



PHILIPS

Philips Semiconductors

May 2, 2001

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New Mexico Environment Department
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Building E
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Certified Mail: 7000 0520 0025 3143 7674

SUBJECT: Philips Semiconductors (NMD000709782) - Notification of Groundwater Well Installation.

Dear Ms. Olson:

As proposed in section 3.3.1, page 3-2, of the Philips Semiconductors Resource Conservation and Recovery Act Facility Investigation (RFI) Work Plan for SWMU #8, Philips has scheduled the installation of three (3) groundwater monitoring wells. The drilling rig and crew are tentatively scheduled to begin drilling the week of May 17, 2001. Each well will take approximately one (1) week to complete. The new wells will be identified as MW-5, MW-6, and MW-7 as outlined in the workplan. Figure 3-1 in the workplan shows approximate locations of well installations. Monitoring well MW-5 will be installed approximately 20 feet to the Northwest of existing well MW-1. MW-6 will be installed near the North arroyo and Pan American Freeway. The existing well MW-3, which had the water table drop below the well screen in 1998, will be filled and closed. MW-6 will replace MW-3 for observation of groundwater on the eastern portion of the site. MW-7 will be installed near the intersection of Balloon Fiesta Parkway and San Mateo. This well will be installed to define the northern extent of the PCE in groundwater. If any changes to the above schedule or well placement occur, I will contact you with the updated information.

If you or one of your group members would like to be present for the well installations, please call me at (505) 822-7342.

Sincerely,

David Paulson
Environmental Section Head

(ENV120)

cc: USEPA Region 6, 7000 0520 0025 3143 7681
James Bearzi, NMED
Philips Legal Counsel
Doug Earp, City of Albuquerque
RFI Compliance Binder

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3.3 Field Activities

The field activities that will be conducted during this RFI are as follows:

- Installation and sampling of three additional monitoring wells to delineate the vertical and horizontal extent of identified PCE contamination in groundwater.
- Continued collection and analysis of groundwater samples from the existing site monitoring wells (MW-1, MW-2, and MW-4), the COA NCLF wells, and an identified downgradient residential supply well.
- Surface soil sampling in the former CML area to confirm the presence of and/or delineate the extent of previously detected SVOC and pesticide compounds.
- Subsurface soil sampling during installation of proposed monitoring wells to assess the potential presence of contamination in the subsurface vadose zone.
- Conduct soil gas survey activities to investigate possible contaminant source areas in the former CML and evaluate soil gas as a potential contaminant transport mechanism.
- Conduct slug testing activities to collect hydrogeologic data for site.

The details of each field activity are discussed below. Standard operations and procedures for conducting the various field activities are provided in Appendix B.

3.3.1 Groundwater Monitoring Well Installation

Philips proposes to install three new monitoring wells, MW-5, MW-6, and MW-7 (Figure 3-1). MW-5 will be placed immediately south of existing MW-1 but installed and screened at a greater depth than MW-1 to investigate the vertical extent of PCE and other potential COCs. Currently all the existing Philips' wells are screened at the water table and only monitor the upper portion of the aquifer. This location was selected because past groundwater samples collected from MW-1 have had the highest PCE concentrations relative to samples from MW-2, MW-3, and MW-4. The screen interval of proposed MW-5 is anticipated to be approximately 280 to 300 feet bgs. The screen interval of MW-1 is 199.5 to 229.5 feet. The depth of completion for MW-5 may be altered slightly based on results from the COA NCLF-8 well, which was installed and screened from 240 to 260 feet bgs. Initial analytical results from NCLF-8 indicate the presence of PCE at a concentration of 2.8 µg/L in the aquifer at that screen depth. This concentration is below the EPA MCL, but depending on continued sample results from NCLF-8, the proposed screen interval for MW-5 may be modified to provide the best possible resolution of the vertical extent of PCE contamination.

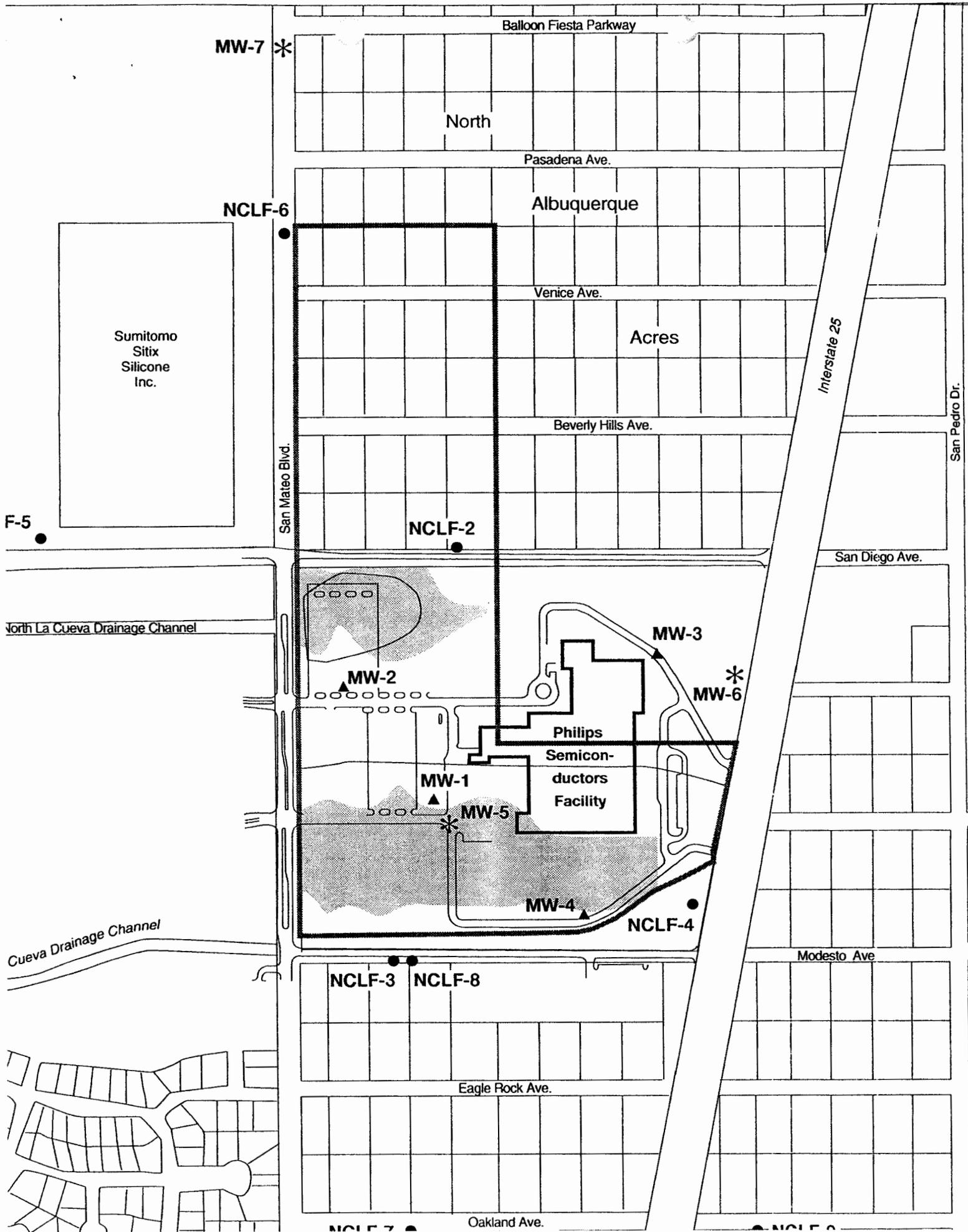
Proposed well MW-6 will be located on the extreme east side of the Philips property adjacent to Interstate-25 (Figure 3-1) and will be completed at the top of the groundwater table. Ideally a well would be placed on the eastern site of Interstate-25 in the area where Interstate-25 intersects Glendale Avenue; however the COA has already considered placing a well in that area and found that logistically there are few accessible sites with sufficient room to drill a monitoring well. The eastern side of Interstate-25 will, however, be investigated as a possible alternate location for proposed well MW-6. The MW-6 location will monitor the potential offsite migration of PCE and its degradation products, replace MW-3, which went dry in 1998, and help further investigate the anomalous water level elevations observed on the eastern portion of the site.

A third monitoring well, MW-7, will be installed approximately 2,500 feet north of the former CML site, near the intersection of Balloon Fiesta Parkway and San Mateo. This well will be installed to define the northern extent of PCE in groundwater since the northernmost COA well, NCLF-6, has repeatedly displayed 1 to 2 $\mu\text{g/L}$ concentrations of PCE. A potential problem with installation of a northern monitoring well is gaining access to one of the private properties in that area or to a COA right-of-way area. If access arrangements cannot be made in the general proposed area, this monitoring well may not be able to be installed.

In the event perched groundwater is encountered in any of the boreholes during drilling, the geologic characteristics of the materials will be described, and a groundwater sample will be obtained, if possible.

Groundwater monitoring well installation and construction procedures are summarized below:

- The well(s) will be single-cased, nominal, 4-inch inside diameter (I.D.) polyvinyl chloride (PVC) monitoring wells. Well MW-5 is anticipated to be completed to a total depth of approximately 260 feet bgs; wells MW-6 and MW-7 will be screened across the water table and are anticipated to be completed to total depths of approximately 250 and 190 feet bgs, respectively, based on water levels observed in MW-3 and NCLF-6. Final well depths will depend on the static water level depths encountered. A site map and the proposed well locations are shown on Figure 3-1.
- Wells will be installed using an air rotary casing hammer or dual wall percussion drilling technique. The techniques are effectively equivalent from the point view that they do not require addition of drilling fluids to advance the borehole. A decision on which method will be used will be made based on subcontractor availability. During drilling operations, the material being drilled will be geologically logged, by an onsite hydrogeologist, as best as possible, from the returned drill cuttings.
- From each proposed well installation location, subsurface soil samples for analytical analysis will be collected from a minimum of two intervals. At the proposed well locations split-spoon samples will be collected at 5-foot intervals for the entire borehole length. All split-spoon samples will be screened with a volatile organic vapor detector to determine whether VOCs are present in the soil. If evidence of VOC vapors are detected (i.e., a sustained soil headspace reading greater than background readings), a soil sample will be collected. If no samples display a photoionization detector (PID) detection, at minimum, the sample from 30 feet bgs and the sample collected from immediately above the water table will be collected and analyzed for RCRA metals, VOCs, SVOCs, and chlorinated pesticides. At location MW-5 split-spoon samples for geologic logging will be collected at 5-foot intervals below the water table to evaluate the presence of any confining units. No analytical samples will be collected for laboratory analysis below the water table because it is not appropriate to collect a saturated soil sample.
- Well development will consist of mechanical bailing and surging followed by continuous pumping until water quality parameters have stabilized.
- Drill cuttings and development and purge water will be managed as outlined in the Investigation-Derived Waste Management Plan (IDWMP) section of this Work Plan.



MW-7 *

Balloon Fiesta Parkway

North

Pasadena Ave.

NCLF-6

Albuquerque

Venice Ave.

Sumitomo
Sitix
Silicone
Inc.

Acres

Beverly Hills Ave.

Interstate 25

F-5

San Mateo Blvd.

NCLF-2

San Diego Ave.

North La Cueva Drainage Channel

MW-3

MW-2

MW-6 *

Philips
Semicon-
ductors
Facility

MW-1

MW-5

MW-4

NCLF-4

Cueva Drainage Channel

Modesto Ave

NCLF-3

NCLF-8

Eagle Rock Ave.

Oakland Ave.