



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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JUL 08 1996

Ms. Stephanie Kruse  
New Mexico Environment Department  
Hazardous and Radioactive Materials Bureau  
2044A Galisteo  
Santa Fe, NM 87505

Dear Stephanie:

The Environmental Protection Agency (EPA) has completed an informal review of the Philips Semiconductors' RCRA Facility Investigation (RFI) Work Plan dated June 14, 1996, and offers the enclosed comments.

The EPA understands that the New Mexico Environment Department (NMED) will assume the lead review of the Corrective Action program at this facility, but that EPA comments will be reviewed and considered by NMED prior to issuance of a Notice of Deficiency or Approval letter.

If you have any questions, please feel free to contact me at (214) 665-6650.

Sincerely yours,

Nancy R. Morlock  
Environmental Engineer  
New Mexico-Federal Facilities  
Section

Enclosure

cc: Mr. Benito Garcia  
New Mexico Environment Department



**EPA Comments  
Philips Semiconductors  
RFI Work Plan**

**GENERAL COMMENTS**

1. In its cover letter, Philips states that it will "...address all NMED comments on the submitted draft RFI Workplan if NMED provides all comments to Philips by August 16, 1996." However, in accordance with its HSWA permit, Philips must address all NMED comments on the draft RFI Workplan, regardless of the date that NMED comments are submitted. EPA recommends that upon issuance of a Notice of Deficiency (NOD), NMED establish a due date for Philips' response.
  
2. Philips has proposed a three-phase investigation. Phase I includes only a determination as to whether the PCE is originating from an off-site source. Phase II includes a characterization of the nature and extent of soil and groundwater contamination. However, Phase II will be completed only if the results of Phase I indicate that the PCE is originating from an on-site source. Finally, Phase III includes a soil-gas survey to identify any source areas.

EPA has several concerns with the phased-approach. First, phased-investigations generally take longer to complete than a single, comprehensive investigation. Secondly, EPA does not agree with the decision point between Phase I and Phase II. EPA believes that characterization of the nature and extent of contamination at the facility, even if some contamination is originating from an off-site source, should be required. The possibility for an additional source area located on the facility must be investigated, regardless of the status of any off-site contamination. EPA therefore recommends that Phase I and Phase II be combined.

**SPECIFIC COMMENTS**

1. **Section 3.0, Nature and Extent of Contamination, Table 3-6, 1987 Baseline Analytical Results for Groundwater Samples, Page 3-14**

Philips provides EPA secondary drinking water standards on this table, and gives a value of 20 ppb for tetrachloroethene. However, the maximum concentration level (MCL) for drinking water for TCE is 5 ppb.

2. **Section 3.0, Nature and Extent of Contamination, Page 3-19, 1st Paragraph**

Philips states that "None of the detected constituents exceeded NMED water quality standards, and the results are consistent with past sampling of the Philips monitoring

wells." However, PCE was detected at concentrations ranging from 6.6 to 7.1 ppb, which exceeds the MCL of 5 ppb.

**3. Section 4.0, Potential Receptors and Pathways, Page 4-4, Paragraph 1**

The EPA questions the validity of the statement "The ingestion of soil is not considered a viable exposure pathway for the wandering child, because there are no child-care facilities in the area." Residential land use is located near the facility.

**4. Section 5.0, Contamination Characterization, Page 5-1, Paragraph 2**

- a. Philips states that "The primary data need is to determine whether the former CML is the source for PCE detected in MW-1, MW-2 and MW-4 or if the PCE is originating from an off-site source (Phase I)." EPA recommends that this statement be rewritten to read "The primary data need is to determine the nature and extent of any contamination located at the facility, and to determine whether the former CML is a source for PCE..."
- b. The statement "If the former CML is determined to be the source of PCE, then data will be collected to establish the nature and extent of COCs in groundwater" should be rewritten to state that the nature and extent will be determined in groundwater and soil.
- c. Philips states that slug testing will be performed to obtain information on hydraulic conductivity. Philips should explain the rationale for completing a slug test instead of a constant rate pumping test or step-drawdown pumping test, which are generally considered to produce more valuable data.
- d. EPA recommends that the soil-gas survey, proposed as part of the "Phase III" investigation, be conducted during the "Phase I" investigation so that any potential source areas may be identified.

**5. Section 5.0, Contamination Characterization, Table 5-1, HSWA Module Requirements Related to Contamination Characterization at SWMU #8, Former Coronado Municipal Landfill", Page 5-2,**

See General Comment #2 concerning the use of a three-phase investigation. EPA recommends that this table be revised to combine the Phase I and Phase II activities into a single phase, For example, the upgradient and downgradient monitoring wells should be installed simultaneously.

**6. Section 5.2.2, Phase II Sampling Activities, Page 5-6**

- a. On Page 5-9, Philips states that soil samples will be taken if screening indicates contamination. However, EPA recommends that soil samples be taken at some regular interval, generally every 10 or 20 feet, regardless of the results of the field screening. The EPA also recommends that the standard operating procedure for the flame ionization detector (FID) be submitted to NMED for review and approval. What is the detection limit for the FID?
- b. At the bottom of Page 5-9, Philips states that "...an assessment will be made to determine whether identified COCs pose a risk to human health or the environment. If there is no significant risk present, the RFI Report/NFA Proposal will be prepared." EPA has several concerns with this statement. First, it is not clear who (Philips or NMED) will determine whether there is a risk to human health or the environment. Secondly, the use of the word "significant" is vague. What type of risk is considered "significant"? EPA recommends that the decision logic between Phase II and Phase III be reevaluated. It may be appropriate to revise the logic to show that NMED will determine the need for a Phase III investigation, following NMED review and approval of a report at the conclusion of Phase I/II. The decision logic figures included in Section 5.0 should be revised accordingly.

**7. Section 5.2.3, Phase III Sampling Activities, Page 5-10**

Again, EPA recommends that a soil-gas survey above the known extent of the CML be conducted during the first phase of the investigation. The information obtained from the soil-gas survey will help guide future investigative activities aimed at defining the nature and extent of contamination.