



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION 8**  
**999 18<sup>TH</sup> STREET - SUITE 500**  
**DENVER, CO 80202-2466**

April 20, 1999

Ref: 8P-AR

Mr. Dennis Myers, P.E.  
Construction Permit Unit Leader  
Stationary Sources Program  
Air Pollution Control Division  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South, APCD-SS-B1  
Denver, CO 80246-1530

Dear Dennis,

EPA Region 8 has reviewed the proposed PSD construction permits for the American Soda Commercial Mine (Piceance facility) and processing plant (Parachute facility), which were sent to the EPA Region 8 office on March 17, 1999. We have identified two problems with this permit action: the first related to the State's determination that these are two separate sources for PSD permitting, and the second with the estimation and monitoring of VOC emissions. In addition, we are aware of the procedural and BACT issues raised by the National Park Service in its April 12, 1999, comment letter, and welcome the opportunity to discuss those concerns also.

Single vs. Separate Source

We have reviewed the information that American Soda's contractor, Steigers Corporation, provided via fax transmittal on April 13, 1999. That fax contained an October 9, 1998, 5 page letter from Hal Copeland to you, and your October 22, 1998, response. We have examined the State's determination that the mine and processing plant are separate sources for purposes of PSD permitting, and did not find any explanation for that decision. Since the mine and processing plant are planned to be roughly 35-40 miles apart (straight-line distance; connected by a 44 mile long pipeline), we surmise that the State is treating them as separate sources primarily due to distance (i.e., not "adjacent"). EPA Regional offices, in consultation with EPA Headquarters, have written several comment letters explaining that whether two facilities are "adjacent" is based on the "common sense" notion of a source and the functional inter-relationship of the facilities, and is not simply a matter of the physical distance between two facilities. I have enclosed the EPA comment letters for your further consideration.

In the case of American Soda's Piceance and Parachute facilities, we believe that EPA's policy holds that these facilities need to be considered as a single stationary source. The two clearly will be functionally interdependent, as evidenced by the dedicated slurry pipeline and the spent brine return pipeline which will connect the two facilities. Additional evidence is that one facility (the mine) is to produce an intermediate product for processing at the other facility (the processing plant). Given the integral connectedness of these facilities, we believe that the distance alone does not preclude these two being considered adjacent for PSD permitting purposes.



## VOC emission estimation and monitoring

We are concerned with potential variability of VOC emissions from the solution mining process. VOC's are evolved from this process by dissolving into the hot water solution as it passes through the mineral deposits. American Soda's permit application stated: "injection fluid temperatures will generally be between 300° and 420°F, and the returned production fluid temperature will generally be 50° to 125°F less because energy is lost in the mining process." Over these temperature ranges, there are likely to be variations resulting from increased solubility of VOC contaminants evolved from the oil shale deposits as water temperatures rise. Similarly, we expect that there may be variations over the life of each solution mining well (as fluid injection pressures and flow rates change, as well as changes to the mineral deposit as it is depleted), and also due to physical location throughout the mineral deposits.

While we understand that the source has test data supporting its estimated emissions, we are still concerned. Thus, we encourage the department to exercise due diligence in following-up on the requirement that American Soda regularly test for VOC emissions (condition 16 of Piceance facility permit). Furthermore, it is very important to ensure that such testing is done under normal operating conditions. Thus, it would be prudent for the source to track water injection temperature and pressure, well-head brine temperature, flow rates, and other parameters that would provide adequate justification that its quarterly (or adjusted frequency) testing is consistent with ongoing operations at the facility. Finally, we recommend that the State scrutinize the sampling location and techniques employed in the source's testing protocols to ensure that all VOC emissions will be adequately quantified. In the event that actual VOC emissions are found to exceed the 40 tpy threshold, American Soda would need to address appropriate PSD permitting requirements, including BACT controls for its VOC emission points, as if construction had not yet commenced.

We look forward to assisting you with these issues. Please contact me at (303)312-6005 or Meredith Bond of my staff at (303)312-6438.

Sincerely,  
Original signed by:

Richard R. Long, Director  
Air and Radiation Program

### Enclosures

January, 15, 1999, EPA Region 3 letter to John Slade, Pennsylvania DEP  
May 21, 1998, EPA Region 8 letter to Lynn Menlove, Utah DAQ  
August 8, 1997, EPA Region 8 letter to Lynn Menlove, Utah DAQ  
August 7, 1997, EPA Region 10 letter to Andy Ginsberg, Oregon DEQ  
August 27, 1996, memo from Robert Kellam, OAQPS/ITPID to Richard Long, Region 8  
March 13, 1998, EPA Region 5 letter to Donald Sutton, Illinois EPA

cc: Ram Seetharam, CDPHE-APCD  
Tom Gibbons, Steigers Corporation

bcc: Michele Dubow, EPA/OAQPS/MD-12  
Cindy Reynolds, 8ENF-T