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May 20, 2008

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Re: Comment Letter on the Once-Through Cooling Policy

Dear Ms. Townsend:

Reliant Energy appreciates the opportunity to submit written comments on the State Water Resources Control Board (SWRCB) Preliminary Draft Policy related to the use of Once-Through Cooling (OTC) issued March 21, 2008. Our comments are structured into pertinent subject areas. We urge the SWRCB to reconsider it's intent not to prepare responses to comments received on the preliminary draft policy and Scoping Document.

Reliant Energy wholly-owned subsidiaries own and operate two electric generating stations in California that utilize OTC. These facilities are the Ormond Beach and Mandalay Generating Stations, both located in Oxnard, California in Ventura County. These two facilities provide over 2,000 megawatts of electric generating capacity.

The Baseline Calculation

The two Reliant Energy facilities were originally designed and operated as "base load" plants, operating at high annual capacity utilization rates. The NPDES permits included maximum intake flow volumes corresponding to that level of operation. For a number of years, the plants have operated at progressively lower capacity utilization rates. Thus the levels of impingement and entrainment (I&E) have been significantly reduced. These plants are not expected to operate as base load facilities again.

The facilities have characteristics and utilize measures that further reduce I&E levels. The Ormond Beach plant has an offshore intake, located about 1900 feet offshore. The structure has a velocity cap as well as parallel "jail bars" approximately 9" apart over the intake to exclude large mammals.

The Mandalay plant intake is located at the end of a 2.5 mile long canal that originates at the Oxnard Harbor, which itself has limited direct access to offshore areas. Both facilities minimize the use of circulating water pumps when the units are not generating power which minimizes the impacts to marine life. At some facilities, it may be

necessary to run intake pumps to support other plant needs, such as sanitary systems, equipment cooling and water quality management. An arbitrary 10% flow cap to apply across the board to plant offline periods is not appropriate. Each site should be allowed to manage pump operation as needed and receive compliance credit for any reduced operation.

The Ormond Beach and Mandalay facilities operate only infrequently and are not causing the I&E impacts presumed to be associated with their permitted flow rates. The SWRCB should recognize and credit toward the compliance objectives the reductions in I&E that have already been achieved by means of the plants' operating mode as well as their specific design and operating measures described above that minimize I&E impacts.

Site-specific Feasibility

Over the past 30 years, the Electric Power Research Institute has researched the effectiveness of various structural technologies to minimize I&E levels. There are no feasible and commercially available structural technologies that will achieve the targeted levels of I&E reductions without credit for existing design, operating and restoration measures.

Converting a facility to closed-cycle cooling by the installation of cooling towers is not without significant environmental and societal impacts. Dry cooling systems are significantly more expensive and cause a number of impacts in excess of those caused by wet systems.

Wet cooling towers would require fresh or reclaimed water for makeup. Fresh water supplies are already stressed to critical levels and the consumptive use associated with tower operation would be substantial. Reclaimed water is not available in sufficient volume to serve as cooling tower makeup.

Use of salt water to serve makeup needs would offset I&E reduction gains since the water would likely come through existing OTC intakes. The concentration of constituents in the sea water as it circulates through the towers would result in a wastewater stream that could not meet current discharge standards. The salt water drift from the towers will cause a number of operations and maintenance impacts at the plant and on the electric grid.

Cooling towers can cause a number of significant environmental impacts. Some of these impacts are:

1) visibility and aesthetic impacts
2) increased Particulate Matter emissions, requiring offsets that are unavailable in many locations
3) increased noise levels
4) land consumption
5) impact to adjacent land uses

6) increased Greenhouse Gas and other pollutant emissions since facilities converting to cooling towers will lose efficiency. The lost power production capability will need to be met through increased operation of other fossil fueled plants
7) increased energy costs to consumers

These impacts are too significant to not be thoroughly assessed on a site by site basis and balanced with the reductions in I&E achieved on these low capacity utilization rate units. The land surrounding the Ormond Beach plant is utilized for agricultural operations or is held by the Coastal Conservancy for future enhancement. The Ocean Protection Council study noted that due to the nearby Naval Air Station, any cooling towers at the Ormond Beach site would need to include plume abatement. The study noted that there does not appear to be enough space onsite for such towers and thus the study characterized cooling tower conversion at the site as infeasible.

The Mandalay plant site has very little available space for cooling towers. The land adjacent to the site includes natural sand dunes, agricultural operations, expensive condominium developments and a planned SCE peaking facility.

Significant past and present public opposition to development in Ventura County indicates that any plans to install cooling towers at either of the two Reliant Energy sites will very likely receive public opposition. The ability to successfully permit and install cooling towers at these sites, as well as recover the estimated $265 million of costs on these low capacity utilization facilities, is extremely doubtful.

The requirements in the proposed policy mirror the EPA's proposed requirements for new or expanded facilities, which are not appropriate for existing facilities. Any SWRCB action needs to provide for a site specific, CEQA-level assessment of the complex issues associated with converting the cooling system of an existing OTC facility. Indeed, the NPDES regulations under 40 CFR 125.3(d)(3) provide that States implementing BPJ technology-based decisions must first consider "Non-water quality environmental impact (including energy requirements)." Other factors also listed include the "age of the equipment and facilities employed" and the "cost of achieving such effluent reduction".

It should be recognized that the aquatic environments in the vicinity of each site are quite different and vary over the seasons of the year. It is quite possible that when all of the impacts are assessed, the continued use of OTC, along with current mitigating measures, may well continue to be the environmentally preferable "available" alternative and thereby constitute Best Technology Available (BTA).

Proposed Interim Measures

The draft Scoping Document associated with the proposed policy does not explain or justify why interim measures are necessary and prudent. The goal of the Clean Water Act section 316 (b) is to utilize Best Technology Available to minimize the impacts of

once through cooling systems. The CWA never proposed interim measures in advance of or in addition to installed technologies or operational measures.

The basis for the interim measures appears to be a belief that ecological impacts are of such a nature and extent that some sort of immediate action is needed. Numbers of organisms and pounds of fish impinged and entrained are cited as the basis for the policy. As has already been demonstrated by recent 316(b) studies performed at each site, I&E losses are small fractions of the source water populations. There is no credible research that demonstrates the amounts of I&E at the site operating at such low capacity utilization rates is actually causing significant harm, let alone any impacts that justify the proposed policy provisions.

As mentioned earlier, most plants minimize the use of water pumps in order to control auxiliary power costs, however the SWRCB should not set an arbitrary enforceable level of reduction. Each facility has varied needs requiring the operation of its water pumps.

Installing a 4" mesh screen over offshore intakes would be problematic. A mesh of that size will clog frequently, especially during periods of peak demand. During such periods, it would be necessary to deploy divers continuously to clear the screens to allow the water flow necessary to continue to provide energy. Many facilities have some existing form of exclusion device and the increased risk to personnel and cost of maintenance is not justified by a perceived incremental reduction in aquatic impacts. The Ormond Beach and Mandalay facilities, for example, have no history of causing mortality to marine mammals.

The requirement to implement interim restoration is not justified and is without any specified framework. The State has not accepted restoration as an alternative to technology or operating controls, so it is unclear why the SWRCB now regards restoration as an effective mitigation measure.

The implementation timetable proposed is inadequate to develop and implement restoration projects. The Scoping Document provides no discussion of the criteria that would be applied to the development and maintenance of restoration measures. Once a restoration effort has been implemented, its impact is long term. Using such an expensive and time intensive effort as an "interim" measure is inappropriate. Such resources would be better spent assessing the appropriate response to use of BTA.

Electricity Supply and Grid Reliability

The low capacity utilization rates of the Reliant Energy OTC plants by no means indicate these facilities are not essential to electric power supply and grid reliability. The units provide necessary reserve capacity, crucial energy during periods of peak demand, load following capability, spinning reserve and other valuable services.

The CAISO Old Thermal Generation Phase I Report issued in February, 2008 concluded that if these OTC plants were retired by 2012, the risk of involuntary load shedding by

rolling blackouts could increase by a factor of four. The study also concluded that power plants with the capabilities of the Ormond Beach and Mandalay plants are "crucial to the reliable integration of intermittent renewable generation".

In developing the proposed policy, the staff relied upon a grid reliability study prepared for the Ocean Protection Council. The authors of that study noted in the report that "...the modeling effort...was limited in scope, capable of only taking a snapshot of the big picture". The report went on to state that "Ideally, the modeling effort would have been expanded to thousands of runs examining **each OTC plant in great detail"** [emphasis added].

Facility owners, working with the CAISO, should be determining when it is safe and appropriate to retire generating capacity in order to maintain reliable energy supplies and grid stability.

A SWRCB policy should not specify what in all likelihood amounts to a mandated facility retirement date. The SWRCB might identify compliance goals that reflect the need to maintain grid reliability and support the California electricity markets.

Policy Timing

Over the past 30 years, States have managed CWA 316(b) requirements using Best Professional Judgment (BPJ). The CWA 316(b) is intended to promote the use of BTA, based upon a balanced assessment of all of the environmental consequences. It is not intended as a ban on the use of OTC. We concur though that it is appropriate and effective for the SWRCB to provide the Regional Boards with guidance on the implementation of BPJ at this time in order to address CWA 316(b) in NPDES permits. In point of fact, the Office of Chief Counsel has provided the SWRCB with its expert legal opinion on the application of BPJ under 316(b) already (see attached 6/11/2003 memorandum). The Office of Chief Counsel's legal assessment is consistent with most, if not all, of our comments offered herein and we are unaware of any contradicting subsequent legal analysis by that office.

It is premature and imprudent for the SWRCB to adopt a policy with enforceable provisions and compliance dates while a number of relevant efforts are ongoing. These efforts include:

1) the CAISO is conducting a detailed analysis of grid reliability relative to the retirement of the older generating units, including the OTC plants,
2) the Supreme Court has taken up the issue of how costs are factored into compliance with CWA 316(b),
3) the EPA is developing a revised rule,
4) the State of California is developing significant changes to its electric market structure.

Adopting a policy that could result in an increase in Greenhouse Gas emissions, an increase in the consumption of stressed fresh water supplies or push the State ever closer to electric system blackouts is not a responsible approach to environmental management.

Recommendations

Reliant Energy strongly urges the SWRCB to:

1) withhold adopting a policy with enforceable provisions and mandated compliance dates until the full ramifications of such an action have been thoroughly evaluated,
2) utilize Best Professional Judgment guidance to the Regional Boards and OTC plant owners,
3) allow for a site-specific, balanced assessment on any implementation of CWA 316(b) requirements,
4) credit facilities with the significant I&E reductions already achieved by virtue of their greatly reduced capacity utilization rates and design and operating features and
5) utilize the Interagency Task Force, the Expert Review Panel, the EPA and facility owners/operators to determine the responsible implementation of CWA 316(b) before adopting an enforceable policy.

We appreciate the opportunity to provide comments. If there are any questions, please call me at (702) 407-4884.

Sincerely,

Robert W. Lawhn

Robert W. Lawhn
Director – Environmental Compliance and Las Vegas Services

Attachment

Winston H. Hickox
Secretary for Environmental Protection

State Water Resources Control Board

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Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at www.swrcb.ca.gov.

TO: Central Coast RWQCB Members

FROM: Jennifer S. Soloway
Senior Staff Counsel
OFFICE OF CHIEF COUNSEL

DATE: June 11, 2003

SUBJECT: LEGAL ANALYSIS OF CLEAN WATER ACT SECTION 316(b); HEARING ON NPDES PERMIT FOR DIABLO CANYON POWER PLANT, PACIFIC GAS & ELECTRIC COMPANY (PG&E)

I am submitting this memorandum to the Board in my role as the Board's legal advisor. The purpose of this memorandum is to provide guidance to the Board on applicable law. This is not testimony.

SUMMARY OF CONCLUSIONS

- This memo only addresses legal issues pertaining to application of Clean Water Act section 316(b).
- Because of sketchy legal authority interpreting section 316(b), the Board must exercise its best professional judgment to reach a reasonable conclusion based on site-specific conditions.
- There are four basic steps in a Best Technology Available analysis:
    1. whether the facility's cooling water intake structure may result in adverse environmental impact;
    2. if so, what alternative technologies involving location, design, construction, and capacity of the cooling water intake structure can minimize adverse environmental impact;
    3. whether alternate technologies are available to minimize the adverse environmental impacts; and

4. whether the costs of available technologies are wholly disproportionate to the environmental benefits conferred by such measures.

DETAILED ANALYSIS

The following is a detailed analysis of the legal issues that apply to this hearing. Because of the lack of regulations or comprehensive legal authority the appropriate standards must be pieced together from a variety of references.

ISSUES

Issue No. 1. What legal guidance is there to help the Board interpret Clean Water Act section 316(b)?

Issue No. 2. What standards should the Board apply when considering alternative technologies to minimize environmental adverse environmental effects?

Issue No. 3. What issues should the Board consider when considering whether a technology is available?

Issue No. 4. How should the Board apply the "wholly disproportionate cost" analysis when considering Best Technology Available?

CONCLUSIONS TO NUMBERED ISSUES

Conclusion to Issue No. 1

There are no EPA regulations that apply to the Diablo Canyon Power Plant. To ascertain the applicable standards for a BTA determination requires assembling a mosaic of EPA administrative decisions, opinions and guidance and court cases. Also, the Board should refer to recent EPA regulations applying section 316(b) to new facilities and accompanying commentary in the Federal Register to understand EPA's most current thoughts on section 316(b). However, the new regulations do not apply to Diablo Canyon Power Plant and the materials in the federal register are not binding. Finally, these resources do not cover all the issues that must be addressed in making a BTA determination. Ultimately the Board must exercise best professional judgment to reach a reasonable conclusion based on site-specific conditions.

Note that in April 2002, EPA issued draft regulations to implement 316(b) at existing facilities. When adopted, these regulations will apply to Diablo Canyon Power Plant. Review of these draft regulations and commentary in the federal register will assist the BTA determination. EPA is required by a Consent Decree to issue final regulations by February 2004. Renewal of the Plant's NPDES permit, scheduled for 2008, will be governed by those regulations.

Conclusion to Issue No. 2.

- Adverse environmental impacts occur whenever there will be entrainment or impingement damage as a result of the operation of a specific cooling water intake structure.

- Minimize does not mean to completely eliminate adverse impacts. New regulations define minimize to mean to reduce to the smallest amount, extent, or degree reasonably possible. EPA also views increases in fish and shellfish as an acceptable alternative to reduction in entrainment.

- Section 316(b) requires the location, design, construction, and capacity of a cooling water intake structures reflect the best technology available for minimizing adverse environmental impacts.

- Although closed-cycle cooling systems are not cooling water intake structures they can be required indirectly by limiting the capacity of the intake by restricting the volume of water flow.

Conclusion to Issue No. 3.

- The Board may find a technology is not available if implementing it at the site would violate federal, state, or local laws administered by other agencies.

- The Regional Board has a responsibility to avoid or require abatement of conditions of nuisance as defined in Water Code section 13050. (Wat. Code §§.13263, 13304.) The Board could reject a technology that would cause a condition of nuisance.

- The Board could find a technology to be unavailable because it is technologically infeasible.

- The Board could find a technology to be so experimental that it is not available.

- The New Plant Final Regulations find that cooling towers are BTA on a national basis and mandate flow and velocity limits based on performance of cooling towers. However, the regulations provide that a discharger can get an exemption from the cooling-tower-based limitations if based on site-specific evidence, there will be significant adverse impacts on air-quality, water resources, or local energy markets.

- There may be other reasons, not listed here, to find a technology is not available.

Conclusion to Issue No. 4.

For over 25 years EPA has applied the wholly disproportionate cost test to BTA determinations. A technology may not be considered BTA if the cost of a technology is wholly disproportionate to the environmental benefit to be gained. EPA has not applied this test in a consistent manner. The methods for determining benefit and costs vary from case to case.

ANALYSIS

Issue No. 1. What legal guidance is there to help the Board interpret Clean Water Act section 316(b)?

Discussion of Issue No. 1.

Clean Water Act section 316(b). (33 U.S.C. § 1326(b).) Section 316(b) states:

> "Any standard established pursuant to section 1311 of this title or section 1316 of this title and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact."

The term best technology available as used in section 316(b) is usually referred to as BTA.

Clean Water Act Section 316(b) became law in 1973. In 1976, EPA adopted regulations interpreting section 316(b) but they were remanded by the Fourth Circuit Court of Appeals on procedural grounds. (*Appalachian Power Co., et al v. Train* (4th Cir. 1977) 566 F. 2d 451.) EPA did not act on the remand for nearly 25 years. In the meantime, EPA, California, and other states issuing NPDES permits have applied section 316(b) on a case-by-case basis.

After environmentalists filed suit to compel EPA to adopt 316(b) regulations, EPA signed a Consent Decree providing a time-schedule to adopt the regulations in three phases. In August 2000, EPA issued draft 316(b) regulations for new facilities. (65 Fed. Reg. 49060, "New Plant Proposed Regulations") and in December 2001, EPA issued final 316(b) regulations for new facilities. (66 Fed. Reg. 65256, "New Plant Final Regulations.")

The New Plant Final Regulations do not apply to Diablo Canyon Power Plant because the Plant does not fall within the definition of "new facility" in the regulations.

EPA issued phase two draft 316(b) regulations for existing power plants in April 2002. (67 Fed. Reg. 17122, "Existing Plant Draft Regulations.") When EPA adopts final regulations, these will govern the cooling water intake system at Diablo Canyon Power Plant. EPA is scheduled to adopt final regulations in February 2004.

Until applicable final regulations are adopted, the preamble to the Existing Plant Draft Regulations provides that permit issuers should not use the proposed regulations as a guidance for BTA determinations but,

> "Until the Agency promulgates final regulations based on today's proposal, Directors should continue to make section 316(b) determinations with respect to existing facilities, which may be more or less stringent than today's proposal on a case-by-case basis applying best professional judgment." (67 Fed. Reg. 17125, col. 1.)

Thus there are no regulations in place to direct the Board's BTA analysis. There are some legal opinions issued in the 1970's by the EPA Administrator and by the EPA General Counsel that interpret the law and provide some precedent and there is one federal court opinion on point. Otherwise, the Board must rely on non-binding guidance from EPA and their consultants. The preamble to the Existing Plant Draft Regulations states permitting authorities should use existing guidance and information to form their best professional judgment. "EPA's draft *Guidance for Evaluating the Adverse Impact of Cooling Water Intake Structures on the Aquatic Environment; Section 316(b)* (May 1, 1977) (1977 Draft Guidance) continues to be applicable for existing facilities pending EPA's issuance of final regulations on 316(b)." (67 Fed. Reg. 17125, col. 1.)

Because the 1977 Draft Guidance and other EPA legal opinions are about 25 years old, the preambles to the New Plant Final Regulations and Existing Plant Draft Regulations, found in the Federal Register, offer valuable insight into recent EPA interpretations of section 316(b). Also, to assist in preparation of the regulations, EPA contracted with Science Applications International Corporation (SAIC) to review the legislative, regulatory, and legal history of 316(b). SAIC's report provides a useful summary and organization of this history and so is one of the documents submitted into the Regional Board record with this memorandum. The report is entitled: *"Preliminary Regulatory Development Section 316(b) of the Clean Water Act, Background Paper Number 1: Legislative, Regulatory, and Legal History of Section 316(b) and Information on Federal and State Implementation of Cooling Water Intake Structure Technology Requirements"* (April 1994).

The bottom line is that ascertaining the applicable standards for a BTA determination at an existing power plant, requires assembling a mosaic of EPA administrative decisions, opinions and guidance, and court cases. Also, some reference should be made to the recent EPA regulations and proposed regulations and accompanying commentary in the Federal Register for guidance on EPA's most current thoughts on section 316(b). Finally, these resources do not cover all the issues that must be addressed in making a BTA determination. Ultimately the Board must exercise best professional judgment to reach a reasonable conclusion based on site-specific conditions.

Issue No. 2. What standards should the Board apply when considering alternative technologies to minimize adverse environmental effects?

Discussion Of Issue No. 2.

Section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impacts. So review of technology focuses on modification of the location design, construction, and capacity of the intake structure. Alternatives presented by staff will focus on these four options.

In the 1970's EPA was asked whether a closed-cycle cooling system (e.g., cooling towers) could be required in an NPDES Permit under section 316(b). EPA's General Counsel concluded that cooling towers were not intake structures and could not be mandated. However, the General Counsel concluded that capacity of a cooling water intake could be affected by limiting the volume of water it could take in because limiting flow volume reduced entrainment and impingement. The plant operator would likely choose to install cooling towers in order to comply with the flow limits. Thus cooling towers and other closed-cycle cooling technologies may be considered by the Board when reviewing alternative technologies. (EPA, Office of General Counsel, Opinion #41 (June 1, 1976) pp. 3-6.)

Section 316(b) requires the technology to "minimize adverse environmental impact." What does "adverse environmental impact" mean? What is the meaning of "minimize?"

The 1977 Draft Guidance states that: "Adverse environmental impacts occur whenever there will be entrainment or impingement damage as a result of the operation of a specific cooling water intake structure." (1977 Draft Guidance, p. 15.) EPA's recent final and proposed regulations do not contain a definition of "adverse environmental impacts." The preamble to the Existing Plant Draft Regulations directs the Board to rely on the 1977 Draft Guidance. (67 Fed. Reg.17125, col.1.) Responses to comments in the preamble to the New Plant Final Regulations indicate that EPA favors a definition similar to that in the 1977 Draft Guidance, which is "recurring and nontrivial impingement and entrainment." (66 Fed. Reg. 65292, cols.1 and 2.)

Minimizing adverse environmental impacts does not necessarily mean eliminating them. The 1977 Draft Guidance states: "Regulatory agencies should clearly recognize that some level of intake damage can be acceptable if that damage represents a minimization of environmental impact." (1977 Draft Guidance, p. 3.) The New Plant Final Regulations define "minimize" to mean "to reduce to the smallest amount, extent, or degree reasonably possible." (Emphasis added. 40 C.F.R. § 125.83.) This definition includes a "reasonableness" component. The preambles to both the New Plant Final Regulations and the Existing Plant Draft Regulations note that minimizing adverse effects does not mean complete elimination of adverse environmental effects (66 Fed. Reg. 65282, col. 3; 67 Fed. Reg. 17168, col. 2.).

EPA's interpretation of "minimize" is further clarified in the New Plant Final Regulations, which authorize use of alternatives to cooling towers. These regulations permit the use of restoration projects as an alternative to cooling towers if the discharger makes "a showing that the impacts to fish and shellfish, including important forage and predator species, within the watershed will be comparable to those which would result if you were to implement (cooling towers). This showing may include impacts other than impingement mortality and entrainment including measures that will result in increases in fish and shellfish, but it must demonstrate comparable performance for species that the Director ". . . identifies as species of concern." (40 C.F.R. § 125.84(d).) While this regulation does not apply to Diablo Canyon Power Plant, it indicates that EPA views increases in fish and shellfish as an acceptable alternative to reduction in entrainment.

As will be discussed below, the duty to minimize environmental effects is subject to some economic considerations. (EPA, Office of General Counsel, Opinion No. 63 (July 29, 1977), p. 8).

Issue No. 3. What issues should the Board consider when considering whether a technology is available?

Discussion of Issue No. 3.

A determination on whether a technology is "available" could be made on any number of grounds. The full universe of considerations cannot be predicted and set forth here. The 1977 Draft Guidance states:

> "It is accepted that closed cycle cooling is not necessarily the best technology available, despite the dramatic reduction in rates of water used. The appropriate technology is best determined after careful evaluation of the specific aspects at each site." (1977 Draft Guidance, p. 12.)

The Board need not find a technology is impossible to implement to find it is not available. There are numerous possible reasons for finding a technology is not available.

Some of the considerations are:

The Board may find a technology is not available if implementing it at the site would violate federal, state or local laws administered by other agencies. Water Code section 13002 specifies that no action by the Board limit the power of another government agency to provide additional regulation on activities that might degrade water quality. Additionally, absent some pre-emptive authority, the Regional Board's Orders do not override other legal authorities.

The Regional Board has a responsibility to avoid or require abatement of conditions of nuisance as defined in Water Code section 13050. (Wat. Code §§ 13263, 13304.) A condition of nuisance, within the meaning of the Water Code occurs "during, or as a result of, the treatment or disposal of wastes." Disposal of wastes refers to discharges of waste to surface water, ground water or land. A condition of nuisance

> "(1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyments of life or property.
>
> (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal."

The nuisance is not limited to the discharge of waste itself although it must be associated with a discharge of waste. Common examples of nuisance covered by section 13050 are odors associated with waste water treatment plants or vectors associated with land disposal facilities. The crude oil soil plumes at Avila Beach we deemed a condition of nuisance because their presence prevented landowners from financing improvements on their land.

Because all cooling systems involve some discharge of waste, e.g., heated cooling water or blow-down, it is possible that operation of some alternatives might cause a condition of nuisance, in violation of the Water Code.

The Board could find a technology to be unavailable because it is technologically infeasible. In some cases, technical infeasibility may be unquestionable, a certain technology might just not be possible. For example, cooling towers using fresh water at Diablo Canyon are not technically feasible because there is not a sufficient supply of fresh water in the area. In other circumstances the Board may have to consider expert opinions and other evidence, which may conflict each other, when determining technical feasibility.

The Board could find a technology to be so experimental that it is not available. One example might be the aquatic filter barrier. This technology has been used with some success in a river on the east coast. There are no studies showing it would work or last in a marine environment. There might also be other site-specific problems that would have to be solved to make it possible to install an aquatic filter barrier. If a technology is experimental there are a number of reasons for finding it is not available. First, there might not be sufficient evidence to show that it would work and thereby minimize adverse impacts of entrainment. Secondly, as a government agency, the Board may not act arbitrarily and capriciously. It may not mandate an individual or company to spend large amounts of money based on speculation that the expenditure might achieve compliance with 316(b). The Board needs substantial evidence that a technology will minimize

adverse impacts of entrainment before it can find that technology to be BTA or part of a suite of technologies constituting BTA.

EPA in the New Plant Final Regulations articulated several non-water quality considerations that should be taken into account before requiring implementation of a technology. The New Plant Final Regulations find that cooling towers are BTA on a national basis and mandate flow and velocity limits based on performance of cooling towers. However, the regulations provide that a discharger can get an exemption from the cooling-tower-based limitations if based on site-specific evidence, there will be significant adverse impacts on air-quality, water resources or local energy markets. (40 C.F.R. § 125.85.) While these regulations are not binding on the Moss Landing permit proceeding, they indicate reasonable grounds for finding a technology is not the Best Technology Available.

Issue No. 4. How should the Board apply the "wholly disproportionate cost" analysis when considering Best Technology Available?

Discussion of Issue No. 4.

EPA interpretations of section 316(b) have consistently implemented a "wholly disproportionate" cost test as established in a 1977 Decision of the Administrator. (*Public Service Company of New Hampshire, et al. Seabrook Station, Units 1 and 2*, (June 10, 1977 Decision of the Administrator) Case No. 76-7, 1977 WL 22370 (E.P.A.) "*Seabrook I.*") In *Seabrook I*, the EPA Administrator ruled that EPA was not required to perform a cost/benefit analyses when applying section 316(b) on a case-by-case basis. However, the Administrator reasoned that cost must be considered otherwise "the effect would be to require cooling towers at every plant that could afford to install them, regardless of whether or not any significant degree of entrainment or entrapment was anticipated." (*Id.* pp. 6-7.) The Administrator ruled "I do not believe it is reasonable to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained." The "wholly disproportionate" test was affirmed by the federal First Circuit Court of Appeals in *Seacoast Anti-Pollution League v. Costle* (1st Cir. 1979) 597 F.2d 306.)[1]

The First Circuit Court clarified the "wholly disproportionate test" was one of incremental cost. The Court stated: "[t]he Administrator decided that moving the intake further offshore might further minimize the entrainment of some plankton, but only slightly, and that the costs would be 'wholly disproportionate to any environmental benefit'." (*Id.* at 311.) The wholly

[1]. *Seabrook I* was appealed and remanded based on some procedural issues. (*Seacoast Anti-Polution League* v. *Costle*, 572 F.2d 872.) On remand, the Administrator cured the procedural flaws and readopted all the findings in *Seabrook I*. (*Public Service Co. of New Hampshire, et al.* v. *Seabrook Station Units 1 and 2* (August 4, 1978 Decision of Administrator,) The Court of Appeal in *Seacoast Anti-Pollution League* v. *Costle*, 597 F.2d 306, cited in text above, affirmed the Administrator's decision on remand.

disproportionate test has been consistently used by EPA when applying section 316(b) since the *Seabrook I* decision. It does not appear in the 1977 Draft Guidance because that document was issued in May 1977 before the *Seabrook I* ruling.

While EPA has consistently used the wholly disproportionate test, there does not seem to be any consistency in how the test is used. In *Seabrook I*, the Administrator considered various construction/design alternatives and the alternative to locate the intake offshore. Concluding that these alternatives would provide minimal environmental benefit, the Administrator rejected them. The First Circuit Court of Appeals affirmed that the cost of the offshore outfall location was wholly disproportionate to this minor additional minimization of entrainment.

When EPA drafted the New Plant Final Rule, it determined that closed-cycle cooling was best technology available for all new facilities but provided for site-based alternatives justified by use of alternative technologies and restoration projects. (66 Fed. Reg. 65314, cols. 2-3; 65315 cols. 1-2.) Nonetheless, the New Plant Final Rule preserves a form of the wholly disproportionate test. It provides that the discharger demonstrates that facility-specific data shows the cost of compliance would be wholly disproportionate with costs considered by EPA when establishing a compliance requirement, a less costly alternative may be permitted. (40 C.F.R. § 125.85(a).)

To provide further information on a variety of decisions I have attached in Excerpts the Record portions of the SAIC Background paper, commissioned by EPA, to review the legislative, regulatory, and legal history of section 316(b). This Background paper is referenced in this memorandum above. They show a lack of consistency in application of the wholly disapportionate cost test.

Attachments