



Cape Industries

Highway 421 North • P.O. Box 327
Wilmington, North Carolina 28402-0327
Telephone: (919) 341-5500

June 3, 1994

Ms. Brenda Johnson
U.S. Environmental Protection Agency
Region IV
346 Courtland St, NE.
Atlanta, Georgia 30365

Subject: Wind Tunnel Modeling Analysis for the Cape Industries Facility in Wilmington, North Carolina

Dear Ms. Johnson:

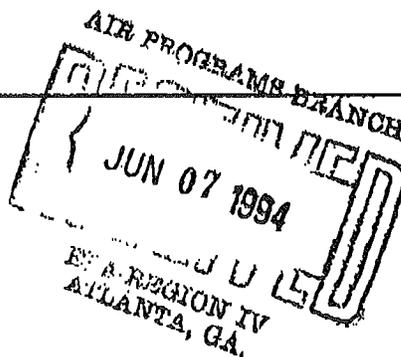
As you know, Cape Industries (Cape) contracted Cermak Peterka Petersen, Inc. (CPP) last year to conduct a fluid modeling study of our facility in Wilmington, North Carolina. The objective of the study was to determine the equivalent solid structure height that could be input to the Industrial Source Complex (ISC) model (ISC) to give the same downwash effect (i.e., produce similar ground-level concentrations) as that produced by a lattice-type structure. Therefore the model would more accurately predict the aerodynamic influence of the many open or latticed structures present at the Cape facility.

The technical procedures followed in the study were identical to those used in a similar study previously approved by EPA Region V for a facility owned by Amoco Corporation (Amoco is Cape Industries' largest competitor). A protocol document was developed for Cape and submitted to the North Carolina Department of Environmental Management (NCDEM) and the U.S. Environmental Protection Agency (EPA)². Following discussions and subsequent correspondence with NCDEM and the EPA regarding the protocol, and based upon the fact that an identical protocol had previously been approved by the EPA, we were led to believe that the protocol was acceptable, and CPP proceeded with the study^{3,4}.

Cape Industries' study was completed in October 1993 and copies of the report were delivered to the NCDEM. The NCDEM reviewed the final report and forwarded copies to the EPA for review. At the time the report was forwarded to the EPA, the NCDEM indicated that the study was complete and that the NCDEM was awaiting EPA's concurrence before issuing final approval⁵.

In February of 1994, the NCDEM sent a letter stating that the EPA's Source Receptor Analysis Branch had reviewed the final report and concluded that a more complete analysis and writ-up was necessary before the wind tunnel derived building dimensions could be approved for use in the dispersion modeling study⁶. CPP was therefore recontracted to address the EPA's concerns, and, in a letter dated April 7, 1994, provided additional information clarifying EPA's concerns⁷. EPA has yet to respond to this letter.

Cape now understands that the EPA Regional Offices plan to meet in early June 1994 to discuss acceptable procedures for use in similar studies, and that EPA Region IV is waiting for any recommendations from this meeting before completing the review of Cape's study.



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While we agree that an EPA consensus regarding technical approaches for such future studies is needed, we do not believe that the results of our study should be subject retroactively to additional procedural recommendations from this meeting. New procedural recommendations which may come from the June 1994 meeting are more appropriately applied to newly commenced analyses of this kind--not to one essentially complete and conducted according to procedures which were agreed upon with EPA nearly one year ago.

Cape Industries has already invested considerable time (nearly one year), effort, and money in this study, and was led to believe during the course of protocol discussions late last fall that approval of this study was imminent. We have addressed all of EPA's questions and concerns regarding this study and would appreciate a speedy resolution of these issues.

Cape has several projects planned for the facility which need to be implemented within the next two to six months, including a project representing a major breakthrough in recycling technology which will result in the recycle of millions of pounds of Polyethylene Terephthalate (PET) into food-grade feedstock for the PET bottle business. This is the only FDA approved plastic recycling process in the United States. Resolution of the wind tunnel modeling analysis is required prior to finalizing and submitting permit applications needed to implement these projects completely.

Cape Industries respectfully requests that the substantial efforts of CPP, Radlan Corporation, and Cape Industries to address the requests by the NCDEM and the EPA for information during the past twelve months be considered, that the supporting data submitted be considered conclusive, and that Cape Industries' wind tunnel study be approved by EPA in its current form.

We welcome the opportunity to discuss this letter with you. If you have any questions, please do not hesitate to call me at (910) 341-5577 or David Keen at Radlan Corporation at (919) 541-9100.

Sincerely,



Ronald N. Walton
Environmental Section Leader
Cape Industries

cc: David Keen, Radlan
Jim Roller, NCDEM
Ron Petersen, CPP
Jessie Lu, VDEQ

Cape Industries

REFERENCES

1. Amoco document by R.L. Peterson, D.N. Blewitt, J. A. Pansk, "Lattice Type Structure Building Height Determination for ISC Model Input", 1993.
2. Letter from David Keen, Radian Corporation, to James Roller, NC DEM, "Test Protocol for Equivalent Building Height Determinations at the Cape Industries Facility in Wilmington, NC." August 11, 1993.
3. Letter from Tom Anderson, NC DEM, to David Keen, Radian Corporation, "Test Protocol for Equivalent Building Height Determinations at the Cape Industries Facility in Wilmington, NC." September 20, 1993.
4. Letter from Ronald Petersen, CPP, to Tom Anderson, NC DEM, "Response to Comments from DEHNR Concerning the Test Protocol for Equivalent Building Height Determinations at the Cape Industries Facility in Wilmington, NC." October 19, 1993.
5. Teleconference between David Keen, Radian Corporation and Tom Anderson, NCDEM, November 18, 1993.
6. Letter from James Roller, NC DEM, to David Keen, Radian Corporation, "Equivalent Building Height Determinations for the Cape Industries Facility in Wilmington, NC." February 23, 1994.
7. Letter from Ronald Petersen, CPP, to Jim Roller, NC DEM, "Cape Industries - Response to EPA Comments." April 7, 1994.