



SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us



DAVE MARTIN
Secretary

BUTCH TONGATE
Deputy Secretary

FACT SHEET November 30, 2011

INTENT TO ISSUE A HAZARDOUS WASTE FACILITY PERMIT UNDER THE NEW MEXICO HAZARDOUS WASTE ACT

PUBLIC SERVICE COMPANY OF NEW MEXICO PERSON GENERATING STATION BERNALILLO COUNTY, NEW MEXICO

Facility Name: Person Generating Station

EPA Identification Number: NMT 360010342

Type of Facility: Electricity Generating Station

Location: The Person Generating Station is located in the south valley of Albuquerque, New Mexico in Bernalillo County and is approximately one mile east of the Rio Grande River.

Owner/Operator: Public Service Company of New Mexico

INTRODUCTION

NMED is issuing a permit to conduct post-closure care activities at the Resource Conservation and Recovery Act (RCRA) regulated Person Generating Station (Facility) under the New Mexico Hazardous Waste Act (HWA). Public Service Company of New Mexico (PNM) as the owner and operator of Person Generating Station currently has a Hazardous Waste Facility Permit for Post-Closure Care issued by NMED in August 2000 to manage hazardous waste pursuant to the HWA and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA, 42 U.S.C. 6901 et seq.). Prior to issuing the permit renewal, NMED is required by the Hazardous Waste Management Regulations (HWMR) to issue a draft permit for public comment, pursuant to 20.4.1.901.A (3) NMAC. NMED is also required to issue a fact sheet which serves as two functions: 1) to facilitate public review of that draft permit; and 2) to provided the basis for any requirements not specified in state regulations. This fact sheet contains all required information under the HWMR, 20.4.1.901 (a) through (f) NMAC.

The Permit implements post-closure care requirements for soil and groundwater contamination at the Facility. The source of the soil and groundwater contamination was determined to be the “Unlined Well”. The Facility included a maintenance area to support, among other activities, equipment cleaning efforts. The area included a sump and a 3.5-ft by 10-ft cylindrical open-bottomed metal pipe (referred to as the Unlined Well) that was installed below-grade in a vertical position. Liquid wastes collected in the sump were piped approximately 9 ft to the metal pipe. The Unlined Well was used as a repository for wastes generated during equipment cleaning from 1976 to 1983 when it was closed.

Historical records indicate that waste oils and greases, kerosene, a water-trisodium phosphate mixture used in steam cleaning, Stoddard® solvent (a petroleum distillate), Dowclene EC® (active ingredients 1,1,1-TCA and PCE), and other solvent mixtures generated during maintenance activities were piped to the Unlined Well for storage. PNM records indicate that significant use of Dowclene EC® began in 1979. Equipment repainting activities in 1980 generated a new type of liquid effluent, including waste paint, thinners, and turpentine, which were also disposed of in the Unlined Well.

The sump, discharge pipe, upper portion of the pipe, and shallow contaminated soils from the bottom of the Unlined Well were removed in 1983 and disposed of as hazardous waste in 1987.

Preliminary investigations of the nature and extent of soil and groundwater contamination at the Unlined Well began in 1984; investigation results were subsequently used to develop a Closure Plan and the initial Post-Closure Care Permit. The Unlined Well was capped in 1987.

GROUNDWATER

The Rio Grande Basin aquifer lies below Person Generating Station. Depth to groundwater at the site ranges from 120 to 200 feet below ground surface (bgs). Groundwater at the site has been grouped into two zones for the purposes of investigation and corrective action: shallow and deep groundwater. The shallow portion of the aquifer refers to water above 120 feet bgs, and the deep portion is 200 to 900 feet bgs. In general, the elevation of the water table surface has dropped approximately 1 ft per year.

Historically, contamination has been detected in the shallow and deep portions of the aquifer, as well as in “B Zone” wells screened in the interval between the two groundwater units (from 120 to 200 feet bgs). The source of these contaminants is the Unlined Well. Contaminants released into the Unlined Well migrated approximately 120 ft to shallow groundwater as both a liquid and vapor. Within the shallow aquifer, contaminants were carried by a generally eastward groundwater flow under a groundwater gradient of approximately 0.006 ft/ft, with groundwater flow rates (based on local permeability) ranging between 1 and 2,500 ft/yr.

FINAL GROUNDWATER CLEANUP LEVELS

Water quality standards were used as the final groundwater cleanup levels for the contaminants of concern at the Facility (1,1-DCE, 1,1,1-TCA and PCE). These groundwater cleanup levels are the more stringent of either MCLs under the Safe

Drinking Water Act or NMWQCC groundwater standards. The groundwater cleanup levels are 5 µg/L for 1,1-DCE, 60 µg/L for 1,1,1-TCA, and 5 µg/L for PCE .

SHALLOW GROUNDWATER REMEDIATION

A Groundwater Treatment System (GWTS) was installed as part of corrective action implementation at the Facility in 1995. The GWTS uses activated carbon to treat approximately 60 gallons per minute (gpm) of groundwater from five groundwater recovery wells. Treated water is discharged to the UNM Championship Golf Course, where it is used for irrigation.

In 1993, the total estimated extent of the VOC plume in the shallow aquifer was 36 acres, with dissolved PCE and 1,1-DCE plumes extending to the east approximately 2,400 ft from the Unlined Well. Remediation efforts have substantially reduced the extent of this plume. Prior to the initiation of groundwater recovery and treatment in 1995, the maximum detected concentrations of contaminants were 10,700 µg/L of 1,1,1-TCA, 1,600 µg/L of 1,1-DCE, and 2,700 µg/L of PCE. Contaminant migration in the shallow groundwater has been predominantly in the horizontal, eastward direction. There has been limited vertical migration to deeper groundwater zones.

Significant progress has been made in reducing contaminant concentrations, with numerous wells now showing concentrations below detection limits (and below applicable groundwater cleanup levels) for these contaminants.

DEEP GROUNDWATER REMEDIATION

The term “deep” describes the deeper portions (200 to 900 ft bgs) of the aquifer underlying the Facility. PNM is currently performing monitored natural attenuation in the deep groundwater.

Historical data collected from deep well clusters indicate that site-related contaminants were present at depths as deep as 800 feet bgs. Data from October 1997 show low concentrations of PCE and 1,1-DCE detected at 500, 600, and 800 ft bgs. Considerable progress has been achieved in reducing contaminant concentrations, with all but three of the deep groundwater monitoring wells showing concentrations below detection limits (and all are below applicable groundwater cleanup levels).

All deep groundwater monitoring wells have been below the groundwater cleanup levels for at least three consecutive years. Three deep monitor wells have been retained for sampling in the monitoring network to monitor potential deep groundwater contamination. Should groundwater analytical results indicate an increase in the concentrations of hazardous constituents in the deep aquifer, as defined by concentrations of the three hazardous constituents of concern for the site that exceed the relevant standards, PNM will sample additional deep groundwater monitoring wells at the direction of NMED.

POST-CLOSURE CARE PLAN FOR GROUNDWATER REMEDIATION

The draft post-closure care plan for groundwater remediation reflects the substantial remediation of soil and groundwater that has been achieved at the site. Achieving soil cleanup levels at the Unlined Well removed the source area for groundwater

contamination. Specifically, soil remediation is complete and is no longer included. Based on the remediation progress to date, the remaining task is to achieve the groundwater cleanup objectives for the site.

To attain the groundwater cleanup objectives, the groundwater post-closure care plan includes:

1. Continued operation of the GWTS for shallow groundwater until compliance with cleanup levels as defined by concentrations of the three hazardous contaminants of concern for the site that exceed the relevant standards, is attained for all monitoring wells at the site for a period of three consecutive years;
2. Semiannual sampling in 14 wells to fully characterize site groundwater; and
3. Once all wells have attained three years of compliance, initiating a phased shutdown of the GWTS, which will include sampling of key wells.

REGULATORY BACKGROUND

In 1976 RCRA was passed by the U.S. Congress to regulate “cradle to grave” management of hazardous waste. RCRA was enacted as an amendment to the Solid Waste Disposal Act of 1965. RCRA mandates the development of regulations governing the actions of owners or operators of facilities that generate, transport, treat, store, or dispose of solid wastes.

On November 19, 1980, the RCRA regulations became effective, and it became unlawful to treat, store, or dispose of hazardous waste without having, or having applied for, a permit. For existing treatment, storage, or disposal facilities (TSDFs), the requirement to submit an application is satisfied by submitting the “Part A” portion of the application; the “Part B” portion may be submitted at a later time.

The United States Environmental Protection Agency (EPA) has authorized the State of New Mexico (the State) to implement and enforce hazardous waste management requirements, including corrective action requirements, under its own hazardous waste management program. The State’s authority for the program is the HWA, which: (1) authorizes the State’s Environmental Improvement Board (EIB) to adopt hazardous waste management regulations; and (2) authorizes the Department to implement and enforce regulations issued under the HWA. These regulations are known as the Hazardous Waste Management Regulations (HWMR).

Thus, the EIB has adopted regulations concerning hazardous waste management and the issuance of hazardous waste permits. These regulations incorporate by reference pertinent sections of the Code of Federal Regulations (CFR) – 40 CFR Parts 260 through 270, 273, and 280.

The HWA and HWMR require each person owning or operating an existing facility or planning to construct a new facility for the treatment, storage, or disposal of hazardous waste to have a HWA permit.

The HWA and HWMR require corrective action for all releases of hazardous waste or hazardous constituents, regardless of when waste was placed in such a unit, from any solid waste management unit (SMWU) at a facility seeking a permit. Corrective action is also required beyond the facility boundary.

On January 26, 1983, RCRA subjected “units” managing and disposing of hazardous waste to the post-closure standards of 40 CFR Part 264, Subpart G and Part 265, Subpart G and required a Post-Closure Care Permit.

On January 25, 1985, the State received from EPA authorization to implement its hazardous waste program under the HWA. Subsequent program revisions were approved effective on April 10, 1990, July 25, 1990, December 4, 1992, August 23, 1994, December 21, 1994, July 10, 1995, January 2, 1996, March 10, 1997, July 13, 1998, October 9, 2001, and October 16, 2007.

On July 25, 1990, the State received from EPA authorization to expand its hazardous waste program under the HWA, including the authority to regulate the hazardous component of mixed waste.

On January 2, 1996, the State received from EPA authorization to implement the corrective action program under the HWA.

PNM PERMIT HISTORY

Date	Submittal/Document
August 26, 1988	Initial Post-Closure Care Permit issued by NMEID and EPA.
September 18, 1991	NMED issued CAD, detailing corrective action plans for soil and groundwater.
June 1993	NMED approved the deep-plume work plan, an addendum to the CAD requirements.
October 1993	PNM requested Class III Permit Modification to replace two groundwater monitoring wells, clarify monitoring requirements, and allow for SVE installation at the Unlined Well.
January 1994	Corrective Measures Plan (CMP) submitted to NMED
June 3, 1994	October 1993 Class III Permit Modification request approved by NMED.
January 15, 1995	Groundwater discharge plan approved by NMED Groundwater Quality Board
August 17, 2000	Second Post-Closure Care Permit issued by NMED, incorporating all 5 volumes of the July 2000 permit application.
March 26, 2003	PNM requested Class III Permit Modification to remove 3 SWMUs from the Permit: four leach fields, bone yard area, and spin-off filter.
August 3, 2005	March 2003 Class III Permit Modification request approved by NMED.
June 2007	Post-Closure Care Permit Renewal Application submitted to NMED
May 2009	Post-Closure Care Permit revisions submitted
November 17, 2011	NMED determined the permit application to be administratively complete.

PERMIT ORGANIZATION

The Permit is comprised of four Parts and Attachments A through F. The Permit parts contain general permit and facility conditions and post-closure care and corrective action requirements.

Permit terms are established to ensure compliance with New Mexico’s HWA and HWMRs and are derived from applicable regulatory requirements, the Permittee’s

commitments, or requirements established by NMED to ensure adherence with the regulations or to protect human health or the environment as provided at 20.4.1.900 NMAC, incorporating by reference 40 CFR § 270.32(b)(2).

This Fact Sheet and the draft Permit generally refer to regulations by citing the federal hazardous waste management regulations, 40 CFR Parts 260 through 273, rather than the New Mexico Hazardous Waste Management Regulations, 20.4.1 NMAC, which incorporate by reference the federal regulations, with certain exceptions. Where relevant, the New Mexico HWMRs are cited directly.

The Parts and Attachments of the Permit are described below:

PERMIT PARTS

Part 1: *General Permit Requirements* contains Permit Conditions that apply to all hazardous waste management units, most of which are based on mandatory Permit Conditions set forth in 40 CFR Part 270.

Part 2: *General Facility Requirements* contains conditions the Permittee must follow for the operation of hazardous waste management facilities, based largely on requirements set forth in 40 CFR Part 264 Subparts B through E.

Part 3: *Post-Closure Care Requirements* contains Permit Conditions the Permittee must follow for post-closure care when it is not possible to accomplish “clean closure” by removal of all waste, hazardous constituents, and waste residues.

Part 4: *Corrective Action* contains corrective action requirements for the hazardous waste management units that are the subject of this draft Permit. These Permit Conditions ensure that the Permittee appropriately addresses releases of hazardous waste and hazardous constituents to the environment. Permit Part 4 also addresses requirements for groundwater monitoring. These requirements include the processes for implementing corrective action, cleanup levels, general methods and procedures for conducting field activities, laboratory procedures, general procedures for conducting risk assessments and determining background levels, general requirements for drilling and well installation, and requirements for reporting on corrective action activities conducted under this Permit.

Field Exploration Activities contains permit conditions for the minimum requirements for field investigations, sample collection, handling and screening procedures, field and laboratory sample analysis, and quality assurance procedures for samples of the medium being investigated or tested at the Facility.

Cleanup Levels contains permit conditions for groundwater and soil cleanup levels.

Reporting Requirements contains permit conditions for general reporting requirements and report formats for corrective action activities.

PERMIT ATTACHMENTS

Attachment A, *General Information*, contains a general description of the geology, site background and Facility operations.

Attachment B, *Inspection Requirements*, contains a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating

and structural equipment that are important to preventing, detecting, or responding to environmental or human health hazards.

Attachment C, *List of Solid Waste Management Units and Areas of Concern*, comprises three lists of SWMUs and AOCs: (a) those requiring corrective action, (b) those where corrective action is complete with controls, and (c) those where corrective action is complete without controls.

Attachment D, *Financial Assurance Documents*, contains cost estimates for certain post-closure care activities and financial assurance documents.

Attachment E, *Figures*, contains the Figures referenced elsewhere in the Permit.

Attachment F, *Compliance Schedule*, contains particular requirements specified in the Permit and their associated due dates.

FINANCIAL ASSURANCE

Regulations under the HWA require the Permittee to provide financial assurance for post-closure care of hazardous waste management units. The Permittee is a non-governmental entity to which these regulations apply. The Permittee will also be required under the draft Permit to submit post closure care cost estimates. Upon NMED's approval of these estimates, PNM will be required to submit financial assurance to support the estimated costs.

PUBLIC PARTICIPATION

There are significant opportunities for the public to learn about and become involved in the regulation of hazardous waste at PNM, including the corrective action processes in the draft Permit. Documents pertinent to permitting and corrective action activities submitted to or issued by the Department are available for public review in the Department's administrative record at 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico. This Fact Sheet is in part an effort to involve the public, and at the end of this Fact Sheet is a description of how the public may comment on the draft Permit.

Regulations require public involvement any time there is a modification to change the Permit. That process involves public notices and may include an opportunity for public comment. Public notices are provided in local newspapers and letters to individuals on the facility mailing list are sent that include notification of requested modifications. The facility mailing list is maintained by the Department and any interested person may request to be placed on the list to be informed of such actions.

PUBLIC REVIEW OF THE DRAFT PERMIT

The Administrative Record for this proposed action consists of the permit modification request, the draft Permit, this Public Notice, the Fact Sheet, and other supporting documentation the Department relied on to develop the draft permit. The Administrative Record may be reviewed, with prior appointment, at the following location during the public comment period.

NMED - Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1

Santa Fe, New Mexico 87505-6303
Phone: (505) 476-6000
Monday – Friday: 8:00 a.m. to 5:00 p.m.
Contact: *Pam Allen*

A copy of the draft Permit, this Public Notice, and the Fact Sheet are also available on the Department's website at: <http://www.nmenv.state.nm.us/hwb/PNMperm.html> under PNM Permit. To obtain a copy of the Administrative Record or a portion thereof, please contact Ms. Pam Allen at (505) 476-6000, or at address given above. The Department will provide copies, or portions thereof, of the Administrative Record at a cost to the requestor.

The Department issued a public notice on **November 30, 2011**, to announce the beginning of a 60-day comment period that will end at **5:00 p.m. MST, January 30, 2012**. Any person who wishes to comment on the revised draft Permit or request a public hearing should submit written or electronic mail (e-mail) comment(s) with the commenter's name and physical address to the respective address below. Only comments and/or requests received before **5:00 p.m. MST on January 30, 2012** will be considered.

John E. Kieling, Program Manager
Hazardous Waste Bureau - New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone: (505) 476-6000
E-mail: john.kieling@state.nm.us
Ref: Draft PNM Permit

Written comments must be based on reasonably available information and include, to the extent practicable, all referenced factual materials. Documents in the administrative record need not be re-submitted if expressly referenced by the commenter. Requests for a public hearing must provide: (1) a clear and concise factual statement of the nature and scope of the interest of the person requesting the hearing; (2) the name and physical address of all persons whom the requestor represents; (3) a statement of any objections to the draft Permit, including specific references to any conditions; and (4) a statement of the issues which the commenter proposes to raise for consideration at the hearing. The Department will provide a thirty day notice of a public hearing, if one is scheduled.

The Department must ensure that the draft Permit is consistent with the New Mexico Hazardous Waste Management Regulations. All written comments submitted will be considered in formulating a decision on issuance of a final permit, or that may cause the draft Permit to be modified. The Department will respond in writing to all public comments. This response will specify which provisions, if any, of the draft Permit have been changed in the final permit and the reasons for the changes. All persons presenting written comments or who requested notification in writing will be notified of the decision by mail. These responses will also be posted on the Department's website.

After consideration of all the written public comments received the Secretary of the Department or his designee will make the final decision on this draft Permit. The decision will be publicly available, and shall be included in a notification to the Applicants by certified mail. The Secretary's decision shall constitute a final agency decision and may be appealed as provided by the HWA.

ARRANGEMENTS FOR PERSONS WITH DISABILITIES

Persons having a disability and requiring assistance or auxiliary aid to participate in this process should contact Judy Bentley at the New Mexico Environment Department, Human Resources Bureau, P.O. Box 5469, 1190 St. Francis Drive, Santa Fe, New Mexico, 87502, telephone number: (505) 827-9872. TDY users please access her number via the New Mexico Relay Network at 1-800-659-8331.