UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
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Re: Supplemental PSD Applicability Determination Cyprus Casa Grande Corporation Copper Mining and Processing Facilities

Dear Mr. Connery:

This is a supplemental determination regarding the applicability of prevention of significant deterioration (PSD) provisions under sections 160-169 of the Clean Air Act, 42 U.S.C §9 7470-7479, and EPA's PSD regulations, 40 C.F.R. S 52.21 to the above-referenced facility, located near Casa Grande, Arizona. This determination supplements the determination set forth in a May 27, 1987 Memorandum from John S. Seitz, Director, Stationary Source Compliance Division, EPA, and in my May 29, 1987 letter to Roger M. Ferland, Streich, Long, Weeks and Cardon, Phoenix, Arizona, attorney for Noranda Lakeshore Mines, Inc., which formerly controlled the Casa Grande facility. For the reasons discussed below, EPA today (1) reaffirms and incorporates by reference herein its earlier determination that reactivation of the Roaster/Leach/Acid (RLA) plant at the Casa Grande facility would constitute a major -new source within the meaning of Part C of the Clean Air Act and EPA's regulations issued thereunder; and (2) determines that even if the reactivated RLA plant would not be subject to PSD as a new source, the start-up would also constitute a major modification for PSD purposes. Accordingly, Cyprus Casa Grande Corporation (Cyprus) must obtain a PSD permit before beginning construction on any of the rehabilitation activities necessary for start-up of the RLA plant.

1. THE NEED FOR THIS SUPPLEMENTAL DETERMINATION

The earlier applicability determination by Mr. Seitz and myself was in response to requests by Noranda that focused exclusively *on the* question whether start-up of the RLA plant would render the facility subject to PSD as a major new source pursuant to EPA's shutdown/reactivation policy. My review of

the administrative record of that matter has confirmed that Noranda did not request *EPA to* consider, and *EPA* did not consider, whether the RLA plant would be subject to PSD upon reactivation as a major modification under the Act and the PSD regulations.

Following EPA's earlier determination, Noranda transferred its interest in the facility in question, including the RLA plant, to Cyprus. Cyprus then sought review of EPA's determination in the court of appeals. Cyprus Casa Grande Corp. v. EPA, No. 87-7322 (9th Cir.). In a Civil Appeals Docketing Statement filed with the Ninth Circuit on July 30, 1987, Cyprus identified under category I., "Issues to be Raised on Appeal," the following item:

> (2) Whether Petitioner's existing RLA plant has been subject to a "major modification," 40 C.F.R. § 52.21(b)(2), which would require a PSD preconstruction permit.

Thus, it is clear that if this matter is adjudicated by the court of appeals, it likely would raise issues beyond the scope of the consideration previously given by EPA and Noranda. This in turn raises the distinct possibility that litigation based on EPA's prior determination would not finally resolve the question of whether PSD applies to the start-up of the RLA plant, and that a subsequent round of judicial review would be necessary. Such a scenario would waste the resources of the court, EPA, and Cyprus, and would be contrary to Cyprus' stated interest in a quick resolution of environmental requirements for the project.

Accordingly, I believe it is appropriate at this time for EPA to determine whether the prospective start-up of the RLA plant by Cyprus would constitute a major modification for PSD purposes. This determination can be made on the basis of the record created in conjunction with the earlier reactivation determination by Mr. Seitz and myself. In addition, because that earlier determination was directed to Noranda in response to requests by that company, and in view of the evident controversy surrounding that determination, it is also appropriate to reconsider its application to Cyprus, as the new owner of the facility.

II. RECONSIDERATION OF WHETHER START-UP OF THE RLA PLANT IS SUBJECT TO PSD AS A MAJOR NEW SOURCE UNDER EPA'S REACTIVATION POLICY.

After reviewing the administrative record in this matter, I find no reason to disagree with EPA's longstanding shutdown/reactivation policy or its application to the set of circumstances presented by Noranda. Hence, EPA has no basis to change its earlier determination that start-up of the RLA plant would be subject to PSD requirements as a "reactivation," except insofar as the intervening transfer of the facility to Cyprus

would require a different result.

There is one key point that emerges from the transfer to Cyprus: It represents a further attenuation, both in the chain of ownership and in time, between shutdown of the RLA plant in 1977 and its prospective reactivation. A change in ownership does not, standing alone, render a stationary source subject to PSD provisions. See 40 C.F.R. § 52.21(b)(2)(iii)(g). However, the circumstances surrounding a change in ownership may be probative of whether the shutdown of the source should be deemed permanent, which is the key analysis that must be made under EPA's reactivation policy.

In this case, the inference that the shutdown was permanent *is* even stronger after the transfer to Cyprus than it was when Noranda was in control. This is so because by the time Cyprus gained control, the RLA plant had already been shut down for ten years, as opposed to two years when Noranda entered the scene. In addition, by the time *Cyprus* took over, the RLA plant was no longer in the state's emission inventory and did not possess operating permits. Thus, from the inception of Cyprus' ownership, every indication is that Arizona considered the facility to be permanently closed.

The transfer to Cyprus serves to strengthen the reactivation determination EPA made as to Noranda. Accordingly, *my* determination is that the start-up of the RLA plant by Cyprus would constitute a reactivation subject to PSD requirements as a new source.

III. WHETHER START-UP OF THE RLA PLANT IS SUBJECT TO PSD REQUIREMENTS AS A MAJOR MODIFICATION.

Even *if* the RLA plant were not subject to PSD as a new source under the reactivation policy, it would be subject anyway if the start-up were deemed to be a “major modification" within the meaning of the Act and 40 C.F.R. § 52.21.

The central thrust of the Clean Air Act's PSD major modification provisions is that significant actual emissions increases -- i.e., those which have substantial consequences for ambient pollution concentrations and, hence, the states' need to account for such pollution -- should be brought under PSD review. See Alabama Power Co. v. Costle, 636 F.2d 323, 400 (D.C. Cir. 1979). EPA followed the lead of the court in formulating the major modification provisions of the PSD regulations by focusing the regulatory definitions on actual emissions rather *than a* source vs potential to emit. See 45 Fed. Reg. 52700, col. 2-3. EPA also promulgated a narrow and limited set of exclusions in Its major modification regulations, but only to allow for routine changes in the normal course of business, where PSD

review would be unduly disruptive. See 40 C.F.R. §52.21(b)(2)(iii)(a) and (f).

Determining whether a major modification will occur at a particular source requires a sequential analysis of several factors. These factors are discussed in the preamble to the PSD regulations at 45 Fed. Reg. 52676, 52698 (August 7, 1980). The factors may be grouped under two basic questions: Would the start-up entail a "physical change in or change in the method of operation of a major stationary source"? If so, would the change "result in a significant net emissions increase of any pollutant subject to regulation under the Act"? See 40 C.F.R. § 52.21 (b)(2)(i).

A. Physical Change or-Change in the Method of Operation of the RLA Plant.

This requirement of a major modification is satisfied if either a physical or operational change would occur. In this case, the start-up would constitute both a physical and an operational change.

1. Physical-Change.

The rehabilitation work necessary to make the Cyprus RLA plant operational would constitute a "physical change" at a major stationary source. */

EPA is aware of three reports addressing the rehabilitation work necessary to restart the RLA plant. By letter dated March 20, 1987, Noranda submitted *the most* recent evaluation of the minimum rehabilitation work necessary to *start up the* plant. The evaluation was prepared in March 1987 by E & C International *("E* & CI") for the Cyprus Minerals Company and was based upon a three day inspection of the plant and review of equipment, support installation and existing piping, instruments and electrical switchgear. Noranda also submitted a June 1986 report prepared by the Ralph M. Parsons Company, also for Cyprus, which estimated "nominal cost" of $1,836,000 for refurbishing the RLA plant, plus "worst case add-on" costs of $906,000. However, the Parsons report was an "order of magnitude"

*/ As noted in Noranda's original Request for opinion dated September 12, 1986, sulfur emissions from the plant are 4.3 tons per day, equivalent to approximately 1500 tons per year, and thus greatly exceeding both the 100 ton per year threshold limit applicable to the primary copper smelter category or the 250 ton per year threshold for an "unlisted" major stationary source under 40 C.F.R. 52.21(a)(1).

scoping report, and based these cost estimates upon the Company's experience rehabilitating similar processing facilities rather than upon a detailed plant inspection. In addition, Noranda's original September 12, 1986 Request for opinion contained a February 1982 survey of rehabilitation work estimating a total cost of $347,000 and monthly maintenance reports for April-July 1982 indicating that some rehabilitation work occurred in this period. From among these three estimates of necessary rehabilitation work, the E & CI evaluation can most reasonably be relied upon. It is the most current and comprehensive and was based upon an actual plant inspection by outside consultants.

The E & CI report called for the following rehabilitation:

1) replacing of the thickener tanks in the roaster plant's Counter Current Decantation (CCD) circuit and repairing the "significantly" damaged foundation for the CCD thickener foundation;

2) installing new external insulation for both fluid bed roasters and gas cyclones;

3) "minor" refractory repairs in one roaster;

4) "minor" structural repairs and painting throughout the roaster plant's steel structure to address "significant" corrosion damage;

5) replacing a "moderate" amount of piping and valves in the roaster plant;

6) restoring or replacing of stainless steel pumps at the acid plant;

7) installing a pressure sand filter;

8) rebuilding the underflow pumps in the CCD circuit.

The E & CI report concluded that the work necessary to prepare the facility for operation could be done in three to four months at a cost of $905,000, without any contingency calculated. Contingency costs could significantly exceed this amount.*/ Even without factoring in contingent costs, $905,000 represents roughly 10% of the replacement cost of a new roaster. See Attachment 2 of March 27, 1987 letter from Roger Ferland.

*/ The E & CI report recommended adding on a 15% contingency for craft labor and materials and the Parsons report estimated $900,000 for "worst case" add-on costs. Information obtained during an EPA site visit confirmed that rehabilitation would require four months of double shifts.

Under the PSD definition of "major modification", a physical change does not include ”routine maintenance, repair and replacement." 40 C.F.R. § 52.21(a)(2)(iii)(a). Although the E & CI report notes the good condition of the acid plant and characterizes some of the needed work as "minor” or "moderate,” viewed as a whole, the minimum necessary rehabilitation effort is extensive, involving replacement of key pieces of equipment (e.g., the CCD thickener tanks, pumps, external insulation), and substantial time and cost. In an operating plant some of the individual items of the planned rehabilitation, e.g. painting, if performed regularly as part of standard maintenance procedure while the plant was functioning or in full working order, could be considered routine. Here, however, this and other numerous items of repair, as well as replacement and installation of new equipment, are needed in order for the RLA plant to begin operation. The fact that the plant requires four months of extensive rehabilitation work despite the adequate maintenance Noranda claims to have undertaken during the shutdown underscores the non-routine nature of the physical change that will occur at the plant. Thus, given the extent and nature of the repair, rebuilding and replacement of important equipment necessary to make the RLA plant operational, the rehabilitation work simply cannot be considered the “routine maintenance, repair and replacement” which is excluded from PSD review.

2. Change in the Method of operation.

The prospective start-up of the RLA plant after a ten-year shutdown would also constitute a change in the method of operation within the meaning of the PSD regulations.

As discussed above, the PSD major modification rules focus on changes in actual emissions. In general, changes at existing facilities that significantly increase actual emissions must undergo PSD review. Yet, in adopting the PSD rules EPA also recognized that Congress did not intend to require preconstruction permits for a routine change in the hours or rate of operation. EPA believed that ”such a requirement would severely and unduly hamper the ability of any company to take advantage of favorable market conditions." 45 Fed. Reg. 52704, col. 2. Accordingly, the PSD regulations exclude from the definition of physical or operational change “an increase in the hours of operation or in the production rate." 40 C.F.R. § 52.21 (b)(2)(iii)(f). However, I believe it is clear that in adopting this exclusion, EPA did not intend to remove PSD coverage in circumstances such as those presented by Cyprus. Rather, EPA limited this exclusion to situations where it would not interfere with a state's efforts in air quality planning when, in the preamble to *the* PSD regulations, it noted:

> At the same time, any change in hours or rate of operation that would disturb a

> prior assessment of a source's environmental impact should have to undergo scrutiny.

45 Fed. Reg. 52704, col. 2-3. Thus, EPA disallowed the exclusion where the increase would not be allowed under a preconstruction permit. 40 C.F.R. § 52.21(b)(2)(iii)(f).

In this case, the RLA plant was not required to obtain a preconstruction permit when it was originally erected, because it predated the PSD program. Thus, the present situation is not squarely addressed by the relevant regulatory provision. Nevertheless, EPA's original intention to disallow the exclusion where it would "disturb a prior assessment of a source's environmental impact" leads me to conclude that the exclusion should not be applied here. This is so because our present assessment as well as that of the State of Arizona, is that the RLA plant in its current non-operating condition has no environmental impact. This is evidenced in part by the removal of the plant from the state's emission inventory and the surrender of operating permits. An additional factor is the simple physical fact that the RLA plant has had zero emissions for ten years. I believe that this result is a reasonable interpretation of the PSD regulations, and in keeping with the statutory purposes. (See in particular Clean Air Act section 160(3) and (S)).

3. Combination.

In any event, it seems undeniable, when one looks at both the physical and operational changes the company is proposing to make, that the reactivation constitutes a fundamental alteration in the character of the plant, one that is neither everyday nor routine. Nor is the reactivation deserving of special treatment because of a high frequency of changes at the facility or insusceptibility to event-by-event permitting.

B. Net Emissions Increase.

Whether a significant "net emissions increase" would occur is itself a multistep analysis. The first step is to determine whether the particular physical or operational change in question would itself result in a significant increase in "actual emissions." See §52.21(b)(3)(i)(a) and (b)(21). If so, the second step is to identify and quantify any other prior increases and decreases in "actual emissions that would be "contemporaneous' with the particular change and otherwise creditable. See § 52.21(b)(3)(i)(b). The third step is to total the increase from the particular change with the other contemporaneous increases and decreases. See § 52.21(b)(3)(i)(b). If the total would exceed zero, then a "net emissions increase" would result from the change. Each of these factors is analyzed below in the context of the prospective start-up of Cyprus" RLA plant.

1. Increase in Actual Emissions.

The start-up of the RLA plant would result in an increase in actual emissions within the meaning of the PSD regulations.

This calculation is made by comparing actual emissions as of a ”particular date” -- i.e., immediately prior to the physical or operational change in question -- with the emissions from the source after the change is made. The regulations provide that actual emissions shall be the rate at which the source actually emitted the pollutant during the two-year period immediately preceding the particular date (the date of the change), unless EPA determines that a different two-year period is more representative of normal source operation. 40 C.F.R. § 52.21 (b)(21); see.also 45 Fed. Reg. 52718, col. 2.

In this case, the pollutant in question is sulfur dioxide (SO2), and emissions during the two-year period preceding start-up of the RLA plant are zero. I believe that this period is representative of normal source operations, since emissions have been zero during each of the last ten years while the plant has been shut down. Conversely, given this operational history, I do not believe that emissions during the one year in which the RLA plant was functioning is more representative of normal operations at the, Casa Grande facility. After start-up, emissions will be approximately 1500 tons per year. Thus, the entire amount of emissions after start-up will be considered an increase in actual emissions, and it is obviously significant. 40 C.F.R. § 52.21(b)(23)(i).

2. Contemporaneous Increases and Decreases in Actual Emissions.

No other Increases or decreases in actual *emissions* that would be contemporaneous with the start-up of the RLA plant have been brought to EPA's attention.

The regulations define the contemporaneous period as extending back five years from the physical or operational change, 40 C.F.R. § 52.21(b)(3)(ii), and no changes in emissions at the RLA plant have been made during this period because it has been shut down during this entire period. It should be pointed out in this regard that EPA chose the "fairly large" five-year contemporaneity period over a shorter period in response to industry commenters on the PSD regulations, who had urged that no time limit be placed on crediting of prior emissions decreases. The Agency believed five years to be adequate to accommodate a normal period for corporate planning. See 45 Fed. Reg. 52701, col. 1. Thus, EPA specifically considered and rejected an arrangement whereby an emissions decrease, such as that represented by the ten-year shutdown of the RLA plant, potentially could be credited upon start-up for purposes.of determining whether a major modification would occur.

3. Net Emissions Increase.

Because the actual emissions increase from start-up of the RLA plant would be approximately 1500 tons per year, and there are no contemporaneous emissions increases or decreases, the net emissions increase from start-up would also be approximately 1500 tons per year. This amount is well above the 40 tons per year "significance" level for S02. 40 C.F.R. § 52.21(b)(23)(i). Hence, the start-up would constitute a major modification within the meaning of the Clean Air Act and 40 C.F.R. § 52.21, and Cyprus must obtain a PSD permit prior to construction for this reason alone.

IV. SUMMARY.

Whether the prospective start-up of the RLA plant is viewed under EPA's reactivation policy or under its major modification regulations, I conclude that PSD requirements apply. This consistency of results is not surprising, because both the policy and the regulations address the same general principle that significant increases in actual emissions of air pollution, not already accounted for in air quality planning or involving significant capital investment, be reviewed under the PSD provisions of the Clean Air Act. I hope that in light of this supplemental determination, Cyprus will better understand EPA's insistence that the RLA plant undergo the normal PSD review procedures. I am also aware of Cyprus' desire to rehabilitate the RLA plant and recommence operations as soon as possible. EPA will do its best to accommodate this desire, consistent with its need to avoid undue disruption of its other PSD regulatory responsibilities.

Sincerely,

David P. Howekamp
Director
Air Management Division

cc: Lee Lockie
John Seitz