Final Report

of the

Small Business Advocacy Review Panel

on EPA's Planned Proposed Rule

for Cooling Water Intake Structures

at Section 316(b) Phase III Facilities

April 27, 2004

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1. INTRODUCTION

This report is presented by the Small Business Advocacy Review Panel (SBAR Panel or Panel) convened for the proposed rulemaking on requirements for cooling water intake structures at §316(b) Phase III facilities, currently being developed by the U.S. Environmental Protection Agency (EPA). Under section 609(b) of the Regulatory Flexibility Act (RFA) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), an agency is required to convene such a panel prior to publishing the initial regulatory flexibility analysis (IRFA). In addition to EPA's Small Business Advocacy Chairperson (Mr. Alexander Cristofaro), the Panel consisted of the Director of EPA's Engineering and Analysis Division within the Office of Water (Ms. Mary T. Smith), the Administrator of the Office of Information and Regulatory Affairs within the Office of Management and Budget (Dr. John D. Graham), and the Chief Counsel for Advocacy of the Small Business Administration (Mr. Thomas M. Sullivan).

This report includes the following:

C background information on the proposed rule being developed;

C information on the types of small entities that may be subject to the proposed rule;

C a summary of the Panel's outreach activities;

C the comments and recommendations of the small entity representatives (SERs); and

C panel findings and discussion.

Section 609(b) of the RFA directs the Panel to report on the comments of small entity representatives and make findings on issues related to identified elements of an IRFA under section 603 of the RFA. Those elements of an IRFA are:

- a description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply;
- projected reporting, record keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirements and the type of professional skills necessary for preparation of the report or record;
- an identification, to the extent practicable, of all other relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule;
- any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities; and,

- any impacts on small entities of the proposed rule or significant alternatives to the proposed rule.

Once completed, the Panel report is provided to the Administrator of EPA and is included in the rulemaking record. In light of the Panel report, and where appropriate, the agency is to make changes to the draft proposed rule, the IRFA for the proposed rule, or the decision on whether an IRFA is required.

It is important to note that the Panel's findings and discussion will be based on the information available at the time the final Panel report is drafted. EPA will continue to conduct analyses relevant to the proposed rule, and additional information may be developed or obtained during the remainder of the rule development process. The Panel makes its report at a preliminary stage of rule development and its report should be considered in that light. At the same time, the report provides the Panel and the Agency with an opportunity, at an early stage in the rule development process, to identify and explore potential ways of shaping the proposed rule to minimize the burden of the rule on small entities while achieving the rule's purposes.

Any options identified by the Panel for reducing the rule's regulatory impact on small entities may require further analysis and/or data collection to ensure that the options are practicable, enforceable, environmentally sound, and consistent with the Clean Water Act (CWA).[1]

[1] 33 U.S.C. 1251 *et seq.*

2. BACKGROUND AND REGULATORY HISTORY

EPA is developing regulations under section 316(b) of the Clean Water Act. Section 316(b) requires that the location, design, construction and capacity of cooling water intake structures reflect the best technology available (BTA) for minimizing adverse environmental impact. Nationwide, more than 1,500 facilities use large volumes of cooling water from lakes, rivers, estuaries or oceans to cool their plants, including steam electric power plants, pulp and paper makers, chemical manufacturers, petroleum refiners, and manufacturers of primary metals like iron and steel and aluminum.

Cooling water intake structures can cause adverse environmental impact by pulling large numbers of fish and shellfish or their eggs into a power plant's or factory's cooling system (entrainment). There, the organisms may be killed or injured by heat, physical stress, or by chemicals used to clean the cooling system. Larger organisms may be killed or injured when they are trapped (impinged) against screens at the front of an intake structure.

2.1 Regulatory History

The Federal Water Pollution Control Act, also known as the Clean Water Act (CWA),[2] seeks to "restore and maintain the chemical, physical, and biological integrity of the nation's waters."[3] The CWA establishes a comprehensive regulatory program, key elements of which are (1) a prohibition on the discharge of pollutants from point sources to waters of the United States, except as authorized by the statute; (2) authority for EPA or authorized States or Tribes to issue National Pollutant Discharge Elimination System (NPDES) permits that regulate the discharge of pollutants; and (3) requirements for limitations in NPDES permits based on effluent limitations guidelines and standards and water quality standards.

CWA section 316(b) addresses the adverse environmental impact caused by the intake of cooling water, not discharges into water. Despite this special focus, the requirements of section 316(b) are closely linked to several of the core elements of the NPDES permit program established under section 402 of the CWA to control discharges of pollutants into navigable waters. For example, section 316(b) applies to facilities that withdraw water from the waters of the United States for cooling through a cooling water intake structure and are point sources subject to an NPDES permit. Conditions for implementing section 316(b) are included in NPDES permits.

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[2] 33 U.S.C. 1251 *et seq.*

[3] 33 U.S.C. 1251(a).

In 1976, EPA published a final rule under section 316(b) that addressed cooling water intake structures.[4] The rule added a new § 401.14 to 40 CFR Chapter I that reiterated the requirements of CWA section 316(b). It also added a new part 402, which included three sections: (1) § 402.10 (Applicability), (2) § 402.11 (Specialized definitions), and (3) § 402.12 (Best technology available for cooling water intake structures).

In 1977, fifty-eight electric utility companies challenged those regulations, arguing that EPA had failed to comply with the requirements of the Administrative Procedures Act (APA) in promulgating the rule. Specifically, the utilities argued that EPA had neither published the Development Document in the Federal Register nor properly incorporated the document into the rule by reference. The United States Court of Appeals for the Fourth Circuit agreed, and without reaching the merits of the regulations themselves, remanded the rule.[5] EPA later withdrew part 402. [6] The regulation at 40 CFR 401.14, which reiterates the statutory requirement, remains in effect.

Since the Fourth Circuit remanded EPA's section 316(b) regulations in 1977, NPDES permit authorities have made decisions implementing section 316(b) on a case-by-case, site-specific basis. EPA published draft guidance addressing section 316(b) implementation in 1977.[7] This draft guidance describes the studies recommended for evaluating the impact of cooling water intake structures on the aquatic environment and recommends a basis for determining the best technology available for minimizing adverse environmental impact. The 1977 section 316(b) draft guidance states, "[T]he environmental-intake interactions in question are highly site-specific and the decision as to best technology available for intake design, location, construction, and capacity must be made on a case-by-case basis."[8]

In the absence of national regulations, the case-by-case, site-specific approach to implementing 316(b) has continued to the present. However, in the mid-1990's a coalition of individuals and environmental groups brought suit against EPA for failing to promulgate national regulations needed to implement section 316(b) requirements. In *Riverkeeper Inc., et al.* v. *Whitman,*[9] a consent decree was initially entered on October 10, 1995, which provided that

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[4] 41 *FR* 17387 (April 26, 1976), proposed at 38 *FR* 34410 (December 13, 1973).

[5] *Appalachian Power Co.* v. *Train*, 566 F.2d 451 (4th Cir. 1977).

[6] 44 *FR* 32956 (June 7, 1979).

[7] See *Draft Guidance for Evaluating the Adverse Impact of Cooling Water Intake Structures on the Aquatic Environment: Section 316(b) P.L. 92–500* (U.S. EPA, 1977).

[8] Section 316(b) Draft Guidance, U.S. EPA, 1977, p. 4.

[9] No. 93 Civ 0314 (AGS).

EPA propose regulations implementing section 316(b) by July 2, 1999, and take final action with respect to those regulations by August 13, 2001. Under subsequent orders and an amended consent decree, the rulemaking was divided into three phases and EPA is working under new deadlines, as described below:

C **Phase I** – Governing new facilities that employ a cooling water intake structure (Final Rule published on December 18, 2001 at 66 Fed. Reg. 65256; upheld in all but one respect in Riverkeeper, et al. v. U.S. EPA, No. 02-4005 (and consolidated cases) (2d Cir. Feb. 3, 2004));

C **Phase II** – Governing existing facilities that employ a cooling water intake structure and whose primary activity is to generate and transmit electric power (or to generate electric power for sale to another entity for transmission), if the facilities meet certain other criteria, including a design intake flow of at least 50 million gallons per day (Final Rule signed on February 16, 2004).

C **Phase III** (Under Development) – Governing cooling water intake structures used by, at a minimum, electric power producers not covered by the Phase II rule (i.e., those with design intake flows less than 50 million gallons per day) and facilities in four industrial sectors (pulp and paper, petroleum and coal products, chemical and allied products , and primary metals) (signature on proposed rule due November 1, 2004; final action by June 1, 2006).

This Panel Report will address only the 316(b) Phase III regulations.

2.2 Description of Rule and its Scope

The proposed Phase III rule could potentially apply to cooling water intake structures at:

- existing power plants with design intake flows of less than 50 million gallons per day (MGD);
- all other existing facilities; and
- new offshore facilities that are not covered by the Phase I rule, including new offshore and coastal oil and gas extraction facilities and new offshore liquified natural gas (LNG) regasification facilities

While the specific scope of the Phase III proposed rule has not been determined, it is expected that the basic criteria for determining applicability of the proposed rule will be similar to those of the Phase II regulation. As such, it is anticipated that the national requirements of a Phase III rule would apply to a facility that meets the following criteria:

- is a point source;

- uses a cooling water intake structure withdrawing water from a "water of the United States";
- uses at least 25 percent of its water intake solely for cooling purposes; and,
- has a design intake flow greater than a threshold amount, yet to be determined (intakes below the threshold would be subject to case-by-case determinations on the basis of best professional judgement).

2.3 Related Federal Rules

The Phase III rule is unlikely to duplicate, overlap or conflict with other federal rules. However, Phase III rulemaking is related to the Phase I and Phase II regulations, which together establish requirements for certain facilities subject to CWA § 316(b). The Phase I and Phase II regulations are described in more detail below.

The Phase I cooling water intake regulation establishes the best technology available (BTA), based on a two-compliance track approach, for minimizing adverse environmental impact associated with the use of cooling water intake structures. Based on facility size, Track I establishes national intake capacity and velocity requirements as well as location- and capacity-based requirements to reduce intake flow below certain proportions of certain water bodies (referred to as "proportional-flow requirements"). It also requires the permit applicant to select and implement design and construction technologies under certain conditions to minimize impingement mortality and entrainment. Track II allows permit applicants to conduct site-specific studies to demonstrate to the Director that alternatives to the Track I requirements will reduce impingement mortality and entrainment for all life stages of fish and shellfish to a level of reduction comparable to the level the facility would achieve at the cooling water intake structure if it met the Track I requirements. See 40 CFR Part 125, Subpart I.

The Phase II regulation applies to cooling water intake structures at existing facilities that generate and transmit electric power and that have a design intake flow of 50 MGD or greater and that meet other applicability criteria. Under this rule, EPA established performance standards for the reduction of impingement mortality and, when appropriate, entrainment. The performance standards consist of ranges of reductions in impingement mortality and/or entrainment (e.g., reduce impingement mortality by 80 to 95 percent and/or entrainment by 60 to 90 percent). These performance standards reflect the best technology available for minimizing adverse environmental impact. The type of performance standard applicable to a particular facility (i.e., reductions in impingement only or impingement and entrainment) is based on several factors, including the facility's location (i.e., source water body), rate of use (capacity utilization rate), and the proportion of the water body withdrawn.

The Phase II final rule provides five compliance alternatives, as follows:

(1) Under §125.94(a)(1)(i) and (ii), a Phase II existing facility may demonstrate that it has already reduced its flow commensurate with a closed-cycle recirculating system, or that it has already reduced its design intake velocity to 0.5 ft/s or less. If a facility can demonstrate to the Director that it has reduced, or will reduce, flow commensurate with a closed cycle recirculating system, the facility is deemed to have met the performance standards to reduce impingement mortality and entrainment (see §125.94 (a)(1)(i)). Those facilities would not be required to submit a Comprehensive Demonstration Study with their NPDES application. If the facility can demonstrate to the Director that is has reduced, or will reduce maximum through-screen design intake velocity to 0.5 ft/s or less, the facility is deemed to have met the performance standards to reduce impingement mortality only. Facilities that meet the velocity requirements would only need to submit application studies related to determining entrainment reduction, if subject to the performance standards for entrainment.

(2 and 3) Under § 125.94(a)(2) and (3), a Phase II existing facility may demonstrate to the Director either that its current cooling water intake structure configuration meets the applicable performance standards, or that it has selected design and construction technologies, operational measures, and/or restoration measures that, in combination with any existing design and construction technologies, operational measures, and/or restoration measures, meet the specified performance standards in § 125.94(b) and/or the requirements in § 125.94(c). Alternatives (2) and (3) would require a Comprehensive Demonstration Study whose detail and cost would vary depending on characteristics of the facility and water body.

(4) Under § 125.94(a)(4), a Phase II existing facility may demonstrate that it has installed and is properly operating and maintaining a rule-specified and approved design and construction technology in accordance with § 125.99(a) or (b). Submerged cylindrical wedgewire screen technology is a rule-specified design and construction technology that may be used in instances in which a facility's cooling water intake structure is located in a freshwater river or stream and meets other criteria specified at § 125.99(a). In addition, under this compliance alternative, a facility or other interested person may submit a request to the Director for approval of a different technology. If the Director approves the technology, it may be used by all facilities with similar site conditions under his or her jurisdiction if allowed under the State's administrative procedures. Facilities that install the technology specified and approved under the rule or a different technology approved by the Director in accordance with this compliance option would be subject to permitting and monitoring requirements substantially less burdensome than a Comprehensive Demonstration Study.

(5) Under § 125.94(a)(5) (i) or (ii), if the Director determines that a facility's costs of compliance would be significantly greater than the costs considered by the Administrator for a like facility to meet the applicable performance standards, or that the costs of compliance would be significantly greater than the benefits of meeting the applicable performance standards at the facility, the Director must make a site-specific determination of best technology available for minimizing adverse environmental impact. Under this alternative, a facility would either compare its projected costs of compliance using a particular technology or technologies to the costs the

Agency considered for a like facility in establishing the applicable performance standards, or compare its projected costs of compliance with the projected benefits at its site of meeting the applicable performance standards. If in either case costs of compliance are significantly greater than the projected costs or projected benefits, the technology selected by the Director must achieve an efficacy level that, in the judgement of the Director, comes as close as practicable to the applicable performance standards without resulting in compliance costs that are significantly greater than such projected costs or benefits. Alternative (5) would require a Comprehensive Demonstration Study whose detail and cost would vary depending on characteristics of the facility and water body.

3. OVERVIEW OF PROPOSAL UNDER CONSIDERATION

3.1 Potential Requirements Under the Proposed Phase III Rule

EPA is in the early stages of data analysis, option formulation and assessment for the Phase III regulation. Therefore, the options described here must be viewed as preliminary, subject to potential change pending the outcome of relevant analyses.

Nevertheless, given that the environmental concerns and the technologies available to mitigate these concerns are similar to those considered under the Phase II rule, the Phase III rule appears likely to be conditioned upon factors such as design intake flow (DIF), percent of design intake flow used for cooling, capacity utilization rate (for power producers), cooling water intake structure location, and economic impact. As discussed below, EPA anticipates adjusting the applicability of requirements like those proposed in Phase II to Phase III facilities based on various threshold criteria appropriate for Phase III facilities.

The Phase III rule may include performance requirements for some or all in-scope facilities similar to those adopted under Phases I and II. These may include requirements for facilities to either: 1) reduce design intake flow to a level commensurate with a closed-cycle, recirculating system, or 2) to reduce impingement rates and/or entrainment rates to specified levels relative to a baseline.[10] Requirements to reduce impingement and/or entrainment might vary based on location (i.e., water body type), the relative proportion of water withdrawn by a specific facility, and utilization rate (power producers only).

As an example of the specific impingement and/or entrainment performance requirements under consideration, the Phase II regulation specifies:

[10] In the final Phase II rule, the calculation baseline is assumed to be a shoreline intake with once-through cooling system, with no impingement or entrainment reduction controls.

- Impingement Performance Standard: all facilities must reduce impingement mortality by 80 to 95% from a calculation baseline for fish and shellfish;
- Entrainment Performance Standard: reduce entrainment of all life stages of fish and shellfish by 60 to 90% from the calculation baseline, if the facility has a capacity utilization rate of 15% or greater and either (i) the facility uses cooling water withdrawn from a tidal river, estuary, ocean, or Great Lake, or (ii) the facility uses cooling water withdrawn from a stream or river and the facility's design intake flow exceeds 5% of the mean annual flow of the stream or river.

Alternative performance standards may also be considered, as well as regulatory options based on design standards or some other approach. As EPA moves forward with development of the Phase III regulation, additional scooping, economic impact, and environmental impact analyses will be conducted, and the Agency will fully consider such information in its decision making.

3.2 Options Likely to be Proposed

As discussed above, EPA is considering performance requirements that are consistent with the performance requirements in the Phase II rule. EPA is also considering compliance alternatives similar to those of the Phase II Final Rule.

EPA is considering developing regulatory options based on criteria or thresholds that would be used to determine which Phase III facilities are subject to which specific performance requirements. As a result, EPA anticipates that some Phase III facilities could be subject to cooling water intake permit conditions based on best professional judgement (BPJ), some could be subject to national requirements for impingement controls only, and some could be subject to national requirements for entrainment controls as well. In general, consistent with the Phase I and Phase II rules, the more sensitive or biologically productive the water body, or the greater the potential for the facility to cause or contribute to an adverse impact, the more stringent the requirements that might be proposed as reflecting the best technology available for minimizing adverse environmental impact.

EPA may consider other criteria, including, but not limited to, percent of design intake flow used for cooling, proportion of source water body withdrawn, utilization rate, and cooling water intake location, to establish its regulatory options for Phase III. Moreover, EPA may combine these criteria to ensure Phase III requirements provide for the use of best technology available to minimize adverse environmental impacts. For example, the Agency may combine intake flow with location to adequately address the potential impacts from Phase III facilities. Ultimately, EPA will select among the options based on its analyses of environmental impacts, costs and economic impacts, and small entity impacts associated with each distinct regulatory option.

4. APPLICABLE SMALL ENTITY DEFINITIONS

Tables 4-1 and 4-2 show the SBA small entity definitions for each of the 4-digit SIC codes represented among the parent entities of the in-scope facilities surveyed by EPA to date.

Table 4-1. Small entity definitions for parent entities of Phase III manufacturer facilities surveyed and found in-scope.

SIC Code	SIC Code Description	Sector	SBA Small Entity Size Standard	
0133	Sugarcane and Sugar Beets	Other	500,000	Revenue
1011	Iron Ores	Other	500	Employees
1311	Crude Petroleum and Natural Gas	Oil and Gas	500	Employees
1381	Drilling Oil and Gas Wells	Oil and Gas	500	Employees
2046	Wet Corn Milling	Other	750	Employees
2062	Cane Sugar Refining	Other	750	Employees
2063	Beet Sugar	Other	750	Employees
2092	Prepared Fresh or Frozen Fish and Seafoods	Seafood Processing	500	Employees
2211	Broadwoven Fabric Mills, Cotton	Other	1,000	Employees
2421	Sawmills and Planing Mills, General	Other	500	Employees
2611	Pulp Mills	Paper	750	Employees
2621	Paper Mills	Paper	750	Employees
2631	Paperboard Mills	Paper	750	Employees
2676	Sanitary Paper Products	Paper	500	Employees
2679	Converted Paper and Paperboard Products, NEC	Paper	500	Employees
2812	Alkalies and Chlorine	Chemicals	1,000	Employees
2813	Industrial Gases	Chemicals	1,000	Employees
2816	Inorganic Pigments	Chemicals	1,000	Employees
2819	Industrial Inorganic Chemicals, NEC	Chemicals	1,000	Employees
2821	Plastics Material and Synthetic Resins, and Nonvulcanizable Elastomers	Chemicals	750	Employees
2824	Manmade Organic Fibers, Except Cellulosic	Chemicals	1,000	Employees
2833	Medicinal Chemicals and Botanical Products	Chemicals	750	Employees
2834	Pharmaceutical Preparations	Chemicals	750	Employees
2869	Industrial Organic Chemicals, NEC	Chemicals	1,000	Employees
2873	Nitrogenous Fertilizers	Chemicals	1,000	Employees
2899	Chemicals and Chemical Preparations, NEC	Chemicals	500	Employees
2911	Petroleum Refining	Petroleum	1,500	Employees
3312	Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills	Steel	1,000	Employees
3313	Electrometallurgical Products, Except Steel	Steel	750	Employees
3315	Steel Wiredrawing and Steel Nails and Spikes	Steel	1,000	Employees
3316	Cold-Rolled Steel Sheet, Strip, and Bars	Steel	1,000	Employees
3317	Steel Pipe and Tubes	Steel	1,000	Employees
3334	Primary Production of Aluminum	Aluminum	1,000	Employees
3353	Aluminum Sheet, Plate, and Foil	Aluminum	750	Employees
3421	Cutlery	Other	500	Employees
3861	Photographic Equipment and Supplies	Other	500	Employees

Table 4-2. Small entity definitions for parent entities of Phase III electric generator facilities surveyed and found in-scope.

SIC Code	SIC Code Description	SBA Small Entity Size Standard	
1311	Crude Petroleum and Natural Gas.	500	Employees
1542	General Contractors – Nonresidential Buildings, Other than Industrial Buildings and Warehouses	27,500,000	Revenue
2621	Paper Mills	750	Employees
4911	Electric Services	4,000,000	MWh
4924	Natural Gas Distribution	500	Employees
4925	Mixed, Manufactured, or Liquefied Petroleum Gas Production and/or Distribution	5,000,000	Revenue
4931	Electric and Other Services Combined	5,000,000	Revenue
4932	Gas and Other Services Combined	5,000,000	Revenue
4953	Refuse Systems	10,000,000	Revenue
6211	Security Brokers, Dealers and Flotation Companies	5,000,000	Revenue
9111	Executive Offices	50,000	Population

5. SMALL ENTITIES THAT MAY BE SUBJECT TO THE PROPOSED REGULATION

For purposes of the Phase III rulemaking, EPA is considering all facilities to which section 316(b) applies and that are not regulated under Phases I or II. As discussed above, Phase I applies to all new, land-based facilities, and Phase II applies to existing utility and nonutility electric power producers that have design intake flows of at least 50 MGD and meet other applicability criteria. Thus, a Phase III regulation could apply to a wide range of existing facilities such as new coastal and offshore oil and gas extraction facilities and new offshore LNG terminals. (For purposes of this report, facilities that are potentially subject to a Phase III rule are identified as "Phase III facilities")

EPA anticipates that a majority of Phase III facilities will fall into the following major categories of economic activity: electricity producers with design intake flows less than 50 MGD; industrial chemicals; pulp & paper; primary metals (iron and steel, aluminum); and petroleum refining.

EPA conducted a questionnaire survey of these major industrial sectors. Using standard methods of survey estimation, EPA is able to estimate the national population of facilities in these industrial sectors that may potentially be affected by a phase III rule, and the number of these which are owned by small entities (Table 5-1).

EPA has not yet completed analysis of survey data for the new offshore facilities that could potentially be subject to the Phase III rule, and therefore cannot at present estimate the number of such facilities owned by small entities. However, based on experience with effluent guidelines for the Oil & Gas Extraction category and other recent research, EPA currently believes that a great majority of the owner-entities in this category are large businesses. Conversely, research and preliminary survey analysis suggest that the majority of potentially in-scope seafood processing vessels may be owned by small entities that are geographically concentrated in Alaska and Washington. However, a substantial number of the largest vessels are owned by three large businesses.

Table 5-1. Estimated Number of Phase III Facilities Owned by Small and Large Firms (as defined by the Small Business Administration), and estimated design intake flow

		Total Design Flow (MGD)	Small Firm	Large Firm
Industry Group	**Design Flow Range**			
Electric Generators (n = 121)	2 - 10 MGD	192	7	33
	10 - 20 MGD	449		27
	20 - 50 MGD	1,807	10	44
	50 - 250 MGD	N/A	N/A	N/A
	> 250 MGD	N/A	N/A	N/A
Electric Generators	All Design Flows	**2,448**	**17**	**104**
Manufacturers (n = 630)	2 - 10 MGD	892	24	133
	10 - 20 MGD	1,380	21	69
	20 - 50 MGD	6,513	21	183
	50 - 250 MGD	12,967	12	131
	> 250 MGD	23,116		36
Manufacturers	All Design Flows	**44,868**	**78**	**552**
Chemicals	All Design Flows	11,608	13	170
Metals	All Design Flows	9,301	16	82
Pulp and Paper	All Design Flows	14,891	38	214
Petroleum Refining	All Design Flows	3,135	2	34
Other *	All Design Flows	5,934	9	52
All Industries (n=751)	All Design Flows	**47,316**	**95**	**656**

* This is not an estimate of affected facilities in other industries, it merely represents surveyed facilities that were thought to be in one of the four industries selected for survey, but which identified their primary business as other than one of the four industries surveyed.

6. SUMMARY OF SMALL ENTITY OUTREACH

6.1 Pre-Panel Outreach

EPA conducted numerous outreach activities during the development of the original industry survey (1998-1999). Although this outreach was conducted primarily to obtain feedback on the survey and questionnaires in connection with an information collection request, it also made widely known the Agency's plans to develop regulations implementing section 316(b) and it resulted in numerous communications with potentially affected firms and industry associations.

During this time, EPA conducted outreach with a variety of industrial groups, including American Iron and Steel Institute, American Petroleum Institute, American Chemistry Council (formerly the Chemical Manufacturers Association), Edison Electric Institute, and Electric Power Research Institute (EPRI), and environmental groups including: Hudson Riverkeepers, New York/New Jersey Baykeeper, Widener University School of Law (Delaware Baykeepers), and US Fish and Wildlife Service.

Further outreach was conducted in 2003, in connection with the information collection request for the 2003 survey of oil & gas extraction facilities and seafood processing vessels. In conjunction with this ICR effort, EPA has coordinated extensively with the International Association of Drilling Contractors and the National Food Processors Association among others (Table 6-1).

Table 6-1. Industry Organization Representatives Consulted Regarding the 2003 Survey

Organization	Point of Contact	Contact Info.
Pacific Coast Federation of Fishermen's Associations and Institute for Fisheries Resources	Dr.Zeke Grader	fish4ifr@aol.com
Pacific Coast Federation of Fishermen's Associations	Glen H. Spain	(541) 689-2000
National Food Processors Association	Rick Jarman	rjarmin@nfpa-food.org
National Fisheries Institute	Bob Colette	703-524-8880 x232
American Fishermen's Research Foundation and Western Fishboat Owners Association	Wayne Heikkila	(707) 443-1098
At-Sea Processors Association (APA)	Trevor McCabe	(907) 276-8252
International Association of Drilling Contractors	Alan Spackman	(281) 578-7171
Western State Petroleum Association (WSPA)	Suzanne R. Noble	805-966-7113
Mineral Management Service	Dr. Kay Marano Briggs	703-787-1646
Offshore Operators' Committee	Kent Satterlee III	504-728-4143

As part of the outreach efforts, the Agency developed a web site to provide access to the latest status and information on the section 316(b) rulemaking, which may be viewed at http://www.epa.gov/ost/316b.

The outreach activities described above did not specifically target small entities, but the associations involved have many small entities as members. EPA began outreach targeted at small entities in August 2002, held a first outreach meeting for small entities on October 1, 2002, and held a second (pre-panel) outreach meeting on January 22, 2004.

In August and September 2002, EPA identified 25 small entities among the respondents to the 2000 survey of electric generators and manufacturers, and attempted to contact all of them. EPA also tried to contact another 21 firms that might be small entities but whose status required research and inquiry, leading to identification of two more small entities. Upon direct inquiry and review, some firms thought to be small entities were found to be large entities and some facilities would not be subject to a Phase III rule, leaving 21 small entities. These small entities were sent brief descriptions of the Phase III rulemaking, the small business advocacy review process, and the roles and responsibilities of SERs (Appendix A). Those expressing interest in either the outreach meeting or the rulemaking were sent the background document identified in Appendix A, describing the Phase III rulemaking.

A summary of the outreach meeting held October 1, 2002 appears in Appendix B and comments received after that meeting appear in Appendix C. Following this meeting, the deadline for signature of the Phase III Notice of Proposed Rulemaking was extended and EPA decided to delay the Phase III panel process in order to focus resources on completing Phase II rulemaking. Preparation for the Phase III Panel was resumed about a year later.

EPA also contacted industry associations with a request that they identify potential small entity representatives. These included the American Public Power Association, National Rural Electric Cooperative Association, American Municipal Power - Ohio, Minnesota Municipal Utilities Association, Electric Power Supply Association, American Chemistry Council, Synthetic Organic Chemical Manufacturers Association, National Petrochemical and Refiners Association, American Petroleum Institute, American Forest & Paper Association, American Iron & Steel Institute, International Association of Drilling Contractors, Offshore Operators Committee, At-Sea Processors Association, and the National Food Processors Association.

EPA held a pre-panel outreach meeting for potential SERs on January 22, 2004, and provided the materials listed in Appendix A. These included a revised background document, examples of regulatory costs under a hypothetical set of regulatory requirements, and an analysis of costs and benefits developed by the Small Business Administration. A summary of that meeting appears in Appendix B and comments resulting from the meeting appear in Appendix C.

6.2 Panel Outreach

The Panel was convened on February 27, 2004. The Panel held an outreach meeting and telephone conference for SERs on March 16, 2004. Materials were provided to SERs in advance of the meeting (Appendix A). Appendix B lists the people attending and provides notes on the verbal comments of Panel members and SERS attending the meeting.

7. LIST OF SMALL ENTITY REPRESENTATIVES (SERs)

Industry	Business or Municipality	Representative
Electric Generators		
Municipal	City of Dover (Dover Light & Power) 116 East Third St. Dover, OH 44622	David G. Borland (Superintendent) 330-343-3442 dborland@doverohio.com
Municipal	Richmond Power and Light P. O. Box 908 Richmond, IN 47375	Bob Crye (Superintendent) 765-973-7215 bobc@RP-L.com
Municipal	Henderson Municipal Power & Light 419 N. Water St. Henderson, KY 42419	Wayne Thompson 270-826-2726 WThompson@hmpl.net
Municipal	Village Of Winnetka 510 Green Bay Road Winnetka, IL 60093	Jeffrey M. Pietka 847-716-3601 jpietka@winnetka.org
Municipal	Crawfordsville Electric Light & Power Co PO Box 428 Crawfordsville, IN 47933-0428	Steve Gillan (Environment, Safety and Training Coordinator) 765-362-1900 steveg@celp.com
Municipal	Iola Electric Department 1220 West 54 Hwy. Iola, KS 66749	Steven D. Robb 620-365-4950 powerplt@iolaks.com

(continued on next page)

Industry	Business or Municipality	Representative
Manufacturers		
Chemicals and Allied Products	NYCOA 333 Sundial Avenue Manchester, NH 03103-7230 http://www.nycoa.net/	John Pollono 603-627-5150 ext 18 JPollono@nycoa.net
Paper and Allied Products	Oconto Falls Tissue, Inc. 2079-A Lawrence Drive De Pere, WI 54115	Jim Kellam 920-983-8379 JimK@GBonline.com
Steel	North American Stainless - Ghent 6870 Highway 42 East Ghent, KY 41045	Steve Shaver 502-347-6000 SShaver@northamericanstainless.com
Steel	Bayou Steel Corporation P.O. Box 5000 La Place, LA 70069-5000	Wendy Stehling 985-652-0322 WendyS@bayousteel.com
Paper and Allied Products	Mohawk Paper Mills, Inc. PO Box 497 Cohoes, NY 12047	George Milner 518-233-6205 MilnerG@mohawkpaper.com
Petroleum and Coal Products	Countrymark Cooperative, Inc. 225 S East St Indianapolis, IN	Donald Horning 812-838-8133 Horning@countrymark.com
Paper and Allied Products	Port Townsend Paper Corp. PO Box 3170 Port Townsend, WA 98368	Eveleen Muehlethaler 360-379-2112 EveleenM@ptpc.com

Associations Supporting Small Entities (these are not SERs)		
Description	**Organization or Association**	**Contact Person**
"APPA is the service organization for the nation's more than 2,000 local publicly owned electric utilities." APPA represents a number of publicly owned electric utilities that may be subject to a Phase III rule.	American Public Power Association 2301 M Street, NW Washington, DC 20037	Teresa Pugh 202-467-2943 tpugh@appanet.org
"The National Petrochemical and Refiners Association (NPRA) represents almost 500 companies, including virtually all U.S. refiners and petrochemical manufacturers."	National Petrochemical & Refiners Association (NPRA) 1899 L Street, N.W., Suite 1000 Washington, D.C. 20036-3896	Tom Wigglesworth 202-457-0480 tom_wigglesworth@npradc.org
"The American Forest & Paper Association (AF&PA) is the national trade association of the forest, pulp, paper, paperboard and wood products industry."	American Forest and Paper Association 1111 19th St NW Washington DC 20036	Meg McCarthy 202-463-2700 meg_mccarthy@afandpa.org Jerry Schwartz jerry_schwartz@AFandPA.org

8. SUMMARY OF COMMENTS FROM SMALL ENTITY REPRESENTATIVES

List of Written Comments from Small Entity Representatives			
Name	Organization	Date Received	Pages
Small Entity Comments Received after Panel Outreach Meeting of March 16, 2004			
David G. Borland (Superintendent)	Dover Municipal Light Plant 303 East Broadway Dover, OH 44622	April 13, 2004	5
Donald M. Horning (Regulatory Compliance Manager)	Countrymark Cooperative, Inc. 1200 Refinery Road Mt. Vernon, IN 47620	March 31, 2004	3
Eveleen Muehlethaler (Vice President)	Port Townsend Paper Corporation 100 Paper Mill Hill Road Port Townsend, WA 98368	March 30, 2004	3
Wendy Stehling	Bayou Steel Corporation La Place, LA 70069	March 30, 2004	2
John Pollono	NYCOA 333 Sundial Avenue Manchester, NH 03103-7230	March 30, 2004	1
Small Entity Comments Received after Pre-Panel Outreach Meeting of January 22, 2004			
David G. Borland (Superintendent)	Dover Municipal Light Plant 303 East Broadway Dover, OH 44622	February 6, 2004	5
Bob Crye (Superintendent)	Richmond Power & Light 2000 U.S. 27 South Richmond, Indiana 47374	February 5, 2004	2
Donald M. Horning (Regulatory Compliance Manager)	Countrymark Cooperative, Inc. 1200 Refinery Road Mt. Vernon, IN 47620	February 6, 2004	2
Eveleen Muehlethaler (Vice President)	Port Townsend Paper Corporation 100 Paper Mill Hill Road Port Townsend, WA 98368	February 6, 2004	3
Small Entity Comments Received after Pre-Panel Outreach Meeting of October 1, 2002			
Steven D. Robb	Iola Electric Department 1220 West 54 Hwy. Iola, KS 66749	October 23, 2002	1

This summary encompasses comments from both pre-panel outreach and the Panel outreach. Some small entity representatives (SERs), in their comments provided after the Panel outreach meeting, assumed that their pre-panel comments would be taken into account by the Panel. Panel representatives were present and introduced to SERs at the January 22 pre-panel outreach meeting and SERs were assured at that meeting that their comments would be considered. Dover Light and Power submitted its comments on April 13th as "additional comments" to those "previously submitted." Port Townsend Paper, in its March 30th comment, stated that "The opinions expressed in our previous comments [of February 6th] still apply, but Port Townsend paper would like to emphasize some of the points we made in the past, and to highlight some concerns that have recently been brought to our attention." This summary is focused on comments submitted after the Panel outreach meeting, but the complete text of all small entity comments was reviewed and is included in the Appendix.

8.1 Number and Types of Entities Affected

Comments from Dover Light & Power (Dover, Ohio) point to considering the impacts on local economies of regulating small municipal power plants. Dover Light & Power contributes substantially to the local and regional economy and noted that more than 90% of public power systems serve communities of less than 50,000 population and more than 95% have fewer than 20 employees. Dover Light and Power submitted, as a comment, material provided to Dover by its industry trade association, the American Public Power Association (APPA). APPA estimates that approximately 50 member utilities may be subject to a Phase III rule and that about 90% of these may be small entities.

8.2 Potential Reporting, Record Keeping, and Compliance Requirements

SERs agreed generally that costs of the sort projected by EPA could impose a significant financial burden on small businesses, and could impose especially large burdens in certain industries. In particular, Port Townsend Paper and Bayou Steel noted that, in their respective industries, the economic and financial climate has been especially severe over the past 3-5 years.

SERs commented on the level of projected costs of conducting demonstration studies and verification monitoring, and their need to hire consultants in order to satisfy such reporting requirements. They encouraged EPA to find ways to reduce the cost of studies, monitoring, reporting and record-keeping, such as using an intake flow capacity threshold for applicability, identifying conditions under which installation & proper operation of an approved technology could satisfy rule requirements without demonstration studies and verification monitoring, and/or identifying conditions under which technology-based standards could be applied rather than performance standards for I&E reduction.

SER comments on compliance costs were generally coupled with suggestions that EPA should consider thresholds for applicability (see below) that would exempt many low-flow

facilities from Phase III requirements, and suggestions that EPA consider designating approved technologies without further requirements for demonstration studies and verification monitoring.

SERs specifically mentioned reporting and record-keeping costs associated with permit application, environmental studies, verification monitoring, and reporting requirements, and noted that these costs (if they remained comparable to costs reported in the outreach materials, which illustrated the application of Phase II requirements to Phase III facilities) can equal or exceed technology costs.

Dover Light and Power and Richmond Power and Light, both municipal power plants, noted that compliance costs estimated by EPA for a facility with a small design capacity are significant for small communities and utilities. Dover Light & Power commented that the cost estimated by EPA would have a substantial economic impact on a small system with a very limited customer base, and that EPA's projected costs for verification monitoring (based on the Phase II rule) would be inordinately burdensome for small municipal utilities.

Port Townsend Paper commented that costs as estimated by EPA would impose a substantial financial burden on small businesses such as Port Townsend Paper, which faces significant economic challenges because of the recent US economic slump, shifting markets, and a weak global economy. Despite a recent upturn in global and domestic markets, Port Townsend has yet to see significant improvement in their line of business. They noted that estimated permitting, monitoring and reporting costs for a facility such as theirs were considerably greater than the capital costs and operating costs of the technologies used to minimize environmental impact.

Dover Light & Power commented that EPA may not have fully considered costs for installing new equipment and its operation and maintenance and the higher level of staffing needed (with associated wages & benefits). In its comment, Dover submitted information from the American Public Power Association which expands on Dover's concerns. APPA believes it likely that downtime for retrofitting may last 1-3 months and that this may have a disproportionate impact on smaller utilities that have only one generation source and one intake. The utility would have to purchase power, resulting in an increased cost and potentially a rate increase to consumers.

In a comment submitted by Dover Light and Power, the APPA states that many types of I&E controls may not be realistic at older facilities because of limited space for new construction. APPA stated that it is aware of State decisions against installing control equipment because of the very limited land available to the utility.

Several SERs expressed a concern about leaves and other debris obstructing intake screens. This is now a seasonal problem that is manageable at their facilities, but it does require staff time. Retrofitting these intakes to decrease the through-screen velocity or to install fine-mesh screens at the shoreline could increase the time and effort needed to clear debris. This

consideration might limit the range of technologies that are economically feasible for facilities with a small staff and budget.

8.3 Related Federal Rules

In comments provided after a pre-panel outreach meeting on January 22, 2004, Richmond Power & Light remarked that reliability (of electric power) could be affected. This comment presumably refers to reliability at a local level. SERs have not identified any adverse impacts upon energy prices or supply at a national level.

8.4 Regulatory Flexibility Alternatives

SERs generally favor balancing considerations of cost and benefit when evaluating regulatory alternatives, and see the need for national regulation only for situations or conditions in which harm is likely or can be demonstrated.

Delayed Implementation; Flexibility in Timing of Implementation

Some SERs suggested that it is desirable to allow for delayed implementation by small entities when this would avoid an undue financial impact. Comments from Dover Light and Power (see above) suggest that EPA may have underestimated the downtime required for retrofitting at small power plants.

Thresholds for Applicability

SERs commented generally in favor of an intake flow threshold for applicability of national requirements. Below such a threshold, Phase III facilities would be excluded from national requirements and instead would be subject to case-by-case determinations by permitting authorities using best professional judgement as to the best technology available. These particular small entities have plants with small-capacity intakes (between 1 and 20 MGD) and generally recommended thresholds above the design intake flow of their plants. These SER comments appeal to the relatively small quantity of water used nationwide below various capacity thresholds, the comparatively high cost per gallon of water of controlling I&E at small-capacity intakes, and either the absence of evidence for adverse impacts or the small numbers of fish impinged at small-capacity intakes.

SER comments suggested various capacity thresholds, from 20 MGD to 50 MGD, with the possible exception of special situations where adverse impact can reasonably be expected (e.g., when a large fraction of the source water is withdrawn). SERs reported that, to their knowledge, no adverse impacts have been demonstrated for the small-capacity intakes that they are familiar with.

Approved Technologies

Commentors suggested that EPA designate a number of alternative approved technologies. Proper installation and operation of these technologies would then either constitute compliance, or use of an approved technology would greatly reduce the requirements for information collection and reporting that were adopted for the Phase II rule. Countrymark Cooperative Petroleum Refinery suggested that EPA identify intake structures with designs less likely to contribute to I&E, and that such designs should not have additional or new requirements. Several SERs commented on the need for designs that minimize accumulation of debris, that are easy to clean, and that require less frequent maintenance.

For those facilities that would be within scope of a Phase III rule, Port Townsend Paper recommended providing a suite of technologies (approved technologies) designated as BTA for satisfying the performance standards. Facilities installing an approved technology would be considered in compliance and would not be subject to extensive and burdensome application, monitoring and reporting requirements. Port Townsend Paper included a Phase II alternative, maximum through-screen velocity of 0.5 ft/sec, as one of their recommended alternatives. This SER commented "Facilities should be able to choose how to meet the requirements of the rule in the manner that best suits their individual circumstances."

Subcategorization

One SER recommended identifying industrial subcategories that could be adversely impacted and reducing economic burden for these subcategories.

Design Capacity versus Actual Water Use

SERs questioned the merits of using design capacity, rather than actual water use, in applicability thresholds, and also noted some complexities of determining design capacity that EPA should consider (e.g., multiple pumps that cannot all be operated simultaneously because other factors limit the intake's capacity).

Port Townsend Paper suggested that actual water withdrawal rather than design capacity is a more appropriate basis for an applicability threshold. Many facilities may have lower intake and discharge flows as a permit condition or because they do not or cannot use the entire design capacity. An applicability threshold based on design capacity rather than actual water use may penalize facilities for conserving water. Bayou Steel also recommended that thresholds for applicability of requirements should be based upon actual average water intake rather than design capacity.

Dover Light & Power noted that their intake structure is designed for 12,000 GPM, while the capacity of all three pumps (6,000 GPM per pump) is 18,000 gPM, and only two pumps are used at any given time.

Environmental Benefits vs. Costs; Need for New Requirements

SERs generally favored balancing considerations of cost and benefit when evaluating regulatory alternatives. SERs see the need for national regulation only for situations or conditions in which environmental harm is likely or can be demonstrated, and do not believe that new regulations are needed for small-capacity intakes unless there is a compelling reason. There may be certain intake designs or locations that could be prohibited or encouraged.

Dover Light & Power commented that EPA's projected costs would be inordinately burdensome for small municipal utilities and that, for small intakes, these expenses cannot be justified by potential benefits to the environment. They observed that the value of fish saved would be much less than expenses incurred [citing a report provided by the Small Business Administration] for intakes with less than 20 MGD design capacity. Dover Light & Power observed that these economic impacts and low benefit-cost ratios require careful consideration, especially as new requirements would affect a system having a very minor impact on the fish population in the Tuscarawas River. Dover Light & Power studied fish impingement mortality in 1988-89, and found low numbers of impinged fish, with about 85% of these being gizzard shad no larger than 1 oz., many of them impinged because of a cold weather event and which might have died in any event.

Port Townsend Paper recommended that EPA should focus on facilities having a reasonable likelihood of causing adverse environmental impact (AEI). This could be done by establishing one or more applicability thresholds and exempting facilities that do not exceed those thresholds. The authority to seek additional studies or impose additional requirements should be appropriately limited. EPA should consider regulating only impingement, not entrainment, under appropriate circumstances. They cited an EPRI report which suggested that entrainment may pose a low risk of AEI in many circumstances. EPA should investigate costs and benefits of alternative thresholds.

Port Townsend Paper is concerned about a possible requirement to reduce both impingement and entrainment for all intakes on tidal rivers, estuaries and oceans. Port Townsend paper states that its intake does not withdraw from a biologically rich water.

Countrymark Cooperative Petroleum Refinery has an intake structure that they feel does not generally cause impingement and does not merit new requirements: "The cooling water intake structure is mounted within a permanent barge structure and consists of [a] submerged basin with passive water inlet holes." ... "With this design, direct impingement does not generally occur." ... "Countrymark feels that our current water intake structure design minimizes impingement and entrainment. It is our opinion that no further upgrades are warranted."

9. PANEL FINDINGS AND DISCUSSION

The Panel's findings and discussion are based upon information that was available at the time this report was drafted. EPA is continuing to develop and refine analyses relevant to the proposed rule. Any recommendations that the Panel makes regarding regulatory alternatives for reducing the rule's impact on small entities may require further analysis and modification to ensure that they are practicable, enforceable, environmentally sound, and consistent with the Clean Water Act and other applicable law.

9.1 Number and Types of Entities Affected

The number and types of entities potentially affected by a Phase III rule are discussed under Section 5. The Panel makes recommendations below under Section 9.5 in connection with SER comments (Section 8.1) on this subject.

9.2 Potential Reporting, Record Keeping, and Compliance Requirements

Materials provided to SERs by EPA presented examples of the potential cost of compliance with the requirements of the Phase II rule, including technology-related costs (capital, operation & maintenance) and costs related to reporting and record-keeping (e.g., comprehensive demonstration study, verification monitoring).

SERs suggested that the costs projected by EPA could impose a significant financial burden on some small businesses, especially in certain industries. For example, as noted by Port Townsend Paper and Bayou Steel, the financial burden could be particularly significant in their respective industries, which have experienced an especially severe economic and financial climate over the past 3-5 years.

There was general agreement among SERs that the projected costs of conducting demonstration studies and verification monitoring were substantial and would likely impose a significant burden, particularly as most small entities would need to hire outside consultants in order to satisfy these requirements. They also questioned whether the environmental impacts associated with their relatively small cooling water withdrawals warranted the estimated study costs. They encouraged EPA to find ways to minimize the costs of demonstration studies, monitoring, reporting and record keeping.

The Panel shares this concern and recommends that EPA develop regulatory alternatives that minimize these types of costs. For example, the Phase II rule included a pre-approved technology option that allowed facilities to avoid the demonstration study requirement while still requiring them to conduct verification monitoring and to demonstrate attainment of performance standards. In Phase II, EPA identified only one technology on one water body type as an eligible pre-approved technology (wedgewire screens in freshwater rivers and streams). The Panel recommends that EPA include a similar provision in the proposed Phase III rule and explore ways to expand the availability of a pre-approved technology option to low-flow facilities and/or

identify other ways to reduce the associated monitoring and study costs. One promising approach, suggested by one SER, would be to eliminate the verification monitoring requirement for low-flow facilities that install and properly operate an approved technology.

9.3 Related Federal Rules

The Panel did not identify any federal rules that duplicate, overlap, or conflict with the proposed Phase III rule. Although one SER expressed concern that the anticipated Phase III requirements might adversely impact reliability of electric power generation, which could implicate Executive Order 13211 relating to energy effects, the Panel does not find this to be the case. Based on the analysis conducted for the Phase II rulemaking, the Panel believes that the rule is unlikely to have a significant, adverse impact on the supply, distribution, or use of energy, at either the local or national level. The Phase II rule contained substantial flexibility for power plants and permitting authorities to work together to minimize the potential for such impacts, and the Panel recommends that similar flexibility be provided in Phase III. Further, the total amount of energy generation affected by Phase III is estimated to be only about 10% of capacity at a national level. In contrast, Phase II affected about half of national generation capacity.

9.4 Regulatory Flexibility Alternatives

The SERs suggested a number of regulatory alternatives for reducing the impacts of the rule on small entities that the Panel believes warrant further consideration, as discussed below.

Delayed Implementation

Dover Light and Power provided comments from its industry trade association, the American Public Power Association (APPA), recommending that implementation of the Phase III rule be delayed until 2010 in order to allow time for implementation of Phase II to be substantially completed. APPA was concerned about the limited number of consultants with sufficient expertise to design and retrofit cooling water intake structures for 316(b) compliance, estimating that only a few dozen such companies nationally. More generally, SERs recommended delayed implementation of rule requirements to ease potential financial hardship resulting from compliance costs.

The Panel notes that significant implementation flexibility was included in the Phase II rule. Facilities were allowed up to three and one half years following rule promulgation to submit their initial demonstration study and related application materials. The rule provides that downtime for technology installation should be scheduled to coincide with otherwise necessary downtime and that additional downtime be scheduled to minimize impacts on electricity reliability. Further, following installation of control technologies, additional time was allowed to adaptively manage the technologies to meet performance standards in response to changing or unpredictable environmental conditions. The Panel recommends that this level of flexibility be

provided for Phase III requirements. The Panel also recommends that EPA consider the availability of contractor resources as it develops the implementation schedule for Phase III.

Thresholds for Applicability

Most SERs recommended an applicability threshold in the range of 20 to 50 MGD. Under this approach, facilities that fell below the threshold would continue to be regulated on an individual BPJ basis by State and local permitting authorities, but would not be subject to uniform national requirements. These SERs noted the relatively small quantity of water used nationwide below various capacity thresholds, the comparatively high cost per gallon of water of controlling impingement and entrainment (I&E) at small-capacity intakes, and either the absence of evidence for adverse impacts or the small numbers of fish impinged at small-capacity intakes. The Panel notes that in some cases, even small intake flows could cause significant adverse environmental impacts. BPJ based permitting decisions would be able to address such situations on a site-specific basis.

In response to these comments, EPA developed additional information on Phase III facilities within various design intake flow ranges, under the assumption that they were required to comply with Phase II requirements. This information included design intake flow (DIF) and average intake flows (AIF), for all facilities and for only those incurring technology costs; the numbers of facilities potentially subject to either impingement and entrainment (I&E) or impingement-only (I) performance standards; and average revenues and costs per facility. This information is presented in Tables 1-4 below (Section 9.5).

Based on these preliminary analyses (which the Panel understands may need to be further refined prior to final development of a proposed rule), the Panel notes the following:

- Of the 750 potentially in-scope facilities, 319 (43%) have DIFs below 20 MGD, and these facilities account for 6% of total DIF and 5% of total AIF. Of these 319 facilities, 88 (28%), accounting for 3% of total DIF and AIF, would be required to install technology to reduce I and/or E, at an average annual cost of about $238,000 per facility and a total national cost of $21 million per year. The remaining 231 facilities would incur permitting and monitoring costs only, averaging about $10,000 per facility per year. Total costs for facilities below 20 MGD would be about $24 million per year, or about 11% of the costs for all facilities. This group includes 53 out of 95 potentially impacted small entities (56%).

- Of the 750 potentially in-scope facilities, 577 (77%) have DIFs below 50 MGD, and these facilities account for 23% of total DIF and 30% of total AIF. Of these 577 facilities, 191 (33%), accounting for 12% of total DIF and 14% of total AIF, would be required to install technology to reduce I and/or E, at an average annual cost of about $355,000 per facility and a total national cost of $68 million per year. The remaining 386 facilities would incur permitting and monitoring costs only, averaging about $15,000 per facility per year. Total costs for facilities below 50 MGD would be about $74 million

per year, or about 33% of the costs for all facilities. This group includes 82 out of 95 potentially impacted small entities (86%).

Setting an applicability threshold at 20 MGD would thus exclude 43% of potentially in-scope facilities, including 53% of small entities, that collectively account for 11% of the national costs but only 5-6% of flow, which the Panel used as a proxy for expected benefits. Some 72% of the excluded facilities are not projected to install I&E reduction technologies but would still incur permitting and monitoring costs if covered, which could lead to improved operation of currently installed technologies in some cases. Setting an applicability threshold at 50 MGD would exclude 77% of potentially in-scope facilities, including 86% of small entities, that collectively account for 33% of the national costs and 23-30% of flow. Some 67% of the excluded facilities are not projected to install I&E reduction technologies but would still incur permitting and monitoring costs if covered. Setting a threshold at either level would remove a significant number of potentially impacted small entities from the scope of the rule.

Based on this information, the Panel believes that an effective way to substantially reduce potential economic impacts on small businesses would be to set an applicability threshold of 20 MGD. Facilities below 20 MGD represent a small proportion of the total flow associated with the Phase III rulemaking. To the extent that flow is a good proxy for environmental impacts, setting a threshold at this level would not substantially reduce the environmental benefits of the rule. The Panel recommends that EPA analyze a range of potential thresholds, particularly those between 20 MGD and 50 MGD.

The Panel understands that EPA must consider other statutory factors, such as economic achievability, in determining appropriate regulatory requirements. The Panel expects that EPA would analyze the economic impacts of potential regulatory requirements for facilities below these potential thresholds and factor this analysis into the choice of options for the proposed rule. The Panel also notes that EPA has already established requirements under Phase II that apply to power plants with DIFs greater than or equal to 50 MGD. In general, the Panel would expect technology costs and environmental benefits to be similar for facilities in other industries with DIFs above this level. Thus, unless EPA finds that economic achievability is a significant issue for some other industry sector, requirements similar to Phase II for facilities with DIFs above 50 MGD might be appropriate. If impacts differ substantially across sectors, subcategorization by economic sector may be appropriate. The Panel also notes that few small entities have DIFs that exceed 50 MGD.

Finally, the Panel notes the recommendation by some SERs that regulatory requirements be based on actual flows, rather than design flows. The Panel recognizes the implementation challenges associated with such an approach (e.g., permits might need to be reopened if usage levels changed) but believes that this recommendation nonetheless merits further consideration. One approach would be to allow facilities to make a binding commitment not to exceed a particular intake flow level for the duration of the permit. This would be similar to a provision in the Phase II rule that allowed facilities to make a binding commitment not to exceed 15% of generation capacity, and thus be subject to performance standards for impingement only.

9.5 Methodological Issues

Dover Light and Power provided comments from its industry trade association, American Public Power Association, that raise several issues regarding EPA's methodology in analyses prepared for this report. First, APPA's estimate of facilities potentially subject to the Phase III rule differs from EPA's. APPA estimates that approximately 50 utilities may be subject to a Phase III rule and that about 90% of these may be small entities. EPA estimates that approximately 121 electric generators may be subject to a Phase III rule, of which about 25 are public power utilities (19 of them owned by small entities). The difference might be explained by the fact that EPA excluded from its estimates facilities that have design capacities not exceeding 2 MGD and any facilities not subject to NPDES permit requirements. The Panel recommends that EPA seek further information from APPA and attempt to reconcile the difference. Secondly, APPA questions whether EPA is allowing for enough down-time to retrofit an intake. APPA believes it likely that a public power system would experience 1-3 months of down-time to retrofit an intake with I&E controls, owing to distance from metropolitan centers and because of competition with larger utilities for the services of qualified contractors. EPA estimates 2-8 weeks of downtime for retrofitting, and anticipates that retrofitting would occur during down-time scheduled for regular maintenance. The Panel anticipates that the Phase III rule will incorporate flexible implementation provisions, as adopted in Phase II, which should be sufficient to address APPA's concerns. Nonetheless, the Panel recommends that EPA seek further information from APPA to identify any necessary modifications to the assumptions used for its cost and economic impact analyses prepared for this report.

Dover OH Light & Power also commented that EPA may not have fully considered all relevant compliance costs to small entities, including costs for installing new equipment and its operation and maintenance and the higher level of staffing needed (with associated wages & benefits). With respect to staffing, Dover noted that small public power facilities have very few employees, and attached supporting comments from the APPA stating that the public power facilities likely to be subject to a Phase III rule typically have fewer than 20 employees. In light of this information, the Panel recommends that EPA review its assumptions used to develop costs and economic impacts to ensure that these assumptions are appropriate for facilities with smaller budgets and staffs.

The APPA comments submitted by Dover Light & Power also stated that older facilities may not be able to adopt many types of I&E controls because of limited space for new construction. APPA further stated that it is aware of State decisions not to require installation of control equipment because of the very limited land available to the utility. The Panel notes that EPA's costing methodology takes into account such space limitations by calculating the cost of designing and building either an expanded shoreline intake or a submerged, offshore intake. These modifications cost more than simple modifications to existing intakes.

9.6 Preliminary Data Analysis: Tables

Table 1: Average Flows for Phase III Facilities (manufacturers and electric generators)

Facility Design Intake Flow (DIF)	Estimated Number of Facilities (estim. no. owned by small entities)	Design Intake Flow (DIF)**			Average Intake Flow (AIF)**		
		Estimated Total all Facilities (MGD)	Percentage of Total	Estimated Average per Facility (MGD)	Estimated Total all Facilities (MGD)	Percentage of Total	Estimated Average per Facility(MGD)
2-10	195 (29)	986	2%	5	435	2%	2
10-20	124 (23)	1,758	4%	14	869	3%	7
20-35	176 (x) *	4,715	10%	27	4,061	15%	23
35-50	82 (x) *	3,419	7%	42	2,714	10%	33
50-250	134 (4)	13,209	28%	98	6,496	23%	48
250+	39 (9)	23,151	49%	589	13,150	47%	335
Total all DIFs	750 (95)	47,238	100%		27,725	100%	
Owned by Small Entities (all DIFs)	95	4,014	8%		1,637	6%	

This table applies to all Phase III facilities in the electric generation and manufacturing sectors expected to be subject to §316(b). It does not include facilities in the Oil & Gas Extraction category. The table does not include Phase III facilities having DIF at or below 2 MGD; these account for an estimated 126 facilities (9 electric generators and 117 manufacturers) having a total DIF of 100 MGD and a total AIF of 32 MGD.

*** There are 28 small entities with a DIF of 20 to 50 MGD. This group of facility sizes cannot be broken out further without compromising individual facility information.**

**** Phase II facilities accounted for a total DIF of 362,074 MGD and a total AIF of 212,476 MGD.**

Table 2: Illustration of Applying Technology Requirements for the Phase II Rule to Phase III Facilities (manufacturers and electric generators)

Facility Design Intake Flow (DIF)	Estimated Number of Facilities	Performance standards required (when Phase II requirements are applied)		Facilities incurring NO technology costs (when Phase II requirements are applied)	
		I&E requirement	I-only requirement	Est No. of Facilities	Median P&M Cost *
2-10	195	38	281	230	$2,366
10-20	124				
20-35	176	15	161	108	$2,366
35-50	82	43	39	47	$2,366
50-250	134	66	107	61	$2,366
250+	39				
All DIFs	750	162	588	446	$2,366
Owned by Small Entities (all DIFs)	95			58	$2,366

This table applies to all Phase III facilities in the electric generation and manufacturing sectors expected to be subject to §316(b). It does not include facilities in the Oil & Gas Extraction category. The table does not include Phase III facilities having DIF at or below 2 MGD.
Approximately 406 facilities that would <u>not</u> incur technology capital costs would incur total costs of $2,366 for permitting and monitoring.
Approximately 40 facilities that would <u>not</u> incur technology capital costs would incur an average of $60,449 for permitting and monitoring.
*** The median permitting and monitoring cost (P&M) is provided instead of the average P&M cost to avoid disclosure of individual facility costs.**

Table 3: Illustration of Average Revenues and Technology Costs for Phase III Facilities (manufacturers and electric generators) when Phase II Requirements are Applied

Facility Design Intake Flow (DIF)	All Facilities			Subset: Facilities incurring technology costs (when Phase 2 requirements are applied)			
	Estimated Number of Facilities	Average Revenue per Facility* ($million)	Total National Cost** ($million)	No. Facilities Incurring Technology Costs	Average Cost per Facility**	No. facilities with I& E Requirement	No. facilities with I-only Requirement
2-10	195	$ 222 M	$14 M	42	$291,942	30	58
10-20	124	$ 252 M	$10 M	46	$189,636		
20-35	176	$ 321 M	$41 M	68	$566,090	40	63
35-50	82		$9 M	35	$237,992		
50-250	134	$ 482 M	$35 M	90	$383,348	48	65
250+	39	$ 1592 M	$112 M	23	$4,801,258		
All DIFs	750		$221 M	304		118	186
Owned by Small Entities (all DIFs)	95	$ 86 M	$10	36	$284,425		

This table applies to all Phase III facilities in the electric generation and manufacturing sectors expected to be subject to §316(b). It does not include facilities in the Oil & Gas Extraction category. The table does not include Phase III facilities having DIF at or below 2 MGD.

*** Average annual revenues, in June 2003 dollars.**

**** Approximate, annualized, pre-tax cost to comply with Phase 2 requirements, in 2002 dollars. Includes permit and monitoring costs.**

Table 4: Average Flows for Phase III Facilities (manufacturers and electric generators) That Incur Technology Capital Costs When Phase II Requirements are Applied

Facility Design Intake Flow (DIF)	Estimated Number of Facilities	Subset: Facilities Incurring Technology Capital Costs						
		Est. No. Facilities	Total DIF (MGD)	Percent of DIF	Percent of Total Industry DIF	Total AIF (MGD)	Percent of AIF	Percent of Total Industry AIF
2-10	195	42	556	4%	1%	220	3%	1%
10-20	124	46	961	7%	2%	451	6%	2%
20-35	176	68	2,475	19%	5%	1,949	26%	7%
35-50	82	35	1,981	15%	4%	990	13%	4%
50-250	134	90	6,985	54%	15%	3,869	52%	14%
250+	39	23						
Total all DIFs	750	304	12,959	100%	27%	7,479	100%	28%
Owned by Small Entities (all DIFs)	95	36	2,063	16%	4%	1,038	14%	4%

This table applies to all Phase III facilities in the electric generation and manufacturing sectors expected to be subject to §316(b). It does not include facilities in the Oil & Gas Extraction category. The table does not include Phase III facilities having DIF at or below 2 MGD.

Appendix A: List of Materials EPA Shared With Small Entity Representatives

Pre-Panel Outreach

Pre-panel Outreach meeting held October 1, 2002

1. Background Information for Potential Small-Entity Representatives on EPA's Rulemaking Project (316b_PhaseIII_Background.pdf)
2. Information on intake technologies and their costs (ten PDF files)

After the outreach meeting held October 1, 2002

3. Powerpoint slides used for outreach meeting (briefing-background.ppt)
4. Summary of meeting (Mtg Summary_100102.wpd)

Pre-panel outreach meeting held January 22, 2004

1. Background Information for Potential Small-Entity Representatives on EPA's Rulemaking Project (316b_Phase3_Background_2004.pDF)
2. Cost Examples (Example_1.pDF, Example_2.pDF)
3. Attachments for Cost Examples (Table 2 Capital Cost.pdf, Table 3-4 cost factor.pdf, Table 5-6 OM.pdf, Table 7 ICR costs.pdf)

After the outreach meeting held January 22, 2004

4. Additional table for background document showing numbers of facilities (and number owned by small entities) by intervals of design intake flow (Table_H-1_SB_flow.pdf)
5. Small Business Administration's analysis of costs and benefits of some regulatory alternatives (PhaseIII SBA REPORT Exec Summary 1.9.04.doc and PhaseIII SBA REPORT 1.9.04.zip)
6. Meeting summary (Meeting Notes 22jan04.pDF)
7. Suggestions on providing comments (SER Comment guidance.pdf)
8. Information about the compliance alternatives proposed for Phase 2 facility cooling water intakes (Ch_A1.pDF)

Appendix A (continued): List of Materials EPA Shared With Small Entity Representatives

Panel Outreach

Panel outreach meeting held March 16, 2004

1. Letter from the Panel Chair (4 pages)
2. Description of the Phase II Final Rule (10 pages)
3. Examples of Estimated Costs of Technologies to Small Businesses (10 pages)
4. What regulatory alternatives might be considered by the Small Business Advocacy Review Panel for the Phase 3 rulemaking on cooling water intake structures?" (3 pages)
5. Questions and Solicitation of Comments for Small Entity Representatives for EPA's Proposed Rulemaking for Cooling Water Intakes (3 pages)

Appendix B: Summary of Outreach Meetings With Small Entity Representatives

B.1: Summary of Panel Outreach Meeting on March 16, 2004

B.2: Summary of Pre-panel Outreach Meeting on January 22, 2004

Appendix B.1: Summary from the Panel's Outreach Meeting with Small Entity Representatives on March 16, 2004

Meeting Participants:

Small Entity Representatives:

David G. Borland, City of Dover (Dover Light & Power), Dover, OH
Bob Crye, Richmond Power and Light, Richmond, IN
Maria Eichelberger, North American Stainless, Ghent, KY
Eveleen Muehlethaler, Port Townsend Paper Corp., Port Townsend, WA

Panel Members:

Small Business Administration (SBA):
Represented by Thomas M. Sullivan, Chief Counsel, Office of Advocacy

Office of Management and Budget (OMB):
Represented by James A. Laity, Office of Information and Regulatory Affairs

Environmental Protection Agency (EPA):
Represented by Mary T. Smith, Division Director, Engineering and Analysis Division, Office of Water

Small Business Advocacy Chair, EPA:

Alexander Cristofaro, EPA Small Business Advocacy Chair and Director, Office of Business Regulatory Policy and Management

Other Participants:

U.S. Small Business Administration (SBA):
Keith Holman, Office of Advocacy, U.S. Small Business Administration (SBA)
Joseph Johnson, Office of Advocacy, U.S. Small Business Administration (SBA)

U.S. Environmental Protection Agency, Office of Policy, Economics and Innovation:
Patrick Easter
Mindy Gampel

U.S. Environmental Protection Agency, Office of Water:
Ghulam Ali
Elicia Blumberg (for Tetra Tech Incorporated, an EPA contractor)
George Denning
John Fox

Paul Shriner

U.S. Environmental Protection Agency, Office of General Counsel:
Pooja Parikh

Associations supporting small entity representatives:
Meg McCarthy, American Forest and Paper Association

Welcome and Introductions/ Words from the SBREFA Panel Chair:
(Mr. Alexander Cristofaro, EPA Small Business Advocacy Chair, Office of Policy, Economics, and Innovation)

Mr. Cristofaro welcomed everyone to the meeting, and invited everyone to introduce him or herself. He first explained that the purpose of today's meeting was to get information from small entities before EPA drafts the Phase III rule, so that EPA would be able to take their concerns and information into account. He emphasized that small entities would be invited to comment again during the usual rulemaking process following the Small Business Regulatory Enforcement Fairness Act (SBREFA) process. Mr. Cristofaro stated that EPA, OMB and SBA would prepare a report based upon information received from participants and make a recommendation to the EPA Administrator within 60 days following the meeting. The Administrator would then consider the input as the rule was being developed. In addition, EPA will issue a proposal (available to the public), and small entity representatives (SERs) would be welcome to comment again for EPA's consideration. Participants must submit any comments that they would like to see included in the memo to the Administrator by March 30, 2004.

Mr. Sullivan (SBA) thanked the participants for taking the time to help the government "get it right." In the past three years, $31 billion has been saved through the Small Business Regulatory Enforcement Act, in part because of engaged and involved small businesses. The Final Rule for 316(b) Phase III will reflect the concerns of those entities.

Overview of Outreach Materials
(Mr. John Fox, Phase III Rulemaking Manager, EPA Engineering and Analysis Division (EAD))

Mr. Fox briefly reviewed the materials that were sent to participants since the last Outreach Meeting:

- A description of the Final Phase II rule;
- A set of sample costs for various kinds of control technologies as well as permitting costs, based upon the Phase II requirements (these costs did not take into account regulatory options being considered for Phase III);
- A list of possible regulatory alternatives for Phase III; and
- A list of detailed questions for SERs' consideration.

Question and Answer Session/ Comments from Small Entity Representatives:
(participants were called upon in alphabetical order of first names).

Bob Crye, Richmond Power and Light, explained that they are a small utility (approximately 40 staff), and lack an environmental department. As such, Mr. Crye anticipates having to outsource design and engineering work, which would mean an extra expense. Another concern is the reliability of intakes: with the current configuration, seasonal rain can cause shutdowns. Mr. Crye also expressed concern related to overall costs potentially associated with the Phase III rule. In response to a question on whether the costs presented in the outreach materials looked high or low, Mr. Crye replied that he believed they may be high, but could not be certain as his utility had never conducted studies or gotten price quotes for this purpose. In answer to other questions, Mr. Crye described the current intake configuration: stationary screens located in the center of Whitewater River, at a depth of 4 feet in the middle of the water column, and extending 3 feet up. The intake is located 15 feet from the shoreline. The design intake capacity of the intake is less than 2 million gallons per day (MGD), probably 0.8 MGD. The facility does experience problems with clogging by leaves following rainy periods.

David Borland, Dover Light & Power, said that he agreed with Mr. Crye's statements and emphasized that his staff is even smaller than that of Richmond Power and Light. The design intake flow for Dover's facility is 17.75 MGD, and is also a river intake (the Tuscarawas River in Ohio). Mr. Borland described the intake as having trash racks and two traveling screens behind the racks. Like Mr. Crye, Mr. Borland anticipated that Dover would have to outsource the plant study for any modifications to the intake structure, and that it would be expensive to do so. Mr. Borland described the shoreline intake as having a channel alongside the riverbank to direct water into the intake structure. Dover experiences problems with clogging by leaves in the fall. The facility conducted a fish kill study in January 1989 as part of their NPDES permit application, and found that the majority of fish kill ocurred during two days of extremely low temperatures. Mr. Borland therefore attributed the fish kills to the weather as opposed to the plant. The study looked at adult fish only, not fish eggs or larvae. Mr. Borland added that he believes the Dover plant will not require entrainment controls, as the intake flow is less than 5% of the mean annual river flow. When asked the facility's estimated percentage of the mean annual river flow, Mr. Borland stated that he thought about 2%. He added that he anticipates any changes to the intake structure will exacerbate the leaf issue in the fall, particularly if the changes reduced intake velocity. He has not yet spoken with any engineers on the issue. Both Mr. Crye and Mr. Borland agree that the regulations should be tailored to fit the needs of the individual facilities. A Panel member asked whether the intake configuration was designed for preventing the intrusion of leaves or fish; Mr. Borland replied that the plant was built in the 1940s, and probably designed to keep leaves out, although a side benefit of the design is that fish must swim up a 100-foot channel to get into the intake. This design probably minimizes the entry of fish into the intake. Mr. Borland was asked about the number of pumps, and answered that there are three pumps but only two are run at any time, as the third is a backup. The flows reported for the facility were for two pumps running, not three. Ms. Eveleen Muehlethaler, of Port Townsend Paper Corporation, asked for clarification from EPA on the term design intake capacity. For example, she said, their facility has four pumps, but two of those are backups. If all four are run, the intake flow would be 11 MGD, though normally only one or two pumps are run, which reduces that number significantly.

Eveleen Muehlethaler, Port Townsend Paper Corporation, described her facility. It is a paper mill with 315 staff (including six environmental staff) on-site. The cooling water intake structure was constructed in the late 1920s or early 1930s as part of the original mill design. There are four pumps, but the intake is designed as a one or two pump system. Because they don't have a flow meter, Ms. Muehlethaler had to refer to pump curves in order to answer the flow questions on the survey. They considered all four pumps and determined that the DIF was 11 MGD. Ms. Muehlethaler pleaded for a simple approach to the rule. The preferred approach would be an approved technology that could be considered [the best technology available based on[11]] best professional judgment (BPJ) for their facility. She added that any biological or dredging assessments would be outsourced, each costing an estimated $20,000. Therefore, Ms. Muehlethaler prefers to choose the right technology for the plant and not spend additional money on monitoring and reporting. Ms. Muehlethaler is also interested in the de minimis approach; for example, setting the threshold for being in-scope at 20 MGD. She added that the facility is located on a saltwater body at the northern edge of Washington State, and has a near shore crib intake design. The Port Townsend facility has not experienced major debris loading - the crib is cleaned approximately once every 8 years. Ms. Muehlethaler reiterated that EPA should clarify whether DIF would be based on actual use or capacity. Regarding use of BPJ in permitting, Ms. Muehlethaler generally supports the idea though she is concerned about over-zealous permit writers. Finally she had a general question regarding when impingement controls would be required as opposed to both impingement and entrainment controls. Port Townsend, as an ocean intake, would need both types of controls [if Phase III requirements came to resemble those of the Phase II rule[11]] and Ms. Muehlethaler does not understand why this should be the case.

A Panel member responded to Eveleen's concern about interpretations of permit requirements. He explained that under the Clean Water Act, States may have more stringent standards than national standards. If EPA issues national standards in Phase III, this will provide a default for permit writers, who might otherwise vary in their best professional judgement.. The Panel member asked Eveleen whether she preferred the current status (permit writers determining requirements independently using BPJ) to national standards. Eveleen answered that she preferred a blend: EPA guidelines presenting acceptable technologies would be her first choice. A Panel member asked whether Port Townsend had current protective technologies on the intakes; Ms. Muehlethaler answered that the structure is unchanged from the last century, and consists of bar-screens at the intake crib spaced 0.5 inches apart. The Panel member also asked whether the 1.5-2 MGD figure referred to DIF or actual intake. Ms. Muehlethaler replied that this was a question of definition: with four pumps it was 11 MGD, but with typical operation, only up to 2 MGD. A Panel member asked if there were any records that showed daily use. Ms. Muehlethaler answered that there were not because the facility lacked a direct flow meter. The Panel member asked if it would be problematic for Ms. Muehlethaler's facility if the rule threshold were based upon average intake of 2 MGD; she replied that they would need to purchase monitoring equipment. The flows as reported are calculated flows. Ms. Muehlethaler was asked if the facility reused cooling water for processes. She explained that some water is

[11] Clarification inserted by editor

used in the condensation process (cooling of process equipment), so she would need clarification on what constituted cooling water.

Maria Eichelberger, North American Stainless, expressed concerned about the variability within states in determining what was reasonable for a facility. Her facility is located on the Ohio River and has a maximum permitted intake of 8 MGD. Ms. Eichelberger asked about the role of cost analyses in Phase III. Mr. Fox answered that the cost analyses provided to SERs represented EPA's estimates of costs to Phase III facilities if Phase II requirements were applied to them and that cost analyses would be made for other regulatory alternatives. Maria also expressed concern about consistency among permit writers, that some may be stricter than others. A Panel member replied that this was similar to a concern expressed by Eveleen, and explained that inconsistency among and within States was due in part to the lack of uniform national regulations. Ms. Eichelberger asked if EPA had a minimum cost in mind. A Panel member answered that if EPA promulgates national requirements for Phase III, facilities might be allowed a variance for costs based on cost-cost tests as seen in Phase II;this may or may not be the case for Phase III. Ms. Eichelberger suggested that it might be beneficial to increase the de minimis threshold to help small businesses.

Ms. Muehlethaler agreed that if a national standard were available, States would often use it as a default. She wanted to know if States were aware that Phase III facilities were smaller than Phase II facilities. A Panle member mentioned that some Phase III facilities are actually quite large, and utilize far more than 50 MGD.

A Panel member wished to know if the Port Townsend Paper and North American Stainless facilities have cooling water requirements in their NPDES permits. Ms. Muehlethaler replied that Port Townsend does not, aside from a requirement to monitor flow. Ms. Eichelberger replied that her facility only had to monitor the temperature of the discharge. A Panel member asked if the flows for either facility exceeded the 5% threshold for mean annual flow of the rivers. The answers were "No" for both facilities.

Meg McCarthy, American Forest and Paper Association, expressed agreement with Eveleen Muehlethaler's comments. She also wanted to know whether the rule would cover facilities or intake structures. A Panel member answered that under Phase II, the determination of applicability was done on a facility-wide basis. The design flows of all intake structures were added to see if the 50 MGD and 25% thresholds were met. There was a provision that if a facility had different structures that served separate units, there might be a capacity or peaking facility issue, possibly resulting in less stringent requirements. . An EPA staff member asked if any paper facilities had different intakes solely dedicated to different processes. Ms. McCarthy answered that she was not sure, but wanted to know if the de minimis determination would apply to the intake or to a whole facility. A Panel member stated that it was too early to tell for the Phase III rule, but in Phase II the rule was based on the whole facility. Ms. McCarthy was asked if she was aware of the two thresholds in Phase II: the total withdrawal of 50 MGD and the percentage of water used for cooling (25%). A Panel member clarified that if a facility has water that is used as both cooling and process water, it could count as process water. This was not yet decided for Phase III. The Panel member asked Ms. McCarthy whether cooling water is

generally reused at paper facilities, and if so, whether the 25% threshold would be useful. Ms. McCarthy answered that the 25% provision was useful, though she was not sure of the exact numbers of facilities that reuse cooling water use. Ms. Muehlethaler added that from the pulp and paper standpoint, the 25% threshold was useful, though for her facility it was less relevant because of the saltwater issue.

Conclusions

Mr. Cristofaro asked if there were any further questions. As there were none, he added that the SERs can submit written comments by 30 March 2004, close of business. Comments should be addressed to Mr. Cristofaro or by email to Mr. Patrick Easter. For process questions, SERs call Patrick Easter; for technical questions, they may call John Fox. Mr. Cristofaro reminded SERs that EPA will consider their comments when writing the rule. Furthermore, comments already submitted will become part of the permanent record. Anyone who plans to submit additional comments should notify EPA. As a last question, a Panel member asked if anyone who was on the phone had conducted a fish kill study, and encouraged submittal of comments on that matter. The meeting was adjourned.

Appendix B.2: Summary from the Pre-Panel Outreach Meeting with Small Entity Representatives on January 22, 2004

Meeting Participants:

Small Entity Representatives:
David G. Borland, City of Dover (Dover Light & Power)
Bob Crye, Richmond Power and Light
Donald Horning, Countrymark Cooperative, Inc.
Steve Shaver, North American Stainless – Ghent
Wendy Stehling, Bayou Steel Corporation
George Milner, Mohawk Paper Mills, Inc.
Eveleen Muehlethaler, Port Townsend Paper Corp.

Associations Supporting Small Entities:
Meg McCarthy, American Forest and Paper Association
Jerry Schwartz, American Forest and Paper Association
Tom Wigglesworth, National Petrochemical & Refiners Association

Environmental Protection Agency:
Alexander Cristofaro, OPEI, Small Business Advocacy Chair
Joan Crawford, OPEI
George Denning, EAD
Patrick Easter, OPEI
John Fox, EAD, Phase III Regulation Manager
Mindy Gampel, OPEI
Ken Munis, OPEI
Tom Nakely, OPEI
Pooja Parikh, Office of General Counsel
Martha Segall, EAD, Acting Director, Cooling Water Intake Task Force
Mary Smith, EAD, Division Director
Eric Strassler, EAD
Jennifer Vernon, OPEI
Mark Wilson, OPEI

Small Business Administration:
Keith Holman, Office of Advocacy
Joe Johnson, Office of Advocacy

Office of Management and Budget:
Jim Laity, Office of Information and Regulatory Affairs

Other Participants:
Elicia Blumberg, Tetra Tech Incorporated (EPA contractor)

Welcome and Introductions/ Words from the SBREFA Panel Chair:
(Mary Smith, Division Director, EPA Engineering and Analysis Division)
(Alexander Cristofaro, EPA Small Business Advocacy Chair)

Mary Smith opened the meeting and invited everyone introduce him/herself.

Mr. Cristofaro summarized the SBREFA process. He explained that the SBREFA process was enacted in 1996, and its purpose is to provide an opportunity for small businesses to be part of the regulatory process. Input from small businesses allows EPA to become aware of and consider the circumstances of those entities. EPA's main goal is to develop alternative regulatory approaches that meet the needs of small businesses as much as possible. Mr. Cristofaro emphasized that it is EPA's hope to receive as much input as possible from the small entities before writing the rule. Small business representatives should provide written comments to EPA by February 5, 2004, so that the panel meeting later in the month will have ample time to review the comments. Following the official start of the SBREFA panel, small businesses will have another opportunity to provide comments. Also, he added that Mr. Fox would be available at any time to field questions.

Mr. Keith Holman welcomed everyone to the meeting, and stated that a second, more complete, set of documents will be sent to small entity representatives (SERs) in late February to early March. These documents will further explain 316(b) in detail, and present rule costs. Mr. Holman stated that the SBREFA process is about getting a better rule without creating unnecessary burdens on small businesses.

Mr. Jim Laity added that the SBREFA process presents a unique opportunity for SERs to inform EPA of concerns early on in the rulemaking process. Mr. Laity continued that it would be particularly helpful to provide technical information that EPA might not be aware of. Mr. Laity recommended that anyone who has ideas on how to accomplish the objectives of this rulemaking better or in a less costly way should send their suggestions to EPA.

Overview of Cooling Water Intake Structure Rulemaking
(Mr. John Fox, EPA Phase III Rulemaking Manager)

The following notes are taken from talking points used by Mr. Fox. They summarize the main points covered by Mr. Fox during the meeting:

What are impingement and entrainment?
Impingement refers to fish being trapped and held against a screen or other structure in the intake, or being harmed by rough contact with the intake structure. Entrainment refers to larvae of fish and shellfish being pulled into the cooling system. Entrained organisms generally die from thermal shock and mechanical damage, though the extent of mortality is still controversial.

What facilities are subject to §316(b)?
Under the Phase 1 and proposed Phase 2 rules, facilities are potentially subject to national requirements under section 316(b) of the CWA if they require a NPDES permit to discharge

wastewater, have a cooling water intake that withdraws water from "a water of the US," and use at least 25% of the intake water exclusively for cooling purposes. We expect the same will apply to Phase 3 facilities.

What facilities will be considered in the Phase 3 rulemaking?

Phase 1 addressed new facilities
Phase 2 addressed electric generators with design capacities of at least 50 MGD
Facilities that will be considered for regulation under Phase 3 are:

(a) all existing facilities, except electric generators covered by the Phase 2 regulation
(b) electric generators with design capacities under 50 MGD
(c) new facilities - coastal and offshore oil & gas (platforms and MODUs)

What is EPA's schedule for regulation development?

For compelling legal reasons (i.e. a consent decree), EPA is required

to formally consider regulatory alternatives by May 14, 2004,
to propose Phase 3 regulations by November 1, 2004
to take final action by June 1, 2006

What has been decided about the Phase 3 regulation?

The scope and specific requirements of the Phase 3 regulatory proposal are only now starting to be considered. Decisions won't be made until May and June when EPA must prepare a proposal for inter-agency review at OMB. The scope and nature of requirements is then subject to further modification during interagency review. After a regulation is proposed, public comments must be received and considered, and a final round of interagency review occurs before any final action is taken.

How will the small business advocacy process affect the regulation?

The Federal panel will

Provide information and questions to small entity representatives
Take oral and written comments from small entity representatives
Present a report to the EPA Administrator with recommendations on how impacts upon small business may be minimized by the choice of regulatory alternatives
The panel report will be presented <u>before</u> EPA considers regulatory alternatives

What regulatory alternatives are under consideration?

The Phase 1 and Phase 2 regulations lay the groundwork for defining what technologies and alternative approaches (such as restoration) may be effective in satisfying the requirements of section 316(b). We do not expect that these basic facts and approaches will change.

The most significant issues to be decided about Phase 3 include what kinds of facilities and intake capacities need national requirements, and what specific requirements are needed.

Some specific suggestions under consideration include:

- Flow thresholds for national requirements to reduce impingement mortality and entrainment

- Reduced permitting and monitoring requirements for intakes with smaller design capacities (this may be combined with a requirement to use a pre-approved technology, with or without verification monitoring, depending on the situation)

- A capacity utilization threshold for national requirements (for example, in the Phase 2 proposal, electric generators would not be required to reduce entrainment if their capacity utilization is less than 15%)

- No entrainment controls required under some conditions (for example, at freshwater intakes with capacities under 50 MGD)

- Identification of industrial subcategories or specialties that have high numbers of small businesses or would have significant economic impacts from national requirements

How are regulatory alternatives evaluated and compared?

- The cost of an alternative and its economic impact on businesses is evaluated. This includes market analysis of price changes and effects on consumers.

- The economic impact on small businesses is specifically evaluated

- Effects on energy supply and demand are evaluated

- Economic and fiscal impacts on governmental entities (municipalities, States, Tribes) are evaluated

- Environmental benefits of alternatives are evaluated and are also compared to the costs of the alternatives

What technologies are used to impingement and entrainment?
There is a wide variety of technologies. These were described in the paper sent two weeks ago, and are described in more detail in the documents found on EPA's 316(b) web site.

Technologies commonly used to control impingement are:

surface shoreline intakes:	- traveling screen with fish handling & return system
	- barriers and fish diversion systems
submerged intakes:	- velocity cap
	- passive (wedgewire) screen

Question and Answer Session/ Comments from Small Entity Representatives

The question and answer session addressed the rulemaking schedule, the schedule for submitting comments after this meeting, and the Panel's schedule. Information was provided about the types of comments that would be most helpful - for example, technical information on cooling water intakes and impingement and entrainment (I&E) control technologies, experiences with requirements under CWA section 316(b), experiences with measuring I&E, any thoughts on the Phase II requirements, and so forth. In particular, Panel members suggested that SERs consider the Phase II approaches to streamlined data collection and approved technologies, and provide the Panel with suggestions for pre-approved technologies under specific conditions. Panel members suggested that SERs provide information on I&E control technologies that they have installed or evaluated.

Appendix C: Written Comments Received from Small Entity Representatives

Comments resulting from the March 16, 2004 Panel outreach meeting:

C.1 Bayou Steel Corporation (La Place, Louisiana)

C.2 Countrymark Cooperative Refinery (Mt. Vernon, Indiana)

C.3 Dover Light and Power (Dover, Ohio)

C.4 Nylon Corporation of American (Manchester, New Hampshire)

C.5 Port Townsend Paper (Port Townsend, Washington)

Comments resulting from the January 22, 2004 pre-panel outreach meeting:

C.6 Countrymark Cooperative Refinery (Mt. Vernon, Indiana)

C.7 Dover Light and Power (Dover, Ohio)

C.8 Port Townsend Paper (Port Townsend, Washington)

C.9 Richmond Power and Light (Richmond, Indiana)

Comments resulting from the October 1, 2002 outreach meeting:

C.10 City of Iola Power Plant (Iola, Kansas)

C.11 National Rural Electric Cooperative Association (Arlington, VA)

Editorial Note: in the interest of providing these documents in a relatively compact electronic file, we changed some of the original letterhead formatting and fonts, and deleted a graphics object displaying a logo and letterhead.

Appendix C, part C.1: Comment from Bayou Steel

Comments Regarding the Possible Requirements of the Phase III Cooling Water Intake Structure Regulations

Bayou Steel Corporation is a member of the Steel Manufacturers Association, which is comprised of 39 mini-mill companies that operate 125 steel plants throughout North America. A mini-mill takes scrap metal and utilizes electric-arc furnaces to melt the scrap into steel, making mini-mills the largest recyclers in the nation.

In order to determine how many mini-mills would be affected by the possible 316(b) phase III rule making a statement and question were sent to the SMA member companies:

> EPA is proposing regulations for cooling water intakes similar to the 316(b) phase II that affects existing power producing facilities.
>
> The proposed regulations would impact those facilities that use cooling water, i.e., have a cooling water intake structure withdrawing water from U.S. waters and at least 25% of the water is used for contact or non-contact cooling; they have an NPDES permit (or are required to obtain one); and they have a design intake flow of 50 MGD or greater.
>
> How many member companies will this affect, i.e., how many use cooling water with a design intake of 50 MGD or greater?

Responses were received from 30 facilities, representing 17 companies and 4, including Bayou Steel Corporation, would be affected by the 316(b) regulations.

General Comments

1) While there may be many facilities whose design intake flow may be 50 MGD or greater, the regulation should apply to those who actually utilize 50 MGD or greater. The facility should be able to demonstrate, over a certain period of time, that the 50 MGD is not exceeded.

2) Financially - Bayou Steel Corporation, and many of the other mini-mills in the country, have been struggling over the past few years just to remain in business. Bayou Steel Corporation has just emerged from bankruptcy last month and considers itself lucky to still be in operation. The monitoring and permitting costs alone are significant and would be a large impact on extremely small budgets. Many, if not all, capital and other projects for improvement at Bayou Steel and most other mini-mills have been abandoned or postponed indefinitely due to limited resources.

Wendy Stehling
Bayou Steel Corporation
LaPlace, LA on the Mississippi River
wendys@bayousteel.com
985/652-0322

Appendix C, part C.2: Comment from Coountrymark Cooperative

COUNTRYMARK COOPERATIVE, LLP
1200 Refinery Road
Mt. Vernon, Indiana 47620

March 29, 2004

Mr. John Fox
US EPA
Washington, DC 20510

Re: Pre-Rulemaking Comments
Phase III Cooling Water Intake Structures

Dear Mr. Fox,

Countrymark appreciates the opportunity to be a part of the regulatory process and comment on the Phase III Cooling Water Intake proposals.

As you know, Countrymark Cooperative, LLP. is a regional, farmer owned cooperative which owns and operates a 24,000 barrels per day petroleum refinery located in Mt. Vernon, Indiana. Countrymark Co-op employs approximately 300 people. Countrymark is a small refinery as defined by the Small Business Administration.

Our refinery has the ability to withdraw approximately 2 million gallons per day of surface water from the Ohio River. This water is treated and used to supply both process and cooling water for our refinery. The cooling water intake structure is mounted within a permanent barge structure and consists of submerged basin with passive water inlet holes. The water is then screened prior to entering the pump well area. The pump basin area is protected with screens that are inspected and cleaned daily. Typical debris includes vegetation (sticks, leaves, etc.) and river trash (bottles, plastic, foam, etc.). Only rarely would fish or other water life enter this area. In any case, it does not appear to become impinged upon the screens.

With this design, direct impingement does not generally occur. The next step is sedimentation and chemical treatment where silts and other suspended material are removed. Clean water then moves from the reservoir into the water supply system. After the water is used, it runs through an NPDES wastewater treatment system and is discharged downstream at essentially ambient temperatures.

Countrymark feels that our current water intake structure design minimizes impingement and entrainment. It is our opinion that no further upgrades are warranted. With that said, we assume that EPA would agree. If not, Countrymark would question the severity and necessity of further mandated controls.

Given the previous statements, Countrymark offers the following comments:

1. Additional environmental regulations applying to smaller cooling water intake structures should not be dictated unless there are compelling reasons. EPA has not shown that impingement and similar local issues impact the environment / fish in a significantly adverse way in all but limited examples. Perhaps EPA should consider prohibiting certain designs or susceptible locations (those with endangered fish, etc.)

2. The Phase III regulations if warranted, should have a minimum flow threshold of no less than 20 million gallons per day, unless there are source stream / lake considerations that add a compelling reason.

3. EPA should not consider just cooling water intake structures. Consider all sources of water intake structures and don't target specific industries or activities. Drinking / recreational / agricultural water withdrawal intake structures also cause impingement / entrainment. It is either a universal problem or not. It does not seem fair to regulate specific users and not all entities with water intake structures.

4. A registration process with each regulated entity would include some requirement for description of the water withdrawal intake structure. Structure with designs less likely to contribute to impingement or entrainment need not have any other requirements.

5. EPA should provide some level of significance in terms of harm caused by excessive impingement or entrainment. This could be in terms of number of the fish entrained per day or other easily gauged metric. Water users could then estimate the potential harm caused by a poorly engineered design.

6. EPA should make available detailed water intake designs that minimize impingement or entrainment and are easy to clean. There is a strong incentive for the water users to use designs that minimize daily or periodic maintenance. Being friendly to the environment is an added benefit.

Countrymark appreciates the opportunity to comment on this proposed. Please contact me (horning@countrymark.com or 812-838-8133) if you have any questions or comments.

Sincerely,
Donald M. Horning, REHS
Regulatory Compliance Manager

Appendix C, part C.3: Comment from Dover Light & Power

DOVER MUNICIPAL LIGHT PLANT

303 EAST BROADWAY
DOVER, OH 44622-1914
PHONE 330-343-3442
FAX 330-343-4626

April 13, 2004

Mr. Alexander Cristafaro
Small Business Advocacy Chair
c/o Mr. Patrick Easter
1200 Pennsylvania Avenue, NW
MC 1806 A
Washington, DC 20460

Dear Mr. Cristafaro

As an SER Panel member I would like to include the following additional comments on the Proposed Cooling Water Intake Structures at Section 316(b) Phase III Facilities previously submitted. The comments were supplied to Dover Light & Power as a member of American Public Power Association (APPA) and I would like to include them as an addendum to my previously submitted comments. If you have any questions, please don't hesitate to contact me by email or phone. These comments should help clarify the problem of small entities on a wider base of information than the comments submitted based on the operation of Dover Light & Power in The City of Dover, Ohio.

Sincerely,

David G. Borland
Superintendent

cc: Mr. John Fox, U.S. EPA
Ms. Theresa Pugh, APPA

What is APPA:

The American Public Power Association is a national association for local and state-owned government or public utilities that provide electricity to communities. Also provide water or broadband services to their communities. There are more than 2,000 municipal and other state or community-owned electric utilities that provide electricity for approximately 40 million Americans. These public power systems are among the most diverse of the electric utility sector, representing utilities in small, medium and large communities in 49 states (all but Hawaii). Seventy-five percent of public power systems are located in cities with populations of 25,000 people or less. Overall, public power accounts for about 14 percent of all kilowatt-hour sales to consumers. Ninety percent of APPA's members meet the definition of SBREFA—meaning that they have retail sales of <$4 million annually and serve populations of 50,000 people or fewer.

APPA was established in 1940 as a non-profit, non-partisan organization. Its purpose is to advance the public policy interests of its members and their consumers, and provide member services to ensure adequate, reliable electricity at a reasonable price while ensuring protection of the environment.

Scope of the Phase III rule in the public power community:

Based upon APPA's reading of EIA data (from 2000 data), we believe that there are approximately 50 utility facilities that may be subject to the Phase III rule. As explained below, we believe these facilities would incur disproportionate capital, operating and maintenance costs that would far outweigh any benefits from mitigation or prevention of "adverse environmental impact" for entrainment or impingement.

Affordability and financial or economic impacts of possible requirements:

The materials submitted to the SERs called for comments on the financial, economic or affordability impacts of possible control requirements. Most of the APPA facilities likely to be covered by the Phase III rule have less than 20 employees. This is a critical factor in understanding the regulatory impact of this possible rulemaking. Simply going through the permitting requirements, biological studies and other paperwork is burdensome to a utility (or any other business) with only a few dozen employees. The few exceptions to this generalization would be the larger APPA members which have facilities in Phase II and Phase III. In that case, those utilities would be regulated under Phase II requirements for their >50 MGD intakes.

Further, if the EPA (or states) require technology retrofits for Phase III facilities, it is likely that the public power system would experience 1-3 months of downtime for a number of factors. The EPA has not considered that there is a disproportionate impact on smaller utilities that have only one generation source (and one intake) from a planned (or unplanned) outage. The utility would have to purchase power on the open

market and this would likely mean an increased rate of approximately 12 percent (on a nationwide average). A rate increase to consumers, even for a short period, of up to 12 percent is significant for the smaller communities served by facilities subject to Phase III. The reason that the retrofit time may take longer for a public power community is that many are located away from major cities and available technology retrofitting contractors. Most of the experienced contractors will be tied up for years on the far more costly and sophisticated Phase II retrofits. Smaller communities, especially those away from major cities and those not near major airport hubs, will pay dearly for any necessary retrofits and contractor time.

APPA believes that EPA, in the Phase III rule, should set a de minimis level of 50 MGD below which the EPA national program should defer to states to make determinations about entrainment or impingement reductions. APPA believes that these smaller systems do not merit a national rule but should be regulated under State authority.

Alternative cooling water supply:

Most APPA members do not have access to an alternative cooling water supply without getting state or local approval for access to groundwater. A sizable number of Phase III facilities are located in more arid regions where states are less likely to allow the use of groundwater for this purpose. In many locations, local water authorities do not want public power (or other) utilities using groundwater for cooling water. APPA recommends that the rule should be designed to avoid creating incentives for further use of groundwater.

Cooling towers are not feasible for Phase III facilities:

EPA's questionnaire asked if the community utilities have cooling towers and how this decision was made. APPA is aware that some public power utilities were constructed in the 1970s and 1980s and that cooling towers were viable because they were a part of the design of newer utilities. However, EPA appropriately decided that cooling towers weren't economically feasible for Phase II facilities. Certainly, cooling towers are even less economically feasible for Phase III facilities than for Phase II facilities. We believe most of these facilities are located within their member community's borders and cooling tower plumes could also create problems. Therefore, APPA questions the need for EPA to pursue cooling towers as an option in Phase III.

Alternative ways of controlling impingement and entrainment:

Additionally, many types of impingement/entrainment control technologies might not be realistic for control at older facilities. For example, in a number of situations, APPA is aware that states rejected the decision to install control equipment because of the very limited "footprint" of the utility. Municipal utilities are typically located on public or

community land and are often surrounded by other city property, small industrial parks, and often share waterfront with other city purposes (urban renewal, industrial parks, schools, community centers, libraries, parks, ports, etc).

Need for controls: environmental benefits achieved and reference to state/Federal Agencies:

In the SER materials, EPA inquired if the state or Federal agencies had inquired about conducting studies, evaluations or the monitoring results. APPA is aware of only one E &I study conducted for a Phase III facility. That E & I study was provided to the EPA in 2003 and again in 2004 for the purpose of identifying Phase III policy options. In that instance, the state agency did not see sufficient aquatic harm to require further action of the utility. That intake was <25 MGD.

Economies of scale: Economists call it "Law of Supply and Demand" but APPA calls it "Chasing after the same contractors":

The EPA asked questions about economics and economies of scale in retrofit. Realistically, there are not as many contractors with 316(b) expertise as with 316(a) or conventional water or air pollution abatement systems. As with all new regulatory programs, there is a large cost associated with being in the first group (Phase I and II regulated community) to be regulated. APPA is of the opinion that there are only a few dozen companies with expertise in 316(b) retrofits in the country. If this is true, it will be reflected in the costs. It would make a great deal of sense to let this expertise be used on the bigger intake systems at, typically, larger utilities and to phase in the Phase III utilities after Jan. 31, 2010.

APPA urges EPA to propose a rule that phases in the new 316(b) requirements for Phase III facilities under NPDES permit review beginning with any NPDES permit review commencing after Jan. 31, 2010. This additional time would allow for the market to demonstrate additional technologies to reduce flow or E & I and for the contractors' costs to begin reflecting more realistic rates. Any utility pushing to implement 316(b) studies or to install retrofits in the first 10 years after the Phase II rule will be paying higher contractor rates as the demand for those limited contractors will be very high.

Summary of APPA's policy suggestions for Phase III:

APPA believes that the environmental consequences to public power utilities with <50 MGD do not merit a national EPA regulatory program. The APPA recommends that the final rule provide for State agencies to require baseline information, studies or the installation of traveling screens or less expensive technology according to the permit writer's best professional judgment at the first NPDES permit review beginning after Jan. 31, 2010. This additional time would allow CWIS technology companies and

contractors to find ways to economize in testing and perhaps to develop new CWIS screens and other devices scaled down to smaller utilities with smaller intakes.

Since we believe APPA has the largest number of facilities in Phase III, as an industry, we hope that the EPA (and SBA) will give due consideration to these suggestions. APPA is in the process of surveying our members so that we will have more substantive comments during the rule's official comment period.

Submitted by:
David G. Borland
Superintendent
Dover Light & Power
303 East Broadway
Dover, Oh 44622
(330) 343-3442
dborland@doverohio.com

Appendix C, part C.4: Comment from Nylon Corporation of America

John Pollono <jpollono@nycoa.net> 03/30/04 03:32 PM

To: Patrick Easter/DC/USEPA/US@EPA
Subject: RE: Cooling Water Intake SBREFA Panel: Information Package and Meeting Invitation

Dear Mr Easter,

I have several thoughts with regards to Phase 3 rulemaking :

support case by case determination for facilities with less than 20 MGD with regards to impingement and entrainment controls

support reduced permitting and monitoring requirements for certain applicable facilities

support no entrainment controls under certain conditions

support delayed implementation of new requirements for small businesses where undue financial burden would be experienced

support fair evaluation by the EPA of the cost of compliance for a facility with regards to site specific requirements

John Pollono

Appendix C, part C.5: Comment from Port Townsend Paper Corporation

[graphic object letterhead and logo deleted]

(**Via E-Mail** easter.patrick@epa.gov)
Alexander Cristofaro
Small Business Advocacy Chair
C/O Patrick Easter
USEPA
1200 Pennsylvania Avenue, NW
MC 1806A
Washington, DC 20460

Re: Port Townsend Paper Corporation Small Entity Representative Comments on EPA's Proposed Rulemaking for Phase III of the 316(b) Cooling Water Intake Structures Rule

Dear Mr. Cristofaro,

Port Townsend Paper is pleased to submit these comments as part of SBREFA Panel for the Phase III of the Cooling Water Intake Structure (CWIS) rulemaking under Section 316(b) of the Clean Water Act. I have consulted with Meg McCarthy of the American Forest & Paper Association in the preparation of these comments, as she attended the outreach meeting EPA held earlier this month. While I am writing these comments from the perspective of a small business, the alternatives proposed within these comments could be applied more generally to all Phase III facilities since, on the whole, these facilities' cooling water intake structures have not been identified as causing adverse environmental impacts.

Port Townsend Paper has previously submitted comments to EPA as a part of the SBREFA panel for the Phase III rule (attached). The opinions expressed in our previous comments still apply, but Port Townsend Paper would like to emphasize some of the points we made in the past, and to highlight some concerns that have recently been brought to our attention.

As we stated previously, Port Townsend Paper is a small business faced with an extremely challenging economic climate, resulting in limited sales, job losses and closed plants. We are very concerned about the potential costs (whether capital or administrative) that may be imposed by the Phase III rulemaking and the impact they will have on our company.

Port Townsend Paper holds the opinion that EPA should not apply comprehensive national regulations to all Phase III facilities because of the low risk that they pose. Alternatively, Port Townsend Paper endorses the idea of establishing a ***de minimis*** applicability threshold of 50 million gallons per day (MGD) of cooling water. Using this approach, facilities withdrawing less than 50 MGD of cooling water would be outside the scope of the rulemaking absent some unusual site-specific factor. Not applying comprehensive national requirements to all Phase III facilities is consistent with the fact that, according to data collected in EPA's screener survey, Phase III manufacturing facilities such as Port Townsend Paper only comprise about 2% of the total national cooling water flow. Further, we are unaware of data showing, as a general matter, that these facilities' CWISs have had an adverse impact on the environment. Since manufacturing facilities constitute such a small percentage of the total cooling water usage and

their CWISs have not been demonstrated to result in adverse environmental impact, Port Townsend Paper believes that it is appropriate to exclude from national regulation a substantial majority of those facilities. A 50 MGD cooling water ***de minimis*** applicability threshold, which has been used by EPA in the past to distinguish between Phases II and III, would accomplish that goal.

For those facilities that would be considered within the scope of the rule, Port Townsend Paper supports the following regulatory alternatives that would reduce the financial burden on small businesses. Facilities should be able to choose how to meet the requirements of the rule in the manner that best suits their individual circumstances. For example, if a facility were to maintain a maximum through-screen intake velocity of 0.5 ft./sec. or implement a technology chosen from a suite of technologies pre-approved by EPA, then EPA should consider the facility to be in compliance. If the facility has chosen one of these options, it should not be required to demonstrate that the facility is meeting performance standards requirements as in Phase II. Furthermore, under these options, permitting studies and monitoring requirements should be waived, as they pose a significant financial burden on small businesses such as Port Townsend Paper.

Additionally, Port Townsend Paper is concerned with the performance standard requirements from the Phase II rule, which group tidal rivers, estuaries and oceans together, requiring reductions of both impingement and entrainment for facilities on those water body types. While Port Townsend Paper does withdraw salt water from the ocean, the water withdrawn is not like the biologically rich waters at the mouth of a river or estuary. Port Townsend Paper's cooling water intake structure is located under the docks at the shoreline of Port Townsend Bay. The area is subject to tidal movement but in this case, the shoreline is an artificial breakwater. The intake structure should not be held to the stricter standard of reducing both impingement and entrainment just because it is withdrawing ocean water.

Thank you for the opportunity to participate in the SBREFA process and to comment on the development of regulations to establish requirements for Cooling Water Intake Structures at Section 316(b) Phase III Facilities. Please feel free to contact me at (360)379-2112 if you have any questions about these comments.

Sincerely,

//via e-mail 3/30/04//

Eveleen Muehlethaler
Vice President, Asst. Mill Manager
Port Townsend Paper Corporation

Appendix C, part C.6: Comment from Countrymark Cooperative

COUNTRYMARK COOPERATIVE, LLP
1200 Refinery Road
Mt. Vernon, Indiana 47620

February 6, 2004

Re: Pre-Rulemaking Comments
Phase III Cooling Water Intake Structures

Dear Mr. Fox,

Countrymark appreciates the opportunity to be a part of the regulatory process and comment prior to proposal.

As you know, Countrymark Cooperative, LLP. is a regional, farmer owned cooperative which owns and operates a 24,000 barrels per day petroleum refinery located in Mt. Vernon, Indiana. Countrymark Co-op employs approximately 300 people. Countrymark is a small refinery as defined by the Small Business Administration.

Our refinery has the ability to withdraw approximately 2 million gallons per day of surface water from the Ohio River. This water is treated and used to supply both process and cooling water for our refinery. The cooling water intake structure is mounted within a permanent barge structure and consists of submerged basin with passive water inlet holes. The water is then screened prior to entering the pump well area. The pump basin area is protected with screens that are inspected and cleaned daily. Typical debris includes vegetation (sticks, leaves, etc.) and river trash (bottles, plastic, foam, etc.). Only rarely would fish or other water life enter this area. In any case, it does not appear to become impinged upon the screens.

With this design, direct impingement does not generally occur. The next step is sedimentation and chemical treatment where silts and other suspended material are removed. Clean water then moves from the reservoir into the water supply system. After the water is used, it runs through an NPDES wastewater treatment system and is discharged downstream at essentially ambient temperatures.

Countrymark feels that our current water intake structure design minimizes impingement and entrainment. It is our opinion that no further upgrades are warranted. With that said, we assume that EPA would agree. If not, Countrymark would question the severity and necessity of further mandated controls.

Given the previous statements, Countrymark offers the following comments:

1. The Phase III regulations should have a minimum flow threshold of no less than 5 million gallons per day.

2. EPA should not consider just cooling water intake structures. Consider all sources of water intake structures and don't target specific industries or activities. Drinking / recreational / agricultural water withdrawal intake structures also cause impingement / entrainment. It is either a universal problem or not. It does not seem fair to regulate specific users and not all entities with water intake structures.

3. A registration process with each regulated entity would include some requirement for description of the water withdrawal intake structure. Structure with designs less likely to contribute to impingement or entrainment need not have any other requirements.

4. EPA should provide some level of significance in terms of harm caused by excessive impingement or entrainment. This could be in terms of number of the fish entrained per day or other easily gauged metric. Water users could then estimate the potential harm caused by a poorly engineered design.

5. EPA should make available detailed water intake designs that minimize impingement or entrainment and are easy to clean. There is a strong incentive for the water users to use designs that minimize daily or periodic maintenance. Being friendly to the environment is an added benefit.

Countrymark appreciates the opportunity to comment on this proposed. Please contact me (horning@countrymark.com or 812-838-8133) if you have any questions or comments.

Sincerely,

Donald M. Horning, REHS
Regulatory Compliance Manager

Appendix C, part C.7: Comment from Dover Light & Power

DOVER MUNICIPAL LIGHT PLANT
303 EAST BROADWAY
DOVER, OH 44622-1914
PHONE 330-343-3442
FAX 330-343-4626

Comments Regarding 316 (B) Phase III Regulations and Small Municipal Utility Concerns in anticipation of the EPA SBREFA Panel

The City of Dover is a community of 13,000 located in Tuscarawas County in East Central Ohio. Dover is one of more than 2000 municipally owned public power electric utilities. Dover Light Plant currently has 21 total employees. Dover Light & Power is one of many public power systems that provide free electric service to all city owned facilities including street and traffic lights. This service contributes approximately $750,000.00 annually to the City of Dover. Some public power systems contribute directly to their cities' general fund budgets, payment in lieu of taxes, in amounts near the City of Dover's contributed electric service. The average household income in Dover is $36,665. According to the latest census figures about 9.2% of the individuals in Dover live below the poverty line. Dover serves 6541 customers, 5579 residential, 856 commercial and 106 industrial. We are located in American Electric Power's Ohio Power service area which is our local competition. We have maintained a competitive rate structure with the local investor owned utility. We feel our rates along with our local presence have helped maintain the local economy. An economic impact study done on our electric system indicates Dover Light Plant contributes between $4,500,000.00 and $5,500,000.00 to the local economy according to a recent study by Ohio University. The study also indicated the personal income effect ranges at between $1,000,000.00 and $1,500,000.00 for the current full time employees. The study also indicated 20 to 60 additional area and regional jobs created by the operation of the plant.

More than 90% of these of these public power systems serve communities of less than 50,000 population and more than 95% have fewer than 20 employees. Dover passed an ordinance in 1898 to begin their own Electric Utility Dover and is one of about 500 public power systems that own generation and operate units of 50 Megawatts or less. The generating plant was built in the early 1900's and has been in continuous operation since that time at the current location of 303 East Broadway, Dover, Ohio adjacent to the Tuscarawas River.

Dover currently operates a coal/steam generating unit with a nameplate of 18.5 MW, a natural gas combustion turbine generator with a nameplate of 15.5 MW and an internal combustion generating unit with a nameplate of 2.5 MW.

The 18.5 MW unit is the once through cooled unit that uses Tuscarawas River water for the condenser. The cooling water intake structure was originally constructed in 1933 and was designed for a maximum intake of 12,000 GPM. Currently located within the cooling water

intake structure are three 6000 gallons per minute (GPM) pumps. The intake structure restricts our intake to a maximum of two pumps in operation at any time. Sometimes we operate with one pump and supplement the cooling water with well water from wells on power plant property. The maximum flow rate of 12,000 GPM capability of the intake results in 17.28 million gallons per day (MGD) maximum flow. The base flow for the river is 1392 cubic feet per second or 900 MGD. The rate is high due to the large drainage area and large amount of water impounded by four flood control dams in the drainage area. This means that Dover Light Plant uses 1.92% of the river's base flow. The cooling water intake is positioned along the riverbank with sheet piling driven in front of the intake to prevent any large debris from entering the intake screen area. This piling extends out from the shore upstream of the intakes and forms a channel about 80 feet long. Water must run down stream and then back up through the channel before entering the intake area. This piling in front of the intake acts as a diversion structure that uses the river current to carry organisms downstream to avoid entrapment. Water is drawn through two 5' 6" high x 4' 8" wide openings in the intake structure. These two area are covered with bar screens made of 3/8" x 2 ½" bars spaced 2 ½" on center. After the bar screen openings the water then passes through two traveling water screens with 3/8" mesh. This results in an average water velocity of approximately 1.5 feet per second.

In 1989 as part of Dover's NPDES Permitting process, we performed a fish kill study. The study was done between October 1988 and April 1989 in two phases. Phase one was done from October 1, 1988 thru January 5, 1989 and the second was January 12, 1989 thru March 30, 1989. The study was done to collect all fish impinged on the traveling screen over a 24 hour period every 4 days for the two three month periods. The great preponderance of fish impinged during the study (85%) were Gizzard Shad of 1 ounce or smaller. Total impinged Gizzard Shad were 156 fish. Of the 156 count, 60 were trapped on the screens on only two days when the river froze over, January 1, 1989 and January 5, 1989. I believe this is a very small impact on the fish population of the Tuscarawas River. Studies have indicated that Gizzard Shad do not have the ability to withstand the cold temperatures of near freezing water. These temperatures cause the fish to become lethargic and in many cases die as a natural cause. Another problem that we experience annually is vegetation being impinged in our CWIS. This occurs primarily during late summer and fall. As lawn clipping and leaves migrate into the Tuscarawas River we must maintain a continuous watch to keep the intake clear.

If we were to install a fish handling system on our rotating screens they would be required to run continuously. Since these screens were installed in 1933 I believe the mechanical wear and tear would increase dramatically. This would also require more frequent rebuilds of the traveling screens. The run time would be about 5 times more than current operation modes increasing plant maintenance costs. In addition we would have to increase staffing levels to allow current personnel to perform the duties now required by plant operations. It doesn't appear the estimates would include these type additional costs. Each additional employee required to operate the plant would add about $60,000.00 per year in wages and benefits. It doesn't appear these additional costs were factored into the calculations. Even without these additional cost numbers it would appear that the percentage increase is several times higher than the estimated 0.1% to 0.2% in the Cost Impact Analysis of the 316 (B) Phase II.

Using the information and formulas provided in the "Background Information for Potential Small-Entity Representatives", the cost of compliance to Dover Light Plant would be $112,612.17 in Capital Cost, $15,346.15 Annual O&M and $58,198.00 for Information Collection Request. To a small system with a very limited customer base this would have a substantial economic impact on Dover. The $112,612.17 represents about 7500 man-hours. While the Annual O&M costs listed in the EPA materials may only be $58,198.00 that represents an additional 3800 man-hours. These figures also do not appear to include additional personnel that may be required to operate the new system.

In addition to the capital, O&M, and ICR costs, we anticipate that EPA will require two years of verification monitoring for Phase III facilities, just as it has proposed for Phase II facilities. See Proposed 40 C.F.R. § 125.95 (b)(7). The costs of verification monitoring will be inordinately burdensome on small municipal utilities. EPA estimated the annual costs (in 2001 dollars) of Phase II verification monitoring as follows:

	Freshwater	Marine
Impingement	$16,985	$21,623
Entrainment	$37,369	$46,044
TOTAL	$54,354	$67,667

Source: EPA's Information Collection Request for the Phase II Existing Facility Rule (DCN: 4-0001), Table 8.

There is no basis for assuming that verification monitoring for Phase III will be any less extensive than what is required for Phase II, and therefore the costs for Phase III should be comparable to what EPA has estimated for Phase II. In addition to these costs, we will need to commit resources to planning for the monitoring and providing oversight to the contractor who will perform the monitoring. Using cost figures outlined in the paragraph above, the total freshwater compliance monitoring cost of $54,354.00 would represents almost 3600 man-hours.

For small intakes, these types of expenses cannot be justified by the potential benefits to the environment. The value of fish saved by the improved intake technologies undoubtedly will be much less than the expenses incurred by the utility.

The SBREFA Panel Support for Cooling Water Phase III Regulations under Section 3126 (B) of the Clean Water Act, Final Report has a Cost Benefit Comparison of various regulatory options. All the options listed indicate a negative cost benefit ratio for all CWIS (cooling water intake structure) with a DIF (design intake flow) for 20 MGD or less. These negative cost benefit ratios range from $0.37 benefit for every dollar spent for compliance cost for 2 to10 MGD intakes to about $0.72 benefit for every dollar spent for 10 to 20 MGD intake structures. I think with the added economic impact and negative cost benefit ratios require careful consideration prior to added regulation on a system that currently has very minor impact on the fish population in the Tuscarawas River.

David G. Borland, Superintendent
Dover Light & Power
Generating Plant

Appendix C, part C.8: Comment from Port Townsend Paper Corporation

February 6, 2004

Port Townsend Paper Corporation Preliminary Comments on EPA Approach to Cooling Water Intake Structure Phase III Rulemaking

Dear Mr. Fox:

Port Townsend Paper is pleased to submit these comments on EPA's proposed approach to Phase III of the Cooling Water Intake Structure (CWIS) rulemaking under Section 316(b) of the Clean Water Act. I have consulted with Meg McCarthy of the American Forest & Paper Association in the preparation of these comments, as she attended the outreach meeting EPA held last month. While I am writing these comments from the perspective of a small business, the alternatives proposed within these comments could be applied more generally to all Phase III facilities since, on the whole, these facilities' cooling water intake structures have not been identified as causing adverse environmental impacts.

As a small business, Port Townsend Paper is concerned about the potential costs and burdens that may be imposed by the Phase III rulemaking. Port Townsend Paper, like many small paper manufacturers, currently is facing significant economic challenges. The recent economic slump and shifting markets resulted in the closure of our two bag plants and the loss of over 200 jobs. In addition, the weak global economy has limited sales overseas. While there has been an upturn in the global and domestic markets recently, we still have not seen a significant improvement in our businesses. Capital expenditure has been restricted and further downsizing of our remaining personnel has occurred. Our limited resources must be spent wisely to insure our continued existence. Any additional costs will only exacerbate that economic challenge. For example, the initial capital cost of retrofitting a facility with an intake technology plus the compliance costs of annual monitoring and reporting, as estimated by the EPA, would pose a substantial financial burden on small businesses such as Port Townsend Paper.

Additionally, according to the Small Business Administration's analysis of the benefits and costs of some of the regulatory alternatives for the Phase III rulemaking, the permitting, monitoring and reporting costs were considerably greater than the capital costs and operating costs of the technologies used to minimize environmental impact. SBA also indicates that the cost-benefit ratio for the rulemaking would improve if regulatory alternatives were adopted that deregulate smaller facilities, eliminating cumbersome regulations on small entities that provide few environmental benefits per dollar invested.

Our comments are premised on the notion that despite decades of operation, the cooling water intake structures operated by Port Townsend Paper and other Phase III facilities are not thought to present an adverse environmental impact to the aquatic resources located near those intakes.

Port Townsend Paper would support the following regulatory approaches for the Phase III rulemaking that take this into account.

1. EPA should consider not applying comprehensive national regulations to all Phase III facilities. There are several alternatives that EPA could utilize to determine which facilities would be regulated. Options include:

A EPA should focus the Phase III rulemaking only on facilities with a reasonable likelihood of causing adverse environmental impact (AEI) through cooling water withdrawals. As an initial matter, EPA should establish one or more applicability thresholds and exempt from the scope of the rulemaking, facilities that do not fall within those thresholds. The authority to seek additional studies or impose additional requirements should be appropriately limited. Stakeholders have suggested various de minimis applicability thresholds ranging from 10-250 MGD. For example, SBA suggests that facilities withdrawing less than 20 million gallons per day (MGD) should be outside the scope of the rulemaking, absent some unusual site-specific factor that would cause a permit writer to seek additional study or impose additional requirements. Further investigation into the costs and benefits of each of the various threshold levels should be conducted.

A Additionally, if EPA uses the amount of water withdrawal as an applicability criterion, Port Townsend Paper suggests that EPA base that criterion on actual intake flow, as opposed to the design intake flow. Many manufacturers, including small businesses, are already functioning with lower intake and discharge volumes as required by their NPDES permits or have a demonstrated track record of lower water withdrawal. By basing the flow threshold on design intake without considering that the actual intake volume may be significantly lower, the EPA is in effect penalizing facilities for conserving water. Port Townsend suggests that the EPA utilize the more reasonable and consistent alternative of basing the flow threshold on past actual intake volume, not on design intake volume.

A Alternatively, EPA should exclude all Phase III facilities from regulation except in those cases where the permit writer determines that based on available scientific data a CWIS has resulted in an adverse environmental impact. For those facilities the permit writer should use best professional judgment to include in the facility's NPDES permit provisions for the application of best technology available or equivalent (see below) to minimize that impact.

2. Port Townsend Paper would support alternative regulatory approaches for those facilities that fall within the scope of the Phase III rulemaking in order to lessen the effect of the rule on small businesses.

A Best technology available for minimizing adverse environmental impact could be defined by EPA as a designated suite of technologies for facilities that fall within the scope of the rulemaking in order to reduce the economic burden posed by the considerable permitting, monitoring and reporting costs. Plants that agree to install an approved technology would be considered to be in compliance with Section 316(b) and not be subject to extensive monitoring costs and burdensome reporting requirements.

- EPA should consider regulating only impingement (not entrainment) at plants in appropriate circumstances. EPRI has produced a report that shows that in many instances a significant water withdrawal and healthy fish populations can co-exist, so the risks of dropping entrainment controls for plants in this category are likely to be small while cost savings would be significant.

- EPA should consider identifying industrial subcategories that could be adversely affected by the Phase III rulemaking and reducing the rulemaking's economic burden for these subcategories.

Thank you for the opportunity to participate in the SBREFA process and to comment on the development of regulations to establish requirements for Cooling Water Intake Structures at Section 316(b) Phase III Facilities. Please feel free to contact me at (360)379-2112 if you have any questions about these comments.

Sincerely,

Eveleen Muehlethaler
Vice President, Asst. Mill Manager
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Appendix C, part C.9: Comment from Richmond Power & Light

February 5, 2004

Richmond Power & Light
2000 U.S. 27 South
Richmond, Indiana 47374

Comments on the 316 (b) Phase III Rule Development

Dear EPA,

Thank you for the opportunity to comment on the proposed rule.

Richmond Power & Light is located in Wayne County Indiana. Population is approximately 39,000. The Utility employees one hundred and forty people. The Municipal has been generating electricity for over one hundred years. Richmond has a strong, consistent industrial base consisting of mostly small to medium sized industrial plants.

The utility owns and operates 2 pulverized coal units. Unit one, a 33-megawatt unit and unit 2, a 60-megawatt unit. Each unit has its own dedicated cooling tower. River water is drawn from the east fork of the Whitewater River. Daily makeup flow is approximately one million gallons per day. We have no NPDES permit.

Small entities like Richmond are very concerned with any new proposed rule.

Some concerns are:

Small entities have no environmental department.

All work would be performed by outside contractors.

Reliability could be affected.

Economic burden could be significant.

Studies alone would be expensive.

Ratepayers could possibility see increases.

Additional staff may need to be added.

Cost summaries contained in the “Background Information For Small Entity Representatives” indicate compliance cost of a 2MGD in example one are $46,943 for capital costs, $5249 for O&M and $58198 for ICR. These alone are significant for small communities and utilities.

Thank you for this opportunity to comment on this rule making. If you have any questions or need further information, please call.

Appendix C, part C.10: Comment from City of Iola Power Plant

Note: This comment resulted from the October 1, 2002 outreach meeting conducted the first time this proposed rule was preparing for a Panel.

City of Iola Power Plant (Iola, Kansas)

This comment was sent via email.

> Steve Robb <powerplt@iolaks.com> 10/23/02 02:04 PM
> To: Deborah Nagle/DC/USEPA/US@EPA
> Subject: EPA316b

The City of Iola Power Plant was started in 1900. The power plant has used river water from the Neosho river for cooling systems since the very start as we do today. The river water (surface water) is used in a once thru pass for cooling steam condensers, then returned to the river. From 1900 to 1962 the power plant operated 24 hours per day 7 days per week 365 days per year. From 1962 to present the power plant only operates 3 to 4 months per year during peak seasons. In 1995 the power plant installed a new traveling screen with 3/8" square woven mesh wire screens. We use a bar rack in front of the intake structure and a solid barrier at water level to keep floating derbies out of our traveling screens. We have had no problem with fish or other river life being trapped in our intake screens. To reduce the size of our screens would make it impossible for us to operate our system. Tree leaves, sticks and mud during high water plug our screens reasonably quick. The steam equipment we are using are 3 megawatt and 5 megawatt condensing steam turbines. Total daily flow can go from 6 MGD to 24 MGD depending on day to day operations.

Thanks Steve Robb Power Plant Superintendent.
[Iola Electric Department, Iola, KS]

Appendix C, part C.11: Comment from the National Rural Electric Cooperative Association (NRECA)

Note: This comment resulted from the October 1, 2002 outreach meeting conducted the first time this proposed rule was preparing for a Panel. At that time, EPA had identified one potential SER affiliated with NRECA. That entity was acquired by a large entity.

NRECA
Preliminary Comments
Section 316(b) Regulations -- Phase III

Comments on Preliminary EPA Phase III Material

EPA has not established the precision of their cost estimates. Because the large number of site specific factors likely to affect costs are not included, the accuracy of the cost estimates are highly uncertain. As a result, EPA's ability to predict the actual costs for retrofitting intake technologies at existing facilities is in doubt.

Alternative Regulatory Approach

Risk Management Approach -- To the greatest extent practicable, the rules should reflect the principles of risk management. The rules should minimize transaction costs like costs for preparing permit applications and performing baseline biological studies. EPA should attempt to identify low-risk facilities and instances where risks to certain sectors of the environment are minimal.

Plants With Closed Cycle Recirculating Cooling -- should be exempt from the rule.

Flow Threshold -- EPA should consider exempting cooling water intakes with an average flow of 50 MGD or less from the rule.

Impingement Only -- EPA should consider regulating only impingement (not entrainment) at cooling water intakes with flows below 100 MGD. EPRI[12] has produced a report that shows that in many instances a significant water withdrawal and healthy fish populations can co-exist, so the risks of dropping entrainment controls for intakes in this category are likely to be small while cost savings would be significant.

Screening Tool -- EPA should consider developing a screening tool as recommended in UWAG's Phase II comments. In may be possible to identify intakes with low risk of adverse environmental impacts based on a tool that uses a small amount of readily available data.

For Remaining Facilities -- EPA should provide a two track process:

- In the first track, one of the options EPA should consider is an approach that does not rely on particular performance criteria. Rather, EPA would identify a small number of technologies as "best". Plants that

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[12] Electric Power Research Institute. December 2002. Impacts of Water Withdrawals on Fish Populations and Communities. Prepared by Oak Ridge National Laboratories. EPRI TR-100-5178

agree to install technologies on this list would be deemed to be in compliance with 316(b). For intakes with flows below 100 MGD, EPA should consider specifying technologies that address only impingement, not entrainment.

- OR -

- In the second track -- an essential part of this approach -- dischargers, at their option, may perform a cost / benefit analysis and develop a site-specific solution as proposed in Phase II. Restoration is also an option that dischargers would be allowed to consider on this track.