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(Slip Opinion)

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BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In the Matter of:)
)
Hawaiian Commercial &) PSD Appeal No. 92-1
Sugar Company)
)
Permit No. HI 89-01)
_____)

[Decided July 20, 1992]

ORDER DENYING REVIEW

Before Environmental Appeals Judges Ronald L. McCallum and Edward E. Reich.

SUGAR COMPANY

HAWAIIAN COMMERCIAL &

PSD Appeal No. 92-1

ORDER DENYING REVIEW

Decided July 20, 1992

Syllabus

Petitioner, a private citizen is appealing the issuance of a Prevention of Significant Deterioration (PSD) permit to the Commercial & Sugar Company by the State of Hawaii. The permit relates to construction of a new 30 MW Circulating Fluidized Bed Boiler to be located at the Puunene Mill Facility on the island of Maui.

The petition sets forth six bases for seeking review. These relate to ash disposal, coal stockpiles, the fuel oil to be burned, SO₂ and NO_x emission limits, air quality modeling, and waiver of performance tests.

Held: While Petitioner urges the State to go beyond the applicable Federal PSD requirements, the petition does not identify any deficiency in the permit relative to those requirements. The petition for review is therefore denied because it fails to identify any factual or legal errors or any policy considerations or exercises of discretion that warrant review.

Before Environmental Appeals Judges Ronald L. McCallum and Edward E. Reich.

Opinion of the Board by Judge Reich:

Petitioner James V. Williamson, a private citizen, has filed this appeal of the issuance of a Prevention of Significant Deterioration (PSD) permit to the Hawaiian Commercial & Sugar Company (HC&S) by the State of Hawaii. The State, acting pursuant to a delegation from the U.S. Environmental Protection Agency (EPA) and with its concurrence, issued the permit, styled "Approval to Construct/Modify a Stationary Source (HI 89-01)." The permit covers construction of a 30 MW Circulating Fluidized Bed (CFB) Boiler to be located at the Puunene Mill Facility, Puunene, Maui. The Boiler is being designed to burn three different types of fuels for maximum flexibility. These are coal, fuel oil, and bagasse (the part of sugarcane remaining after the sugar is squeezed out). It will provide additional electricity to the Mill, as well as providing electricity which HC&S is proposing to sell to Maui Electric Company to meet the island's demands.

Mr. Williamson's petition raises six issues. At the request of this Board, the State of Hawaii Department of Health submitted a copy of the

administrative record for the permit and a response to the petition. The record shows that the issues raised in this appeal had previously 2
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been raised by Mr. Williamson in his comments on the draft permit, and thus were preserved for review under 40 CFR Section 124.19.[See footnote 1]

Under the rules that govern this proceeding, a PSD permit ordinarily will not be reviewed unless it is based on a clearly erroneous finding of fact or conclusion of law, or involves an important matter of policy or exercise of discretion that warrants review. See 40 CFR Section 124.19; 45 Fed. Reg. 33412 (May 19, 1980). The preamble to the Federal Register notice in which Section 124.19 was promulgated states that "this power of review should be only sparingly exercised," and that "most permit conditions should be finally determined at the Regional level * * *." Id. The burden of demonstrating that review is warranted is on the petitioner. For the reasons set forth below, we conclude that Petitioner has failed to show that review of the permit is warranted under 40 CFR Section 124.19, and therefore review is denied.

Ash Disposal: The first issue raised by Petitioner relates to disposal of the fly ash (and bottom ash) from the operation of the boiler. Petitioner expresses the view that HC&S has no definite plans for disposal of the ash and doesn't even know if it is hazardous. Petitioner believes the ash should already have been tested and the disposal problem investigated since HC&S has been using small quantities of the same coal for some time.

The State, in its response to the petition, identifies several options HC&S has explored for ash disposal including selling it to local cement manufacturers for use as a component of cement, using it as a soil amendment in the sugar cane fields, or using it as a surfacing material for cane haul roads. All these potential uses presuppose a determination that the ash is non-hazardous. If it proves to be hazardous, the ash will be disposed of in a manner consistent with all

Footnote 1. 40 CFR Section 124.19 provides for appeal of PSD permits by persons who filed comments on the draft permit or participated in the public hearing. Any person who failed to file comments or failed to participate in the public hearing may petition for review only to the extent of changes from the draft to final decision.

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applicable Federal and State laws.[See footnote 2] Based on the testing of ash resulting from coal combustion at an existing boiler at the HC&S

facility, HC&S does not expect the ash to be hazardous. However, a disposal method cannot be finally identified until the ash actually produced by the new boiler is tested once it comes on line.

The Ambient Air Quality Impact Report which accompanied the final permit discusses the anticipated impacts of ash handling in Section IV.F. at page 6. There is no discussion in that Report of plans for the ultimate disposition of the ash. However, It is apparent from the record that the Permittee has given considerable thought to the ash disposal issue although it is not yet in a position to make a final decision.[See footnote 3] While consideration of the nature of the fly ash could be relevant to a consideration of collateral environmental effects as part of an analysis of best available control technology (BACT),[See footnote 4] Petitioner's concerns here are speculative. There is nothing in the record to suggest that the BACT determination for any pollutant regulated under the Clean Air Act would be affected by the absence of a definitive plan for the disposal of the fly ash.[See footnote 5] Petitioner has not identified any violation of PSD

Footnote 2. Although not discussed in the State's response or in the comments of HC&S in the administrative record, we note that 40 CFR Section 261.4(b)(4) excludes fly ash waste and bottom ash waste resulting from the combustion of fossil fuels from the definition of solid waste, and thus from Federal regulation as a hazardous waste.

Footnote 3. For example, Sierra Research, on behalf of the Permittee, sent a letter to Mr. Williamson on September 9, 1991, responding to questions he raised at the public hearing. Enclosed with this letter is a Summary of Comments and Responses which discusses alternatives for fly ash disposal on pages 3-4.

Footnote 4. 40 CFR Section 52.21 (j)(3) requires a new major stationary source to apply best available control technology for each pollutant subject to regulation that it would have the potential to emit in significant amounts. Best available control technology is defined at 40 CFR Section 52.21(b)(12).

Footnote 5. "While collateral environmental impacts are relative to the BACT determination, their relevance is generally couched in terms of discussing which available technology, among several, produces less adverse collateral effects, and, if it does, whether that justifies its utilization even if the technology is otherwise less stringent." In re Old Dominion Electric Cooperative, PSD Appeal 91-39 at p. 23 (January 29, 1992). See also North County Resource Recovery Associates, PSD Appeal No. 85-2 (Remand, June 3, 1986)

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regulations in the lack of greater specificity on plans for disposal of the fly ash. Thus, Petitioner has not carried his burden of identifying either a clear factual or legal error or an important policy consideration or exercise of discretion that should be reviewed. Review of this issue is therefore denied.

Coal Stockpiles: Petitioner questions what the size of the stockpile will be, how HC&S will prevent fugitive dust due to winds, and how HC&S will get rid of coal dust. The State, in its response to the petition, describes the stockpiles and indicates that it does not expect significant air pollution problems from fugitive dust because the coal will be washed and has an extremely low silt content (4.23%). The State also cites assurances from HC&S that fugitive dust will not produce visible emissions beyond the property boundary.

The permit addresses fugitive dust controls in Section IX.D.6. This provision requires:

Fugitive dust controls, including the use of enclosures and wet suppression to prevent particulate matter from becoming airborne to the extent practical, during all material handling operations of coal, sorbent, and ash. All coal conveyors shall be enclosed and the coal pulverizer shall be vented to the coal storage bin to control fugitive emissions. Hawaiian Commercial & Sugar Company shall design and construct the boiler ash handling and disposal system in a manner that will minimize particulate emissions from ash handling and disposal. Ash conveyors shall be pneumatic or shall handle wet ash and all conveyors and transfer points shall be covered or sealed. In no case shall Hawaiian Commercial & Sugar Company cause or permit the discharge of visible emissions of fugitive dust beyond the permittee's property boundary.

Footnote 5 (... continued)

(environmental impact of pollutants not regulated under the Clean Air Act may necessitate a more stringent emission limit for regulated pollutants undergoing BACT review).

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Relative to disposal of coal dust, the State's response to the petition indicates that "the disposal of the coal dust will be minimal" and will be conducted in accordance with all applicable federal and state regulations. Response at 2.

The Ambient Air Quality Impact Report projects negligible fugitive particulate emissions associated with fuel handling due to the nature of the coal to be used and the fact that all coal conveyers will be enclosed. Petitioner has not pointed to any data or other evidence in the record to challenge this conclusion. In addition, the permit limitation on visible emissions of fugitive dust beyond the property line provides an enforceable mechanism to deal with any problem should one arise. Petitioner has not carried his burden of identifying either a clear factual or legal error or an important policy consideration or exercise of discretion that should be reviewed and review is accordingly denied.

Petitioner also indicates that he is adamantly opposed to any additional coal fired boilers on Maui, suggesting that HC&S should instead install a combined cycle facility fueled with low sulfur distillate or residual oil and equipped with a selective catalytic reduction unit for NO_x control.[See footnote 6] The State, in its response to the petition, indicates that it does not have the authority to define the boiler type to be used.[See footnote 7] Instead, it evaluated the anticipated impacts of the facility with the type of boiler proposed and found them to be acceptable under the PSD regulations.

Footnote 6. The State did evaluate the relative merits of selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) in the context of its best available control technology analysis for NO_x and found selective non-catalytic reduction to be preferable. It cited the lack of experience with SCR systems on CFB boilers, significant problems with plugging and poisoning of the catalyst by fly ash in crushed coal-fired boilers, increased costs, and other considerations in rejecting SCR. Ambient Air Quality Impact Report at pp. 19-20. Petitioner has not shown that the State's BACT is deficient, and thus has not met his burden under 40 CFR Section 124.19.

Footnote 7. The State indicates that it "does not have authority to require facilities to use a specific equipment, fuel or air pollution control device." Response at p. 2. However, we note that the definition of BACT includes consideration of both clean fuels and use of air pollution control devices. 6 HAWAIIAN COMMERCIAL & SUGAR COMPANY

EPA's PSD permit conditions regulations do not mandate that the permitting authority redefine the source in order to reduce emissions.[See footnote 8] The U.S. Environmental Protection Agency's Air Quality Management Division discussed the application of this principle in a draft New Source Review Workshop Manual Issued in October 1990. This document was developed for use in conjunction with new source review workshops and training, and to guide permitting officials. As such, it has been widely

circulated and represents the Office of Air Program's current thinking in this regard.

On page B.13 of that Manual, it provides:

Historically, EPA has not considered the BACT requirement as a means to redefine the design of the source when considering available control alternatives. For example, applicants proposing to construct a coal-fired electric generator, have not been required by EPA as part of a BACT analysis to consider building a natural gas-fired electric turbine although the turbine may be inherently less polluting per unit product (in this case electricity). However, this is an aspect of the PSD permitting process in which states have the discretion to engage in a broader analysis if they so desire. Thus, a gas turbine normally would not be included in the list of control alternatives for a coalfired boiler.[See footnote 9]

Footnote 8. "Although imposition of the conditions may, among other things, have a profound effect on the viability of the proposed facility as conceived by the applicant, the conditions themselves are not intended to redefine the source * * *." In re Pennsylvania County, New Jersey Resource Recovery Facility, PSD Appeal No. 88-8 at p. 11 (November 10, 1988).

Footnote 9. This situation was presented in In re Old Dominion Electric Cooperative, PSD Appeal 91-39 (January 29, 1992). In that instance, the State determined that requiring a coal-fired steam electric generating station to use natural gas as an alternative fuel would redefine the source. It further concluded that it was not empowered to do this unless the facility as proposed would not meet all Federal and State air emission limitations or would result in a violation of a national ambient air quality standard. While the Administrator of EPA found no clear error in the State's handling of the matter, he stated that "EPA construes the 1990 Amendments as conferring discretion on the permit issuer to consider fuels other than those proposed by the permit applicant." Id. at p. 25.

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Petitioner's preference as to the type of boiler and fuel to be used in this instance would in effect redefine the source. The cited draft guidance makes clear that the permitting authority is entitled to wide latitude in how broad a BACT analysis it wishes to conduct in this regard. Petitioner has provided no good reason for curtailing this discretion here nor has he shown that the State abused this discretion. Thus, review of this issue is also denied.[See footnote 10]

Fuel Oil: Petitioner states that the Hawaii Department of Health should urge local refineries to install desulfurization equipment or require the electric company to purchase low sulfur (0.1% S) fuel oil or (0.05% S) #2 distillate oil from outside the State. Petitioner further indicates that while this would result in higher fuel costs, "the majority of Hawaiians would willingly agree to a reasonable increase in power rates if it means improving the air quality in these beautiful islands." Petition at 2. More specifically, Petitioner would like to see the HC&S permit reflect SO₂ and NO_x limits "much more stringent than BACT as defined in the Federal regulations," following the practice of some Air Quality Management Districts in California.

The State, in its response to the petition, confirms the relative unavailability of very low sulfur fuels in Hawaii due to inadequate desulfurization capacity at local refineries. Such fuel oil would have to be imported. Relative to the HC&S permit, the State responds that BACT was not required for SO₂ because the facility's emissions (after crediting emissions reductions from three existing boilers) will not exceed the significance levels for SO₂ which would trigger a BACT review.[See footnote 11] However, though not compelled by the PSD rules, the controls to be used at the facility are what the State characterizes as "BACT pollution controls," and will reduce SO₂ emissions to those equivalent to 0.1% sulfur fuel oil. The State further indicates that it did

Footnote 10. The State may not view its authority under State law as being extensive enough to take advantage of the flexibility afforded under the Federal PSD regulations. See note 7 supra.

Footnote 11. PSD review is required for SO₂ emissions if the net increase in SO₂ emissions is 40 tons per year or greater. See 40 CFR Section 52.21(b)(23)(i). The calculation of the "net increase (actual a decrease) for SO₂ is discussed in the Ambient Air Quality Impact Report at pages 8-14. 8 HAWAIIAN COMMERCIAL & SUGAR COMPANY

require BACT for any pollutant subject to PSD review, including NO_x. [See footnote 12]

General issues relative to desulfurization at refineries or requirements to purchase low sulfur oil by the electric company are not cognizable in the challenge to the HC&S permit. The fuel to be used at the Puunene facility is relevant in the context of a determination of BACT (where applicable) and in analyzing the air quality impacts of the project. There is no obligation to adopt a definition of BACT more stringent than that required by Federal law. Petitioner's belief that the State should have adopted a standard more stringent than that required by Federal

regulations has no legal relevance.

As previously noted, the Puunene 30 MW CFB Boiler is being designed to burn coal, fuel oil, and bagasse. In the case of fuel oil, a sorbet injection system is being installed to allow the use of number 6 fuel oil with a 2.0% sulfur content with the sorbet system then reducing emissions by 95%. This would be equivalent to the use of 0.1% S oil, which the State has determined to be BACT, even though BACT is not required for SO₂ under the PSD regulations. The State's determination that this level is equivalent to BACT is not subject to challenge since, as noted previously, the BACT requirement does not apply to SO₂ since the significance level will not be exceeded.

In the case of NO_x Petitioner states that use of lower sulfur fuel will also reduce NO_x emissions. We note that this does not necessarily follow. There is no direct relationship between fuel sulfur content and NO_x emissions. However, in this case, what Petitioner suggests is the use of a distillate (#2) oil rather than the residual oil (#6) as proposed by HC&S. "Because residual oils are produced from the residue after lighter fractions (gasoline, kerosene and distillate oils) have been removed from the crude oil, they contain significant quantities of ash,

Footnote 12. BACT for NO_x was determined to be staged combustion and a selective noncatalytic reduction system using urea injection. Ambient Air Quality Impact Report at P. 20. See footnote 6 supra. HAWAIIAN COMMERCIAL & SUGAR COMPANY 9

nitrogen and sulfur."[See footnote 13] Nitrogen oxides emissions from residual oil combustion in industrial and commercial boilers are strongly related to fuel nitrogen content.[See footnote 14] A switch from residual to distillate oil, without controls, would result in a lower emission factor for nitrogen oxide (55 lb/101 gal for residual oil versus 20 lb/10(3) gal for distillate oil).[See footnote 15] Thus, while unrelated to the sulfur content of the fuel, the switch Petitioner suggests could have consequences in terms of NO_x levels if the fuel were burned uncontrolled.

Of course, HC&S is not proposing to burn the fuel without controls for NO_x. The facility is required to apply BACT for NO_x, and NO_x emissions will be substantially addressed through the use of combustion modification (staged combustion) and post-combustion controls (SNCR).[See footnote 16]

Petitioner has cited nothing in the administrative record which would lead us to conclude that the State's BACT analysis and its BACT determination in this case are deficient. Petitioner cites no data in the record about the effect on NO_x emissions of the use of the NO_x control

technologies in combination with distillate fuel to suggest that this combination should have been considered in the BACT analysis.[See footnote 17] Petitioner has not identified any error, policy consideration or exercise of discretion appropriate for review and review of this issue is accordingly denied.

Footnote 13. Compilation of Air Pollution Emission Factors, Third Edition AP-42 (Updated 1986) at p. 1.3-1. This document is EPA's basic reference document for air pollution emission factors and we hereby take official notice of it.

Footnote 14. Id., note J at 1.3-2, and 1.3-3.

Footnote 15. Id. at 1.3-2.

Footnote 16. Ambient Air Quality Impact Report at pp. 16-20.

Footnote 17. See In re Spokane Regional Waste-to-Energy, PSD Appeal No. 88-12 at p. 17 (June 9, 1989). ("A technology is obviously not available in any meaningful sense if knowledge about its effect on emissions, in the particular configuration in which it would be employed, is so incomplete as to be unusable.") This decision was upheld by the Court of Appeals for the Ninth Circuit. 959 F.2d 839 (9th Cir. 1992). 10 HAWAIIAN COMMERCIAL & SUGAR COMPANY

SO₂ and NO_x Emission Limits: Petitioner questions why HC&S has emission limits of approximately 42 lb/hr each for SO₂ and NO_x whereas California has limits of 16 lb/hr for SO₂ and 6 lb/hr for NO_x. The State explains the difference as relating to the type of fuel to be burned. The California limits are possible mainly because new power plants there burn natural gas. In contrast, natural gas will not be used at the HC&S facility; HC&S will burn coal, fuel oil, and bagasse. The limits imposed on HC&S are typical for California power plants burning biomass or solid fuels. In addition, as previously discussed, the SO₂ limit is equivalent to a BACT level of 0.1% S. While the Petitioner acknowledges these distinctions, he reasserts his position that low sulfur (0.05%) distillate fuel oil is available and reduced NO_x levels can be achieved with new and better turbines and installation of a selective catalytic reduction unit.

This issue largely overlaps the previous issue. The State has provided a plausible explanation for the difference in emissions limits between the HC&S permit and those used in Southern California. More significantly, Petitioner has failed to identify how the permit limits are in any way deficient under applicable PSD regulations and thus review is denied.

Air Quality Modeling: Petitioner asks how well the verification process has been carried out for the air quality models used in evaluating the HC&S project, asserting that he believes those models to be flawed. Petitioner further asserts that meteorological data from Kahului Airport are not representative of the proposed facility. The State responds that U.S. EPA-approved flat terrain and complex terrain air quality models were used to predict maximum anticipated ambient air quality. Such models are designed to over-predict worst-case estimates of impacts to be protective of ambient air quality. In addition, Kahului Airport was determined to be representative of the meteorological conditions at Puunene by both State and U.S.E.P.A. meteorologists since it is in close proximity (2 miles) with no intervening terrain changes which significantly affect the meteorological data.

The air quality impacts of this project are discussed at some length in Section VII of the Ambient Air Quality Impact Report, beginning at page 26. This section outlines in detail the approach used
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and the results obtained in the modeling analysis. Air quality model selection is discussed in paragraph B (page 29) and data selection in paragraph A (pages 27-28). The models used were U.S.E.P.A.-approved UNAMAP-6 series guideline models and data selection were determined to be acceptable by U.S.E.P.A.'s Regional meteorologist.

In his petition, Petitioner merely asserts that modeling is inexact in Maui's topographic and climatological environment and that the modeling procedure was flawed. He points to no technical data in the record showing that either the model selection or the data utilized were flawed, only unsubstantiated anecdotal reports and observations of air circulation patterns by Maui residents. When viewed against the modeling analysis done to support the permit, this falls far short of meeting Petitioner's burden of showing clear error or any other basis which would justify review, and review is thus denied.

Waivers of Performance Tests: The permit provides for performance testing on existing Boilers 1, 2 and 3 after installation of air pollution controls on those boilers but prior to startup of the new 30 MW CFB boiler. Permit at 8. The permit provides for testing on the new 30 MW CFB boiler after initial startup, and thereafter on an annual basis or at such other times as may be specified by the Department of Health. Permit at 9-10. Waiver of performance testing is provided for in accordance with the following provision:

The Hawaii Department of Health may waive a specific performance test

upon prior written request of Hawaiian Commercial & Sugar Company. Such a request would need to be justified on the grounds that prior tests had shown compliance by a wide margin, and that adequate alternative means exist to show continuing compliance.

Permit at 10. The initial performance test cannot be waived, only the subsequent tests.

Petitioner states that waivers of performance tests for the boiler and fugitive emissions should not be provided. The State, however, points out that performance tests were incorporated primarily to demonstrate compliance upon completion of construction, and that 12 HAWAIIAN COMMERCIAL & SUGAR COMPANY

continuous emissions monitoring (which the permit requires) is a better indicator of ongoing performance.

In discussing the waiver provision, the State notes the considerable Department of Health staff time which oversight of a performance test requires and the cost to the permittee. In this context, the State's response to the petition indicates at page 4 that "[t]he Department believes that the provisions for waiving specific source tests will not compromise source emissions compliance while maximizing its personnel resources."

The State's position on this issue reflects a perfectly rational approach given the costs to both the State and the permittee associated with performance testing and the primary reliance on continuous emissions monitoring systems. While the Petitioner has stated that "[there is absolutely no reason to allow a waiver of these very important tests" (Petition at 4), this is merely a statement of his opinion. No applicable PSD requirement which would preclude inclusion of the waiver provision is cited. Petitioner has not carried his burden of identifying either a clear factual or legal error or in important policy consideration or exercise of discretion appropriate for review. Review of this issue is therefore denied.

In summary, none of the bases set forth in the petition for review meets the threshold level for granting review, and the petition is accordingly denied.

So ordered.

CERTIFICATE OF SERVICE

I hereby certify that copies of the forgoing Order Denying Review in the matter of Hawaiian Commercial & Sugar Company, PSD Appeal No. 92-1, were sent to the following persons in the manner indicated:

First Class Mail,
Postage Prepaid:

James V. Williamson
672 Kumulani Drive
Kihei, HI 96753

John C. Lewin, MD
Director
State of Hawaii
Department of Health
P.O. Box 3378
Honolulu, HI 96801

David P. Howekamp, Director
Air & Toxics Division
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

By Hand-delivery:

Ms. Bessie Hammiel
Headquarters Hearing Clerk
Room 3708, A-110

Dated: JUL 21 1992

Brenda H. Selden
Legal Staff Specialist→