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**NMED HAZARDOUS & RADIOACTIVE MATERIALS BUREAU
MEMORANDUM TO FILE**

TO: Philips Semi-Conductor/City of Albuquerque Coronado Landfill
Project File
CC: Stephanie Cruz, Ron Kern

FROM: Dale E. Conover

DATE: April 16, 1996

DE Conover

SUBJECT: OBSERVATIONS ON QUARTERLY GROUNDWATER SAMPLING:

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On Monday, 15 April 1996, I observed sampling of groundwater monitoring wells located at the Philips Semi-Conductor Facility north of Albuquerque, NM. I arrived at the site @ 07:45 am. Sampling was conducted by D.B. Stephen's Barbe Sherupski for Philips. A Well Wizard low flow bladder pump is dedicated to each monitoring well. The first monitor well to be sampled was MW-3. Two reasons were given for sampling this well first: it is one of the deeper wells and would therefore take longer to sample, and it has been free of contaminants in the past (sampling from cleanest to dirtiest well). The well is located on the Northeast side of the facility, just across a paved freight delivery roadway that borders the facility's east and north sides.

A tailgate safety meeting was held from 8:15 am to 8:30 am. Toxins identified were PCE and 1,1,2,2-Tetrachloroethene from previous samples and Methane as a potential toxin since this is a landfill site.

Sampling today is for the entire 40 CFR Part 264 Appendix IX "Ground-Water Monitoring List" of contaminants of concern (COCs).

Analytical labs and sample analytes are: Hall Environmental for metals, cyanide and SW-846 Method 8310; Toxin of Houston, TX for the dioxins and furans; and ACZ of Steamboat Springs,

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CO for the remaining Appendix IX list.

Screen and Gravel Pack Statistics for each of Philips Four Monitoring Wells:

MONITOR WELL	DEPTH OF GRAVEL PACK (Feet)	SCREENED INTERVAL (Feet)
MW-1	179 - 247	199.5 - 229.5
MW-2	188.5 - 245	200 - 230
MW-3	194 - 260	209.5 - 239.5
MW-4	198.5 - 260	209.5 - 239.5

Note: the monitor wells are each constructed of 2-inch diameter PVC (schedule 40) with 30 ft. screen lengths (0.02-in. machine slotted screens).

Following the tale gate safety meeting, Barbe calibrated the pH, temperature and conductivity instrument (YSI brand "Water Quality Monitor"). Decontamination of the instruments and tubing was with Liquinox detergent wash and deionized water rinse. I requested a copy of the D.B. Stephens sampling plan and Quality Assurance Project Plan (QAPP) as followed in the field by Ms. Barbe while conducting the sampling.

The 8:45 am water level reading for MW-3 was 232.6 ft. below the top of the PVC casing inside the protective steel surface casing. On Friday, 12APR96 this well had a water level of 231.59 ft. at 3:50 pm.

While Ms. Barbe worked on setting up the Well Wizard Pump controller (for the "MicroPurge QED Low Impact Sampler") and the decontamination water storage drum, I discussed with Melanie McKinley the direction and location of the nearest off-site pumping wells. These wells are the Webster and Coronado water supply wells for the City of Albuquerque and are located to the southeast of Philips, across I-25 and about 2 miles away. The shallow groundwater flow direction, as indicated by past Philips' water elevation readings, is to the northeast, about 120 degrees opposite of the regional flow direction to the southeast and toward the Albuquerque pumping wells.

By 9:40 am the pump and controller were plumbed to a nitrogen air supply bottle and Ms. Barbe was ready to begin purging the required 15.2 gallons of water from MW-3. By 10:50 am, no water had been pumped to the surface. David Paulson brought out Philips' Well Wizard controller and by 10:55 am water began to flow into the pH, temp., and conductivity test chamber and the purge water collection bucket.

By 1:00 pm enough water had been purged to begin collecting samples and take pH readings (pH = 7.34, 7.39 and 7.39). Samples taken for Appndx. IX included:

2 VOCs x 40 mL amber vials for volatile organics (ethyl-dibromide) preserved with mercuric chloride, to be sent to Hall Environmental.
2 VOCs X 40 mL amber vials for remaining VOCs to be sent to ACZ Laboratory.
1 metals plastic bottle preserved with nitric acid,
1 cyanide plastic bottle preserved with sodium hydroxide, all to be sent to ACZ's lab.
1 sulfides plastic bottle, preserved with sodium hydroxide, and
6 x 1 liter bottles for dioxins, pesticides/PCBs, herbicides, polly-aromatic hydrocarbons, and semi-volatile organics (SVOCs) or SW846 method 8270.

QA/QC samples included:

1 Temperature Blank, provided by the laboratories,

1 Trip Blank

A second cooler with the suite of samples listed above for D.B. Stephens' own internal laboratory for QA testing.

MW-2 would provide the field duplicate samples.

By 3:00 pm sampling and decontamination at MW-3 was completed and the decon water was placed in the drum and the drum labeled and sealed, for pickup by Philips later that day. Philips has its own onsite water treatment facility which can process the COCs found to date in the groundwater samples.

By 3:15 pm, Barbe had mobilized her equipment to MW-2, located on the west side of the Philips Facility, in a planter at the entrance to the employee parking lot. I left the site prior to the purging and sampling of this well. Barbe planned to finish sampling MW-2 on Monday and sample the remaining two monitoring wells on the facility's south side on Tuesday.