

Final Summary
Effluent Guidelines Planning Workshop
April 2 and 3, 2001
Admiral Fell Inn, Baltimore

I. Welcome

Geoff Grubbs, Director of the EPA Office of Science and Technology, Office of Water, opened the workshop, thanking participants for coming to Baltimore. Grubbs stated that he will be the first office director in more than a decade to set priorities and plans for the effluent guidelines program without a consent decree, and that this situation presents a great opportunity to fashion the program anew. In many ways, he said, the consent decree was a good thing. It told the EPA what it had to do, and gave it continuity in the program. Within the next year, however, the EPA will have started work on its final obligations under the most recent consent decree, and the EPA must be focused on the future, on what the effluent guidelines program should and could look like. Grubbs further added that the 304(m) requirements mean a lot to him. He noted that EPA has tried a number of things in the program recently, including multimedia rulemaking and other regulatory strategies beyond the basic 304(m) requirements.

In terms of this workshop, Grubbs stated that he has no expectation of consensus from this group. Rather, he is looking for points of view and understanding. He gave two points of guidance: 1) think inside the box about 304(m) - the EPA needs a defensible, rational approach to meet the spirit and letter of the Clean Water Act (and defensible with new administrations in the future); and 2) think outside the box related to where the program could go in the future - be as creative as possible knowing that resource constraints will remain constant at best, and that this program will have limited funding in the future.

In regard to a schedule for new rulemaking, the EPA will need a final 304(m) plan by February 2002. The EPA wants to set a tone, beginning now, about what they intend to do with the plan. EPA has to be sensitive to the budget cycle, and thus will need a proposed plan by the end of this summer (2001). So, the efforts of the workshop participants play a key role in the upcoming plan.

In regard to the political landscape, Grubbs said that he had met with the new EPA administrator, and that she understands the legislation and interest groups with a stake in the program. She indicated that EPA can use everyone's help to put together a good program for the future. EPA expects a new Assistant Administrator to be named by the fall.

II. Introductions

Linda Manning, with Marasco Newton Group, explained her role as a facilitator: asking probing questions, encouraging creativity among participants, and encouraging people to get to know each other and work well together. She said her goal was to bring together all of the knowledge sets of the various participants in the workshop, but not to force the group towards consensus.

The participants introduced themselves, their affiliations, and their experience in working with the effluent guidelines program. Sheila Frace, EPA director of the Engineering and Analysis Division, Office of Water, introduced herself and her staff, and explained that they were present primarily as a resource to other participants.

Manning then introduced the first presentation by Fran Dubrowski, an attorney in private practice, formerly of the Natural Resources Defense Council (NRDC), and Phil Cummings of The Accord Group, formerly of the Senate Committee on Environment and Public Works. They discussed the legislative and administrative history of 304(m), and how it fits into the larger effluent guidelines program.

III. Presentation on the Legislative History and Intent of the Effluent Guidelines Program

Cummings introduced the legislative history and intent of the effluent guidelines program, and stated that he and Dubrowski would trace the 1972, 1977, and 1982 Clean Water Act (CWA) amendments, various administrative and implementation issues regarding the CWA, and the task set before workshop participants by the EPA. In their presentations, Cummings and Dubrowski made the following points:

1972 Clean Water Act

In 1972, Congress was skeptical that a legislated water quality improvement process could be implemented quickly enough to cure the nation's water ills. So, legislators put in place a system whereby: 1) all discharges would be subject to permits immediately, and 2) there would be limitations based on a set of baseline of controls, on an industry-by-industry basis, to which all dischargers would have to adhere. Congress knew they would not attain all water quality standards, and so in lieu devised a way to achieve improvements through the Best Available Technology.

The 304(b) language of the CWA required 40 sessions of the conference committee. The committee met so frequently and for so long that they developed a language of their own, which makes the legislative history unclear. But this is indicative of the complexity of the task at hand. They set up the process to be *continuous and iterative*, which translated in legislative language to "an annual review." Further, the idea behind the legislation was to reduce or remove regional competitive advantages (i.e., industries in areas of the country with more restrictive environmental requirements would not be at a competitive disadvantage than those with less restrictive environmental requirements) by instituting national industrial categories and common

standards.

The 1972 legislation was not an amendment, but in essence a completely different law from water protection laws of the past. Back then, rivers were catching fire; water quality problems across the country were grave. The Nixon Administration wanted something that was going to be ambitious and technology forcing. In its early implementation, Congress was surprised by the sheer number of permits issued by EPA, rather than the States. Also, the first round of CWA amendments (i.e., 1972) relied a lot upon “best professional judgment,” as well as negotiated permits, which was later refined into a more objective permit approval system.

1977 Amendments to the Clean Water Act

By 1975, only a handful of Standards had been set, so EPA was sued by NRDC and others. Congress returned to a focus on the technology forcing concept for the 1977 amendments. Congress had initially intended the CWA to focus on toxics and conventional pollutants, but in its implementation the CWA had currently only worked toward fixing problems with conventional pollutants. As a result, there were a lot of citizen suits during the 1970s, that eventually drove the discussion for the 1977 revisions.

In 1977, the CWA was re-oriented toward toxics. After looking back on CWA implementation during the last several years, Congress created a separate structure for toxics and a bigger regulatory push to address them. Congress identified specific pollutants that EPA would have to address, but there was little regulatory effort until 1987. The 1977 CWA also established BCT for additional controls of conventionals, and stormwater, non-point discharges, and sludge.

1987 Amendments to the Clean Water Act

Between 1977 and 1985, Congress focused on fine-tuning of individual programs to keep current with changes in technology and the economy. There was not so much a flaw in the technology based parts of the CWA, as there was a lack of progress on water quality based standards. Congress had not achieved the CWA that they wanted.

In the 1987 amendments, Congress introduced the concept of 304(m). Since only one paragraph was devoted to 304(m), its legislative history is not well documented. In addition, these amendments discussed the issue of variances and waivers (such as fundamentally different factor (FDF) variances), and focused on better subcategorization schemes in ELGs to address differences in operations within a category.

After a review of water quality standards, Congress called for numeric toxic criteria. Congress also identified the industrial sources whose guidelines deserved revision. What they did differently was that they identified water quality problems first, and then built the legislation around that. They asked, “where are the multi-source water quality problems?” In essence, they created the legislation that the EPA implements now. It was designed to be a “can do” program,

and meant to address real world problems in an ambitious way.

Current Implications

As a result of that legislation, the EPA has been contending with a number of issues. For example, EPA has difficulty in obtaining or developing data and has looked to all available databases. What categories deserve regulation? What about multiple-source water quality issues? Should all of the regulatory burden be on point sources, or are non-point sources controlled more effectively?

Five Questions

Dubrowski stated that there are five key concepts/questions that participants in the workshop should seek to address:

1. In the annual review and revision, are we picking up systemic problems? We need to be experts in water conservation, which requires us to look at technology development and recent literature in the field. If we do not approach rule-making this way, we could end up rewarding laggard industries, or not see important issues on the horizon.

2. Are we addressing our current/existing water quality control problems? We need to use three parts of the CWA that are not currently used effectively:

1. Water quality monitoring. Only 17% of rivers and streams are monitored (mostly for strictly biological information). We are not getting good data on trends. We need to use water quality monitoring systems more comprehensively. We still do not have good information for conventional pollutants, for BOD, and for other new chemicals.
2. Water quality standards. Current standards are deficient. They are few, and address human health not aquatic life.
3. Environmental justice. We need to address problems that pertain to specific communities.

3. Are we using all possible early warning systems about new pollutants, such as TSCA and FIFRA, that would help us identify new kinds of problems?

4. Are we keeping pace with new pollution control technology? Are there more effective or efficient ways to do things? We are not really here to do a technology review, and there are technological limits in permits. But we do not have a technology clearinghouse, like the EPA Air Program's BACT/LAER database. We are not using PCS very well (to track production, technologies, flow). We could be incorporating additional media techniques to see where the technology is going.

5. Are we keeping pace with new developments on the economic front? Are we looking at

industrial changes(such as shifts to non-regulated chemicals, changes in market structure, consolidations)? One example of market changes is hog farming. The industry currently has the same output they have had for years, but with 74% fewer farms, which are thus concentrated in specific areas. A challenge of keeping up is that permits and controls effective in 2005 would be promulgated in the 2002 plan. We are always a few years behind due to the regulatory development schedule, which means we must be thinking even further ahead.

Closing Thoughts

The Effluent Guidelines Program is a strategy that has gotten better defined and implemented with time. We face a quandary with data sources, in that some address human health (305(b)) and others address water quality problems (303(d)). Increasing documentation would help. Obviously there are resource constraints. But the CWA's legislative history points to a bold vision and a willingness to take risks. That is what the workshop participants are here to do today -- to think boldly about how to solve these problems.

Questions About the Presentation from the Audience to the Presenters

Q. Is EPA doing anything with non-point sources in the near future?

A. There's a debate on how much federal authority there is to do anything. The TMDL process will help address many of these concerns by allocating loads between point and non-point sources. Point sources might be able to fund reductions from other sources to achieve overall water quality standards at lower cost than achieving more stringent point source limitations.

Observation: No one has mentioned litigation, which has made a deep impression on how we develop guidelines (i.e., under a defensive posture). We have to assume everyone will be litigated, and so we must collect data in certain ways. Lots of things can be done with public participation. We need to get more information from the public so that there are fewer questions when a rule is published.

Observation: The CWA was designed to be both a technology and water quality law, so you need both components working to have an effective program.

IV. EPA Presentation on the Effluent Guidelines Program

Sheila Frace and Pat Harrigan, of the Engineering and Analysis Division, Office of Water, presented key points about the effluent guidelines program, in order to ensure that all workshop participants possessed a similar level of knowledge prior to the problem-solving sessions in the afternoon. In this presentation, EPA explained its CWA requirements and its past approach to 304(m) planning, and highlighted limitations and issues it has encountered in developing previous plans. The presentation is included in Appendix A and summarized below.

Effluent limitation guidelines (ELGs) are technology based standards to regulate direct and

indirect dischargers. They are nationally applicable, but can be geographic in scope. They define performance by establishing limitations and often defining BMPs. In establishing ELGs, the EPA looks at two things: 1) technology (not just treatment, but also pollution prevention processes and practices), and 2) financial aspects (is the guideline economically achievable?).

To date, the EPA has issued more than 50 ELGs covering over 34,000 facilities. There are three areas where the EPA would like to accomplish more: 1) environment - address remaining water quality problems, 2) progress - update regulations to reflect current technologies, and 3) implementation - resolve state and local issues implementing existing standards.

Every other year, the EPA must establish a schedule for reviewing existing guidelines, identifying categories of sources that have not yet been regulated, and establishing a schedule for promulgating new guidelines. In the past, this schedule has been largely proscribed by lawsuits. Since EPA will shortly complete its legal obligations, it is now in a position to define a new approach. In developing its plans, EPA wants to ensure it is acting as a good public steward of the environment. EPA is asking workshop participants to help them develop this plan.

The question is, “How does EPA develop a fair and reasonable approach for reviewing, revising, and developing effluent guidelines given limited staff and financial resources, and information and data?” EPA presented some information on processes it has used to select projects in the past. In general, projects were selected based on a ranking of three factors: environmental, utility and economic. When applying these criteria, EPA found that only partial data is available, that the process was time and resource intensive, and that much information pointed to local, not national, concerns.

Following the presentation, stakeholders asked questions to clarify their understanding of past and current EPA efforts.

Questions About the Presentation from the Audience to the Presenters

Q. What regional information gathering efforts are ongoing?

A. Most regional contact efforts are cyclical. The EPA Office of Water tries to touch base with its counterparts in other parts of the agency at least twice per year. This is a very informal approach.

Q. What do ASWIPCA and AMSA stand for?

A. The Association of State and Interstate Water Pollution Control Administrators, and the Association of Metropolitan Sewerage Agencies, respectively. The latter represents 300 POTWs around the country. There is currently a shift toward smaller POTWs joining AMSA.

Q. Why are resources so limited?

A. Due to court ordered deadlines for the proposal and promulgation of new and revised ELGs, the EPA must use resources first to meet the terms of these deadlines, leaving less for planning.

One participant suggested that EPA set aside some funds for iterative changes to existing guidelines. This participant further explained that regulations for some industries need minor changes, and not a whole new ELG. Since programs with the highest environmental benefit get the highest priority, these minor changes often do not get done.

Q. Who gets value from effluent guidelines (i.e., who is customer and what do they need)?

A. The greatest benefit is to states and POTWs (although that is debatable). One of the advantages is that it is a national program. There is a delineation between what makes sense for the EPA's Effluent Guidelines Program to address versus what should be handled at the state and/or local level. Many NPDES permits written today are based on water quality standards. People are writing permits with more stringent limits based on improved technologies, raising the question: is ELG keeping pace with new technology?

Q. Are you far down the line on diminishing returns?

A. We hope people here will talk about process and treatment technology advances. Are we keeping pace? It is hard to tell.

Q. What is the EPA doing to ensure permits are reissued on a timely basis and water quality standards are being met (e.g., water quality standards issued in Indiana 10-15 years ago no longer mean anything)?

A. Under the Federal Managers' Financial Integrity Act (FMFIA), the agency does understand the permit backlog is a weakness, and has been working with states to reorganize the program.

Q. What does it cost to develop a guideline?

A. The range is based on the complexity of the industry. We generally have teams of 1-3 full-time engineers and then part-time statisticians, economists, attorneys, and other specialty services adding up to approximately 5 EPA full-time equivalents (FTE). Generally we have contractor support in the \$800k to \$1.2 million per year. Average length to develop a guideline is 5 years.

V. Presentation on Water Quality Data Sources

Margaret Heber, Director of the Assessment and Watershed Protection Division of EPA's Office of Wetlands, Oceans, and Watersheds (within the Office of Water), gave an overview about some data sources on water quality and their usefulness for the 304(m) process. She explained that Section 305(b) of the CWA requires states to report to EPA and to Congress every two years on the condition of all state waters and whether or not they are meeting applicable state water quality standards. Generally, water quality standards are a combination of two things: 1) criteria - both narrative and numeric, and 2) designated use (fish habitat, recreation, etc.).

Section 303(d) requires states to provide a list of all waters that are "impaired"; some states list waters that are not attaining water quality standards, while other states only list waters if their designated use is impaired. Those waters that are not meeting the standards are then designated to undergo the TMDL process. Currently, there is an effort to merge the 305(b) and 303(d)

reports, since one report is essentially a subset of the other. The next phase of the program will look to improve reporting on the source(s) of impairment.

The EPA has inadequate information on sources and causes of impairment. Only 30% of state waters have been monitored and assessed, and those are mostly rivers and streams.

This section concluded the information presentation section of this workshop. The remaining text summarizes the results of the small discussion groups and discussion surrounding report out from those groups.

VI. Homework Assignments and Breakout Discussion Sessions

Many of the workshop participants (16 individuals/groups) drafted an approach to conducting the 304(m) planning process prior to attending the workshop. Since participants did not have access to each other's homework assignments in advance of the meeting, participants were given two hours to read and review each other's homework assignments. These suggested approaches were complex and diverse. Consequently, the facilitator (Manning) suggested that participants focus on the similarities between approaches. She explained that in the next phase of the workshop, participants would be asked to select two to three breakout groups during which a few approaches would be developed in more detail.

The following observations were made on the homework approaches:

- One participant noticed a general lack of public participation among the approaches, and asked "How do you engage the public in this process?"
- One participant said that there appeared to be a case of "mission creep." The program started out with 65 classes of toxics, then included 129 priority pollutants. Many of the proposals are suggesting an expansion of this to include everything listed in TRI, for example. This participant suggested that a better question is, "What's needed to make the program work?" Only the 65 classes of toxic pollutants, or more? How can the program be returned to its original goal? The EPA needs to decide what will be the universe of pollutants to be addressed. What is the scope? What is the statutory requirement? How do you exclude things? Or do you keep the program completed open to all pollutants? How do ELG and WQ programs work together?
- Another participant stated that maybe the program should follow a "Mission, vision, critical success model."
- Another said that the scope is laid out in the statute. The assignment today is to narrow down the list for the annual review, not discuss water quality and other related programs. Water quality and other programs are not necessarily the point here. The group's focus

needs to be on developing the plan.

Choosing Breakout Topics

The plenary group developed the following options to select break-out topics for the three discussion groups:

- Option 1: – Vote on the three “best” or “top” homeworks, and use them as templates from which to begin discussions in breakout groups.
- Option 2: – Breakout into a “New” (i.e., identify new industries for regulation), “Revised” (i.e., identify current ELGs that need to be revised) and “Outside the Box” (i.e. use creative and non-traditional ways to develop the plan) group.
- Option 3: – breakout into an engineering (i.e., data-driven) group, a stakeholder and public participation (i.e., opinion-driven) group, and an incentives-based group.

By a show of hands, the plenary group chose Option 2, and broke out into groups to discuss revision of existing ELGs, identification and development of new ELGs, and exploration of innovative ideas or an “outside the box” discussion for the effluent guidelines program.

VII. Report Out/Discussion from the “Outside the Box” Discussion Group

The “Outside the Box” group was the smallest group with eight people. It’s goal was to think about and discuss innovative approaches the effluent guidelines program might take now (working within the current frame of the CWA) and in the future (assuming the CWA was revised).

In the following discussion, “group” refers to these eight individuals and “participants” refers to the rest of the workshop individuals.

The outside the box group shared several suggestions that EPA might do to enhance its current effluent guidelines program. First, the group suggested that the program should become more service-oriented with permitting authorities (states and POTWs) as its primary customers. The group suggested that EPA needs to communicate more with permitting authorities to get information on gaps in the current program, issues that may need to be addressed, and unintended pollutant transfers that occur as a result of current technology based approaches. The group suggested that, at a minimum, EPA establish periodic conference calls with permitting authorities. Workshop participants agreed that convening permit writers periodically was a good idea.

Second, the outside the box group suggested that EPA cultivate relationships with universities and use the Internet more effectively to obtain information on the latest treatment and pollution prevention technologies.

Next, the group provided some suggestions on how EPA might collect additional information

and better use information currently available. For example, the group suggested that discharge permits require in-process monitoring. The group felt this information could be used by EPA to identify where pollution prevention technologies might be applied to improve effluent quality. Workshop participants, however, expressed concerns about required in-process monitoring in discharge permits including burden to permit writers and difficulty in applying this approach to variable batch processes. Participants also questioned what legal authority the agency would have to require such additional information. One suggestion was made to use the State of Pennsylvania as a model and have a voluntary program as a pilot to test the concept.

Regarding pollutant information, the group suggested that the agency monitor pollutant load allocations on water bodies with established TMDLs to assess their relationship to environmental problems. The group suggested that these load allocations may be more accurate than current reports on impaired water bodies. Once a pollutant of concern was identified, then the agency could look at what technologies might be available to address it.

The group also provided suggestions on the program structure. They are as follows:

- **Restructure and organize EAD by industry sector.** This would mean that one or more EAD staff would be “expert” in a particular industry sector and would be knowledgeable about trends and challenges for that sector. Group members felt this would result in better service to each sector. In the plenary discussion, participants cautioned that technical support units like the one suggested are often the target of budget cuts.
- **Increase flexibility in ELGs to accommodate regional needs.** For example, one parameter may be of higher priority for one part of the country than for another. Therefore, a parameter would be regulated differently in different parts of the country. The example cited was temperature, which is critically important because of salmon populations in the northwest, but is not as critical in the southeast where fish populations may be less temperature sensitive. Participants asked if this regional flexibility would be based on technology or water quality. The group indicated that this suggestion came up in the context of regulating specific pollutants. The group explained that this concept could be expanded to allow for tradeoffs in technologies, where one region could apply a technology that is better at treating one parameter, while another region could apply a technology that is better at treating a parameter that is more of an issue in that region. The group also suggested that some ELGs should be subcategorized by region and provide technical expertise on “beyond-BAT” that can address specific regional problems.
- **Develop a list of the best technology for a particular pollutant.** This may mean a shift from industry based guidelines to pollutant based guidelines. Participants noted that there were several issues that make this approach

impractical in many instances. The group observed that such an approach may end up in long treatment trains, each piece of equipment addressing a specific pollutant. The group suggested that, as an alternative to pollutant based guidelines, EPA should develop a look-up table of pollution prevention technologies by parameter.

- **Revisit production based standards and possibly cap them because they effectively escalate pollution along with production.** Participants noted that such a cap was built into existing regulations and if you set a cap, you would have to make the technology more stringent. The group noted that this was related to a concept it discussed in detail: concentration based versus mass based limits.
- **Make the program consistent with the Administrator’s policy on eliminating releases of persistent bioaccumulative toxins (PBTs).** Some group members expressed an opinion that the current effluent guidelines program was inconsistent with the Agency’s PBT policy because it allowed for the discharge of PBTs by setting “non-zero” limits. Although participants in the plenary session agreed that reducing discharges to zero was probably impossible, they felt that PBTs could be used as a way to prioritize pollutants considered for regulation. More broadly, participants discussed that this might lead to guidelines for pollutant categories instead of industry sectors. Participants cautioned that the effluent guidelines program should be consistent with the PBT rules but not go beyond them (e.g.: Great Lakes model).
- **Recruit certain industrial facilities to be in-process laboratories to test particular criteria or technology.** This would be similar to the Project XL program, but with more targeted results. Participants added that there was already a significant amount of activity in this area and that EPA just needed to better access the information being generated (e.g.: DfE, use of EMS).
- **Convene an annual or biannual conference of permit writers to discuss their needs and academics working on emerging technologies.** The group felt that the agency could target specific industries or topics each year and that the information provided at the event could be used to advance the thinking in that sector in a relatively short time frame. The group also discussed other communication methods such as the establishment of regulatory list-serves and chat rooms to cultivate a community exchanging ideas (using low-cost Internet-based tools).
- **Revise the basic guidelines development process to follow three basic steps:**
1) Convene academics to determine the best technology; 2) Take these findings to stakeholders and get their feedback; and 3) Propose final rule based on this feedback. Participants asked who the group meant by “academics” and suggested

that trade associations should be included as resources in step 1 because they often have access to the latest thinking for their respective industries. The group emphasized that the point of the suggestion was to delay the policy debate until after the technologies were known.

- **Other points:** 1) Give low priority to sectors with documented pollution prevention programs, and 2) include POTWs as an “industry” to be regulated (redefine secondary treatment). Other participants disagreed that EAD should regulate POTWs because issues such as nutrients are local problems and should be addressed through water quality standards.

The group spent a significant amount of time discussing changing the program to a more incentives-based approach. A question remained of what incentive could be offered to industry to voluntarily share process information with the public. Under such an incentives-based approach, EPA would reward industries that made progress (e.g., technology advancements, load reductions) and focus its regulations on those industrial sectors that were not performing (see homework #5). In such cases a permit limit might be a facility-wide limit on releases for a particular parameter (allowing in-plant trading). The group also strongly recommended including non-point sources in the program. Participants suggested EPA should look at the Metal Finishing Industry Strategic Goals Program to see how an incentive based program could work.

During the report out, there was a brief discussion of water quality standards. One participant asked, “if water quality standards were functioning properly, would you still need an effluent guidelines program?” Some participants felt that the answer to this question was “no” as it is a waste of public money to try to go beyond water quality standards. However, states do not have water quality standards for all pollutants of concern (e.g., PBT compounds). Best available technology (BAT) limits for these pollutants can help improve water quality. Also, some water quality standards are narrative. BAT for related, measurable pollutants can put facilities on an equal footing in meeting these narrative standards and streamline the permitting process.

Participants also discussed that the effluent guidelines process was not designed to correct facilities that were not in compliance (enforcement programs are designed to address non-compliance). Further, if an industry sector cannot comply with existing limits, lowering that limit does not necessarily bring them into compliance.

Finally, the group recognized challenges and issues regarding some of the things it suggested, including:

- How to ensure equity within a particular sector;
- How to measure compliance and what compliance means; and
- How to get industry to the table to get the information the agency needs to make informed decisions.

VIII. Report Out/Discussion from the Revising Guidelines Breakout Group

This group consisted of approximately 25 people and was largely populated by industry representatives. Its goal was to suggest and discuss process for reviewing existing guidelines and selecting ones for possible revision. The group initially debated the difference between the process to review all existing ELGs and select a subset of these for revision and the process of actually revising ELGs. Some stressed that the review process should be simple, and that it shouldn't include a full blown industry study. The group also discussed the need for valid, quality assured (QA'd) data upon which to base the selection process. Several databases were identified as possible sources.

By the end of the breakout session, the group had laid out a series of steps that could serve as an initial process for review and selection of ELGs for possible revision. The group intended these steps to serve as a screening mechanism to assist EPA in easily narrowing down the list of all existing ELGs to a manageable number upon which a more in-depth study could be performed. However, the group also raised several issues and questions about each step or information source that it would like EPA to keep in mind when developing their final review process.

Begin: Begin process of review by listing all existing ELGs and ranking them by date signed.

Step 1: Remove from the list all ELGs younger than 5 to 7 years.

It typically takes at least 5 to 7 years for most standards to get fully incorporated into existing industry permits. The group believed that revising an industry ELG prior to this time would not benefit from on-the-ground experience and improvements.

Issue: Group members also noted that the amortization period EPA used in developing the economic impact to industry must be considered. EPA generally assumes that industry will amortize improvements needed from guidelines over a 10 to 20 year period. Therefore, it may not be in EPA's best interest to include for review an industry that is still "paying off" improvements made to comply with the previous ELG, as there could be more difficulty in showing economic achievability.

Step 2: Rank the remaining ELGs by load reduction (based on DMR data). Remove from the list the top 50% of industries which have achieved the largest reduction in effluent pollutant discharges.

This step/criteria would provide an incentive for businesses to voluntarily and continually decrease their discharge of pollutants to water. It would reward those who have done so by removing them from the list for consideration of a revision of their ELG.

Issue: The group discussed how the load reduction would be measured/calculated at the facility level. Some members suggested normalizing the load by production, either with or without a production based cap. Some group members felt that multimedia considerations and possible shifts of pollutants from one medium to another should also be evaluated.

Issue: The group agreed that EPA will need to decide upon a baseline for measuring improvement that would be equitable across industry types. Some industries have implemented changes to reduce pollutant discharges more aggressively and/or over a longer period of time making additional reductions more costly and more difficult.

Issue: The group discussed how industry categories would be compared. Some members perceive that industries made up of a relatively small number of large facilities would be better able to make improvements than an industries populated by a large number of small facilities. Alternatively, some group members expressed concern that this step may favor keeping industries with large facilities on the list for consideration.

Issue: The group discussed how to measure load reduction for an entire industry category, and how to account for differences in facility performance (i.e., Within a single industry category, high performers and low performers are likely). One suggestion was to look at the average performance for the industry.

Issue: Consider what would be measured to determine the ranking. Some group members advocated load reduction and others advocated risk reduction as the appropriate measure. In addition, there was no consensus on what group members meant by load reduction (e.g., total pounds of a constituent, total toxic equivalent pounds, production normalized loads, etc.) and what constituents would be evaluated (e.g., the whole universe of chemicals?).

Step 3: Assess environmental impact for remaining 50% of industry categories. In this step, EPA would assess which industries have the largest negative environmental impact and focus on those ELGs for review and possible revision.

Substep A: Use a risk screening model (based on TRI data and possibly PCS data in the future) to determine which industries pose the greatest risk to public and ecological health.

Issue: Industry and others have issues with the information in TRI. One example of a TRI data issue is that pollutants that are not detected in the effluent must still be reported at half the detection level and

therefore may overstate pollutant discharges. Two others are that TRI does not cover all pollutants of interest to EPA, and also does not include all facilities covered by existing ELGs.

Substep B: Identify any constituents that are discharged by an industry, but are not currently regulated under the existing ELG. If more than 50% of the facilities in an industry are discharging this constituent, keep the industry on the list. Suggestions for how to identify these “new” constituents include a possible combination of the following steps:

- 1) sort TRI/PCS data by SIC code (as discussed in homework #8);
- 2) solicit information from permit writers on pollutants that are regulated locally;
- 3) solicit information from POTWs on pollutants that pass through the POTW without treatment and pollutants that interfere with the POTW’s treatment system performance;
- 4) solicit input from industry on new processes and/or chemicals;
- 5) solicit input annually from the public on new processes and/or chemicals of concern (there was a suggestion to create an interactive Internet-based database; and
- 6) review the existing ELGs to determine what pollutants are controlled through surrogate parameters, and drop them from consideration if they are “indirectly” regulated by the ELG.

Issue: Consider regional concerns when making determination. Some areas of the country may have special needs (e.g., water temperature and cold water fisheries in the Pacific Northwest). Therefore, the use of a threshold of 50% of facilities discharging the constituent may not be appropriate.

Issue: If the new constituent is very harmful, using a threshold of 50% of the facilities discharging the constituent may be too low.

Issue: Rather than seeking out information about pollutant discharges, which may be costly and time consuming, EPA could assume a posture whereby it did not change guidelines unless and until a problem was brought up to them. Some questioned how this satisfies the 304(m) requirements.

Issue: When using TRI data as the basis for pollutant discharges, EPA

would need to consider how to handle pollutants for multiple industries. TRI data is organized by SIC code, which does not always have a one-to-one relationship to an ELG industry category.

Possible Step: To prioritize the list of remaining ELGs, identify if the ELG revision would be “major” or “minor” (based on level of effort to revise ELG).

Step 4: If there is no available technology that would effectively control the constituents of concern for an industry category, remove the industry category from the list.

The group suggested that EPA should conduct a relatively brief screen of technology and not a lengthy, costly study. The rationale behind this step is to eliminate an ELG for revision if there have been no improvements in the technology basis or no improvements/changes/additional technologies which EPA should now consider. Methods by which this technology screen could be conducted include:

- 1) industry surveys;
- 2) a review of what technologies are being used to meet water quality based standards; and
- 3) a quick literature search.

Step 5: If an ELG revision is “obviously” not economically achievable for industry, remove the industry category from the list.

Again, the rationale here was to quickly remove those industries from the list for which a revised guideline would obviously not be economically achievable, (i.e., the idea was not to do a full blown economic achievability analysis). EPA could conduct this cost screen by reviewing EPA’s historical data of profitability within an industry.

Issue: One group member suggested that this determination should not be based on a small number of facilities because there is a large variation in economic feasibility and profitability within a given industry.

Set Aside Budget for Fixing Existing Effluent Guidelines

The group discussed the value of the EPA setting aside a small part of its annual budget for making “non-controversial” and common sense fixes to existing effluent guidelines. The group believed that, for a small amount of money, EPA could significantly decrease its burden, its co-regulators’ burden, and the regulated entities’ burden by making these small fixes.

IX. Report Out/Discussion from the New Guidelines Breakout Group

The group consisted of ten participants, seven of whom were EPA officials (not within EAD).

Their goal was to suggest and discuss processes EPA could use to identify and select “new”, unregulated industries for ELG development. By the end of the workshop, this “new” group had agreed on the basic outline of a process for addressing 304(m)(b): “identify categories of sources discharging toxic or non-conventional pollutants for which guidelines...have not previously been published”. They suggested that this process, slightly modified, also could be used to address the requirements of 304(m)(a): “establish a schedule for the annual review and revision of promulgated effluent guidelines...” The group noted that it was important that EPA make decisions about developing new guidelines and revising existing guidelines on the same basis. The main driver behind the process for developing new guidelines and revising existing guidelines is protection of human health and the environment. The steps are as follows:

Step 1: Identify categories of sources discharging pollutants that EPA should consider controlling

A. Develop a ranked list of industry sectors

The goal of this exercise would be to identify industry categories that may pose a risk of impairing multiple water bodies. EPA would derive a ranked list of industry sectors from existing databases using EPA/OPPT/EETD’s Risk Screening Environmental Indicators Model, which relies primarily upon TRI data, and produces a rank of risks to human health by industrial sector, including chemicals released, geographic locations and exposure pathways (see homework #9 for additional description of this model). This process would rank risks in industrial categories so that EPA could make an initial cut regarding which categories warrant further evaluation.

Issue: The TRI database does not include all “sources discharging toxic or non-conventional pollutants.” TRI does not include information about dischargers not required to report their toxic emissions. These dischargers include:

- POTWs;
- sources using TRI chemicals below the reporting threshold;
- sources not using TRI chemicals, such as food industry, agricultural; and
- non-point source discharges (e.g., construction sites, stormwater, agriculture).

TRI also lacks information on PBT (persistent, bioaccumulative, toxic) compounds that are discharged in very small quantities but may pose significant risks.

B. Assessment of Ambient Water Pollution and Identification of Pollution Source

EPA would also collect, tabulate, and review available data that assess ambient water pollution. EPA would need to identify:

- what streams are impaired;
- what pollutants are causing the impairment; and
- what sources are discharging these pollutants.

EPA could use the following databases:

- WATERS (303d);
- NWIS (National Water Information System, maintained by USGS);
- STORET (includes some volunteer stream monitoring data); and
- NAWQA (a USGS database).

The group knew that these databases would not be sufficient, by themselves, to identify the sources of the water body impairments. The members suggested that EPA also consult with state and Regional staff to learn what discharge sources were suspect. EPA would be able to narrow down the list of possible industrial categories, and then proceed to further explore those posing the most risk.

Issues: Participants asked if the Risk Screening Environmental Indicators Model took into account POTW treatment (i.e., whether the model provides a pollutant pass-through analysis for discharges to POTWs). Experts in the audience indicated that there is a pass-through analysis that applies to POTWs generally in the model. Participants suggested that this pass-through model should be consistent with other pretreatment pass-through models. Other questions about the model included whether it addressed metal speciation issues. Experts on the model indicated that there are no real data available in this area.

Participants asked if any of the databases included bioassessments. The group indicated that there are whole effluent toxicity (WET) databases at the state level. In addition, the agency is conducting a national fish survey, which will have national data in 3-4 years.

Other participants suggested that additional information about polluted water bodies will be available from the Office of Ground Water and Drinking Water's source water protection program, or state drinking water programs.

Step 2: Solicitation of best professional judgement from EPA regions, states, industry and the public (expert consultation).

In this step, EPA would solicit "best professional judgement" on the results of Step 1 (data screening). EPA would consult with experts to "ground truth" the results of the data screening conducted in Step 1. Experts would include: 1) EPA

regional pretreatment coordinators; 2) NPDES permit writers at the state and regional level; 3) Academics; 4) Federal water quality staff at EPA and USGS and other federal agencies; and 5) Environmental groups focused on water quality issues. Means of contact could include:

- A. Internet survey/chat list;
- B. Interactive web site;
- C. Workshop or meeting, including small meetings in the Regions;
- D. Telephone contact;
- E. Written request for input; and
- F. Federal Register Notice requesting comment/data.

EPA would rely upon early public outreach, data and information gathered from POTWs and regional pretreatment experts, and supplemental information from data screening to identify industrial categories posing a high risk of pollutant discharge. Potential sources of information in this step include EPA regions, states, POTWs, industry and trade associations, the general public, and environmental groups. Methods of gathering information would include workshops, surveys, volunteer data gathering efforts, and Internet based information solicitations. This step ensures public involvement and creates an opportunity to incorporate more information and data than the data screening alone. In addition, at this time, the agency could collect additional information on technologies that may be available to address some of the categories identified. This activity may require an Information Collection Request.

Step 3: Develop a preliminary list of categories of sources EPA should further investigate.

After consultation with the experts, EPA would develop a list of categories of sources discharging toxic or non-conventional pollutants for which guidelines have not previously been published. EPA would seek information for each source category about:

- A. human health risk;
- B. potential environmental impacts;
- C. number of facilities in the category;
- D. distributional impacts of the discharges (do the discharges disproportionately affect disadvantaged or vulnerable populations);
- E. technology available to control the discharge of the pollutant of concern; and
- F. relative cost of implementation of the control technology.

Issues: Participants noted that this approach would be extremely resource intensive and may involve an Information Collection Request.

Step 4: Determine whether a new effluent guideline is needed.

Based on the information collected, the agency would determine whether the categories already have effluent guidelines limitations, which would require new ones, or which issues could be addressed by other programs or other parts of the agency.

Step 5: Prioritize which guidelines will be developed.

For those that were determined to need new effluent guidelines, the group discussed criteria that could be used to prioritize which guidelines would be developed. The criteria the group identified included:

- human health (risk);
- number of facilities/environmental impact;
- distributional impacts;
- cost of implementation (small business issues, internal resources); and
- technology or pollution prevention options available.

Issues: The group wondered if environmental justice should be a factor for both new and existing guidelines or only new guidelines.

Advantages

- The process is publicly accessible because data is available to all.
- It incorporates public and stakeholder concerns.
- It will be systematic and comprehensive.
- It addresses the CWA's protection goals: human health and the environment.
- The scientific components are/would be peer reviewed.
- Once the system is in place, it's quick to follow and easy to replicate.

Disadvantages

- It could take a lot of time, particularly the first time. (Some of the "processes" in the screening tool are overly complicated. The screening protocol needs to be "quick and dirty.")
- It doesn't address the problem of "bad" or unreliable/invalid data (e.g., a particular concern of data in the TRI database).
- It would need to strive hard to avoid preconceptions on the data, that the data is complete and accurate enough to provide the answer.

Components of the Approach

- Includes public participation, through surveys or other methods, from the beginning; information outreach.
- Be a transparent process.
- Be practical to implement.
- Base on the greatest return on investment, in regard to risk to health and the environment.

- Must track progress.
- Must also apply to the revision of existing guidelines.
- Incorporate a balance of information sources.
- Must be a measurable/data rich approach.
- Must include state information, and so there needs to be improved information flow between EPA and states.
- Empower states to develop ELGs (state, regional, watershed, etc.).
- Differentiate between hard (experimental) data and other (anecdotal) information.
- Should convene experts to analyze data and information.
- Have an agreed upon metric.
- Consider the cost/benefit of a regulatory action.
- Have improved reliability of data, but that in the interim, the process would have to rely upon “best professional judgement”.
- Process should be dynamic (i.e., things change in 5-7 years).
- Have a methodology (process) for meshing and ranking information and data (i.e., a recipe for using specific data bases).
- Utilize stakeholder networks.

Topics for Consideration

During the breakout discussions, the group felt that there were several topics that they did not adequately cover. They include:

- Technology advancement. The questions that the group identified that would need to be addressed include: What is the point of regulating if there is no technical advancement? How do you get data on technology? The group recommending looking in more depth at the PBT program, which deals with similar issues.
- Are non-point sources within the scope of the statute and, if so, where would the data come from?
- What happens when there are discrepancies between what the data shows and the anecdotal data or between the data gathered from various databases?
- What do you do with diffuse pollutants, especially those where the contamination came from sources other than water discharges?

X. Diane Regas Comments and Question

Deputy Assistant Administrator for Water Diane Regas joined the workshop on the second day to thank participants for coming and asked participants, “What is the most important thing you heard or learned during this workshop?” A list of responses is found below.

- There needs to be more communication throughout this planning and development

process and it needs to be more meaningful.

- Use ELGs for certain non-point source problems that may be hard to handle in other ways.
- EPA should experiment with approaches to doing the 304(m) plan, especially the low cost suggestions.
- Establish a methodology that is replicable from year to year (predictable and defensible) .
- EPA should team with universities to pilot some of the studies and ideas developed at this workshop.
- EPA should be faithful to the statutory requirements. Keep this process simple. Make sure there is a need for a new or revised ELG and make sure EPA's response is appropriate.
- EPA should find ways to better enmesh the effluent guidelines program with the pretreatment program and be strategic in using ELGs in concert with water quality standards. (i.e., only establish pretreatment standards "if necessary")
- The EPA should fix old guidelines that could save money for regulators and the regulated.
- There is a huge need for defensible data of high quality. If the EPA does not have it, it should request it.
- Databases/models are needed to do the planning process. The databases used need to be updated and the models need to pull everything together. This output from databases and models should be balanced and validated through input from people on the front lines (i.e. field validate database responses).
- The EPA needs to devote planning and development resources in order to be successful.
- The plan should not be a static document, but evolve as needs and technology evolve.
- The EPA should remember that the customer is the permit writer.
- There is a continuous need for outreach to permit writers and industries.
- Outreach can bring some common sense to the process including reality and cross checking of assumptions and data and ensure that the EPA and its contractors do not operate in a vacuum.

- The EPA should market its assessment process to other parts of the EPA for their use.
- The EPA should focus on the mission of the effluent guidelines program and not try to be everything to everyone.
- The EPA should look to improve its development process for effluent guidelines.
- The simpler this process is the better.
- One process suggestion for the meeting was that if you ask people to do homework, you should focus more on that homework at the event.

XI. Public Comment Period

Kevin Bromberg from the Small Business Administration was the only public commenter. Bromberg has worked with the EPA in the development of regulations and with program offices to develop the TRI rules. Some lessons from his experience include:

- TRI is not a solution to all problems and neither are effluent guidelines;
- TRI can work with effluent guidelines. TRI is information and effluent guidelines is a program that needs information;
- Information is power and EPA databases do not speak to each other. Responsibility with database integration lies with the Office of Environmental Information and they will need resources to do this job;
- The effluent guidelines program is a mature program which has developed a sophisticated system for developing effluent guidelines, including a pounds equivalent weighting scheme which multiplies pounds with the toxic weight factor;
- The effluent guidelines program may have achieved its purpose and methodology for deciding when we do and do not need new and revised guidelines, the problem is getting the data into the system; and
- He explained that models are good tools for making decisions, but that they must be used carefully and gave an example where he believes EPA needs to check one of its models used for the proposed MP&M rulemaking. He cautioned that when using models, EPA needs to remember that: 1) they are best when tested by the outside world; 2) comment processes do work; 3) you do not need to reinvent the wheel; and 4) the effluent guidelines process has been tested legally.

XII. Closing and Next Steps

Sheila Frace thanked the participants for coming and for their valuable input. She explained that the workshop participants had given EPA a lot of helpful information to think about both in the discussion and the homework. She suggested that EPA will probably be calling some of the participants to delve more deeply into their homework assignments in order to include all the innovation and creativity there as it develops a final plan. This group can expect to get a summary from this meeting and then get copies of the Federal Register notice announcing the new plan.

**EPA Effluent Guidelines Planning Workshop, April 2nd and 3rd, 2001
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