

PNM 99
2/22/1995

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Toni ✓

STATEMENT OF BASIS/FINAL DECISION

Public Service Company's (PSC) Person Generating Station, Albuquerque, NM

Facility/Unit Type: Natural depression or pit, called the Natural Pit Area (NPA), approximately 60 x 85 feet, 5100 square feet

Contaminants: arsenic, lead, chromium, toluene, naphthalene

Media: Soils

Remedy: Removal of all contaminated soil within the NPA, with confirmatory sampling for verification

FACILITY DESCRIPTION

Persons Generating Station, owned by the PSC of New Mexico, is located in the Albuquerque Basin in the middle part of the Rio Grande Valley. The site is 22 acres and is situated immediately north of Rio Bravo Blvd. and approximately 1000 feet west of Interstate 25.

The Person Generating Station site was a gas and oil fired production facility operated by PSC from 1951 through 1986. The site still contains an operational electrical switching station and power operations facility.

In August of 1988, PSC was issued a joint post-closure hazardous waste permit by the New Mexico Environment Department and EPA. The NMED portion of the permit contained conditions requiring PSC to perform investigations on a underground tank. EPA's portion of the permit required the investigation of a natural pit, about 60 X 85 feet, which received wastes containing organics (toluene and naphthalene) and (heavy metals) (lead, arsenic, and chromium)

Groundwater is approximately 100 feet below the surface in an unconfined aquifer and is used as drinking water source. The facility is enclosed by an eight foot high chain link fence.

HISTORY OF INVESTIGATION

PSC conducted two separate soil investigations on the NPA from January 1989 until May of 1990. The results of these investigations indicated that the NPA contained elevated levels (above natural soil levels) of arsenic, chromium, lead, toluene and naphthalene. However, these levels were below the EPA cleanup standards. In a letter dated 2-26-91, EPA tentatively determined that PSC could choose to not remediate the NPA and place administrative controls on the NPA. The controls were: (1) a survey plat of the Natural Pit indicating the location and dimensions of the unit, with this information being submitted to the local zoning authority and EPA; and, (2) that warning signs are posted marking the unit location to alert any oncoming

persons to the area. PSC originally elected not to remediate the NPA and implemented the administrative controls. However, PSC has since decided to remediate the NPA and plans to proceed with the EPA approved Remediation Work Plan to clean close the NPA. This plan requires the removal of all contaminated soil and testing of the remaining soil to ensure "clean closure". EPA tentatively approved this plan February 14, 1992. Since this plan is considered a final remedy for the NPA, the EPA cannot officially approve this plan until all public participation procedures have been met and the Class III permit modification procedures have been initiated. ✓

INVESTIGATION RESULTS

PHASE I: In the Phase I investigation (see figure), PSC took 4 soil borings within the unit to a depth of 5 feet. Sampling intervals for each boring were: 0-1'; 1-2'; 2-3'; 3-4'; and, 4-5'. Each sampling interval was sampled for heavy metals, heavy organics, and solvents. Heavy metals analyzed included: arsenic, chromium, lead, and cadmium. Heavy organics analyzed included: toluene; naphthalene; PCB's; and, oil and grease. Solvents analyzed included: 1,1,1,-trichloroethane; perchloroethylene; and, trichloroethylene. All soil samples taken met EPA approved sampling procedures and analytical testing requirements, as required by the investigation workplans and subsequent reports. Groundwater sampling was not required since groundwater is at 100 feet and soil sampling was performed first to find the vertical extent of contamination. /

For the heavy metals, 6 out of the 80 sampling intervals exceeded the background concentrations for metals analyzed. However, no soil interval was contaminated below 2 feet. There was only 1 sampling interval out of 80 which exceeded EPA's heavy metal soil standard. The 0-1 foot interval from boring 5 (see figure) exceeded EPA's soil standard for chromium, which is 900 ppm. (Chromium Met)

For the heavy organics, 6 out 80 intervals exceeded background soil concentrations. However, no soil interval detected organic hazardous constituents below 2 feet. Also, no intervals exceeded EPA's soil standards for heavy organics.

There were no solvents detected in the 60 soil intervals analyzed.

PHASE II: In the Phase II investigation PSC took 3 soil borings within the unit to a depth of 10 feet. Sampling intervals for each boring were: 0-1'; 1-2'; 4-5'; and, 9-10'. Each sampling interval was sampled for heavy metals. Heavy metals analyzed included: arsenic, chromium, lead, and cadmium. All soil samples taken met EPA approved sampling procedures and analytical testing requirements. Also, EPA was on-site to observe PSC collect soil samples. Groundwater sampling was not required since soil

contamination extended to only two feet.

For the heavy metals, 6 out of the 36 sampling intervals exceeded the background concentrations for a particular metal. However, no soil interval was contaminated below 2 feet. None of the sampling intervals analyzed exceeded EPA's standard for heavy metals. Also, a test was performed on the sampling interval with the highest metal concentrations to see if the material would qualify as a hazardous waste. Results indicated that the soil was not a hazardous waste.

STABILIZATION MEASURES IMPLEMENTED

Warning signs were placed around the unit alerting any oncoming persons to the area.

EXPOSURE PATHWAYS

Soil and groundwater; however, soil samples taken found contamination only to two feet, therefore groundwater was not affected. The surrounding property is zoned heavy manufacturing. The nearest housing subdivision is approximately .75 miles to the southwest of the facility. The facility's perimeter is enclosed by an eight foot high chain link fence.

SELECTED REMEDY

PSC has proposed to remove all contaminated soils from the NPA. For the areas of the pit which had oily soil contamination, removal of the soil will be based visually. All visually contaminated oily areas will be removed horizontally and vertically, including an additional vertical foot of "visually clean" looking soil. After all visually contaminated soil is removed, PSC will sample the remaining soil and analyze it for Total Petroleum Hydrocarbons (TPH), if the remaining soil is below 100 parts per million TPH, no more soil will be removed. *

For areas of the NPA which contained metal contamination only, a 2600 square feet area will be grided at 5 foot intervals. The grided area will encompass all sample locations found to contain heavy metal contamination. At each grid line intersection a stake will be placed to mark the subsequent soil sampling. Soil samples will be from the 0-1 foot depth. Samples will be analyzed for total chromium. The presence of chromium contamination above 11 parts per million (ppm) will be used to determine if an adjacent 5 foot by 5 foot section will need to be excavated. ✓

If a grided soil section has four surrounding samples which do not show chromium above 11 ppm, that section will be considered clean and will not be excavated. Excavated soil samples will be removed to a depth of 2 feet. Once excavation is complete, for

confirmation purposes, one soil sample from the center of each excavated grid will be collected from the remaining soil surface. Samples will be analyzed for total chromium. The presence of chromium above 11 ppm will be used to determine if additional excavation is needed.

All contaminated soil will be bulk loaded and transported to an industrial permitted landfill.

**Figure 4.1
Excavation Scheme for Heavy Metal Contamination**

	C	D	E	F	G	H
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	X	X	0	0
6	0	0	0	X	0	0
7	0	0	0	0	0	0

X = chromium above 11 ppm

0 = chromium at 11 ppm or less

exca = means that the 5 X 5 foot section will be excavated

INNOVATIVE TECHNOLOGIES CONSIDERED

None.

PUBLIC PARTICIPATION

A public meeting was held by PSC on August 18, 1994, at the South San Jose Community Center in Albuquerque, New Mexico. Eight people attended the meeting including representatives from the EPA, PSC, Environmental Services Inc. and Albuquerque citizens. Six questions were asked at the public meeting. Four of the questions were in reference to why PSC was voluntarily removing the contaminated soil from the NPA when EPA had determined that no further action was necessary. PSC responded by saying that they wanted to remove the administrative controls, that cost of future remediation would be more expensive and that it would increase the salability of the property. The two remaining questions dealt with whether the cleanup of the NPA would be passed down to the customers. PSC responded saying the costs would not be passed to the customer.

NEXT STEPS

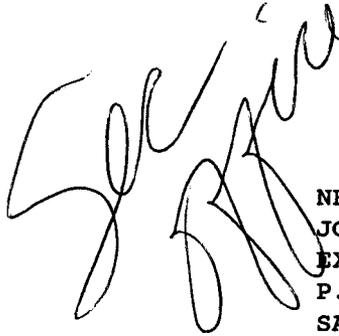
EPA will public notice the permit modification and will hold a public hearing if there is a significant degree of interest.

After the public comment period is over, EPA will then make a final decision on the modification. If the final decision remains the same as the tentative decision, then PSC will implement the soil removal plan. After the soil is removed, PSC will send a report verifying that all contaminated soil has been removed. EPA will then review the report, and if acceptable, will allow PSC to remove the administrative controls on the NPA.

CLEANUP STANDARDS FOR THE NATURAL PIT AREA				
Media	Estimated Volume	Contaminant	Maximum Concentration Detected	Cleanup Standard
Soil	To be determined	chromium	6832 ppm	>11 ppm
		arsenic	219 ppm	See chromium
		lead	202 ppm	See chromium
		Oil and grease	68692	100 ppm

CONTACT
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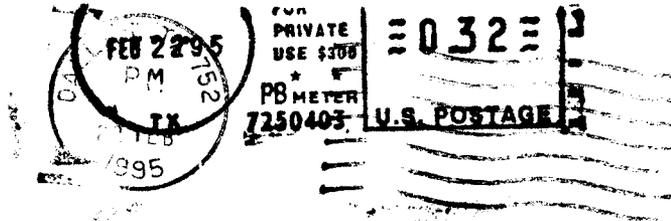
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