(118)

T. E. LANDRY

AUG 15 1978

July 26, 78

BEFORE THE REGIONAL ADMINISTRATOR

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

IN THE MATTER OF:
Boston Edison Company Pilgrim Nuclear Station Units 1 and 2 National Pollutant Discharge Elimination Systems Permits Nos. MA0003557 and MA0025135

INITIAL DECISION

This initial decision concerns requests for adjudicatory hearings to reconsider two National Pollutant Discharge Elimination System ("NPDES") permit determinations for Units 1 and 2 of the Pilgrim Nuclear Station ("Pilgrim") in Plymouth, Massachusetts. Pilgrim is owned and operated by Boston Edison Company ("BECo"). NPDES permits are provided for in Section 402 of the Clean Water Act, ("the Act"), 33 U.S.C. §1251 et seq. This decision concerns the question of whether a so-called "once-through" or open cycle cooling system is allowable under Section 316 of the Act. I have concluded that it is. Environmental Protection Agency ("EPA") regulations governing the issuance of this decision are found at 40 CFR §125.36.

I. Administrative History

BECo applied for its Unit 1 permit from the U. S. Army Corps of Engineers on June 30, 1971, submitting a revised application on September 30, 1971. Upon passage of the Clean Water Act in 1972, EPA was given authority to

issue NPDES permits for this type of discharge. NPDES permits for dischargers in Massachusetts are issued jointly by EPA and the Massachusetts Division of Water Pollution Control ("MDWPC"). EPA and the MDWPC issued a permit for Unit 1 on March 26, 1975 (EPA-2-1, 23-39).1/ This permit, MA0003557, was based on EPA's Effluent Guidelines and Standards for Steam Electric Power Generating Point Sources, 40 CFR §423.

On April 10, 1975, the Plymouth County Nuclear Information Committee ("PCNIC"), through William S. Abbot, requested an adjudicatory hearing on the permit which request was amended on May 2, 1975 and then granted by EPA on May 23, 1975.

The Unit 1 permit was a study-action permit prohibiting the discharge of heated effluent (except for cooling system blowdown) after July 1, 1981 unless BECo could show through the studies required by the permit that a less stringent thermal standard would be allowable under Section 316 of the Act. In this regard, the permit required submission of annual reports with monitoring data concerning the effects of plant operation (including the thermal plume and intake effects) on the marine community.

On February 15, 1975 BECo submitted its NPDES permit application for Pilgrim 2. BECo submitted a Section 316 Demonstration Document for Pilgrim 1 and 2 in July 1975 as well as other information requested

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1/ Citations designated "EPA", "BECo", "SUR" and "PCNIC" refer to the adjudicatory hearing exhibits.

by EPA. A public hearing was held on December 4, 1975 to discuss the provisions of proposed NPDES Permit No. MA0025135 for Unit 2. At that time the proposed permit prohibited essentially all thermal discharge beginning July 1, 1981. As set forth in the public notice for this hearing EPA was considering what intake structure requirements should be imposed to meet Section 316(b) requirements and whether alternative and less stringent thermal effluent limitations could be imposed under Section 316(a).

On March 11, 1977 John A. S. McGlennon, then Regional Administrator, issued a "Determination Regarding Issuance of Proposed NPDES Permit No. MA0025135" ("Determination", EPA-1) in which he concluded that an NPDES permit should be issued"...for the discharge of pollutants from Pilgrim Unit 2 with thermal effluent limitations which will allow use of a once-through cooling system at the proposed facility." He further found that all requirements of Section 316 of the Act would be met by the issuance of the permit. At the same time EPA and the MDWPC issued the permit for Unit 2 which allows once-through cooling (EPA-2-3, 42-57). PCNIC requested an adjudicatory hearing on the permit determination for Unit 2. This request was granted.

EPA and the MDWPC decided to combine the administrative proceedings to the extent feasible and permissible. On June 10, 1977 EPA ordered the Unit 1 and Unit 2 adjudicatory hearings to be consolidated. In July, 1977 EPA granted intervention motions which had been filed by BECo and Stanley Robinson ("Robinson").

On September 20, 1977, EPA and the MDWPC issued a permit modification for Unit 1 which allowed open cycle cooling for that unit (EPA-2-1, 40-46). The Unit 1 and Unit 2 permits thus both now allow once-through cooling, and it is these two permits which are at issue here.

A joint EPA/MDWPC hearing for the Pilgrim 1 and 2 NPDES permits was held from November 14-17, 1977, with Thomas B. Yost, Administrative Law Judge for EPA and John J. O'Brien, MDWPC, presiding. Following the hearing the Administrative Law Judge referred to the EPA General Counsel one legal issue for resolution. The record, together with proposed findings and conclusions of the parties (BECo, Robinson, PCNIC and the Enforcement Division of Region I ("Enforcement")) was certified to me for an initial decision. The MDWPC will reach a separate decision.

On May 3, 1978, the General Counsel issued a decision on the legal issue which had been referred.

All applicable procedural requirements have been complied with. This decision is based on a review of the evidence and testimony submitted at the adjudicatory hearing and a consideration of the proposed findings and conclusions submitted by the parties.

II. Preliminary Matters

A. Adoption of Portions of Determination

The Determination (EPA-1) to issue NPDES permits for Pilgrim 1 and 2 which would allow once-through cooling was a detailed statement of more than 100 pages explaining the reasons for the Determination.

At the hearing the parties were requested to refer to this Determination, which was entered into the record as EPA-1, in drafting their proposed findings and conclusions which were filed at the close of the hearing. BECo and Enforcement generally complied with these requests; PCNIC and Robinson did not.

As will be discussed in more detail below, neither the written testimony filed by PCNIC and Robinson nor any testimony developed at the hearing nor my review of the record has raised any doubt concerning the correctness of any of the statements in the Determination (EPA-1). Therefore, with the exception of Section I.B. entitled "Administrative History" found at pp. 7-10, the Determination (EPA-1) is hereby adopted and shall be, together with the discussions and conclusions contained herein, the Initial Decision of the Regional Administrator.

B. Scope of the Hearing and Initial Decision.

On November 1, 1977 Enforcement filed a motion to exclude PCNIC from the adjudicatory hearing and a motion to limit the scope of the hearing to certain issues. Briefs were filed and an opportunity for oral argument allowed and on November 11, 1977 the Presiding Officer issued an order allowing PCNIC to remain a party but limiting the issues to be considered at the hearing. Thus, as a result of this order, the issues to be decided in this initial decision are limited to those issues which were raised in the direct testimony of a witness, Buckley (PCNIC-28) appearing for Robinson and PCNIC and the rebuttal testimony of Robinson (SUR-27).

The issues identified by witness Buckley (PCNIC-28) relate to the decline in Irish moss, the thermal kill of plankton, nitrogen gas bubble disease, the "skinny fish syndrome" and entrainment and entrapment problems, all in relation to menhaden, a finfish, and also the adequacy of data concerning population changes in flora and fauna at the Pilgrim site. Robinson's testimony (SUR-27) concerns only the question of whether a statistical analysis of the relationship between the operating history of Pilgrim 1 and Irish moss harvest records is necessary. These issues are discussed below in the context of the proposed findings and conclusions submitted by the parties.

C. Burden of Proof

PCNIC (PCNIC Findings, #1) argues that the burden of proof of making the Section 316 demonstration rests with the applicant, here BECo, and that EPA bears a continuing responsibility to make sure that this burden has been met. This position is correct and is clearly spelled out in the Administrator's decision In the Matter of Public Service Company of New Hampshire, et al. (Seabrook Station, Units 1 and 2), National Pollutant Discharge Elimination System Permit Application No. NH 00230338, Case No. 76-7 at p. 17. It is, however, also clear that individuals requesting an adjudicatory hearing have the burden of going forward with evidence which at least raises some credible question concerning the decision appealed from, as is required by EPA's rules governing this proceeding (40 CFR 125.36(h)(5)(i)(1)). As will be explained PCNIC and Robinson together presented essentially no evidence.

The record in this case and in particular the Determination (EPA-1) demonstrate an energetic and thorough effort by EPA to investigate all issues, including all issues raised by PCNIC and Robinson at the hearing. EPA and BECo have carried their burdens; it is PCNIC and Robinson which have not.

D. New source question. On November 23, 1977 the Presiding Officer, pursuant to 40 CFR §125.36(m), referred the following legal issue to the Office of General Counsel for resolution.

> Is the proposed Pilgrim Unit 2 nuclear power plant a new source as defined in Section 306 of P.L. 92-500?

After the submission of briefs, on May 3, 1978 Joan Z. Bernstein, General Counsel, signed "Decision of the General Counsel on Matters of Law Pursuant to 40 CFR §125.36(m), No. 69" in which she concluded that Pilgrim 2 is not a "new source" within the meaning of §306 of the Act. (See Attachment A) Pursuant to 40 CFR §125.36(m)(4) that decision is final and shall be relied on in this initial decision.

E. Motion to Strike.

Portions of Robinson's proposed findings sought to introduce evidence concerning the application of a method for analyzing the relationship between two sets of data, one of which, Irish moss harvest data, is in the record (BECo-55, Table 6-1), and the other, electrical output at Pilgrim, is publicly available (T.R. 786). On December 27, 1977 Enforcement filed a motion to strike those portions of Robinson's

Proposed Findings. On December 30, 1977, by letter, BECo joined in the motion and also asked that one additional sentence be stricken. In a document received on December 30, 1977 in Region I, Robinson opposed the motion to strike and moved to reopen the hearing. On January 4, 1978 Judge Yost denied the motions to strike stating that they should be addressed to the Regional Administrator. On January 31, 1978 Enforcement, by motion, asked me to rule on the motions.

Robinson had ample opportunity to file direct and rebuttal testimony prior to and at the adjudicatory hearing. He did not avail himself of this opportunity. I agree with Enforcement that the proper time for Robinson to introduce evidence was before or during the hearing when the relevancy, validity and importance of the analysis could have been tested by cross examination. Furthermore, as will be discussed in detail below I have concluded that the evidence sought to be introduced is not necessary. For these reasons, and with particular emphasis on Robinson's failure to avail himself of the agency's full procedures for development of a record, the motions of Enforcement and BECo are granted.

III. Questions of Fact

A. Irish Moss.

The "Additional Proposed Findings of Fact and Conclusions of Law Submitted to Regional Administrator by Stanley Robinson" ("Robinson Findings") concern the question of whether "...Irish moss is adequately protected by the proposed permit." (Robinson Findings, #10A). Robinson maintains that without a statistical analysis of the relationship between Pilgrim 1 operation and Irish moss harvest data one cannot conclude that BECo has demonstrated that Irish moss will be adequately

protected by the once-through cooling system. A large part of the hearing consisted of cross examination by Robinson on this question.

Irish moss is one of two species of algae chosen for inclusion in the "Representative, Important Species" ("RIS") (EPA-1, 23). Irish moss is a subtidal species which is found along the North American coast from Labrador to New Jersey and is commercially harvested for carrageenen, a suspending agent used in the brewing, pharmaceutical and dairy industries. The analysis of impacts on Irish moss is contained in Attachment 5 to the Determination (EPA-1). The analysis predicts that the total impact from all phases of operation of units 1 & 2, including thermal discharge, entrainment and entrapment, would result in approximately four acres of the moss being affected. The prediction is based on observation of the effects of operation of Pilgrim 1 which has resulted in about three acres of moss being either eliminated or stunted as a result of the the thermal discharge. The additional effect of unit 2, a greater volume and thus a larger discharge plume but with less change above ambient water temperatures, is predicted to affect an additional acre. The following statement of particular relevance to Robinson's challenge is made in Attachment 5, p. 2. "Based on 5 years of pre- and post-operational data, it appears that the present harvest rate in the area directly influenced by the Unit 1 plume equals or exceeds that of the control areas." The conclusion is that there will be no impact on Irish moss other than that which is caused in the approximately four acre area near the discharge canal.

The conclusion in Attachment 5 was based on information submitted by BECo contained in BECo-55. The analysis is found at pp. 6.2-1 to 6.2-3 and also includes Table 6-1 and Figures 6-1 to 6-4. Table 6-1 is entitled "Irish Moss Harvest Statistics: 1971-1976" and contains harvest data for those years from eight study areas running from Manomet Point, south of the discharge point, north to Warren Cove. This is the area in which most of the commercial harvesting is done. See BECo-55, Figure 6-1.

Irish moss, like any other marine species, could be adversely affected by Pilgrim Station in three ways.

First, an early life stage, for Irish moss, spores, could be entrained and exposed to heat. This could occur if spores are taken into the cooling system and pumped through, or by spores being mixed with the heated water of the discharge plume. The Determination concluded that neither type of possible entrainment impact would be significant for Irish moss mainly because the spores appear to be tolerant of the discharge temperatures of Pilgrim 1. (EPA-1, Attachment 5, p.3; TR 668-671). This conclusion has not been challenged. It should be noted that the combined Pilgrim 1 and 2 discharge temperature will be lower than the temperature for Pilgrim 1 alone.

Second, the adult of the species, in this case the Irish moss plant itself, could be drawn into the intake system, entrapped, and killed by mechanical or thermal stresses. Irish moss, however, clings to rocks in the subtidal area and cannot become entrapped in the cooling system.

Finally, a marine species could be directly affected by the thermal discharge. The effect would be either a mechanical one such as scouring or hydraulic stress or a direct thermal effect. The Determination concluded that this direct impact would affect approximately four acres of Irish moss. In two of those acres there is predicted to be no moss growth and in two acres growth will be stunted. Operation of Pilgrim 1 has affected about three acres of Irish moss (EPA-1, Attachment 5, pp. 2-3). This conclusion has not been challenged.

In summary, none of the specific conclusions concerning Irish moss contained in the Determination are directly challenged by Robinson (or PCNIC). The only challenge raised at the hearing and in Robinson's Findings amounts to an indirect challenge by criticizing the completeness of the analysis which has been done. In each of Robinson's Findings, as well as during the hearing, where a substantive point was made that point was only that BECo and EPA have failed to do a statistical analysis of the correlation between Pilgrim 1 operation, as shown by electricity output, and Irish moss harvest data. (The purpose of such an analysis would be to attempt to show statistically whether Pilgrim 1 operation has had any effect on the pattern of moss harvest.) Robinson Findings, #10A-20; Tr. 85, 405-409, 419-445, 541, 589-598, 649-655, 675-676, 765-772; Ex. Sur-27).

In view of the fact that no one has even suggested, much less shown, how Pilgrim 1 could have had an impact on Irish moss outside

the three-acre area directly affected by the thermal plume, I cannot find a statistical analysis to be necessary. The overwhelming weight of the evidence in the record suggests that increases and decreases in Irish moss abundance in the area are due to natural causes (Tr. 668-671; EPA 57; EPA 59; EPA 60, p.12).

Canal Discharge vs. Submerged Diffuser

PCNIC Findings #2, 5 and 6 refer to testimony by Dr. Jan Prager (TR. 750-757) in which Dr. Prager stated that he prefers submerged diffusers to canal discharges and made specific reference to impacts on menhaden. PCNIC argues that because of this testimony I must conclude that BECo has not met the Section 316 requirements. PCNIC's argument is clearly wrong. BECo's burden is to show that its proposed thermal discharge, a canal discharge, will meet the Section 316 test, not to show that it is preferable to all other systems. I have concluded that the Section 316 requirements have been met. The impact of the cooling system on menhaden is discussed below.

Menhaden

PCNIC Findings #4, 7 and 8 concern the potential impact on menhaden. Menhaden are an important commercial fish used to produce fish meal and fish oil. They are schooling, pelagic fish which migrate along the Atlantic coast from Nova Scotia to Florida. Menhaden have been killed by the effects of thermal discharges at power plants. At Pilgrim, 43,000 menhaden were killed in 1973 and 5,000 were killed in 1975. Menhaden are one of the RIS chosen for special study at Pilgrim.

The general conclusion in the Determination concerning the impacts on marine populations expected at Pilgrim is as follows.

> Based on the analysis contained in Attachment 5, I find the company's projections to be adequate and generally conservative, especially when compared to data acquired from studies conducted during the operation of Unit I. As noted earlier, although the area of thermal impact will be larger with the addition of Unit II the temperature rise will be appreciably smaller. We conclude that the combined direct and indirect impacts on the RIS will not impair the protection and propagation of a balanced, indigenous population of marine life in and on the waters affected by the discharge and that the once-through cooling system proposed by the company meets the standard prescribed by Section 316(a). The occurence of menhaden mortality in the discharge canal due to gas bubble disease is cause for concern, however, as explained below. This problem has been addressed by special conditions in the permit imposed pursuant to Section 402(a) of the Act. (EPA-1, 26)

A detailed discussion of the problem of the effects of gas bubble disease and the "skinny fish symdrome" on menhaden is found at pp. 28-33 of the Determination. The overall assessment is that if the menhaden mortality from such causes experienced in 1973 were experienced each year, the North Atlantic menhaden population would be reduced by .00156% in ten years, and that the total effect from all aspects of operations

at Pilgrim would reduce that population by .005% in ten years (EPA-1,31). The Determination concludes that this impact will not "...impair the protection and propagation of the species in local waters." (EPA-1,32) The Determination then goes on to conclude that because the menhaden population is declining, measures must be required to reduce mortality due to gas bubble disease. The proposed permit thus requires BECo to install a barrier to restrict fish entry into the discharge canal where maximum gas saturation occurs. If the barrier does not work BECo will be required to reduce the nitrogen content in the discharge to 115%, a level which will not cause fish mortality (EPA-1, 32-33).

PCNIC Finding #4 states that the effect of winds as opposed to current direction on the thermal plume was not considered by BECo, that a BECo witness had no opinion as to whether the Pilgrim site is well-flushed or not, and that menhaden are attracted to the thermal plume where they will become susceptible to gas bubble disease. These statements all appear correct but they do not in any way alter the conclusion in the Determination. One way in which wind affects the plume is by creating currents which affect rate and direction of flow, and current speed and direction was considered (TR. 319). It does not appear necessary to characterize the site as "well-flushed" or not well-flushed, nor would any particular result flow from such a characterization were it made. (TR. 324-328, 337-341). Menhaden are apparently attracted to warm water but the Determination has concluded that the impact on menhaden will be acceptable.

PCNIC Finding #7 concerns the adequacy of a net as a solution to minimize environmental impact by preventing marine life from entering the effluent area. The concerns are that the net may rip and that it may not exclude menhaden from a sufficiently large portion of the discharge area (TR. 509-511, 605-607, 614-617, 736-738). A further stated concern is the workability of power shutdowns as a means to eliminate or limit exposure to the thermal effluent. (TR. 736). It appears from the record, however, that there are at least two other methods which are available for reducing menhaden mortality, a permanent barrier (as opposed to a net) and an air bubbler (TR. 607-609). The permit requires BECo to design and construct a barrier near to the end of the discharge canal "which shall at all times prevent fish entry into the canal." (EPA 2-3, 56) Clearly, a net which is subject to ripping or which does not prevent fish entry would not comply with this requirement. If EPA or the MDWPC determines that the physical barrier is not preventing finfish mortality, BECo is required by the permit to maintain an average dissolved nitrogen saturation level of less than 115%, when finfish are in, or within 200 feet of, the canal. BECo is required to reduce the nitrogen level "as soon as possible" (EPA 2-3, 56).

PCNIC proposed finding #8 concerns the adequacy of plant shutdown as a backup means of limiting finfish mortality. An administratively protracted power shutdown procedure would not comply with the permit requirement to reduce the nitrogen level as soon as possible. Also, there are means other than plant shutdown for reducing the nitrogen

level. I conclude that adequate means exist for limiting menhaden and other finfish mortality to acceptable levels.

Adequacy of Demonstration

PCNIC proposed finding #3 raises the issue of whether the studies and other information provided by BECo are adequate to support a successful §316 demonstration. PCNIC's first point is that

> ...most of Edison's crucial statistical findings were based upon data collected only from the operation of Pilgrim I, without any data based upon the projected output of Pilgrim II...

This is incorrect. The Determination refers to numerous studies and projections which refer to potential impacts to be expected from Pilgrim 2. The basic documents are EPA-13 and BECo- 55, the Section 316 Demonstration and Supplement.

PCNIC's other point appears to be that since Pilgrim 1 has not been in continuous operation evidence as to its impacts should not be relied on. The PCNIC witness who made this point was unable to support his claim or to be more specific. In fact, he withdrew substantially all of his testimony (TR.123-134). I would also note that the impact predictions assume full power operation for Units 1 and 2 and it is likely that actual operating experience will be significantly, or even substantially, below full capacity.

Conclusion

I conclude that BECo has demonstrated that, although there have been certain observed impacts of a minor nature on the marine ecosystem caused by Pilgrim 1, Pilgrim 1 and 2 can operate without threatening the protection and propagation of the shellfish, fish and wildlife populations affected by the proposed discharge. Pilgrim 1 and 2 can utilize the "once-through" cooling system which is proposed. The intake structures reflect the best technology available for minimizing adverse environmental impact. The Determination to issue the permit is affirmed. This initial decision shall become the final decision of the Agency unless appealed pursuant to 40 CFR 125.36(n) within ten (10) days of the date appearing below.

William R. Adams Jr.

WILLIAM R. ADAMS, JR.
Regional Administrator, Region I

DATED: Boston, Massachusetts
July 31, 1978

CERTIFICATE OF SERVICE

I hereby certify that copies of this Initial Decision have been sent by certified mail or hand delivery to the following this 26th day of July, 1978:

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ATTACHMENT A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

DECISION OF THE GENERAL COUNSEL ON MATTERS OF LAW PURSUANT TO 40 CFR SECTION 125.36(m)

No. 69

In the matter of National Pollutant Discharge Elimination System (NPDES) permit for Boston Edison Company, Pilgrim Power Station, Unit 1, MA0003557, and proposed Unit 2, MA0025135, the Presiding Officer has certified an issue of law to the General Counsel for decision pursuant to 40 CFR §125.36(m). The parties, having had the opportunity to provide briefs in support of their respective positions,[1] present the following issue.

Issue of Law[2]

1/ Briefs in support of the position of Boston Edison were filed by the company and by Region I. Although the Plymouth County Nuclear Information Committee, Inc. in its request for an adjudicatory hearing asked for a determination that Pilgrim Unit 2 was a "new source", the organization declined to submit a brief in this matter.

2/ Under 40 CFR §125.36(m) issues of law may be referred to General Counsel by the Presiding Officer of an adjudicatory hearing. Such referrals can expedite decision making and ensure consistent legal interpretations.

However, where issues actually involve questions of fact or where issues have been previously resolved by General Counsel referrals are an unnecessary and improper interruption of the decision making process.

The legal issues in this case have been adequately addressed in previous decisions of the General Counsel, and the actual problem in this case is the application of facts to that law. Although the General Counsel is ruling on this matter, no comparable referrals will be accepted.

Question Presented

"Is the proposed Pilgrim Unit 2 nuclear power plant a new source as defined in section 306 of P.L. 92-500?"

Conclusion

No.

Discussion

Boston Edison contends that its proposed Pilgrim Unit 2 nuclear electric generating station is not a new source within the meaning of §306 of the Clean Water Act, 33 U.S.C. §1316, (the Act) by virture of the fact that 1) there are now no applicable standards of performance following the partial remand of the standards for the steam electric point source category, and 2) the company entered into contractual obligations for the purchase of facilities or equipment for Pilgrim Unit 2 prior to the publication of the new source standards.

I

Section 306(a)(2) of the Act defines a "new source" as:

> ...any source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under this section which will be applicable to such sources, if such final standard is thereafter promulgated in accordance with this section.

On March 4, 1974, EPA published proposed standards for the steam electric point source category, 39 Fed. Reg. 8294, and these were thereafter promulgated on October 8, 1974. 39 Fed. Reg. 36198, 40 CFR §423. However, in Appalachian Power Co. v. Train, 545 F.2d 1351 (4th Cir. 1976), portions of these regulations were remanded for reconsideration by the EPA.

In a memorandum dated December 3, 1976, the General Counsel considered the effect of a remand of standards of performance on the classification of a facility as a new source. It was determined that "(w)here standards are remanded or withdrawn due to deficiencies which are extensive in scope and which would require reproposal of rectified standards, it follows that the facilities within that category should no longer be considered new sources." However, the memorandum went on to note:

> ...regulations may be remanded for clarification of insubstantial issues. Also, new source standards may be found to be without support only as to one or two of several pollutant parameters covered in the standards. In these situations the foundation of the new source standards may remain, and one may legitimately conclude that the original proposal of those standards continues to define after-constructed facilities as new sources.

These factors were applied to the remand in Appalachian Power Co. v. EPA, supra, in a memorandum by the General Counsel dated February 28, 1977. The memorandum stated:

> In the case of the steam electric power industry, only NSPS [new source performance standards] for thermal and fly ash were remanded. While the remand was based on substantive grounds, the chemicals NSPS for the industry were not challenged. Most of the provisions of the NSPS for this industry remain in effect.

Consequently it is the opinion of the General Counsel that applicabl standards of performance continue to exist for the steam electric point source category and that new facilities will be "new sources" for purposes of section 306 unless they commenced construction prior to the relevant date of publication.

II

Section 306(a)(5) defines "construction" as:

> ...any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including prepartion work at such premises.

It is not contended that there was actual construction or site preparation work on Pilgrim Unit 2 prior to March 4, 1974. However, Boston Edison asserts a number of alleged contractual obligations as a basis for determining that the facility had commenced "construction" for purposes of §306. These include:

1) Contract for Nuclear Steam Supply Systems between Boston Edison Company and Combustion Engineering, Inc. ("NSSS Contract");

2) Contract for Steam Turbine Generator between Boston Edison Company and General Electric Company ("Steam Turbine Contract");

3) Contract for Engineering, Design and Construction services between Boston Edison Company and Bechtel Power Corporation ("Bechtel Contract");

4) Contract for Nuclear Fuel Fabrication Services between Boston Edison Company and Combustion Engineering, Inc. ("Nuclear Fuel Contract");

5) Various administrative and internal expenses by Boston Edison Company ("Administrative expenses");

6) Various contracts for environmental and engineering studies between Boston Edison Company and outside vendors ("engineering expenses").

The development of a new facility involves a spectrum of activity ranging from initial planning to final construction. By defining "contractual obligations for the purchase of... facilities or equipment" as the earliest point on that spectrum at which construction has commenced, Congress presumably recognized that such obligations represent

both a significant commitment to construction and a limitation on that design flexibility which is implicit in the imposition of new source standards of performance on a facility.

In Decision of the General Counsel, No. 46, the "Seabrook decision", analysis of these factors led to certain conclusions about the elements of contractual obligations necessary to satisfy §306. First, such obligations must be for items which are to form a permanent part of the source itself and which are to be used in its operation. Thus, contracts for design or environmental studies, equipment to be used in such studies or contracts for consummable items such as fuel do not meet this requirement. Second, the obligation must actually be for purchase of facilities or equipment rather than a mere "option to purchase." Liability for cancellation of a contract, therefore, may not simply represent an effort to compensate a contractor for expenditures in engineering and the "benefit of the bargain." Rather, such payments must be proportionate compensation to the supplier for its efforts in preparing to fabricate or fabricating the desired equipment. Further, liability for cancellation must be substantial. Although the statute itself applies to "any contractual obligation" a requirement that potential loss be substantial ensures that contracts which might define

a facility as an existing source actually represent a limitation on the design flexibility and alternatives of the developer. Finally, the contractual obligation must be a part of a continuous program of development of the source.

Application of these principles to the alleged contractual obligations leads to a clear result. Neither the Bechtel Contract, which as of March 4, 1974 consisted of engineering and design services rather than procurement, construction or installation of equipment, nor the administrative and engineering expenses constitute contractual obligations for the purchase of facilities or equipment. Similarly, the Nuclear Fuel Contract was not for items which form a permanent part of the facility. In the Seabrook decision, similar contracts executed for the development of the Seabrook Nuclear Power Station were found not to satisfy the requirements of §306.

However, both the NSSS Contract and the Steam Turbine Contract do satisfy these requirements and constitute obligations for the purchase of facilities or equipment. Both were binding contracts as of March 4, 1974. 3/

3/ In fact, the contract for the steam turbine was not executed until December, 1975. However, the record shows a written exchange of offer and acceptance in 1970-71 sufficient to create a contract under the Uniform Commercial Code.

Both were part of a continuous program of development, and both contracts were for the purchase of equipment to be installed at the Pilgrim 2 site in Plymouth, Massachusetts.

Potential liability for termination of such contracts as of March 4, 1974, is in some dispute. However, under the NSSS Contract, Boston Edison would have been obligated to pay approximately five million dollars and under the Steam Turbine Contracts the company would have been obligated to pay between $50,000 and $1,900,000. In the Seabrook decision, liability of $500,000 was found, in absolute terms, to be a substantial contractual obligation, and the contracts in this case thus satisfy this equipment.

Finally, it seems clear that at least the NSSS Contract was not simply an option to purchase. There is evidence in the record that actual fabrication of components had commenced prior to March 4, 1974.

On the basis of the above considerations the Pilgrim Unit 2 facility is not a "new source" within the meaning of §306 of the Clean Water Act.

Joan Z. Bernstein

Joan Z. Bernstein
General Counsel

Dated: May 3, 1978