



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

Water Division

Mail Code: WTR-7

February 8, 1999

Mr. Ronald Nowicki
Senior Process Engineer
Beckmen Display, Inc.
2606 Barrington Court
Hayward, California 94545

Dear Mr. Nowicki:

This is in response to our January 27, 1999, telephone conversation regarding the applicability of the Federal pretreatment categorical standards to Beckmen Display, Inc. in Hayward, California. Based upon our conversation we conclude that Beckmen's operations are not subject to the pretreatment categorical standards.

The Environmental Protection Agency (EPA) addressed the applicability of categorical standards to stand-alone research and development facilities in a June 26, 1987, letter to AT&T Bell Laboratories (copy enclosed). In that case, the Agency found that the then currently promulgated categorical standards did not apply to such facilities. The AT&T letter explains that stand-alone research and development facilities are those in which the products made at the facilities are not sold commercially. The categorical standards are located at 40 CFR Subpart N, Parts 405 to 471.

The applicability of categorical standards to stand-alone research and development facilities is an important issue in Region 9 because there are several large stand-alone research and development facilities in our Region. While we agree that the lack of commercial sale of products is one indicator of a facility that should not be covered under the categorical standards, we believe that the individual circumstances for many stand-alone research and development facilities present a complex situation that requires additional analysis.

Stand-alone research and development facilities frequently perform manufacturing processes that match the regulatory applicability description in the pretreatment categorical standards. In some cases, however, stand-alone research and development facilities operate the regulated processes in ways that are very different from the operations the Agency evaluated as the basis for the categorical standards. At some stand-alone research and development facilities, a regulated process is the subject of the research and development activities. In these cases, the production method, materials or other factors are materially different from the processes the Agency evaluated as the basis for the categorical standards. Under these circumstances, the categorical standards should not apply because the wastewater quality or quantity may differ from the wastewater that EPA analyzed as the basis for the categorical standards.

Beckmen Display, Inc. is an example of a stand-alone research and development facility that is not subject to the categorical standards. The facility performs operations that would otherwise be covered under the electrical and electronic component pretreatment categorical standards at 40 CFR Part 469, or the metal finishing pretreatment categorical standards at 40 CFR Part 433. The facility's research concerns the development of production methods and processes for a new proprietary active matrix display. Beckmen is experimenting with display manufacturing operations in order to develop and demonstrate a viable manufacturing operation. The Company's operations involve the processing of six-inch diameter silicon wafers. The research and development efforts result in the processing of approximately 6-12 wafers during a week. Because the manufacturing operations are the subject of the research, many of the factors affecting wastewater characteristics may be different from those EPA used as the basis for the categorical standards and, consequently, we find that Beckmen's operations at this facility are not covered under the categorical standards. The items developed at the Hayward facility may be shown to potential customers for evaluation. The workpieces, however, will not be sold commercially.

There are circumstances where stand-alone research and development facilities are covered under the categorical standards. We have found that in some cases, stand-alone research and development facilities perform categorical process operations in support of research and development projects. In these cases, the categorical operations are materially the same as the processes EPA intended to regulate. The workpieces, however, are experimental parts associated with a research project. In our view, such categorical operations are subject to the categorical standards. For example, a stand-alone research and development facility may electroplate parts for an experimental laser. The laser parts are highly experimental but the plating operation is materially the same process EPA intended to regulate under the categorical standards. Under these circumstances, the electroplating operation would be covered by the pretreatment categorical standards even though the experimental part is not offered for commercial sale.

Beckmen's operations are not subject to the electrical and electronic component pretreatment categorical standards at 40 CFR Part 469, nor the metal finishing pretreatment categorical standards at 40 CFR Part 433 when it is performing the research and development operations identified in this letter. The following operations by Beckmen, however, would be covered under the categorical pretreatment standards:

- Low-volume production that is not related to research and development activities by Beckmen; and
- Quality control and quality assurance operations that support any production facilities.

Under the first circumstance, Beckmen would be engaged in production operations, albeit low-volume production, that are subject to the categorical standards. Under the second circumstance, Beckmen would be supporting production operations. Such activities are not considered research and development and, consequently, are regulated under the categorical standards. I understand

that if Beckmen's research and development efforts are successful, Beckmen will manufacture the active matrix parts in a fully permitted facility other than its current Hayward facility.

Thank you for your inquiry. If you have any questions regarding this matter, please call me at 415.744.1907.

Very truly yours,



L. Keith Silva
Pretreatment Coordinator

Enclosure

cc: Mr. Joseph Mendoza
City of Hayward

Mr. Michael T. Chee, P.E.
San Francisco Bay Regional Water Quality Control Board

Mr. Gordon Innes
California Water Resources Control Board

Ms. Elaine Brenner
U.S. Environmental Protection Agency