

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of)
INTERNATIONAL BUSINESS MACHINES)
For Review of Site Cleanup)
Requirements, Order No. 88-157,)
of the California Regional Water)
Quality Control Board, San)
Francisco Bay Region. Our File)
No. A-588.)

ORDER NO. WQ 89-10

BY THE BOARD:

On October 19, 1988, the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Board), adopted Order No. 88-157, Site Cleanup Requirements and Order No. 88-158, Waste Discharge Requirements, for International Business Machines (hereinafter IBM). On November 18, 1988, IBM filed a petition for review of the above orders. On December 15, 1988, we issued a stay of the provisions relating to a continuously pumping monitoring well. Our order today deals with the whole of the petition.

I. BACKGROUND

IBM operates its General Products Division in the City of San Jose, Santa Clara County. In 1980 and 1981 IBM identified

several industrial chemicals in soil and groundwater adjacent to an underground tank farm on its property. Additional investigation revealed more extensive groundwater pollution. A plume has been defined extending through the Santa Teresa groundwater basin approximately 2-1/2 miles from the IBM site northwest toward a natural hydrogeologic bottleneck known as the Edenvale Gap. The Regional Board adopted cleanup requirements for this discharge in December 1984. In response to petitions for review of these requirements we issued Order No. 86-8.

We further reviewed the groundwater extraction program and its effect on basin supplies in February 1988. State Board Resolution 88-88 was issued in July 1988 directing IBM to fully address the groundwater pumping issue and prepare a groundwater use plan. The Regional Board amended the site cleanup requirements (order) for IBM in October 1988, incorporating the requirements of Resolution 88-88 and including a requirement for a continuously pumping monitoring well at the Edenvale Gap. The Regional Board also issued an NPDES permit to regulate the discharge of extracted pollutants. This permit contained an expiration date of December 1989. IBM petitioned for review of two parts of these Orders. Following a hearing, in December 1988 we issued a stay of the requirement for the installation of a continuously pumping monitoring well. We will now deal with the merits of the issue.

reviewed. Accordingly, we find it necessary to closely scrutinize the need for a continuously pumping well. We find that there is no technical justification for a continuously pumping well. Further, such a well would result in excessive groundwater extraction in return for the comparatively small volumes actually analyzed.

The continuously pumping monitoring well specified by the Regional Board does not conform to standard monitoring well construction and sampling practices. Standard practice for monitoring dissolved volatile organic compounds (VOCs) calls for discrete water samples rather than a mixture of groundwaters moving through different water bearing zones. Standard monitoring well design practice, which ensures such discrete sampling, requires short screened intervals usually from five feet to ten feet and never greater than 20 feet. If the aquifer is much thicker than ten feet, additional short screened wells must be installed at staggered depths in close lateral proximity to one another. Standard sampling practice for VOC requires periodic rather than continuous extraction of small quantities. Contrary to standard construction practices, the continuously pumping well specified by the Regional Board would probably need a screen length in excess of 70 feet. The well would then necessarily yield a mixture of groundwaters drawn from different water bearing zones rather than discrete samples. Dilution effects from less contaminated or uncontaminated water bearing strata would effectively mask zones of significant

II. CONTENTIONS AND FINDINGS

1. Contention: A continuously pumping monitoring well at the Gap is not justified or necessary.

Finding: We agree. In Order No. 88-157, the Regional Board adopted updated cleanup requirements for IBM. The order contains a number of specific tasks for groundwater extraction and reuse, extraction well installation, pilot studies and long range plans. The Order also requires that a well at the Edenvale Gap be utilized for monitoring. Testimony from the Regional Board meeting and correspondence in the record shows that the Regional Board is requiring that this well be a continuously pumping well.

The issue of the appropriateness of such a monitoring requirement relates back to our previous review of the IBM cleanup order, both in terms of the need for adequate monitoring wells, and the need to minimize long term impacts on the groundwater supply of the Santa Teresa Basin. In Order No. 86-8, we considered the need for adequate monitoring wells at the Edenvale Gap. We extensively reviewed the then existing monitoring network, and directed that additional wells be installed. We were concerned that the monitoring wells be capable of measuring all of the plume passing through the Gap. Since that time, additional wells have been installed. We have also previously expressed our concern in Resolution No. 88-88 that groundwater pumping and reuse options be thoroughly

contamination. Therefore, substantial increases in dissolved VOC concentrations could very easily escape accurate quantification and, with sufficient dilution, escape detection entirely. The very volatility of the constituents coupled with the pumping rates would result in further inaccuracies.

We note further the large volumes of water which would be pumped. At the current extraction well (ORBC-3), proposed by the Regional Board to comply with the Order, up to 800 gpm could be pumped. This could result in the pumping of thousands of gallons of water in the time it takes to collect several small samples. During the interval until the next month's samples would be collected, over 34 million gallons of groundwater could be removed. In the course of one year, a continuously pumping "monitoring" well as required by the Regional Board could extract approximately 3-4% of the estimated 32,000 to 44,000 acre-feet of groundwater flowing through the Gap annually. We do not find this necessary or justified.

2. Contention: The term of the NPDES permit was inappropriately set for one year.

Finding: At the October 1988 meeting, the Regional Board adopted Order No. 88-158, an NPDES permit which regulates the discharge to surface water of extracted pollutants. The Regional Board set an expiration date of December 1989 for the NPDES permit. This represented a change from the normal five year term of an NPDES permit. A Regional Board clearly has the authority to set a shorter permit duration than five years (see,

1. The continuously pumping monitoring well required by the Regional Board at the Edenvale Gap would yield inadequate, imprecise and potentially misleading water quality data.

III. SUMMARY AND CONCLUSIONS

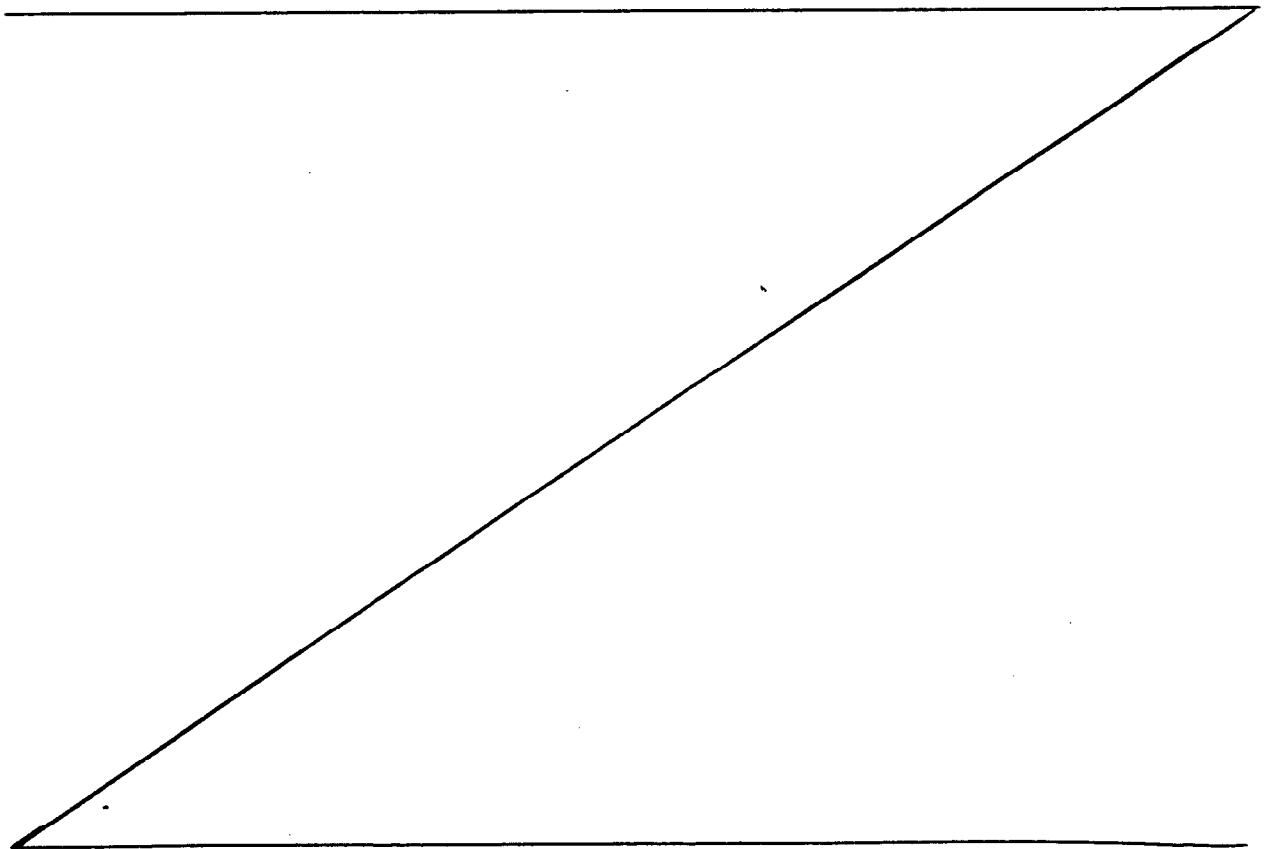
e.g., 40 CFR 122.46(c)). If a Regional Board does adopt a permit supported in the findings. We recognize that in this case, the Regional Board wished to closely review IBM's cleanup and progress toward groundwater reuse. However, the permit itself contains provisions for tasks with completion dates well beyond the December 31, 1989 expiration date. For example, Task 8 calls for a technical report describing the construction and operation of an onsite treatment system to treat groundwater by June 19, 1991. It is inappropriate to require items be done at a time after the expiration date of the permit. The Regional Board should address this concern in one of two ways: Either the permit duration should be extended consistent with the long range tasks, or the provisions which extend beyond the permit expiration date should be included in the site cleanup requirements. We direct that the Regional Board reconsider this permit prior to December 31, 1989 to make the appropriate changes. If the Regional Board continues to find that a shorter than usual term is necessary for the permit, justification should be set forth in the findings of the permit.

2. Present beneficial uses are covered by a Caltrans contract, agriculture and a Department of Fish and Game required stream flow. Long term future uses are not determined.

3. While an NPDES permit may have a term for less than five years, a permit with a shortened duration should have findings supporting the lesser time, and should not include provisions and tasks to be completed beyond the expiration date of the permit.

IV. ORDER

IT IS HEREBY ORDERED THAT the second paragraph of Finding 23 and Provision C2(a), Task I, are deleted from the Site



Cleanup Requirements, Order No. 88-157. The Regional Board shall also reconsider the expiration date of Order No. 88-158 prior to December 31, 1989.

CERTIFICATION

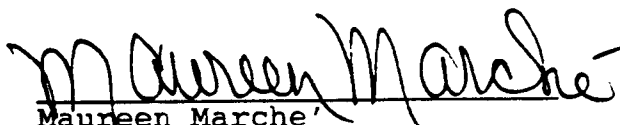
The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on July 20, 1989.

AYE: W. Don Maughan
 Darlene E. Ruiz
 Edwin H. Finster
 Eliseo M. Samaniego
 Danny Walsh

NO: None

ABSENT: None

ABSTAIN: None


Maureen Marche
Administrative Assistant
to the Board