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COMMONWEALTH OF PENNSYLVANIA
Environmental Resources
June 11, 1982
8-354-2405

SUBJECT: Review of Betz Hydrogeologic Study (10/81)
Bishop Tube Company
East Whiteland Township, Chester County

TO: Marilyn Shup
Water Quality Specialist

Thru: Walter Stanley
Joseph Feola

FROM: Robert Young *RY*
Hydrogeologist

I have reviewed the subject report and have the following comments:

1. Betz bases their recommendations for no action on the finding that there is no hazard to human health and that there is no hazard to human health simply because there is no human use of the affected ground or surface waters in the vicinity of Bishop Tube.
2. Groundwater beneath the area around the old east impoundment appears to be heavily contaminated with fluoride. Also, several other parameters (Al, Mn, Ni, NH₃, TDS) are elevated above background. The small unnamed tributary just east of this east impoundment also contains more fluoride (2.2 ppm) than can be accounted for in the 001 discharge (1.0 ppm). Well No. 4, which was installed to monitor groundwater in the area between the east impoundment and the stream shows a level of 23.1 ppm fluoride which indicates that groundwater in this area is the most probable source of the elevated levels of fluoride in the stream.
3. Sample results from three other monitoring wells and a deep water supply well indicate that the groundwater contamination is fairly well confined to the area around the old east impoundment.
4. There is no mention of groundwater use in the area other than the nearest public water supply is 1.5 miles away and is in no danger of being affected by groundwater from the Bishop Tube area.
5. The Department limits in-stream fluoride concentrations to 2.0 ppm. However, a review of available references indicates that some forms of aquatic life are, under certain conditions, adversely affected at concentrations above 1.5 ppm.

Conclusions

1. The impression this report conveys is that since no public water supplies are being affected by this contamination there is no cause for concern.

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2. It appears that the old east impoundment is having an effect on local groundwater and surfacewater in the form of increased fluoride concentrations and, to a lesser degree, increased NH₃, TDS, Al, Mn and Ni concentrations.
3. No public water supplies are affected, but the report makes no mention of private water supplies.
4. The level of fluoride and other parameter concentrations in groundwater beyond the immediate vicinity of the east impoundment is, by no means, a public health hazard, but the level of fluoride concentration in the stream adjacent to and below this area is above DER standards and may be harmful to some forms of aquatic life.

Recommendations

1. Recommend that the area in the vicinity of the old east impoundment be more closely studied. This will require more monitoring wells to better define the area of contamination and probably some borings within this old impoundment area.
2. Recommend that all private groundwater used in the area, if any, be inventoried and the possible impact on these uses evaluated.
3. In view of the impact the old east impoundment is having on the stream, I cannot accept the recommendation that the situation be simply monitored without some proposal(s) on how to solve the problem.

cc: Groundwater Unit
R. Young
Ce Re 30 YB370

Department of Environmental Resources

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1875 New Hope Street
Norristown, PA 19401
215 631-2409

June 28, 1982

Mr. Victor A. Barbato, President
Bishop Tube Company
Frazer, PA 19355

Re: Industrial Waste - Hydrogeologic Study
Bishop Tube Company
East Whiteland Township
Chester County

Dear Mr. Barbato:

Please excuse our delay in reviewing the hydrogeologic study conducted for Bishop Tube by Betz, Converse & Murdock, Inc., dated October 1981. In order to satisfy the requirements of this Department, the following must be addressed:

1. The area in the vicinity of the east "impoundment" needs closer study. This will require additional wells and borings to better define the area of contamination.
2. All private groundwater wells, if any, in the area should be inventoried, and any possible impact on these evaluated.
3. In view of the impact the east "impoundment" is having on the stream, we cannot accept the recommendation that the situation be simply monitored without some proposal(s) on how to solve the problem.

A schedule for the implementation of these items should be submitted no later than July 15, 1982.

If you have any questions regarding this matter, do not hesitate to contact the Department.

Very truly yours,

MARILYN SHUP
Water Quality Specialist

cc: T. Jolly
R. Young
(Re) 30 CG168

Bishop Tube Co.

ROUTE 30 AND MALIN ROAD
FRAZER, PENNSYLVANIA 19355

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PHONE: (215) 647-3450 TWX 510-668-5428 TELEX 83-4511

August 17, 1982

Miss Marilyn Shup
Water Quality Specialist
Pennsylvania Department of Environmental
Resources
Bureau of Water Quality Management
1875 New Hope Street
Norristown, PA 19401

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ENVIRONMENTAL RESOURCES
WATER QUALITY MANAGEMENT
NORRISTOWN REGIONAL OFFICE

Subject: Comments re Your Letter of June 15, 1982

Dear Miss Shup:

Thanks again for permitting the delay in our answering the subject letter. We have been extremely busy with both DER and the Township on the application for installation of a packed tower scrubber in addition to the activities relative to our two week shut-down period and our "normal" work.

We have discussed the hydrogeological report and your letter internally and with Mr. Alan Robinson of Betz-Converse-Murdock, who produced the report. To be frank, we cannot identify a "problem" and therefore can see no justification for further work. The reasons are as follows, referenced to the numbered paragraphs in your letter:

1. Additional wells and borings to better define the area of contamination would not be justified, because that is a very small area and one well has already identified that as the (very small) area with the highest contamination levels. Most of the old impoundment is actually under the new addition to the building.

2. The nearest public well is 1.5 miles away. (Please see → the report, page 7, paragraph 5.1, 2.)

3. The stream downstream from the east impoundment contains about 2.0 mg/l of fluoride, only 0.3 mg/l more than drinking water standards, and as far as we know, the stream is not used for drinking

Check Charlie stream + discharge requirements

*We asked
for
private
well
locations*

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Marilyn Shup

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August 17, 1982

water. As the report states, the stream is probably diluted rapidly to the 1.7 mg/1 maximum fluoride content of drinking water standards.

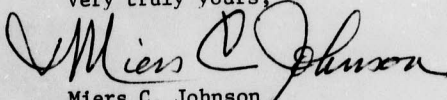
As part of our monthly discharge report under NPDES Permit No. PA0013641, we take three samples per month and have them analyzed by Betz Laboratories for fluoride content. Our cooling water at discharge point 001 typically contains about 1.0 mg/1. The upstream sample typically contains about 0.1 mg/1. The downstream sample is taken at the north side of the railroad, and has contained over 2.0 mg/1 of fluoride only once, 2.2 mg/1, when that sample was taken during a rain.

We really do not see why an increase in fluoride content to a level barely exceeding drinking water standards is a problem when the water is not used for anything, as far as we can determine.

Mr. Alan Robinson offered to write you a letter corroborating the above, if that would serve any purpose.

We sincerely hope that you will reconsider your requirements.

Very truly yours,



Miers C. Johnson
Project Engineer

MCJ/fms