

Note: This is a reference cited in *AP 42, Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources*. AP42 is located on the EPA web site at [www.epa.gov/ttn/chief/ap42/](http://www.epa.gov/ttn/chief/ap42/)

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# Badische Corporation

SYNTHETIC FIBERS

AP-42 Section 5.19

Reference Number

47

P.O. Drawer D  
Williamsburg, Virginia 23185

June 1, 1979

David R. Patrick, Chief  
Chemical Manufacturing Section  
Chemical and Petroleum Branch  
U.S. Environmental Protection Agency  
Research Triangle Park, NC 27711

Dear Mr. Patrick:

I have reviewed the draft report for EPA by Pullman Kellogg which you sent me on May 18, 1979, and would like to submit the following comments:

- ✓ 1) On page 104 emissions from spinning and washing for a model solution polymerization plant are predicted to be 0.15 pounds of AN per thousand pounds of fiber. We project somewhat lower efficiencies from polymer stripping. Specifically we project emission of about .41 pounds of AN per 1000 pounds of fiber for our B Plant spinning area and about .86 pounds per 1000 pounds of fiber from our Z Plant spinning area. (See my letters to Don R. Goodwin dated 6/29/78 and 10/23/78).

As you can see, these are significant differences and great care should be used if EPA is considering using the values projected in Pullman Kellogg's study to develop emission standards.

- 2) The economics sections assume a cost of \$2.50 per thousand pounds of steam. This is an unrealistically low figure. The cost of fuel used in the study appears to be more realistic at \$2.50 per million BTUs. If we assume 82% thermal efficiency in converting fuel to steam, the cost of fuel to generate steam would be

$$\frac{2.5 \text{ \$/MM BTU} \times 1100 \text{ BTU/lb}}{.82 \times 1000} = \$3.35 \text{ per thousand pounds of steam for fuel alone}$$

June 1, 1979

Obviously there are other costs which should be added, and a cost of \$3.60/1000 pounds of steam would be more appropriate.

- 3) On page 101 the description of option 2 provides that the spinning and washing areas of a solution polymerization plant be fairly tightly enclosed to concentrate AN vapors and thus provide for efficient incineration. The figures used assume concentrations within the enclosure up to about 3000 PPM. In practical operation it is often necessary for employees to work in the areas to be enclosed. It would be entirely unacceptable to expose employees to anywhere near a 3000 PPM AN level.
- 4) The acrylonitrile handling and safety section on page 226 refers to a 20 PPM permissible exposure limit. This is obsolete. The section should be updated to match current OSHA limits.

Very truly yours,

*2 pp' gk*  


Michael O. Johnson  
Williamsburg Manager  
Engineering and Utilities

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