



*Hazardous & Solid Waste*

*Say*

Department of Environmental Quality

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February 10, 1986

John Harland  
Intel Corporation  
5200 N.E. Elam Young Parkway  
Hillsboro, Oregon 97124-6497

*HW 7.20*

Hazardous & Solid Waste Division  
Dept. of Environmental Quality

RECEIVED  
FEB 10 1986

Re: HW - Intel Corporation  
Jones Farm  
ORD 980 834 964  
Washington County

Dear Mr. Harland:

Attached are comments from the Department's Hazardous and Solid Waste Division regarding the "Intel Jones Farm Campus Geohydrologic Study". The comments raise some questions and suggest areas where additional work is needed. Please review the comments and submit an addendum which addresses the concerns raised.

If you have questions concerning the comments please call Mr. Neil Mullane at 229-6242 or me at 229-5296.

Sincerely,

Gregory D. Baesler  
Senior Environmental Analyst  
Northwest Region

GDB/ppk

cc: Hazardous and Solid Waste Division, DEQ

at the Jones Farm campus, was used as an indicator of leakage from the waste solvent tank. A groundwater sample taken in May 1983 showed no detectable level (less than 5 micrograms per liter) of N-methyl-2-pyrrolidone.

On March 13, 1984, the results of a gas chromatograph-mass spectrometry (GC-MS) test on a groundwater sample taken from well W-1 identified the presence of volatile organics. GC-MS tests on an additional sample taken from the well on April 24, 1984 confirmed the original results. The identified volatile organics and their concentrations in micrograms per liter or parts per billion (ppb) by weight are as follows:

*Proposed  
EPA MCL  
0.200mg/l* →

<u>Volatile Organics (by GC-MS)</u>	<u>3-13-84</u>	<u>4-24-84</u>
1,1,1 - Trichloroethane	120	90
1,1,2 - Trichloro-1,2,2-trifluoroethane (Freon TF)	280	300

Based on the above results it was determined that the tank should be removed from service and that additional work should be performed to define the hydrogeology and water quality in the vicinity of the tank.

*was the tank  
actually taken  
out of service  
does it remain  
out of service*

#### PROGRAM PLAN/SCOPE OF WORK

To accomplish the project objectives, the following program of field, laboratory, and office studies was developed jointly by Intel and GRI.

1. Five 59-ft-deep exploration borings, designated JFW-1 through JFW-5, were made to define the sub-soil and groundwater conditions, and to obtain soil samples at 5-ft intervals of depth for the quantitative determination of volatile organics at different levels below the ground surface. The

borings were located based on the results of water level monitoring in previous soil exploration borings, made for the design of foundations at the Jones Farm Development. These indicated that groundwater flows were primarily to the west or north. As shown on the Site Plan, Figure 2, JFW-5 is located near the waste solvent storage tank; JFW-1 through JFW-3 are down-gradient from the tank; and JFW-4 is up-gradient and a considerable distance from the storage tank.

2. A total of nine permanent groundwater monitoring wells were installed at the five boring locations. These wells are designated JFW-X-Y, where X defines the well location and Y defines the well depth. As originally planned, dual completion deep and shallow wells were to be installed in the soil exploration borings at the JFW-1 through JFW-3, and JFW-5 locations. By screening only the lower 20 ft of the deeper well and installing a shallower screened well in these boreholes, the groundwater head elevations could be monitored and groundwater samples could be taken from both the upper and lower portions of the near-surface soils. However, following the dual completion of wells JFW-1-59 and JFW-1-16 in borehole JFW-1, it was determined that the wells could be installed more efficiently by placing only the deeper well in the soil exploration boring and placing the shallow well in a separate nearby borehole, drilled without sampling. This was done for the JFW-2, JFW-3 and JFW-5 locations. The JFW-4 borehole was located to provide up-gradient groundwater quality data. Therefore, only one well, JFW-4-59,

*Seperate wells  
are preferred!*

*Good*

*Yes!*

was installed at that location and it was screened for nearly its entire depth.

3. All of the wells were developed and groundwater has been sampled twice (July 1984 and April 1985) for the quantitative determination of volatile organics. In conjunction with this work, static groundwater head elevations were measured in each well to allow estimates of piezometric gradients and directions of groundwater flow.
4. Laboratory testing consisted of both gas chromatograph (GC) and gas chromatograph/mass spectrometry (GC/MS) testing on soil samples to identify and quantitatively measure volatile organics. GC/MS tests were performed on groundwater samples.
5. Office studies consisted of an evaluation of all the field and laboratory data and the preparation of this report.

#### SITE DESCRIPTION

##### Topography

The original ground surface topography in the vicinity of JF-1 is shown on the Vicinity Map, Figure 1, and in more detail on the Site Plan, Figure 2. As shown, the original ground sloped gently to the north over the building footprint and toward a minor drainage swale which extended southward across the east parking area. Minor cuts and fills made during construction of the JF-1 building have resulted in the finished building and parking area grades shown on Figure 2.