

Public Service Company of New Mexico
Person Generating Station
Groundwater Treatment System

Treatment Effectiveness Report
Fourth Quarter 2000

February 9, 2001

Report Prepared Pursuant to Requirements Contained in:

The Person Generating Station Corrective Action Directive (NMT 360010342)
and
The New Mexico Environment Department Discharge Plan, DP-1006

Table of Contents

Executive Summary	1
I. Introduction	2
II. Operational History	4
III. Groundwater Treatment Effectiveness	5
IV. Operational Activities	14
V. Influent and Effluent Flow Volumes	15
VI. Laboratory Analysis	17
A. Influent and Effluent Sampling for Chlorinated VOCs (8021 Analysis)	17
B. Effluent Sulfate Analysis and pH Monitoring	20
C. Golf Course Pond Sampling	20
VII. Groundwater Sampling	21

Appendix A. Laboratory Reports

List of Figures

Figure 1. Person Generating Station Site Map	3
Figure 2. Total VOCs at PSMW-16	5
Figure 3. Total VOCs at VEW	6
Figure 4. Total VOCs at EW-1	6
Figure 5. Total VOCs at PSMW-24, 25, 26	7
Figure 6. Total VOCs at EW-3	7
Figure 7. Total VOCs at EW-2	8
Figure 8. Total VOCs GTS Influent vs. Effluent – East	18
Figure 9. Total VOCs GTS Influent vs. Effluent – West	18
Figure 10. Concentration of PCE in Groundwater	22
Figure 11. Concentration of DCE in Groundwater	23
Figure 12. Concentration of TCA in Groundwater	24

List of Tables

Table 1. Influent Concentrations at PSMW-16	9
Table 2. Influent Concentrations at VEW	10
Table 3. Influent Concentrations at EW-1	11
Table 4. Combined Influent Concentrations at PSMW-24, 25, and 26	12
Table 5. Influent Concentrations at EW-2	13
Table 6. Influent Concentrations at EW-3	13
Table 7. Influent and Effluent Flow Volumes	16
Table 8. Influent and Effluent VOC Concentrations	19
Table 9. GTS Effluent Sulfate Concentrations	20
Table 10. Monthly pH Readings	20

Executive Summary

Contour maps of the three primary contaminants of concern, PCE, DCE, and TCA, are shown in Figures 10, 11, and 12, respectively. These contour maps indicate the areal extent of the groundwater plume and the associated contaminant concentrations within the plume. The contour maps are prepared twice per year using data from the spring and fall sampling events.

Figure 10 indicates that the low PCE concentration zone (5 ppb to 20 ppb) has increased in size, but the moderate PCE concentration zone (20 ppb to 100 ppb) has decreased in size since April 2000. Figure 11 indicates that a similar trend for DCE has occurred since April 2000. Due to the low concentrations of TCA in the groundwater, no plume is shown in Figure 12. This is similar to the April 2000 contour map.

Due to the locally declining groundwater table, PSMW-16 was not operated during the fourth quarter. PSMW-24 was not operated during the fourth quarter due to a damaged pump. Operational problems with the sulfuric acid injection pump prevented operation of the east treatment train during the fourth quarter.

I. Introduction

This report is prepared pursuant to requirements contained in the Person Generating Station Corrective Action Directive (NMT360010342) issued by the New Mexico Environment Department (NMED) Hazardous and Radioactive Materials Bureau, and requirements contained in Discharge Plan DP-1006 issued by the NMED Groundwater Protection and Remediation Bureau.

This report contains information on sampling results and operational activities at the Person Generating Station Groundwater Treatment System (GTS). The GTS is designed to extract volatile organic compound (VOC) contaminated groundwater, treat through an air stripper and granular activated carbon filter, and discharge the treated water to an irrigation pond at the UNM Championship Golf Course.

Figure 1 is a site map of the Person Generating Station vicinity and shows monitor well and extraction well locations.