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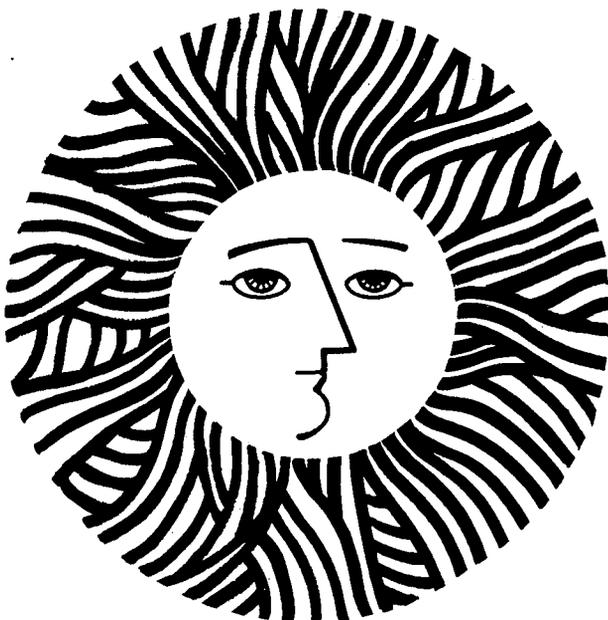
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June 8, 1981

TO: Michal Harthill
FROM: Mathilde Kland
RE: Monthly Progress Report for May
Hydrologic and Water Quality Effects and Controls of Coal Mining
LBID-410

In May negotiations continued with the technical staff from Big Horn Mine in Sheridan, Wyoming to obtain suitable coal and spoil samples for our preliminary mineralogic and chemical analyses. Tom Bury informed me that he had located an area close to an active mine site from which he could furnish drill hole material (~10 mesh), recoverable to 10 feet below the coal seam. By mid-May the overburden and coal were ready for shipment and Tom contacted the chief hydrologist, Jim Bowlby for water samples. The latter were not immediately available and the request generated enough concern on Bowlby's part to necessitate further negotiations by phone and the dispatch of some sample publications from our group and from LBL.

The problem is that a hydrologic study is just being initiated by Bowlby, probably as the result of a finding of high inorganic nitrogen near Sheridan, Wyoming by the Argonne team. Richard Olson, project manager of the Environmental Impact Studies Division at Argonne spoke of "tremendous increases" in inorganic nitrogen levels, and in reply to my question, said that was not due to fertilizer or explosives. This result was also mentioned--obliquely--by Jim Bowlby in explaining his preference for an in-house hydrologic study before releasing our samples. He also wanted a detailed proposal from us.

Both Tom Bury and Jim Bowlby were on vacation during May, further delaying sample movement. While awaiting a resolution of this matter, we made a number of personal contacts with active investigators in western mining: Professors David McWhorter at Colorado State University, Vincent Ricca at Ohio State University, Wayne Van Voast at Montana College of Mineral Science, and Gordon Pagenkopf at Montana State University.

Gerald Groenewold of the North Dakota Geological Survey has studied pre- and post-mining effects of geology and mineralogy on groundwater quality. He is just wrapping up a 2-1/2 year study for the USBM, the final report of which should be of considerable interest to us.

Most of the experts contacted have apparently experienced a similar resistance to outside investigators--even Van Voast, who is also affiliated with the Bureau of Mines. However, he did offer to expedite matters by a personal on-site introduction if necessary. And Charles Drevna, the Environmental Specialist for NCA whom I contacted in March, also anticipated some resistance and offered to put in a good word for us.

A number of new bibliographic materials were added to the coal library in May.

New Bibliographic Acquisitions

- 1) Seam Alert, U. of Arizona, Office of Arid Land Studies, Tucson, Arizona 85719: a) Vol. III, nos. 1 to 3 incl. (1979); b) Vol. IV, nos. 1, 3 and 4 (1980); c) Vol. V, no. 1 (1981).

A mining information announcement bulletin of bibliographic references to current mined land reclamation, sponsored and funded by OSM/USDI.

- 2) Land Reclamation Program, A Selective Bibliography of Surface Coal Mining and Reclamation Literature, Argonne National Laboratory, Argonne, Illinois 60439: a) ANL/LRP-1, Vol. 1: Eastern Coal Province (1977), b) ANL/LRP-1, Vol. 2: Interior Coal Province (1979).
- 3) Energy and Mineral Resources Programs, A Bibliography of Selected References on the Effects of Coal Mine Pollutants on Aquatic Ecosystems, Energy and Envl. Systems Div., Argonne National Laboratory, ANL/EMR-5 (1979).

This report was done with support from the Department of Energy. Any conclusions or opinions expressed in this report represent solely those of the author(s) and not necessarily those of The Regents of the University of California, the Lawrence Berkeley Laboratory or the Department of Energy.

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