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1026 W. 4th Ave., Suite 201 Anchorage, AK 99501 (907) 276-4244 (907) 276-7110 Fax Email: ecolaw@trustees.org

April 29, 2009

Brian Newton
Chief Executive Officer
Golden Valley Electric Association, Inc.
PO Box 71249
Fairbanks, AK 99707-1249

Re: Healy Coal Plant #2 Compliance with PSD Requirements

Dear Mr. Newton:

On January 14, 2009, the Alaska Industrial Development and Export Authority (AIDEA), Golden Valley Electric Association, Inc. (GVEA) and Homer Electric Association, Inc. (HEA) announced the approved terms for the sale of the Healy "Clean Coal" Project (hereinafter referred to as Healy Coal Plant #2 or HCCP) to GVEA. The terms of the sale were identified in a January 9, 2009, Settlement Term Sheet signed by all three parties. Trustees for Alaska and the Sierra Club Environmental Law Program write on behalf of the Alaska Center for the Environment, Sierra Club, Northern Alaska Environmental Center, Denali Citizens Council, National Parks Conservation Association, HEA Member Forum and the MEA Ratepayers Alliance to caution you and the other parties to comply with the Prevention of Significant Deterioration (PSD) provisions of the Clean Air Act before commencing operations at Healy Coal Plant #2. *See* 42 U.S.C. 7604(a)(3); *see generally*, 42 U.S.C. Part C; 40 C.F.R. § 52.21. We recommend that GVEA apply for a permit for Healy Coal Plant #2 prior to irretrievably committing further resources to its reactivation.

History of Healy Coal Plant #2

In 1989, the U.S. Department of Energy's Clean Coal Technology Program selected Healy as a demonstration project to use experimental technology to burn waste coal. Healy Coal Plant #2 was built and began testing in 1998, and continued to run tests through 1999. The plant was shut down in 2000. By all indications at that time, the shutdown was intended to be permanent. According to GVEA, "[d]uring the engineers' testing of the technology, and as each major system was verified and brought on, it became clear to GVEA that HCCP had no chance of actual commercial operation using the experimental technology …." GVEA Narrative Statement of Facts, available at www.gvea.com/about/hccp/HCCP_Statement_Facts.pdf at 5 (last visited Feb. 12, 2009).

In 1998 and 1999, GVEA had even requested that AIDEA declare the HCCP technology not commercially feasible. Id. at 6. According to GVEA,

> [a]t the end of 1999, AIDEA had spent all of the project funds (including the retrofit budget) and HCCP was still not finished. There was millions of dollars worth of work yet to be completed. The plant had failed to pass the commercial operation test. HCCP was 'shuttered' and has been sitting in that condition

idle ever since. Id.

In 2000, GVEA reached a settlement with AIDEA that would allow GVEA to retrofit the plant to conventional combustor technology, again signaling its intent to abandon operation of the plant as originally built. Id. at 8-9. The settlement set out that GVEA would take over custodial care. Id. at 9. GVEA and AIDEA agreed to further custodial terms on August 8, 2001. Id. In March 2002, Trustees for Alaska and other groups contested GVEA's permit modification request to retrofit the facility. Id. at 13. In April 2002, DEC rejected GVEA's request for an administrative permit modification, finding that a full permit process would be required. Id. As a result, GVEA abandoned its efforts to retrofit the facility to a common coal-fired power plant. Id. In February 2004, GVEA submitted a joint air permitting plan to DEC. Id. at 15. A revision to the Nov. 14, 2003 Air Quality Operating Permit was issued on Nov. 10, 2004.

The Clean Air Act requires PSD review to restart Healy Coal Plant #2.

The Clean Air Act forbids any person from constructing, or modifying, a major source of air pollution without first securing a PSD permit ensuring, *inter alia,* that the source's emissions will be limited to a level consistent with application of "best available control technology," and will not cause or contribute to violation of any air quality standards. *See* 42 U.S.C. §§ 7411(a), 7475(a), 7479(2)(C). The U.S. Environmental Protection Agency (EPA) has well-established guidelines defining when re-opening a shutdown plant triggers PSD review. *See* U.S. EPA Memorandum from Edward Reich, Director, Division of Stationary Source Enforcement to Stephen A. Dvorkin, Chief, General Enforcement Branch, Region II, Sep. 6, 1978, Re: PSD Requirements (1978 Memorandum). Under those guidelines, PSD review for reactivation is required when the shutdown is considered permanent. EPA evaluates permanence based upon the intent of the owner or operator at the time of the shutdown.

Intent is determined from the circumstances of the case, including the cause and handling of the shutdown. *See* U.S. EPA Memorandum from Edward Reich, Director, Stationary Source Enforcement Division to William Sawyer, Attorney, General Enforcement Branch, Region II, Aug. 8, 1980, Re: PSD Applicability Determination: Babylon 2. A shutdown lasting two years or more (or resulting in removal of the source from the State's emissions inventory) is presumed to be permanent. 1978 Memorandum at 2. The Healy Coal Plant #2 has been shuttered for over nine years; GVEA accordingly bears an extraordinarily heavy burden to show that the shutdown was not permanent.

GVEA cannot meet that burden. Accordingly, PSD review is required before Healy Coal Plant #2 can be restarted.

Reactivating the plant will take a major capital investment and a significant period of time. The March 28, 2006, HCCP Condition Assessment and Restart Study, prepared by Shaw, Stone & Webster, estimated capital costs for the restart of Healy Coal Plant at $29,836,000. Shaw, Stone & Webster, *HCCP Condition Assessment and Restart Study* (March 28, 2006) at 9. At that time, it was noted that it would take at least six months for a basic startup of Healy Coal Plant #2, with an additional four to five weeks for combustor and controls tuning. HCCP Condition Assessment and Restart Study, at 73. More recently, on February 11, 2009, Mr. Hoffman, Supervisor for Healy Coal Plant #2, stated in a Denali Borough meeting that there is significant planning, scheduling and engineering to be accomplished to determine what must be done to get the plant operational since it has been idle for nine years. He noted that all of the equipment has gathered dust and that it will take time to determine what measures will be needed to refurbish the existing equipment. Further, in a letter to GVEA members, GVEA "estimate[s] that it may take 18 to 24 months to replace some of the equipment that failed during HCCP's experimental testing and to make sure the plant is equipped with the proper and most up-to-date safety systems." Letter from Bill Nordmark, GVEA Board Chairman and Brian Newton, GVEA President & CEO, to GVEA members (Feb. 12, 2009). *Cf.* Memorandum from John B. Rasnic, Director, Stationary Source Compliance Division to Douglas M. Skie, Chief, Air Programs Branch (8AT-AP), Nov. 19, 1991, Re: Applicability of PSD to Watertown Power Plant, South Dakota (noting that PSD review may not be required only under unique circumstances, including *inter alia*, the ability of the plant to reactivate in a number of weeks).

EPA has consistently required PSD compliance, where the re-start of a shut-down plant demands such massive investments in time and money. In 1987, EPA found that a shutdown was permanent and that the restart of the plant must meet PSD requirements where the facility was idled due to market conditions, remained closed for ten years, was deleted from the operating permits, had been removed from the State's emissions inventory and would require at least several hundred thousand dollars worth of work over at least four months before being operable. *See* U.S. EPA Memorandum from John S. Seitz, Director, Stationary Source Compliance Division to David Howekamp, Director, Air Management Division, Region IX, May 27, 1987, Re: Reactivation of Noranda Lakeshore Mines RLA Plant and PSD Review. HCCP has been shut down for nearly as long as the Noranda plant, and reactivating Healty Coal Plant # 2 will take even more time and require more capital than Noranda..

Similarly, in EPA's Supplemental PSD Applicability Determination regarding the Cyprus Case Grande Corporation Copper Mining and Processing Facilities, EPA found two factors determinative: (1) Cyprus gained control of the Noranda plant ten years after it had been shut down; and (2) the plant was no longer in the emissions inventory and did not possess operating permits. Letter from David Howekamp, Director, Air Management Division, U.S. EPA Region IX to Robert Connery, Esq., Holland & Hart (Howekamp Letter), Nov. 6, 1987, at 2-3. While Healy Coal Plant #2 is covered by an operating

permit, GVEA not only has not owned the plant, but for years on end has asserted that GVEA would not and could not operate the plant with its existing technology.

Alternatively, restarting Healy Coal Plant #2 is a major modification of the permit and requires further review. *See* 42 U.S.C. §§ 7470-7479; 40 C.F.R. § 52.21(b)(2). In the Cyprus Case Grande Corp. determination, EPA also analyzed whether restart of a plant constituted a major modification, and found it did because it entailed a physical and operational change and would result in a significant net emissions increase. Howekamp Letter, at 4-9. First, the rehabilitation necessary to make the Cyprus plant operational constituted a "physical change." The rehabilitation work included changes to piping, and electrical instruments. The refurbishing cost was estimated at $1.8 million dollars. EPA found that the changes to the plant did not fall under the "routine maintenance, repair and replacement" which do not qualify as a "major modification" for PSD purposes. 40 C.F.R. § 52.21(a)(2)(iii)(a). EPA noted that

> [t]he 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.

Id. at 6.

The modifications envisioned for HCCP are not "routine maintenance." The estimated capital cost of the restart of the HCCP is $29,836,000 – far greater than the $1.8 million startup cost for the Cyprus plant. HCCP Condition Assessment and Restart Study at 9. The Healy Coal Plant #2 will require extensive rehabilitation, modification, repair and maintenance that cannot be classified as "routine." These non-routine measures include, among other things: (1) altering the sorbent feed system; (2) repair of the circulating water system; (3) corrective measures to the auxiliary steam system; (4) repairs to the coal system station; (5) replacement of mixed bed resin; (6) replacement of HMI water treatment system; (7) maintenance/investigation of steam turbine to address cause of loss in efficiency; (8) maintenance of the bottom ash handling equipment; (9) removal of fly ash; (10) installation of a clinker grinder for slag ash handling; (11) installation of a dedicated slag ash by-pass conveyor; (12) repair of HP combustor cooling water circulating pump motor; (13) modifications to the slagging combustor head ends; (14) overhaul of the steam and water sampling system; (15) upgrade the Distributed Control System (DCS) (16) improve Spray Dryer Absorber access; (17) improve mill exhaust fans within the coal feed system; (18) remediate the filtered water system; (19) modify the condensate storage system; (20) modify the NO_x port coal igniter system; (21) repair the B silo liner; and (22) extend the leach field. This list is not exhaustive, and further modifications, repair and maintenance beyond those measures identified in 2006 may be necessary. Id. at 12, 16-17, 19-21, 25-28, 31, 37, 39-40, 42-43, 50-51, 54-55. As a result, the necessary rehabilitation, modifications, repairs and maintenance of Healy Coal Plant #2 add up to a "major modification," which requires PSD review.

Beyond the physical changes to the Cyprus plant, EPA found that the prospective start-up of the Cyprus plant after a ten-year shutdown constituted a change in the method of operation within the meaning of the PSD regulation. Howekamp Letter, at 6. Importantly, the PSD major modification rule focuses on changes in *actual* emissions. *See* 45 Fed. Reg. 52700; 40 C.F.R. § 52.21(b)(2)(i). The Healy Coal Plant #2 will result in a significant increase in actual emissions. The DEC Air Quality Operating Permit for Healy Power Plant attributes the following emissions to Healy Coal Plant #2: (1) Particulate Matter (PM) – 58 tons per year (tpy); (2) NOx – 1010 tpy; (3) SO_2 – 248 tpy; and (4) CO – 577tpy. DEC Air Quality Operating Permit No. 173TVP01, Revision 2: Nov. 10, 2004, at 11-12. These emissions limits exceed the significance thresholds for PSD review. *See* 40 C.F.R. §§ 52.21(b)(3)(i)(a)-(b), 52.21(b)(21) and 52.21(b)(23). The Plant's expected SO_2 emissions (248 tpy) are well above the 40 tpy significance threshold. Id. The 577 tpy of CO is five times the 100 tpy significance threshold. Id. The 1010 tpy of NO_x is 25 times greater than the 40 tpy significance threshold. Id. Finally, the 58 tpy of PM is twice that of the 25 tpy significance threshold. Id. As a result, all of the emissions from Healy Coal Plant #2 are indisputably "significant." *See* Howekamp Letter, at 7-8 (noting that an increase of approximately 1500 tpy of SO_2 is "obviously significant" and well above the 40 tpy "significance" level for SO_2) (*citing* 40 C.F.R. § 52.21(b)(23)(i)).

EPA noted in the Cyprus case that the "reactivation constitutes a fundamental alteration in the character of the plant, one that is neither everyday nor routine." Id. at 7. The same can be said for the reactivation of Healy Coal Plant #2. It is far from routine or ordinary. The facility has been mothballed for so long that regulatory changes have occurred, global climate change has become a significant issue facing Alaska and the world, and public concerns about this facility have multiplied. It is hard to imagine that EPA could reach a conclusion with respect to Healy Coal Plan #2 any different from the one the agency reached in the Cyprus case: "[W]hether the prospective start-up of the plant is viewed under EPA's reactivation policy or under its major modification regulations, [EPA] conclude[s] that PSD requirements apply Id. at 9.

Conclusion

In light of the foregoing EPA determinations, we recommend that you proceed with permitting Healy Coal Plant #2 under the PSD requirements of the Clean Air Act and factor those requirements into the legal, economic, and scheduling considerations for restarting the plant.

If you have any questions, I invite you or your attorneys to call me at (907) 276-4244, ext. 107.

Sincerely,

Brian Litmans

Staff Attorney
Trustees for Alaska

Sanjay Narayan
Sierra Club Environmental Law Program

cc:
Ted Leonard
Executive Director
Alaska Industrial Development and Export Authority
813 West Northern Lights Blvd.
Anchorage, AK 99503-2495

Debbie Debnam
Board President
Homer Electric Association, Inc.
3977 Lake Street
Homer, AK 99603

Elin Miller, Regional Administrator
U.S. Environmental Protection Agency - Region 10
1200 6th Ave., Suite 900
Seattle, WA. 98101

Jim Baumgartner
Alaska Department of Environmental Conservation
Air Permit Program
410 Willoughby Ave, Ste 303
P.O. 111800
Juneau, Alaska 99811-1800