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January 16, 1997

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**JAN 17 1997**

**BUREAU OF  
AIR REGULATION**

Mr. Douglas Beason, Esq.  
Office of General Counsel  
Department of Environmental  
Protection  
2600 Blair Stone Road  
Twin Towers Office Building  
Tallahassee, Florida 32399

Re: Piney Point Phosphates, Inc. (PSD-FL-144)

Dear Mr. Beason:

As you know, this law firm is helping the Board of County Commissioners of Manatee County ("County") with its evaluation of various environmental law issues concerning a proposal by Piney Point Phosphates, Inc. ("Piney Point"), to refurbish and restart a fertilizer manufacturing facility in Manatee County that was closed several years ago. Based on the correspondence to and from the Florida Department of Environmental Protection ("DEP"), which is attached hereto as Exhibits "A" and "B," it is our understanding that Piney Point met with DEP on December 10, 1996 to determine whether Piney Point may rebuild its existing sulfuric acid plant and then resume commercial operations, without obtaining any additional permits, permit modifications, or other approvals from DEP. It also is our understanding that DEP has not yet made a final determination about the permitting requirements that are applicable to Piney Point's plan.

This letter describes Manatee County's concerns about Piney Point's proposal.

I. SUMMARY

Piney Point's sulfuric acid plant was built before 1975. The plant was used sporadically in the 1980's. The plant "was down for major repairs and maintenance in February 1989" and, later that year, Piney Point submitted an application to DEP for authorization to construct a new sulfuric acid plant, which would

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permanently replace the existing plant. The existing plant closed in 1992 and has not resumed operations since that time. In the interim, Piney Point has pursued the DEP permits for its new plant.

In 1996, the U. S. Park Service and Manatee County alerted DEP that Piney Point had not conducted a proper "top-down" analysis of the Best Available Control Technology ("BACT") for Piney Point's new facility. Manatee County submitted a BACT analysis to DEP which demonstrated that the emissions limitations for Piney Point's new facility should be more restrictive than the emissions limitations that were proposed by Piney Point. Now it appears that Piney Point is prepared to abandon its plan to build a new sulfuric acid plant.

Piney Point now plans to spend \$18,000,000 or more to rebuild and restart its old sulfuric acid plant. Substantial portions of the plant will be replaced. The magnitude of these repairs suggests that the plant currently is inoperable or, at best, unable to operate at its design capacity.

Piney Point's submittal to DEP does not adequately address the permitting issues that must be evaluated before DEP can determine whether Piney Point's proposal will trigger the application of various state and federal regulations, such as New Source Performance Standards ("NSPS") and Prevention of Significant Deterioration ("PSD"). Based on the limited information available at this time, it appears that Piney Point's plan to rebuild the existing sulfuric acid plant:

- (a) may constitute a "reconstruction" of the facility, subject to NSPS requirements;
- (b) will cause an increase in hourly emissions, subject to NSPS requirements for a "modification"; and
- (c) will cause a significant net increase in annual emissions, subject to PSD requirements for a "major modification."

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Under the applicable regulations, these issues must be addressed and resolved before Piney Point commences construction on the existing plant.

Manatee County respectfully requests DEP to carefully review all of the relevant facts and regulations before DEP makes any decisions concerning Piney Point's proposal to rebuild its sulfuric acid plant in Manatee County. The County also requests DEP to provide Manatee County with:

- (a) written notice of any DEP decision concerning any proposal by Piney Point to construct, modify, refurbish, or operate any potential source of pollution at Piney Point's facility in Manatee County; and
- (b) a clear point of entry into the administrative hearing process whenever DEP makes any determination concerning the applicability of any DEP regulations to Piney Point's facility.

Manatee County wants to work in a cooperative manner with DEP and Piney Point to evaluate the issues concerning Piney Point's proposed activities in Manatee County. However, Manatee County also wants to be positioned to exercise its legal rights and protect its substantial interests, if necessary.

All of these issues are discussed in more detail in the following sections of this letter.

## II. FACTUAL BACKGROUND

Piney Point's existing sulfuric acid plant was built before 1975. The plant originally used a single absorption process to produce 1400 tons per day ("tpd") of sulfuric acid.<sup>1</sup> In 1975, DEP issued a construction permit that authorized the plant's owner to increase the plant's capacity to 2000 tpd and convert the plant to a double absorption process. This modification was completed by August 1976.<sup>2</sup>

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<sup>1</sup> "Report In Support Of An Application For A PSD Construction Permit Review" prepared by Koogler & Associates for Royster Phosphates, Inc. (dated November 30, 1989) at page 4.

<sup>2</sup> Id.

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We do not know whether there have been any modifications of the sulfuric acid plant since 1976. However, the former owner of the plant reported that:

the sulfuric acid plant was down for major repairs and maintenance in February 1989, for approximately 415 hours.<sup>3</sup> (emphasis supplied).

In November 1989, the owner of the plant (i.e., Royster Phosphates, Inc., or "Royster") submitted an application to DEP for a permit to construct a new sulfuric acid plant. The permit application repeatedly states that the existing sulfuric acid plant "will be permanently shutdown when the new sulfuric acid plant is operational."<sup>4</sup>

The existing sulfuric acid plant was shutdown in 1992 and has not operated for more than four years.<sup>5</sup> Indeed, the operations of the plant have been sporadic since 1984. The 1989 permit application for the new facility states that 1984

was the only year of full plant operation in the previous several years at the time of [PSD permit] application was submitted [sic] in 1989.<sup>6</sup>

Most recently, the plant's operations increased from 1988 (3982 hours) to 1990 (7875 hours), but then declined until 1992 (3410 hours), when the plant was closed.<sup>7</sup>

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<sup>3</sup> Letter from Koogler & Associates to DEP (dated October 2, 1990) at page 2.

<sup>4</sup> "Report In Support Of An Application For A PSD Construction Permit Review" at pages 1 and 4.

<sup>5</sup> Letter from Koogler & Associates to DEP (dated April 24, 1995), Attachment 1 at page 1, §1.1.

<sup>6</sup> Letter from Koogler & Associates to DEP (dated October 2, 1990) at page 1.

<sup>7</sup> Letter from Koogler & Associates to DEP (dated April 24, 1995), Attachment 1 at page 1, §1.1.

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The sulfuric acid plant and the related fertilizer manufacturing facilities have been owned by a succession of different companies. It is our understanding that Piney Point bought the facilities after the bankruptcy of the prior owner, Royster Phosphates, Inc.

The physical and operational condition of Piney Point's plant was suspect even before the plant shut down. Among other things, in 1989 a spill of sulfuric acid created a cloud of airborne pollutants, which compelled Manatee County to evaluate approximately 400 people from the area near the plant. Industrial accidents at the site have resulted in several injuries and deaths.

In a letter to DEP dated December 17, 1996, Piney Point identified "approximately 90% of the repair activities associated with the repair and restart" of the existing sulfuric acid plant.<sup>8</sup> Piney Point "anticipates expending approximately \$18 million [\$18,000,000] effecting these repairs."<sup>9</sup> According to Piney Point, "several plant components are currently proposed to be physically relocated" and, "due to technical obsolescence, some of the existing equipment or repair components are no longer available."<sup>10</sup> Piney Point's list of changes to the plant indicates that many components of the facility must be replaced completely (e.g., the boiler feedwater heater; the economizer; all three acid towers; all three mist eliminators; a heat exchanger; the condensate storage tank; the cooling tower; the acid coolers; the acid pump tanks; nine pumps; sixteen ducts; etc.).<sup>11</sup> Piney Point alleges in its letter that these "repairs" will not affect the plant's production capability or emissions, but Piney Point does not identify the production capability or emissions levels that it is using as the baseline for its comparison.

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<sup>8</sup> Exhibit "A" at page 2.

<sup>9</sup> Id.

<sup>10</sup> Exhibit "A" at page 1.

<sup>11</sup> Exhibit "A", at pages 1-3 of Exhibit I.

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### III. MANATEE COUNTY'S CONCERNS

Manatee County believes that Piney Point's proposed work on the existing sulfuric acid plant may constitute a "reconstruction," "modification," or "major modification" of the facility, which would trigger the application of NSPS and PSD requirements. Each of these issues is discussed separately in the following sections of this letter.

This letter primarily focuses on the regulations in the federal NSPS and PSD programs, which have been adopted by reference in DEP's rules, because the U. S. Environmental Protection Agency's ("EPA") interpretations of the applicable federal regulations are more numerous and easier to locate than DEP's precedents.

#### A. Reconstruction Issues

We assume that Piney Point sent its letter to DEP ("Exhibit A") in part because Piney Point does not want its work on the existing sulfuric acid plant to be classified as a "reconstruction." Reconstruction is defined at 40 CFR 60.15(b)<sup>12</sup> as follows:

(b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:

- (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility

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<sup>12</sup> DEP Rule 62-204.800(7)(d), F.A.C., states that "the general provisions of 40 CFR Part 60, Subpart A, revised as of July 1, 1994, are adopted and incorporated by reference" into the DEP rules, subject to certain exceptions that are not relevant here. Thus, the federal definition and general provisions concerning a "reconstruction" apply to facilities in Florida.

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If a reconstruction occurs, the plant "becomes an affected facility, irrespective of any change in emission rate." (emphasis supplied) 40 CFR 60.15(a).

In this case, Piney Point's letter does not contain enough information for DEP to determine whether a reconstruction will occur. First, Piney Point's letter does not identify all of the work and all of the costs associated with Piney Point's proposed project. Piney Point's letter acknowledges that the attached list of "repairs" includes only "approximately 90%" of the work that will be done on the existing sulfuric acid plant. Piney Point should be asked to identify all of the proposed changes to its existing plant and identify the anticipated costs associated with each of the proposed changes.

Second, Piney Point's letter and the attached affidavit appear to be based on an erroneous premise. The affidavit states that the cost of the work on the existing plant was compared to the cost of

a new grassroots plant of the same capacity (2,000 TPD), design (double contact wet process) and emissions limitations. . . . (emphasis supplied).<sup>13</sup>

It is our understanding that Piney Point's existing plant does not use a "wet" process. A "wet gas plant" uses hydrogen sulfide as the source of sulfur.<sup>14</sup> Consequently, Piney Point's estimate of the cost of a comparable new facility may be in error.

Third, Piney Point's letter and affidavit do not indicate whether Piney Point's estimate includes the cost of modifications to the plant that have occurred in the past. To determine

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<sup>13</sup> Letter dated December 17, 1996 from Piney Point, at Exhibit II.

<sup>14</sup> See §8.10 EPA Compilation of Air Pollutant Emission Factors, Volume 1 (5th Ed.); AP-42 (January 1995).

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whether the work on Piney Point's plant constitutes reconstruction, Piney Point must calculate the cost of the changes that are currently proposed and add them to the cost of all of the changes that have occurred at the plant in the past.<sup>15</sup> The current proposals cannot be viewed in isolation.

Fourth, Piney Point's letter and affidavit are too conclusory in nature. Piney Point did not provide a detailed, itemized estimate of the cost of its proposed project or the cost of a new facility. Without itemized estimates, DEP cannot determine whether Piney Point's conclusions are valid.

Manatee County believes DEP should request additional, detailed information from Piney Point so that DEP can better evaluate Piney Point's proposal. Additional information is particularly important in this instance because Piney Point's estimated capital cost for this project (i.e., \$18,000,000) is approaching 50% of the estimated cost of a new facility (i.e., \$40,000,000) and thus it appears that Piney Point is approaching the regulatory threshold for a reconstruction. In addition, Piney Point should not be allowed to avoid the requirements associated with a reconstruction unless Piney Point can clearly demonstrate that its project does not constitute a reconstruction.

#### B. Modification Issues

Piney Point's letter to DEP does not directly address many of the issues that must be answered before DEP can determine whether Piney Point's activities constitute a "modification" that is subject to NSPS or PSD requirements.

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<sup>15</sup> See generally letter from EPA to David S. Dee (dated August 24, 1996), which is attached hereto as Exhibit "C", at pages 3-4 (to determine whether changes to Tampa's resource recovery facility constituted a reconstruction, EPA requested Tampa to submit information concerning all costs of changes for each emissions unit from the time of initial startup in 1967 to the present).



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1. NSPS Determination of a Modification

For NSPS analyses, 40 CFR 60.14(a)<sup>16</sup> provides as follows:

Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the [Clean Air] Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

Thus, as a general rule, any change that causes any increase in regulated emissions shall constitute a modification subject to NSPS requirements. The cost of the changes is not relevant to the determination of whether the changes are a modification.

There are exceptions to this general rule, but the exceptions do not apply to Piney Point's proposal. Most significantly, 40 CFR 60.14(e)(1) provides that routine "maintenance, repair, and replacement" is not a modification. This exception is not applicable here because the extensive changes proposed by Piney Point are not "routine." Indeed, many major components of the plant must be replaced completely, including the boiler feedwater heater, the economizer, all three acid towers, all three mist eliminators, a heat exchanger, the condensate storage tank, the cooling tower, the acid coolers, the acid pump tanks, nine pumps, and sixteen ducts. The sheer magnitude of these replacements, together with the estimated minimum cost of \$18,000,000, highlights the fact that Piney Point's proposed activities are not "routine."

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<sup>16</sup> The provisions of 40 CFR 60.14 are adopted by reference in DEP Rule 62-204.800(7)(d), F.A.C.

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For NSPS purposes, emissions increases are determined by comparing the plant's hourly emission rate immediately before and after the physical or operational changes to the plant.

The EPA compares the hourly emissions of the unit at its current maximum capacity to its potential emissions at maximum capacity after the change. . . . In this calculation, the agency disregards the unit's maximum design capacity; this factor often sheds little light on the unit's actual current capacity to produce emissions." (emphasis in original)

Wisconsin Electric Power Company v. Reilly, 893 F.2d 901, 913 (7th Cir. 1990) (herein referred to as "WEPCO"). When establishing a plant's actual current capacity, EPA does not consider the plant's original design capacity. Id. Similarly, EPA does not establish the pre-renovation emissions of a plant by looking at "representative" emissions during prior years. WEPCO at 913-915. Baseline emission rates for the plant "are determined by hourly maximum capacity just prior to the renovations." WEPCO at 914.

Given the extensive changes that must be made to Piney Point's sulfuric acid plant before the plant can resume commercial operations, it is clear that the plant is in a state of considerable disrepair. We assume that, in its current deteriorated condition, this 1976 vintage plant is not capable of operating at its design capacity or complying with the applicable DEP emissions limitations. Indeed, the plant may not be capable of operating at all, unless the plant undergoes extensive non-routine repairs and improvements. Consequently, for NSPS purposes, the plant's "actual current capacity" appears to be zero. If so, Piney Point's non-routine changes to the plant will increase the plant's emissions, which will constitute a modification, which will make the plant subject to NSPS requirements.

If Piney Point contends that the plant can operate in its current condition, DEP should require Piney Point to conduct stack tests to establish the plant's "actual emissions." Without current stack test data, DEP cannot accurately determine whether the proposed changes to the plant will cause an emissions increase.

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2. PSD Determination of a Modification

In accordance with 40 CFR §52.21(i)(2), the federal PSD and New Source Review (NSR) requirements apply to new sources of air pollution and "major modifications" of existing sources.<sup>17</sup> A "major modification" is defined as

any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the [Clean Air] Act.

40 CFR §52.51(b)(2)(i).<sup>18</sup> A "net emissions increase" is defined as the sum of "any increase in actual emissions from a particular physical change," together with any other "contemporaneous" increases or decreases in actual emissions. 40 CFR §52.21(b)(3). An increase or decrease in emissions is "contemporaneous" if

it occurs between: (a) the date five years before construction on the particular change commences; and (b) The date that the increase from the particular change occurs.

40 CFR §52.21(b)(3)(ii).

These federal PSD regulations were described and applied by the U.S. Environmental Protection Agency ("EPA") in a 1992 memorandum (attached hereto as Exhibit "D") concerning the Cyprus Northshore Mining Corporation ("Cyprus"). In pertinent part, EPA explained that:

Applicability of the PSD provisions must be determined in advance of construction and on a pollutant-by-pollutant basis. Specifically, to determine whether a proposed change at an existing source will result in

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<sup>17</sup> The federal PSD and NSR requirements have been adopted by DEP in Rule 62-212.400, F.A.C.

<sup>18</sup> Under the PSD regulations, a major modification does not include "routine maintenance, repair and replacement." 40 CFR §52.21(b)(2)(iii)(a). This exemption does not apply here because Piney Point's project involves non-routine repairs and replacements.

an increase in actual emissions, the source must first determine a baseline level of actual emissions. The applicable regulation defines actual emissions on a particular date as "the average rate, in tpy, at which the unit actually emitted the pollutant during a 2-year period which precedes the particular date and which is representative of normal source operation" [see 40 CFR 52.21(b)(21)(ii)]. The Administrator shall allow use of a different time period "upon a determination that it is more representative of normal source operation." [Ibid.] The EPA has "typically used the 2 years immediately preceding the physical or operational change to establish the baseline" [see 57 FR 32317].<sup>19</sup>

In the Cyprus case, EPA rejected Cyprus' argument that the baseline emissions could be established by looking at the facility's emissions before the "contemporaneous" period (i.e., more than five years before the proposed change to the facility). EPA explained its decision in the following terms:

The EPA policy presumes a calculation based on the 2 years that immediately preceded the changes [see 45 FR 52676, 52705, 52718 (1980)].

\* \* \* \* \*

As discussed, the Administrator's power to use a different baseline period is limited to those circumstances where the source demonstrates that some time period other than the 2 years that precede the change is more representative of normal source operation. In general, EPA has indicated that this provision is to apply to catastrophic occurrences such as strikes and major industrial accidents. . . .

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<sup>19</sup> Exhibit "D" at page 3.

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On the other hand, EPA has declined to consider a stop in operations, in and of itself, to constitute grounds to change the baseline years. For instance, in the WEPCO rulemaking, EPA adopted a presumption for utilities that considers any 2 years within the 5 years that precede the change to be representative of normal source operations. However, EPA rejected comments seeking to allow further accommodations for units that had been out of operation [see 57 FR 32325].

The EPA disagrees with comments seeking to allow the use of any 2 consecutive years within the last 5 years of a unit's "operation" rather than within the 5 years directly preceding the proposed change. A shifting of the 5-year period would be difficult to harmonize with the definitions of contemporaneous contained in the regulations. This type of open-ended provision would even credit a unit which has been inoperative for 20 or 30 years or longer with a high level of emissions.<sup>20</sup>

In light of these considerations, EPA concluded that the baseline emissions for some of Cyprus' units were zero. EPA noted that:

in the last 10 years the source [Cyprus] has been idle due to general economic conditions, and the zero source baseline appropriately reflects source utilization under these longstanding market conditions.<sup>21</sup>

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<sup>20</sup> Exhibit "D" at pages 7 and 8.

<sup>21</sup> Exhibit "D" at page 8.

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EPA rejected Cyprus' argument that Cyprus could calculate the facility's net emissions increases and decreases by looking at emissions changes that occurred outside the 5 year period for "contemporaneous" changes.<sup>22</sup> EPA noted that Cyprus' argument conflicts with the plain language of EPA's regulations.

Moreover, allowing credit for very old emissions reductions undermines the purpose of the contemporaneous requirement by enabling new construction activity to burden the environment with levels of air pollution higher than they have been for many years.<sup>23</sup>

If we apply the EPA regulations and Cyprus analyses to the Piney Point proposal, it appears that Piney Point's baseline emissions are zero and any significant increase in emissions will trigger New Source Review requirements.

As noted in Cyprus, EPA's policy is to calculate "actual emissions" by looking at the facility's average emissions during the preceding two years. In this case, Piney Point's average emissions during the past two years have been zero.

EPA can consider a different baseline period, but EPA has indicated in Cyprus that a different baseline should be established only when there has been a "catastrophic" occurrence. In this case, Piney Point has not alleged and presumably cannot demonstrate that a catastrophic event has occurred.

Piney Point's decision to stop its operation for economic reasons is not sufficient justification to change the baseline years. Here, as in the Cyprus case, "the zero baseline appropriately reflects source utilization."<sup>24</sup>

Even if we consider Piney Point's emissions during the last five years, Piney Point's "actual emissions" will be quite small. In this hypothetical case, Piney Point's "actual emissions" are the "average rate, in tpy [tons per year] at which the unit actually emitted the pollutant during a 2-year period." Since

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<sup>22</sup> Exhibit "D" at pages 6 and 7.

<sup>23</sup> Exhibit "D" at page 7.

<sup>24</sup> Exhibit "D" at page 8.

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Piney Point's plant was not in operation for approximately 4.5 of the last 5 years, the average emissions rate for any two year period will include, at most, only about six months of emissions.

The baseline emissions rate for Piney Point's plant will be compared to the plant's potential to emit after the modification is completed. Since the plant previously was a major source, it seems highly probable that there will be a "significant" net emissions increase if Piney Point rebuilds its sulfuric acid plant and then operates the plant at its previously permitted levels. If there is a significant increase, the plant will be subject to PSD review pursuant to state and federal regulations.

#### C. PSD Review for Shutdown Facilities

Under EPA policy, a facility that has been shutdown for two years or more is presumed to be shutdown on a permanent basis. A facility that has been permanently shutdown must undergo PSD review as a new source before resuming operations. See also §62-210.300(6)(b), F.A.C.

EPA's policy and presumption should be applied in this case. Piney Point and its predecessors have stated since at least 1989 that they intended to "permanently shutdown the existing facility" as soon as the new sulfuric acid plant is available. Given the extensive non-routine repairs that are required to the existing plant, it appears that Piney Point intentionally allowed the old, existing plant to deteriorate over the past five years while Piney Point pursued the permits for the new facility. Since Piney Point cannot simply reactivate the existing plant and instead must rebuild it, Piney Point should not be allowed to evade the requirements for new sources nor should Piney Point be allowed to renew its operations at old, high levels of emissions.

#### IV. CONCLUSION

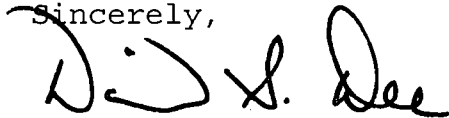
Manatee County would like to work with DEP to evaluate the issues that have been raised by Piney Point's proposal to rebuild the existing sulfuric acid plant. At this time, however, Manatee County and DEP do not have enough information to properly analyze Piney Point's proposal. For this reason, Manatee County respectfully requests DEP to take all appropriate steps to ensure that DEP has all of the relevant facts in hand before DEP makes any final determinations concerning the applicability of DEP's regulations to Piney Point's facility.

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Manatee County also again respectfully requests DEP to provide Manatee County with written notice whenever DEP reaches any conclusions about the application of the NSPS and PSD regulations to Piney Point. Please note that Manatee County is entitled to notice and a clear point of entry into the administrative process, even if DEP decides that the NSPS or PSD regulations do not apply in this instance. See Manasota-88 v. Gardinier, Inc., 481 So. 2d 948 (Fla. 1st DCA 1986) (Manasota-88 is entitled to an administrative hearing to contest DEP's decision that an air permit is not required); Friends of the Hatchineha, Inc., v. Department of Environmental Regulation, 580 So. 2d 267 (Fla. 1st DCA 1991) (environmental group entitled to administrative hearing to challenge DER's decision that proposed driveway qualified for exemption from dredge and fill permitting process). Although Manatee County does not wish to engage in litigation with DEP, Manatee County does wish to preserve its right to pursue its administrative remedies, if necessary.

Thank you for your cooperation and assistance with this matter. Please call me if you have any questions. Manatee County would be happy to meet with DEP in Tallahassee or Tampa, at your convenience, to discuss these issues in more detail.

Sincerely,



David S. Dee

cc: Dr. Richard Garrity  
Bill Thomas  
Gerald Kissel  
Howard Rhodes  
Clair Fancy  
Brian Beals, EPA  
Scott Davis, EPA  
Joyce Chandler, EPA OECA  
Ellen Porter, National Park Service  
Mike Solomon, EPA  
Hamilton Rice, Jr.  
Karen Collins  
Paul Amundsen  
Richard Moore



**PINEY POINT PHOSPHATES, INC.**

13300 U. S. Hwy. 41 North  
Palmetto, Florida 34221  
(941) 722-4555

CERTIFIED/RETURN RECEIPT NO. P 576 124 740

17 December 1996

Mr. W. C. Thomas, P.E., Administrator  
State of Florida  
Department of Environmental Protection  
Division of Air Resources Management  
Southwest District Office  
3820 Coconut Palm Drive  
Tampa, FL 33619

Re: Piney Point Phosphates, Inc.;  
FDEP Permit No. A041-197112  
Sulfuric Acid Plant

Dear Sir:

Piney Point Phosphates, Inc. (PPP) appreciates the opportunity and time you gave Company representatives on 10 December 1996 to discuss the forthcoming restart of the above-referenced sulfuric acid plant. As you may recall, PPP intends to repair the existing 2,000-ton-per-day sulfuric acid plant for restart in late 1997. PPP has identified several specific areas that will be repaired or equipment replaced to different configurations.

Due to technical improvements and safety considerations, several plant components are currently proposed to be physically relocated during repairs. PPP does not anticipate that these actions will in any way affect the plant production capability or alter the emissions from the source. Further, due to technical obsolescence, some of the existing equipment or repair components are no longer available.

Concomitant with the sulfuric acid plant repair will be repairs to the Sulfur Storage Tank operated under FDEP permit AO41-206854. PPP does not anticipate any changes in emissions or operations rate in this source after repairs.



Mr. W. C. Thomas, P.E., Administrator  
17 December 1996  
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PPP will also be installing an auxiliary boiler that is currently permitted under FDEP permit AC41-232096.

Attached as "Exhibit I" find a list and short description of the repairs. These repairs represent approximately 90% of the repair activities associated with the repair and restart. PPP anticipates expending approximately \$18 million effecting these repairs, including installation of a new Sulfur Storage Tank and auxiliary boiler (\$16 million without these later two items).

PPP has reviewed these repair costs in contrast to constructing a new grassroots sulfuric acid plant and found the costs to be less than 50% of an entirely new plant. Find as "Exhibit II" a professional engineer's certification of the estimated repair costs and estimated new plant costs associated with this project. Repairs will be made primarily by Monsanto Enviro-Chem Systems, the original designer and builder of the original plant.

In closing, we appreciate your taking time to discuss this matter with our representatives. Please consider the attached exhibits and foregoing information; then if further information or response is needed, please contact me. Thank you.

Sincerely,



Ivan Nance  
Corporate Environmental Manager

/rmm

Attachments

bcc: R. Stewart  
R. Moore  
C. Masio  
T. Baroody

## EXHIBIT I

### PROPOSED REPAIRS AND EQUIPMENT REPLACEMENT TO THE EXISTING SULFURIC ACID PLANT AT PINEY POINT

Note: These are the major repairs that are planned. They are not all inclusive, but comprise about 90% of the work that is proposed.

1. **Sulfur Burner:** The existing unit will be retained and repaired.
2. **Boiler Feedwater Heater:** A new heater of same size and similar design will replace the existing unit that will be demolished.
3. **Waste Heat Boilers:** The two (2) existing boilers will be retained and repaired.
4. **Economizer:** A new economizer of larger size and similar design will replace the existing unit which will be demolished.
5. **Main Compressor:** The existing compressor will be retained and refurbished.
6. **No. 1 Converter:** The existing unit will be retained. The 1st pass section (of four passes) will be replaced with high temperature materials. The remaining passes will be retained and refurbished. Catalyst will be replaced as necessary.
7. **No. 2 Converter:** The existing unit will be retained and the converter floor repaired. All catalyst will be replaced.
8. **Acid Towers:** All three (3) acid towers (drying, interpass absorption and final absorption) will be replaced with smaller size units of similar design and higher efficiency. The existing towers will be demolished. Two (2) towers will be relocated from on-top of the control room to separate free standing foundations.
9. **Mist Eliminators:** New mist eliminators will be provided in all three of the new towers.
10. **Heat Exchangers:** One new heat exchanger of smaller size and similar design will replace the existing unit that will be demolished. Two existing

heat exchangers will be retained and repaired.

- 11. Superheater:** The existing unit will be retained and repaired.
- 12. Condensate System:** A new condensate storage tank of larger size, similar design and different metallurgy will replace the existing unit that will be demolished. The condensate system will be of similar design.
- 13. Cooling Tower:** A new tower of smaller flow and similar design of higher efficiency will be installed in the area occupied by the previous unit, which was previously destroyed in a storm.
- 14. Acid Coolers:** New coolers of a new design (shell & tube anodic protection) will replace the existing cast iron coolers which will be demolished.
- 15. Acid Pump Tanks:** The two (2) existing pump tanks will be replaced with one (1) new pump tank integral to the new interpass tower/pump tank.
- 16. Acid Storage Tanks:** The two (2) existing sulfuric acid storage tanks will be retained and repaired.
- 17. Plant Stack/  
Water System:** The stack will be retained and rehabilitated. The associated soft water system will be comprised of new softeners of similar capacity and design.
- 18. Pumps:** New pumps will be installed as follows: sulfur pumps (3), common acid circulating pump (1), acid drain pump (1), product acid booster pump (1), cooling water pumps (2), and condensate transfer pump (1).
- 19. Ducts:** Sixteen (16) ducts will be replaced. Four (4) new ducts of the same design will be moved to relocated towers. One duct will be of different metallurgy. One duct will be lengthened and inlet bird screen replaced. All other ducts will be unchanged from original design.
- 20. Misc. Piping/Valves:** New piping and valves of similar design and size will be moved to relocated acid towers and coolers.
- 21. SO<sub>2</sub> Monitor:** The existing monitor will be repaired with new retrofit solid state

parts.

**22. Office:**

A generator and air compressor will be removed and a new office will be constructed from the existing room.

**23. Civil, Structural,  
Insulation, Electrical,  
Painting:**

New piling and foundations will be supplied for the new drying and certain support equipment. An existing foundation will be used for the new interpass tower/pump tank. Otherwise existing foundations will be utilized for the balance of the plant. Most existing structural steel will be retained and rehabilitated; certain steel will be replaced where needed. Most insulation will be removed and replaced with new insulation. A new motor control center (MCC) will be installed adjacent to existing MCC in the same building; new lighting will be provided; new electrical tray, conduit and cable will be provided for new power, control and instrumentation wiring. All new equipment, vessels, steel, piping and ductwork, as well as existing support and access steel, will be painted.

**24. Instrumentation:**

A new electronic system (distributive control-solid state) will replace the existing pneumatic system.

**PROPOSED REPAIRS AND EQUIPMENT REPLACEMENT OF ITEMS ASSOCIATED WITH THE EXISTING SULFURIC ACID PLANT AT PINEY POINT**

- 1. Auxiliary Boiler:** A new package boiler rated at 190 MMBtu/hour will replace the existing 96 MMBtu/hour boiler. Note that PPPI is already permitted for the larger boiler (Permit No. AC41-232096).
  
- 2. Sulfur Tank and Pit:** A new tank of the same size and similar design will replace the existing tank that will be demolished; The existing sulfur pit will be retained and repaired with similar designed coils and cover. Note that the sulfur storage tank is covered under Permit No. AO41-206854.

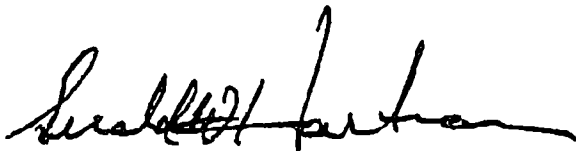
**EXHIBIT II**

**CERTIFICATION OF COST OF PROPOSED REPAIRS AND EQUIPMENT  
REPLACEMENT TO THE EXISTING SULFURIC ACID PLANT AT PINEY POINT**

The undersigned, being a duly registered professional engineer in the State of Florida, hereby certify that I am experienced in the design, construction and operation and maintenance of sulfuric acid plants. In my professional opinion, the repairs and equipment replacements to the existing sulfuric acid plant at Piney Point, estimated to cost approximately \$16.9 million, will not exceed 50% of the cost of building a new grassroots plant of the same capacity (2,000 TPD), design (double contact wet process) and emission limitations (currently permitted limits) on the current Piney Point site. Based on my professional opinion, and the review of independent contractor proposals, the construction of a new grassroots plant having the preceding specifications will cost in excess of \$40 million.

The cost of the repairs and replacement equipment ancillary to the sulfuric acid plant (auxiliary boiler and sulfur tank/pit) are estimated to cost about \$1.3 million.

Signed



Gerald W. Hartman  
December 13, 1996

Registered Professional Engineer in the State of Florida  
License No. PE 48452



# Department of Environmental Protection

Lawton Chiles  
Governor

Southwest District  
3804 Coconut Palm Drive  
Tampa, Florida 33619

Virginia B. Wetherell  
Secretary

December 19, 1996

Mr. Ivan Nance  
Mulberry Phosphates, Inc.  
P.O. Drawer 797  
Mulberry, FL 33860

RE: Permitting of Piney Point Sulfuric Acid Plant  
Repairs/Renovations

Dear Mr. Nance:

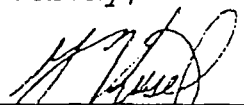
From our meeting of December 10, 1996, it appears that the proposed repairs/renovations will not involve air permitting, with the following possible exceptions:

1) Any significant new emission unit, or a change involving a modification (as defined in the air rules) would require a construction permit (which includes public notice). A new molten sulfur tank could fall in this category.

2) The only construction permit applicable to this facility is AC41-2042B, dated 9/1/75, expired 9/1/76. This permit is referenced in our files but we do not have a copy. If there are specific limits/specifications in that permit which the proposed project would revise, that would probably require a construction permit. By this letter, I'm requesting that you and Manatee County check as to whether you have a copy of that permit.

If you have any questions, please call me at (813) 744-6100, Extension 107.

Sincerely,

  
Gerald Kissel, P.E.  
District Air Engineer

cc: Manatee County

c:\piny1296







UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365

AUG 20 1996

4APT-AEB

Mr. David S. Dee  
Landers and Parsons  
310 West College Avenue  
P.O. Box 271  
Tallahassee, Florida 32303

SUBJ: McKay Bay Refuse to Energy Facility

Dear Mr. Dee:

This letter is in response to your correspondence to the U.S. Environmental Protection Agency (EPA), dated April 2, 1996, requesting an applicability determination for the above referenced facility. Your correspondence requested an applicability determination pursuant to 40 C.F.R. §60.5 with regard to the retrofitting of equipment at the existing McKay Bay Refuse to Energy facility located in Tampa, Florida.

This determination is primarily based on the federal rule for municipal waste combustors (MWC's), promulgated on December 19, 1995, in the Federal Register under 40 C.F.R. Part 60, Subparts Cb (Emission Guidelines and Compliance Schedules for MWC's) and Eb (Standards of Performance for MWC's for Which Construction is Commenced After September 20, 1994). The rule contains the emission guidelines (EG) for existing MWC sources and the new source performance standards (NSPS) for new MWC sources. In addition to our review and interpretation of these federal regulations with regard to the proposed retrofit at the McKay Bay facility, to ensure national consistency, EPA Region 4 consulted with the Office of Enforcement and Compliance Assurance (OECA) and the Office of General Counsel (OGC), and received technical assistance from the EPA Office of Air Quality Planning and Standards (OAQPS).

Background: Reference Definitions and Concepts

The resultant applicability determination is derived directly from specific portions of the federal rule for MWC's. As a reference, the MWC applicability and the "MWC unit," "Modification," and "Reconstruction" definitions from the federal rule are included in this section.

Under 40 C.F.R. §60.51b, the boundaries of a municipal solid waste combustor are defined as follows:



The MWC unit includes, but is not limited to the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustor water system. The MWC boundary starts at the municipal solid waste pit or hopper and extends through:

(i) the combustor flue gas system, which ends immediately following the heat recovery equipment, or if there is no heat recovery equipment, immediately following the combustion chamber

(ii) the combustor bottom ash system, which ends at the truck loading station or similar ash handling equipment that transfer the ash to final disposal, including all ash handling systems that are connected to the bottom ash handling system

(iii) the combustor water system, which starts at the feed water pump and ends at the piping exiting the steam drum or superheater

The MWC unit does not include air pollution control equipment, the stack, water treatment equipment, or the turbine-generator set.

Under 40 C.F.R. §60.51b, Modification (or Modified MWC Unit) and Reconstruction are defined as follows:

Modification or Modified MWC Unit means a MWC unit to which changes have been made after June 19, 1996, if the cumulative cost of the changes, over the life of the unit, exceed 50 percent of the original cost of construction and installation of the unit (not including the cost of any land purchased in connection with such construction or installation) updated to current costs; or any physical change in the MWC unit or change in the method of operation of the MWC unit [that] increases the amount of any air pollutant emitted by the unit for which standards have been established under section 129 or section 111. Increases in the amount of any air pollutant emitted by the MWC unit are determined at 100 percent physical load capability and downstream of all air pollution control devices, with no consideration given for load restrictions based on permits or other nonphysical operational restrictions.

Reconstruction means rebuilding a MWC unit for which the reconstruction commenced after June 19, 1996, and the cumulative costs of the construction over the life of the unit exceed 50 percent of the original cost of construction and installation of the unit (not including any cost of land purchased in connection with such construction or installation) updated to current costs (current dollars).

Under 40 C.F.R. §60.50b, the applicability of the MWC guidelines and standards are outlined, to exclude certain actions:

(d) Physical or operational changes made to an existing MWC unit primarily for the purpose of complying with emission guidelines under subpart Cb are not considered a modification or reconstruction and do not result in an existing MWC unit becoming subject to this subpart.

As the definitions state, the determination of the occurrence of a modification/reconstruction at a MWC unit is based on a cost analysis process. This process includes four steps:

- (1) Determine the original construction and installation costs for the unit.
- (2) Aggregate all costs of changes to the unit since start-up, including all costs for the emission guidelines.
- (3) Subtract the "allowed" retrofit costs required for compliance with the emission guidelines.
- (4) Compare the cost of changes to the unit since start-up to the original cost of the unit. If this value is greater than 50 percent of the original cost then a modification/reconstruction has occurred.

Your correspondence addresses the "allowed" retrofit costs (in step 3), but does not address the other costs (in item 2) for McKay Bay. This response will address all aspects of the cost analysis process.

#### 1985 Conversion to Waste-to-Energy Facility

The McKay Bay Refuse-to-Energy Facility was originally constructed in 1967 as a solid waste combustor without heat recovery. The original facility included three combustion units, each with a capacity of 250 tons per day of municipal solid waste. This facility was in operation from 1967 until it ceased operation in 1979. In 1985, the facility began operations after being converted to a waste-to-energy facility. This conversion included the replacement of three Volund rotary kiln combustion units and the installation of one new Volund kiln unit (250 tons per day capacity) at the facility. A waste heat recovery system, a turbine generator, and four electrostatic precipitators were also installed during the conversion. Under the federal MWC rule, the cumulative costs of the changes at McKay Bay are included in determining the occurrence of a modification/reconstruction. The original three combustion units

began operation in 1967; the fourth unit began operation in 1985. In order to complete the applicability determination of the subpart Cb emission guidelines or subpart Eb performance standards under the "cumulative cost" criteria, we are requesting the submittal of information outlining the waste-to-energy conversion costs and other modification costs for each combustion unit from the initial start-up dates of 1967 (for units 1, 2, and 3) and 1985 (for unit 4) through June 18, 1996.

Applicability Determination: Source Retrofit Categories

This section will initially outline our applicability determination, formulated in response to your question concerning whether the proposed retrofit improvements at McKay Bay would constitute modification/reconstruction of the MWC unit under the EG. Under the potential retrofit improvements discussed in your correspondence, categories for these improvements have been developed. These categories are:

(1) Improvements to components that are not part of the definition of a MWC unit, are being undertaken to comply with the EG, and are not considered part of potential costs of modification/reconstruction. This category has been determined to include the following potential improvements:

- Air Pollution Control Equipment
- Continuous Emissions Monitors
- Induced Draft Fans
- Electrical System (portions)
- Combustion Control Systems (portions)

(2) Improvements to components that are part of the definition of a MWC unit, are being undertaken to comply with the EG, and are not considered part of potential costs of modification/reconstruction. This category has been determined to include the following potential improvements:

- Auxiliary Burners
- Furnace, Grates, and Kilns
- Boiler and Economizer
- Ash Enclosures
- Ash Conveyor System

(3) Improvements to components that are not part of the definition of a MWC unit, are not being undertaken to comply with the EG, and are not considered part of potential costs of modification/reconstruction. This category has been determined to include the following potential improvements:

- General Equipment and Maintenance Building
- Control Room Systems

- Ash Building
- Ash Treatment System
- Tipping Floor

(4) Improvements to components that are part of the definition of a MWC unit, are not being undertaken to comply with the EG; and are considered part of potential costs of modification/reconstruction. This category has been determined to include the following potential changes and improvements:

- Furnace Configuration
- Refuse Pit
- Cranes

Within these four categories, for the purposes of determining whether or not this facility meets the criteria for modification/reconstruction under 40 C.F.R. §60.51b, the potential source improvements identified in Category 4 only would be considered a part of the potential costs of modification/reconstruction at the McKay Bay facility. In addition, the cumulative costs of changes over the life of the unit from the initial construction date through June 18, 1996, would be included in the potential costs of modification/reconstruction at the McKay Bay facility. A summary of the potential source improvements and their applicability criteria within this determination for the McKay Bay facility is presented in Table 1.

#### Applicability Determination: Discussion

Different interpretations are apparent when comparing our determination and the proposed determination in your correspondence. The basis for EPA's determination regarding the potential source improvements at the McKay Bay facility will be discussed in this section.

Category 1 Improvements: Air pollution control equipment is specifically excluded from the MWC unit definition and is being installed for compliance with the EG. Continuous emissions monitors are being installed specifically for compliance with the EG. As the rule (at §60.51b) is written, induced draft fans are not part of the MWC unit definition. This exclusion does not set a precedent however, for applicability to other NSPS boundary determinations. This exclusion is only for sources affected under subparts Cb, Ea, and Eb. The portions of the electrical system that are being installed for compliance with the EG (for compatibility with the new air pollution control system) are excluded from consideration as a modification/reconstruction. No costs associated with these potential improvements are included in modification/reconstruction cost calculations. In addition,

control systems for the combustion units and the air pollution control equipment are not included in the MWC unit definition, thus their costs can be excluded.

Category 2 Improvements: Auxiliary burners are included in the MWC unit definition and are being installed for compliance with the EG for the maintenance of good combustion practices. The furnaces, grates, and kilns are included in the MWC unit definition and are being installed primarily for compliance with the EG to meet the new emission limits. The boiler and economizer are included in the MWC unit definition and are being installed for compliance with the EG to maintain compatibility with the furnace system upgrades. The ash enclosures are included in the MWC unit definition and are being installed for compliance with the EG for the control of fugitive ash emissions. The ash conveyor system is included in the MWC unit definition and is being installed for compliance with the EG for the control of fugitive ash emissions. No costs associated with these potential improvements are included in modification/reconstruction cost calculations.

Category 3 Improvements: General equipment improvements and the maintenance building are excluded from the MWC unit definition and are not being installed or improved for compliance with the EG. The control room systems are excluded from the MWC unit definition and are not being installed for compliance with the EG. The ash building is excluded from the MWC unit definition, is not being installed primarily for compliance with the EG, and is not primarily for the control of fugitive ash emissions (fugitive ash emissions are controlled by the ash conveyor system enclosures). The ash treatment system will be installed in the ash building and will treat fly ash prior to its combination with bottom ash, dewatering, and disposal. The ash treatment system, however, does not constitute a part of the ash handling system. The ash treatment system is excluded from the MWC unit definition and is not being installed primarily for compliance with the EG. The tipping floor is specifically excluded from the MWC unit definition and is not being improved for compliance with the EG. No costs associated with these potential improvements are included in modification/reconstruction cost calculations.

Category 4 Improvements: The furnaces are specifically included in the MWC unit definition, however, a change in the existing furnace configuration would not be completed primarily for compliance with the EG.<sup>1</sup> Furnace configuration changes, such

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<sup>1</sup> The McKay Bay facility is currently configured with four combustion units, each with a capacity of 250 tons per day.

as a change to either three units each with 333 tons per day capacity or two units each with 500 tons per day capacity, are a fundamental change to the MWC units at McKay Bay. These furnace configuration changes require a "unit by unit" comparison of costs to an existing 250 tons per day capacity unit at McKay Bay. Therefore, all costs associated with this potential change are included in modification/reconstruction cost calculations.

The intent of the rule was to include the refuse pit or the hopper, whichever occurs first, specifically in the MWC unit definition. Improvements to the refuse pit would not be done primarily for compliance with the EG. Therefore, all costs associated with this potential improvement are included in modification/reconstruction cost calculations.

Cranes are specifically included in the MWC unit definition as part of the fuel feed system. Any improvements to the cranes would not be done for compliance with the EG. All costs associated with this potential improvement are included in modification/reconstruction cost calculations.

#### Applicability Determination: Modification/Reconstruction Costs

On the basis of the definitions of modification and reconstruction in 40 C.F.R. §60.51b and our analysis of the proposed retrofit at the McKay Bay facility, the following improvements have been determined to be considered in the modification/reconstruction cost analysis: Furnace Configuration Change, Refuse Pit, Cranes. This cost comparison is to be completed on a "unit by unit" basis, comparing each existing unit's original cost of construction and installation (not including any cost of land purchased in connection with such construction or installation) updated to current costs (current dollars) to the replacement or modified unit's cumulative costs of changes over the life of the unit. These cumulative costs of changes over the life of the unit are not to exceed the threshold level of 50 percent of the original unit's updated current cost for a source to remain subject to the EG.

In response to your queries regarding original unit costs, new facility costs, and current dollars computations, EPA has the following responses:

- (1) There are two separate original costs for the MWC units at McKay Bay. The cost of the three original combustion units may be determined from the comparison of originally issued bonds for the construction of the facility, as originally constructed in 1967 as a solid waste combustor. For the fourth combustion unit, constructed new in 1985, its original cost is determined from this baseline date (1985). For the McKay Bay facility, however, a better comparison

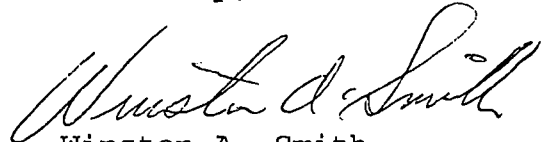
cost may be determined from an accurate estimate of the cost of a new MWC facility of comparable design.

(2) To determine the fixed capital cost required to construct a comparable entirely new MWC facility, reference the EG proposal from September 20, 1994, of the Federal Register. On page 48240, Tables 3A and 3B outline the Capital and Annualized Costs of Air Pollution Control For Typical New and Existing Large and Small MWC Plants.

(3) The method for performing a cost update to current dollars can be selected by the source. Provided the appropriate historical and financial documentation is included, the ENR Construction Price Index can be used.

We look forward to your submittal of additional data to complete the subpart Cb/Eb applicability determination. If you have any questions or comments concerning this response, please contact either Mr. Brian Beals or Mr. Scott Davis of my staff at (404) 347-3555, extensions 4167 or 4144, respectively.

Sincerely,



Winston A. Smith  
Director  
Air, Pesticides and Toxics  
Management Division

Enclosure

cc: Joyce Chandler, OECA  
Leslye Fraser, OGC  
Walt Stevenson, OAQPS  
Clair Fancy, Florida DEP  
Iwan Choronenko, Hillsborough County EPC  
Jerry Campbell, Hillsborough County EPC



TABLE 1

Potential Source Improvement	Defined under "MWC Unit"?	For EG Compliance?	Include in Reconstruction?
Air Pollution Control Equipment	NO	YES	NO
Continuous Emissions Monitors	NO	YES	NO
Auxiliary Burners	YES	YES	NO
Induced Draft Fans	NO	YES	NO
General Equipment and Maintenance Building	NO	NO	NO
Furnaces, Grates, and Kilns	YES	YES	YES
Furnace Configuration	YES	NO *	YES *
Boiler and Economizer	YES	YES	NO
Electrical System	NO *	YES	NO
Control Room Systems	NO *	NO *	NO
Control Systems (APC/Combustor)	NO *	YES	NO
Ash Building	NO	NO *	NO
Ash Enclosures	YES *	YES	NO
Ash Conveyor System	YES	YES	NO
Ash Treatment System	NO	NO	NO
Tipping Floor	NO	NO	NO
Refuse Pit	YES *	NO	YES *
Cranes	YES *	NO	YES *

\* Differences exist between Determinations by EPA and the Source

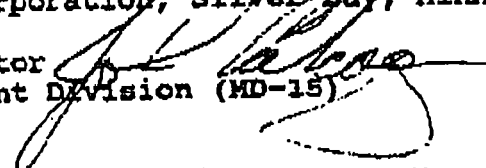


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Office of Air Quality Planning and Standards  
Research Triangle Park, North Carolina 27711

AUG 11 1992

MEMORANDUM

**SUBJECT:** Proposed Netting for Modifications at Cyprus  
Northshore Mining Corporation, Silver Bay, Minnesota

**FROM:** John Calcagni, Director   
Air Quality Management Division (MD-15)

**TO:** David Kee, Director  
Air and Radiation Division, Region V (5A-26)

This memorandum responds to your July 2, 1992 inquiry regarding the applicability of the prevention of significant deterioration (PSD) program to proposed construction at a taconite ore processing facility owned and operated by Cyprus Northshore Mining Corporation (Cyprus) in Silver Bay, Minnesota. Cyprus proposes to modify its existing source by installing two new rotary hearth furnaces at the facility. To prevent this physical change from resulting in an increase in emissions and thus subjecting the source to PSD as a "major modification," Cyprus seeks to take credit for the shutdown of several, existing straight-grate furnaces which would be replaced as part of the proposed work. Since these furnaces have not operated since 1982, you have asked whether Cyprus may use the 1981 and 1982 actual emissions of these furnaces to establish the netting credit. Subsequent to your memorandum, counsel for Cyprus has written Region V urging the Environmental Protection Agency's (EPA's) approval of a baseline using actual emissions from these furnaces during the period of July 1975 to June 1977. However, after reviewing both the facts as presented to me, as well as the appropriate regulations and statutory provisions, it does not appear that either suggested baseline is appropriate. Indeed, for the reasons set forth in this memorandum, it does not appear that Cyprus can be credited with any emissions reductions stemming from the removal of the existing furnaces at the West Plant.



FACTUAL BACKGROUND<sup>1</sup>

The taconite ore processing facility at issue is a single major stationary source consisting of an East Plant and a West Plant. Reserve Mining (Reserve)--the owner before Cyprus--originally produced oxidized iron ore pellets from both plants. According to Cyprus, which took over the plant in 1989, Reserve operated the plant at near capacity until the mid-1970's when production began to decline due to an economic downturn in the domestic steel industry, labor unrest, and the installation of pollution control equipment. Finally, in 1982, Reserve shut down the West Plant operations due to poor market conditions. Reserve continued to manufacture pellets in the East Plant and maintained the equipment in the West Plant through 1986. At that point the company went bankrupt.<sup>2</sup>

Cyprus purchased the facility in 1989 and resumed operations in the East Plant in 1990. The West Plant operations were never resumed. Indeed, in 1989, the Minnesota Pollution Control Agency issued an air permit to Cyprus that apparently prohibited operation of four of the six furnaces at the West Plant.

Cyprus now proposes to restart manufacturing at the West Plant. To this end, the company wants to install two new rotary hearth furnaces as part of a switch to a direct reduction pellet process. [Cyprus currently has an option for the direct reduction technology which must be exercised before the end of this year.] The new West Plant furnaces will have significant nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) emissions. According to Region V and Cyprus, the potential-to-emit for the two new furnaces standing alone greatly exceeds the 40 tons-per-year (tpy) significance level applicable to both SO<sub>2</sub> and NO<sub>x</sub> [see 40 CFR 52.21(b)(23)(i)]. Cyprus proposes to avoid PSD review by netting the emissions from the two new rotary hearth furnaces against the emissions associated with the shutdown of three of the existing furnaces that will be removed from the West Plant as part of the proposed renovation.

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<sup>1</sup> This statement of the facts is based on your memorandum to me dated July 2, 1992 and the July 27, 1992 letter Region V received from Denise W. Kennedy and Robert T. Connery, counsel for Cyprus. The Office of Air Quality Planning and Standards has made no independent effort to verify this factual information.

<sup>2</sup> Prior to the bankruptcy, the union representing the workers at the West Plant filed a grievance against Reserve seeking severance pay on the grounds that the West Plant had been permanently shut down. However, in February 1986, the Iron Ore Industry Board of Arbitration ruled that Reserve did not at that time intend to permanently shut down the West Plant.

## STATUTORY AND REGULATORY BACKGROUND

The PSD program [Clean Air Act (CAA), sections 160-169] applies in attainment areas [i.e., those areas which have attained the national ambient air quality standards (NAAQS)]. The new source review (NSR) requirements apply to newly-constructed sources and to "major modifications," physical or operational changes occurring at existing sources that result in significant net emissions increases. The PSD definition of modification contemplates a two-step test for determining whether activities at an existing facility constitute a major modification subject to review. In the first step, the reviewing authority determines whether a physical or operational change will occur. If so, the reviewing authority proceeds to determine whether a physical or operational change will result in an emissions increase over baseline levels. Routine changes and certain other changes are excluded by regulation from the definition of physical or operational change (see 57 FR 32314, 32316). In this second step, EPA regulations focus on whether the proposed change will result in a "significant net emissions increase of any pollutant subject to regulation under the CAA" [see 40 CFR 52.21(b)(2)(i)]. A "net emissions increase" is defined as the increase in "actual emissions" from the particular physical or operational change, together with any other "contemporaneous" increases or decreases in actual emissions [see 40 CFR 52.21(b)(3)(i)]. To be "contemporaneous," the emissions increases or decreases must have "occurred" within the 5 years preceding the proposed change [see 40 CFR 52.21(b)(3)(ii)].

Applicability of the PSD provisions must be determined in advance of construction and on a pollutant-by-pollutant basis. Specifically, to determine whether a proposed change at an existing source will result in an increase in actual emissions, the source must first determine a baseline level of actual emissions. The applicable regulation defines actual emissions on a particular date as "average rate, in tpy, at which the unit actually emitted the pollutant during a 2-year period which precedes the particular date and which is representative of normal source operation" [see 40 CFR 52.21(b)(21)(ii)]. The Administrator shall allow use of a different time period "upon a determination that it is more representative of normal source operation." [Ibid.] The EPA has "typically used the 2 years immediately preceding the physical or operational change to establish the baseline" (see 57 FR 32317).

Because the applicability determination must be made in advance of construction, EPA's PSD regulations provide that when an emissions unit "has not begun normal source operations," actual emissions equal the "potential-to-emit" of the unit [see 40 CFR 52.21(b)(21)(iv)]. In other words, to determine if there is an emissions increase, the regulations require EPA to compare the source's actual emissions before the change and its potential

emissions after the change. This is the so-called "actual-to-potential" test. This test, in effect, presumes that following the change the source will operate at 100 percent of its physical capacity. The source owner may overcome this presumption by agreeing to federally-enforceable restrictions that would prevent the plant from significantly exceeding its pre-modification emissions baseline.<sup>3</sup>

The determination of whether the physical or operational change would result in an increase in actual emissions is but one factor in determining whether the change will increase emissions. As mentioned, if the change will, standing alone, result in an increase in emissions, the source must next identify and quantify any other prior increases and decreases in "actual emissions" that are "contemporaneous" with the particular change and which are otherwise creditable [see 40 CFR 52.21(b)(3)(i) and (b)(21)]. Reductions are not creditable if the Administrator "has relied on it in issuing a permit" and that permit remains in effect at the time of the proposed change [see *Id.* at 52.21(b)(3)(iii)]. Also, reductions must have "approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change" [see *Id.* at 52.21(b)(3)(vi)(c)].

It should be noted that the initial inquiry as to whether the change, standing alone, will result in an increase in actual emissions is calculated by determining the emissions increase at the particular emissions units to be changed or added [see

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<sup>3</sup> In Puerto Rican Cement Co. v. EPA, 889 F.2d 292 (1st Cir. 1989), the court of appeals upheld EPA's application of the actual-to-potential test in a case involving modernization of cement kilns. However, in Wisconsin Elec. Power Co. (WEPCO) v. Reilly, 893 F.2d 901 (7th Cir. 1990), a different appeals court struck down EPA's actual-to-potential test as it applied to "like-kind" modifications at utilities. In a subsequent rulemaking, EPA adopted an "actual-to-future-actual" test for utility modifications to existing sources. Under that test, EPA compares the pre-change actual emissions baseline to a projection of future emissions that is based on the unit's past operating history and other factors (see 57 FR 32314). Even ignoring the fact that this rule is limited to electric steam generating units, the actual-to-future-actual test would be inapplicable here since Cyprus is essentially proposing to add a new furnace rather than merely making changes to the existing furnaces at the West Plant. Because it is impossible to reliably project future levels of capacity utilization and, hence, actual emissions at a new unit that has no past operating history, EPA's recent rulemaking retains the actual-to-potential test when the change at issue is the addition of a new emissions unit (see *id.*, at 32323).

40 CFR 52.21(b)(21); NSR Workshop Manual, p. A.46 (Draft October 1990)]. The subsequent netting calculation includes all increases and decreases--anywhere at the source--that are contemporaneous and creditable [see 40 CFR 52.21(b)(3)(1); Workshop Manual at A.46-47].

## DISCUSSION

### A. General Applicability of PSD

As discussed, the first question is whether the work proposed constitutes a physical or operational change. This must be answered in the affirmative. The source proposes to add two new rotary furnaces and make all necessary changes to the West Plant to operate these new additions. This is not a case where the source is reactivating a shut-down facility and making only "routine" changes to bring it back on line. For this reason, there is no dispute that this new construction constitutes a physical change.

The second step is to determine whether this physical change will result in an increase in actual emissions at the emissions units affected. Here again, the answer is yes. Based on the description of the project we have, it appears that the work at issue is the installation of a direct reduction pellet process, including two new emissions units--two new rotary hearth furnaces.<sup>4</sup> Since these emissions units are new, their baseline level of actual emissions is zero. As discussed, their potential emissions are over the significance levels, so the proposed work will trigger PSD, unless there are contemporaneous increases and decreases at the source that can be used to net out of review.

### B. Using the Shutdown of the West Plant as a Contemporaneous Decrease

Since the project, standing alone, will result in a significant increase in emissions, Cyprus must identify sufficient contemporaneous decreases to avoid PSD. The company urges EPA to credit the reductions associated with the removal of several existing furnaces at the West Plant. However, as discussed below, these reductions are neither contemporaneous nor otherwise creditable. Moreover, even if these reductions were eligible to be considered for netting, they would have no value since the baseline for the West Plant furnaces is zero.

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<sup>4</sup> Cyprus does not contest that the work at issue involves the installation of new units rather than the rehabilitation of the existing emissions units.

1. Netting Reductions Cannot "Occur" Outside the Contemporaneous Period

The EPA's regulations limit netting to those emissions reductions that occur within the 5-year period that precedes the proposed change:

An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:  
 a) The date 5 years before construction on the particular change commences; and b) the date that the increase from the particular change occurs.

[see 40 CFR 52.21(b)(3)(ii)(emphasis added)]. Thus, if the reduction occurred more than 5 years before the commencement of construction of the proposed change, it is not contemporaneous. Here, the reduction undeniably took place in 1982 when the emissions from the West Plant fell to zero. This is outside the 5-year window. However, Cyprus contends that a reduction does not occur "until such time as the source determines not to resume operation of the equipment in question, or the source is, in some other way, precluded from operation of the equipment." In other words, a credible reduction does not "occur" when emissions decrease. It occurs when the source elects to take credit for it.

In Alabama Power Co. v. Costle, 636 F.2d 323, (D.C. Cir. 1979), the court recognized that EPA has substantial discretion in applying the plantwide bubble concept so as to reconcile the statutory goals of preserving clean air and providing for economic growth [see *Id.* at 400-03]. In particular, the court noted that EPA should enable emissions increases from the addition of a new unit to be set off by decreases resulting from the abandonment of an old unit [*Id.* at 401]. However, the court also emphasized that offset reductions claimed by industry to net out of review must be "substantially contemporaneous" (*Id.* at 402) (emphasis added). The EPA's regulations implemented this standard by setting 5 years, plus time for construction, as the period of contemporaneity. The EPA selected 5 years (despite proposing a 3-year period) on the basis that 5 years would be long enough to accommodate "corporate expansion planning" and would "minimize any incentive for keeping old or obsolete equipment in operation beyond its usefulness" (see 45 FR 52701). On the other hand, EPA declined to expand the contemporaneous period to any prior reduction that had occurred at the plant:

[Industry commenters] urged EPA to treat any emissions decrease which occurs before a proposed increase as being "contemporaneous" with that increase. The EPA, however, has rejected those urgings. To credit any

decrease that occurs before a proposed increase would violate any common sense notion of what is "contemporaneous," since a period of contemporaneity must have some definite boundaries.

[Ibid. (emphasis in original)]. Cyprus' interpretation of this provision violates this common sense understanding of a limited contemporaneous period. Under Cyprus' interpretation, sources could bring in any prior reduction, no matter how old or obscure, so long as the source retained the legal right to return to that emissions level.

Cyprus' proposed interpretation of EPA's regulations conflicts with the plain meaning of the contemporaneity requirement. Moreover, allowing credit for very old emissions reductions undermines the purpose of the contemporaneity requirement by enabling new construction activity to burden the environment with levels of air pollution higher than they have been for many years. The EPA has already given sources a generous 5-year window to aggregate any decreases to net out of review. Since the reduction in actual emissions at the West Plant occurred before the 5-year period, it cannot be used to net out of review.

## 2. The Baseline for the West Plant Furnaces

Even if the reductions at the West Plant could be deemed to have occurred in 1989, Cyprus still must establish the value of the reductions. In general, this requires a comparison of the emissions levels before and after the reduction. The problem for Cyprus is, of course, the baseline for the West Plant reductions. The EPA policy presumes a calculation based on the 2 years that immediately preceded the change [see 45 FR 52676, 52705, 52718 (1980)]. If EPA uses the 1989 date as the point when the reduction occurred, since the units did not operate during that period, the presumptive baseline is zero and there is no credible reduction. To avoid this result, Cyprus seeks to use a time period well outside the contemporaneous period (July 1975 to June 1977).

As discussed, the Administrator's power to use a different baseline period is limited to those circumstances where the source demonstrates that some time period other than the 2 years that precede the change is more representative of normal source operation. In general, EPA has indicated that this provision is to apply to catastrophic occurrences such as strikes and major industrial accidents (see NSR Workshop Manual, p. A.39). For example, in the WEPCO applicability determination, EPA found the fourth and fifth years prior to the proposed renovation project more representative, since the utility's capacity was greatly reduced after that period due to a cracked steam drum and other severe physical problems (see 57 FR 32323).



On the other hand, EPA has declined to consider a stop in operations, in and of itself, to constitute grounds to change the baseline years. For instance, in the WEPSCO rulemaking, EPA adopted a presumption for utilities that considers any 2 years within the 5 years that precede the change to be representative of normal source operations. However, EPA rejected comments seeking to allow further accommodations for units that had been out of operation (see 57 FR 32325):

The EPA disagrees with comments seeking to allow the use of any 2 consecutive years within the last 5 years of a unit's "operation" rather than within the 5 years directly preceding the proposed change. A shifting of the 5-year period would be difficult to harmonize with definitions of contemporaneous contained in the regulations. This type of open-ended provision would even credit a unit which has been inoperative for 20 or 30 years or longer with a high level of emissions.

Based on these policies, EPA cannot approve either a 1981-1982 baseline or the earlier period put forward by Cyprus. Cyprus has not demonstrated that catastrophic occurrences or other extraordinary circumstances disrupted the West Plant for the entire period between the proposed change and the years Cyprus claims are representative of "normal source operations." Indeed, it is admitted that in the last 10 years the source has been idle due to general economic conditions, and the zero baseline appropriately reflects source utilization under these longstanding market conditions. On the other hand, the very fact that Cyprus seeks to throw out the most recent 13 years suggests that the years Cyprus puts forward are not representative of normal operations in any realistic sense. For these reasons, the baseline for the West Plant furnaces should be zero.

### 3. Health and Welfare Effects of the Proposed Netting

The PSD regulations restrict the creditability of some decreases in emissions for the purpose of emissions netting. In particular, one provision allows credit for a reduction only to the extent that it has approximately the same qualitative significance for public health and welfare as the increase from the proposed change [see 52.21(b)(3)(vi)(c)]. Where there is reason to believe that the reduction in ambient concentrations from the decrease will not be sufficient to prevent the proposed emissions increase from causing or contributing to a violation of any NAAQS or PSD increment, this provision requires an applicant to demonstrate that the proposed netting transaction (despite the absence of a significant net increase in emissions) will not cause or contribute to such a violation (see 54 FR 27298). Even if EPA found the proffered reductions otherwise quantitatively acceptable in this case--where the existing emissions units have

not contributed to ambient concentrations for the last 10 years-- Cyprus would have to perform sufficient air quality modeling to demonstrate that the emissions increase from the new units would not violate the applicable NAAQS and PSD increments before the reductions could be credited (see 54 FR 27298).

#### CONCLUSION

In conclusion, based on the information submitted to date, the proposed 1975 to 1977 baseline period is unacceptable. We are, however, acutely aware of Cyprus' need and concern that their project proceed in a timely manner. To this end, we are willing to work with the Region, the State, and Cyprus to facilitate the resolution of any outstanding permit issues and to assist in the expedited processing of a PSD permit.