M/DBP Stakeholder Meeting:
Information Collection Rule Data Analysis

EXECUTIVE SUMMARY

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November 20-21, 1997

In support of the Information Collection Rule (ICR) (61 FR 24354) EPA held a stakeholder meeting on November 20-21, 1997, in Washington DC, to present the Agency's draft ICR Data Analysis Plan. The purpose of the draft plan is to provide an outline of an approach for evaluating the ICR data in the context of the information needed for evaluating the potential impacts from the Stage 2 Disinfectants/ Disinfection Byproduct Rule (D/DBPR) and the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). The purpose of the stakeholder meeting was to present the Agency's draft plan and begin a collaborative process to develop a more detailed plan for ICR data analysis and data retrieval.

Background

The ICR was promulgated on May 14, 1996 and was intended to provide EPA with information on the occurrence in drinking water of disinfection by-products (DBPs) and pathogens as well as information on current treatment practices. The primary goal of the ICR is to fill data gaps identified during the regulatory negotiation process for the Stage 1 D/DBPR and Interim ESWTR. The ICR data will specifically support the development of the Stage 2 D/DBPR and the LT2ESWTR.

The ICR requires all systems serving at least 100,000 people and ground water systems serving at least 50,000 people to collect information on the occurrence of DBPs and microbial pathogens in drinking water and treatment information depending upon size and type of source water used. Additionally, depending upon water quality conditions, systems are required to conduct bench- and pilot-scale treatment studies to determine the effectiveness of granular activated carbon (GAC) and membranes for reducing DBP precursors (naturally occurring compounds that react with disinfectants to form DBPs).

Utilities began collecting ICR data in July 1997. The first six months of QA/QC'ed data will be available in December 1998. The full 18 months of QA/QC'ed data will be available in December 1999. The ICR treatment study data will likely be available August 1999. The final Stage 2 D/DBPR and the LT2ESWTR will be promulgated in May 2002.

Summary

EPA presented an overview of the data being collected under the ICR and its role in supporting regulatory development. EPA then presented an overview of the Draft ICR Data Analysis Approach. The suggested approach included an initial characterization of baseline conditions after the ICR is completed followed by predictions for occurrence and treatment changes following implementation of the Stage 1 D/DBPR and the IESWTR. This new baseline of information would eventually be used to evaluate different general regulatory structures for the Stage 2 D/DBPR and the LT2ESWTR as part of the next round of regulatory negotiations.

The meeting focused primarily on the characterization of baseline treatment and occurrence conditions. The approach taken was to divide the data into three categories: source water, treatment processes, and distributed water (which includes finished water). For each of these three categories for DBP data and for the first two categories for microbial data, major and detailed questions were identified which the ICR data will be useful in answering.

For DBPs, the source water questions pertain to the occurrence of DBP precursors and water quality parameters related to DBP formation. The major question for microbial source water characterization refers to the levels of pathogens in source water. The issue of using an adjustment factor for the microbial data was deferred to a latter time. Both the DBP and microbial analyses require a characterization of the treatment processes in place. The primary question identified for the distributed water pertains to the levels of DBP occurrence. A number of more detailed questions were presented by EPA and identified by stakeholders at the meeting.

In addition to the baseline characterization, EPA presented an number of predictive tools that could be used to forecast occurrence and treatment conditions resulting from the Stage 1 D/DBPR and the IESWTR. These tools were modeling and Delphi approaches, including case study approach, cumulative probability approach, and a Monte Carlo approach. It was recognized that development of a water treatment plant model similar to that used in the first regulatory negotiation would need to begin immediately in order for it to be of use in analyzing the ICR data when it becomes available. A number of other useful statistical data analysis techniques were identified by stakeholders including bootstrapping and jackknifing.

EPA also presented a plan for general public access to the ICR data over the internet. EPA proposed quarterly or monthly updates of data accompanied by purpose and limitation statements. Concerns were raised that ICR microbial data be made available to the health community immediately if microbes were found in the source water. Since a broader range of stakeholders was desired for this discussion, it was decided to hold another stakeholder meeting in the near future to address this issue.

Next Steps

One of the objectives of this stakeholders meeting was to identify next joint requirements planning (JRP) steps for ICR data retrieval and analysis. The group decided to create three technical work groups (TWGs): microbial, DBPs, and modeling, with a steering committee consisting of a subset of these TWGs. Each group will consist of interested stakeholders, EPA staff, and data analysts/ programmers. The steering committee will meet to discuss the TWG/JRP process on December 1 and 11. The first TWG/JRP meeting will be on December 17, 1997. At this meeting the TWGs will identify further questions for data analysis, articulate these needs to the data analysts, and identify overlapping requirements between the different TWGs. Over the next month the TWGs will send their draft questions out for comment to the stakeholders and will meet on January 29-30 to finalize the draft data analysis request. The TWGs will meet again on February 18 to prepare for the February 19 stakeholder meeting in which the information needs identified by the TWGs will be discussed. In March, a JAD will be held in which the TWGs will refine their requirements for design and communicate their needs to the programmers/ data analysts. In response, the programers will identify what can be done by when.