

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 27 1978

OFFICE OF ENFORCEMENT

MEMORANDUM

SUBJECT: Applicability of PSD to Pennsylvania Power and
Light Auxiliary Boiler

FROM: Director
Division of Stationary Source Enforcement

TO: Howard Heim, Chief
Air Programs Branch - Region III

This is in response to your memo dated January 6, 1978, concerning the applicability of Pennsylvania Power and Light Company's proposed auxiliary boiler at Martin's Creek, Pennsylvania to the prevention of significant deterioration (PSD) regulations.

The PSD regulations currently require all new or modified sources (included in the 19 source categories) which commence construction after June 1, 1975 to obtain approval from EPA prior to commencement of construction. The regulations also provide that any source which has been granted approval to construct or modify prior to January 1, 1975 shall not be counted against the increment. This is, of course, provided that the source has commenced construction prior to June 1, 1975. Commence construction as defined in 40 CFR S52.21(b)(7) and as refined by memoranda from Roger Strelow, dated December 18, 1975 and April 21, 1976, (copies attached) refers to on-site construction.

Pennsylvania Power and Light proposes to commence construction of a new 325 MM BTU/hour boiler. This will be in addition to the existing source which consists of at least, two 800 MW boilers. The applicable source category in the PSD regulations is Fossil Fuel Steam Electric Plants of more than 1000 million BTU per hour heat input.

It is the opinion of this office, based on the information attached to your memo that the 325 MM BTU/hr boiler did not commence construction prior to June 1, 1975, that it is a modification of the existing Steam Electric plant and since

the plant is larger than the cutoff size indicated in 52.21 (d)(1) that it is subject to the PSD requirements as they currently exist. However, once the PSD regulations are revised to conform to the 1977 Clean Air Act Amendments this boiler will be considered a new source and not a modification. Should this boiler not obtain its PSD permit prior to promulgation of the PSD revisions, and/or fails to commence construction prior to December 1, 1978 it will be subject to the more stringent requirements contained in that promulgation, provided that the regulations are promulgated as proposed.

Pennsylvania Power and Light poses the question, in their submittal, as to whether they are subject, to new source performance standards (NSPS). Rich Biondi of my staff spoke to Hank Sakalowski of your staff regarding this issue. It was decided, at that time, that there was not enough information available to make a judgment regarding the applicability of NSPS and that Region III would independently pursue this question. For that reason this response only addresses the PSD issue.

If you have any questions or comments concerning this facility, please contact Rich Biondi (755-2564) of my staff.



Edward E. Reich

cc: Mike Trutna - CPDD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III - 6th & Walnut Sts.
Philadelphia, Pa. 19106

SUBJECT: Applicability of PSD to Pennsylvania
Power and Light Auxiliary Boiler

DATE: JAN 6 1978

FROM: Howard Heim, Chief
Air Programs Branch (3AH10)

TO: John Rasnic, Chief
Compliance Monitoring Branch (EN-341)

Attached is a copy of a letter from Pennsylvania Power and Light concerning the applicability of PSD to a proposed auxiliary boiler at Martins Creek, Pennsylvania. In the letter, PP&L contends that the new boiler with a design capacity of 325 MM BTU/hr. represents a continuation of construction on two units, numbers 3 and 4, at Martins Creek, Pa. which began on March 1, 1971.

I am asking that your office review the evidence presented by PP&L and respond on whether the source is a continuation of construction, a modification, or in fact new construction. If you have any questions, please contact Hank Sokolowski at 215/597-8991.

Enclosure

December 21, 1977

Mr. Jack J. Schramm
Regional Administrator
EPA, Region III
Sixth & Walnut Streets
Philadelphia, PA 19106

MARTINS CREEK SES
UNITS 3 & 4 AUXILIARY BOILER
CCN 773038 ER 102630

Dear Mr. Schramm:

On November 23, 1977 a meeting was held in the Philadelphia Regional Office between EPA representatives and PP&L Environmental Management personnel to discuss a number of pending items. Those attending from the EPA were Messrs. A. Ferdas, J. Howell, B. McLean, H. Sokolowski and P. Wynne.

One of the items discussed was the proposed installation of an auxiliary steam boiler to provide supplemental start-up steam for Units 3 & 4 (800 MW each) at our Martins Creek Station. The proposed design capacity of the new boiler is 325 MM Btu/hr. (200,000 lb. steam/hr). Construction of this auxiliary steam supply represents a continuation of construction on Units 3 & 4 which began March 1, 1971. It is common that the installation and operation of a complex facility such as a power plant requires extensive design and testing of component systems to assure compatibility between these systems. In addition, Martins Creek 3 & 4 are the first large oil-fired units ever installed by PP&L. This break-in period may extend several years past the units' commercial operation date. If, during this period, operation of a particular system is found to be deficient, design changes such as increased capacity frequently occur. For example, in some cases water requirements are initially underestimated, thus requiring supplemental water treatment facilities. In other cases design temperatures or pressure within a system do not agree with final operating conditions and therefore require additional or modified components.

Mr, . Jack J. Schramm
December 21, 1977
Page Two

Initial design of Units 3 & 4 did include an auxiliary steam boiler for start-up of one of the main units, with the recognition that a duplicate boiler or steam cross tie from Units 1 & 2 (150 MW each) might be needed. These facts were stated in a letter dated 2/16/71 (copy attached).

Design on an auxiliary steam supply was temporarily delayed for several years while work proceeded on other items that would be more essential to Units 3 & 4 operation. By early 1975, however, rising oil prices mandated frequent shutdowns and subsequent "simultaneous" start-up of both main units with a resultant large increase in auxiliary steam needs. This, in effect, increased the priority for obtaining auxiliary steam. After engineering investigation of alternative steam sources a steam tie line between Units 1 & 2 and Units 3 & 4 appeared most feasible. Engineering proceeded on this alternative until the Units 1 & 2 turbine manufacturer stated that taking the amount of steam needed from a connection on the turbine, the best source for our needs, would result in excessive steam velocities within the turbine and, therefore, they strongly advised against it. In recognition of this drawback, the tie line alternative was replaced by additional auxiliary steam boiler capacity.

The chosen boiler capacity of 200,000 lb/hr. reflects the minimum amount of steam required, in addition to existing capacity, for a warm start (units off line less than 10 hrs.) on both Units 3 & 4. This situation normally occurs nightly when Units 3 & 4 are taken off line for economic reasons.

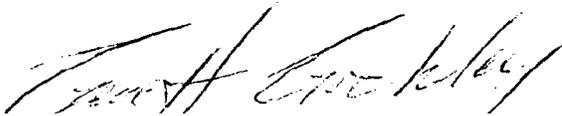
It is our position that because the auxiliary boiler is part of continuous refinement of mechanical equipment needed for the operation of Units 3 & 4 the auxiliary boiler is considered an old source within the context of EPA's New Source Performance Standards (NSPS). Engineering proceeded on installation of this boiler with the understanding such an addition did not constitute an affected facility under NSPS. After submittal of preliminary information regarding the proposed boiler and its emissions to the regional office on October 31, 1977, the question of compliance with NSPS arose.

As noted earlier, the need for additional steam had been recognized prior to August 1971. Although most engineering has occurred within the past three years, this merely reflects the change in priorities caused by rising oil price and the need to conserve oil supply. It is therefore our contention that installation of a supplementary steam supply at this time still constitutes a continuation of construction activities on Units 3 & 4.

Mr. Jack J. Schramm
December 21, 1977
Page Three

Your written confirmation of this interpretation is requested for our record. If you have any additional questions, please contact my office at 215-821-5820.

Very truly yours,

A handwritten signature in cursive script, appearing to read "G. H. Gockley".

G. H. Gockley
Manager-Environmental Management

LDR:ABD

cc:R.J.Sokolowski EPA