPA Estimate the Benefits of the Proposed Rule?

## • Concerns about EPA's methodology

- UTSA and TRSA officials said EPA greatly overstated the toxicity of TPH in laundries' wastewater.[9] As a result, the industry believes that the rule would annually prevent about 14,000 total pound equivalents from reaching wastewater treatment facilities, an amount that is significantly less than EPA's estimate of about 407,000 total pound equivalents. EPA is collecting additional data to determine if the toxicity of TPH should be revised. As noted earlier, EPA is also reviewing whether TPH should be used as an indicator of pollutants in laundries' wastewater.
- For chemical precipitation technology, EPA estimated TPH removals based on samples collected from one laundry over a 4-day period. The results may not be representative. To address this issue, EPA is collecting data to reassess how efficiently chemical precipitation technology removes TPH.

[9]Toxicity is the degree of danger posed by a substance to human health and animal or plant life.

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## GAO Question 3: How Does EPA Support Its Belief About Satisfying UMRA?

- The Office of Management and Budget (OMB) has issued guidance to help agencies comply with UMRA. The guidance directs agencies to:
  - explain the need for the rule,
  - examine alternative approaches, and
  - analyze the benefits and costs of each alternative.

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# GAO Question 3: How Does EPA Support Its Belief About Satisfying UMRA?

- Need for the rule
  - The Clean Water Act authorizes EPA to establish pretreatment standards for pollutants that pass through wastewater treatment facilities or interfere with treatment processes or sludge disposal methods at wastewater treatment facilities.
  - According to EPA, the main reason it identified this industry for possible rulemaking was that laundries may be receiving shop towels laden with solvents identified as hazardous waste under the Resource Conservation and Recovery Act (RCRA). The agency was concerned that the solvents could be discharged to wastewater treatment facilities following laundering, thus potentially circumventing control of these wastes under RCRA.
  - UTSA and TRSA officials note that EPA has delegated regulation of shop towels under RCRA to the states, and all 50 states have addressed this issue. Also, the officials believe that EPA's concern about the potential circumvention of RCRA should have been included in the proposed rule to give parties an opportunity to comment on it.

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# Question 3: How Does EPA Support Its Belief About Satisfying UMRA?

## • Need for the rule

- For the proposed rule, EPA has defined pass-through to mean a pollutant passes through a wastewater treatment facility if an available pretreatment option removes pollutants with greater efficiency than a well-operated wastewater treatment facility does.
- Industry officials said that EPA has never before interpreted the pass-through provision by comparing the removal efficiency of indirect dischargers--facilities that discharge their wastewater to wastewater treatment facilities where it is treated before it is discharged to surface waters--to that of wastewater treatment facilities. These officials pointed out that all industrial laundries are indirect dischargers.
- EPA officials note that pretreatment standards are based on the application of best available technology (BAT). These officials believe that it is therefore appropriate when there are no direct dischargers in the industry, to compare the removal efficiencies of the candidate BAT pretreatment option and the wastewater treatment facilities in determining pass-through.

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# GAO Question 3: How Does EPA Support Its Belief About Satisfying UMRA?

- Need for the rule
  - On the basis of its data collection and analysis, EPA concluded chemical precipitation technology removes some pollutants, including TPH, with greater efficiency than most wastewater treatment facilities; therefore, EPA concluded that pass-through does occur.
  - However, the industry and EPA disagree about wastewater treatment facility removal rates. For example, based on an Association of Metropolitan Sewerage Agencies' study, industry claims that wastewater treatment facilities already remove over 90 percent of TPH compared with EPA's estimate of 65 percent.
  - EPA officials said that they would collect additional information to determine whether TPH is an appropriate indicator pollutant and to reassess how efficiently treatment facilities remove TPH.

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# GAO Question 3: How Does EPA Support Its Belief About Satisfying UMRA?

- Alternative approaches
  - EPA examined five technological options--chemical precipitation, dissolved air flotation,[10] two options that are a combination of chemical precipitation and dissolved air flotation,[11] and organics control.[12]
  - EPA examined the performance and economic achievability of the five options and determined that chemical precipitation was the best available technology economically achievable for existing laundries.
  - EPA also requested comment on a no regulation option and encouraged commenters to support their arguments with data on pollution levels and the degree of pass-through.

[10]Dissolved air flotation is a treatment technology used to remove suspended solids, oil, and some dissolved pollutants from process wastewater. This technology involves coagulating and flocculating the solids and oil and grease and then floating these substances to the surface using pressurized air.

[11]Under the first combination option, either dissolved air flotation or chemical precipitation would form the basis of the standards by establishing one set of standards based on the less stringent of the two standards for each regulated pollutant for the two technologies. Under

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# Question 3: How Does EPA Support Its Belief About Satisfying UMRA?

- Costs and benefits
  - EPA estimated costs and benefits for three of the options--chemical precipitation, dissolved air flotation, and a combination of chemical precipitation and dissolved air flotation. EPA also defined the baseline--what would occur absent the rule.
  - Although EPA used point estimates for costs and did not explicitly recognize the extent of uncertainty, the estimated costs of the rule would likely exceed the benefits even if a range of possible costs were considered.
  - EPA recognized that this proposed rule is not cost-effective. The agency noted, however, that the Clean Water Act does not require EPA to directly consider cost-effectiveness in setting pretreatment standards. Instead, EPA determines whether pass-through of pollutants is occurring and, if so, identifies the best available, economically achievable technology to remove the pollutants.

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the second combination option, facilities with dissolved air flotation in place as of the publication date of the proposal would have to comply with the standards based on this technology, and all other facilities would have to comply with standards based on chemical precipitation.

[12]Organics control is a treatment technology that involves the use of steam tumbling for treatment of shop and printer towels and mops for removal of organic pollutants.

ENCLOSURE I

# GAO OMB Review of Proposed Rule

- OMB officials said that they were impressed by the overall level of detail included in EPA's cost-benefit analysis for this rule.
- OMB officials stressed that this is a proposed rule and that EPA appropriately asked for comments on the key assumptions that the agency made.

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