

MEMORANDUM

TO: Steve Alexander, Technical Compliance Program Manager
FROM: Jane Cramer, Technical Compliance Program *Jc*
THROUGH: Lee Winn, Technical Compliance Program Supervisor
DATE: December 30, 1993
RE: **Public Service Company of New Mexico Person Generating Station (PNM) Project Summary to expedite transfer of the facility from myself to a new staff person**

At Steve Alexander's request, I have compiled a summary of information on PNM for use by a new staff person. This information is organized under the following headings:

1. Facility history and current status
2. Selected Background Documents
3. Contacts and phone numbers
4. Chronological log

1. Facility history and current status

PNM, a RCRA facility, currently holds a Post-closure Care Permit for a waste oil tank, dated November, 1986. The RCRA unit was closed in place (with contamination still present) and capped. The Post-closure Care Permit required development of Corrective Action which is described in the final signed Corrective Action Directive, (CAD) dated Jan 1992.

The nature and extent of soil and ground-water contamination from the waste oil storage tank at PNM has been under study since the tank was taken out of service in 1983. The contaminants are:

1,1,1-trichloroethane *TCE*
tetrachloroethene, and, *PCE*
1,1-dichloroethene. *DCE*

Investigations at PNM have been divided into shallow groundwater contamination and deep groundwater contamination investigations. Assessment of shallow groundwater contamination is complete and

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corrective measures are expected to begin between January and April 1994.

Assessment of deep groundwater contamination is still underway. Contaminants have been detected in production wells. Production wells may have acted as vertical conduits and may have spread the contamination downward. Production wells have been sealed.

Monitoring wells are currently being drilled to determine the extent of contamination. Between August 23 and August 27, 1993 a hole was drilled to 900 feet with the intent of constructing in this single hole a "wind chime"-like cluster of six monitoring wells (19-cluster). Due to construction/design problems the lower portion of the hole was lost and only four wells (19-300, 19-400, 19-500, 19-600) were ultimately installed. A second hole (19B-cluster) is being drilled for the other two wells. These wells will be completed in early January (the above information was compiled from PNM weekly status reports) (see the final paragraph of: 2. Selected Background Documents, below).

To understand the history, contaminant investigations, hydrogeologic setting, and, current developments at PNM, familiarity with the selected background documents listed below, particularly executive summaries and the contents of appendices and attachments, should be developed. This should allow an understanding to be developed of the data used to support the various interpretations and decisions. Activities are being driven by the CAD which is driven by the Post-Closure Care Permit, so, particular attention should be paid to these two documents.

As of December 1993, a Corrective Measures Proposal has been submitted by PNM and is nearing final HRMB approval. The deadline for HRMB comments was December 19, 1993. The schedule for submittals and approvals is given in the CAD.

Up-coming tasks will include involvement in the HRMB permitting process of permit modification to include changes in wells and water quality standards. A citizen's group has requested public hearings. Permitting hopes to satisfy public input needs through an informal public meeting to be scheduled (tentatively February 24th). A second up-coming event will be review and comment on results of Phase I (CAD p. 1-9, paragraph 2)(no due date). Following that PNM will submit a Post-corrective Measures Implementation Report (CAD p. A-11, paragraph 6). Finally, weekly status reports are submitted containing results of monitoring well installation, sampling, and water level measurements programs. It is helpful to compile information from these status reports as they come in because PNM often calls for regulatory assistance and to provide additional information.

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2. Selected Background Documents

Feb 84 Final Soil Contamination Assessment and Preliminary
Groundwater Contamination Assessment at PNM

Aug 85 Seepage and Drainage from the Unsaturated Zone at PNM

Nov 86 Post-Closure Care Permit

Nov 86 Post-Closure Care Permit Application (4 volumes)

Nov 86 Post-closure Plan (3 volumes)

Jan 92 Corrective Action Directive

Feb 92 Groundwater Monitoring Data Annual Report 1991

Feb 93 Groundwater Monitoring Data Annual Report 1992

May 93 Investigatory Approach for Characterization of the
Horizontal and Vertical Extent of the Deep Plume at PNM

Jul 93 Assessment Summary Report (2 volumes)

Jul 93 Potential Corrective Measures Technologies Report

Nov 93 DRAFT REPORT Evaluation of Available Remedial
Technologies and Conceptual Design of Recommended
Remedial Approach

Two other important compilations of background information for this facility should also be reviewed: chronological facility files (red and blue), and, weekly status reports (currently available for 9/14/92 to the present (12/18/93)). The latter have been compiled in a black, 1 1/2 inch 3-ring binder in the library. Two sets of the former exist. One set is found in the space saver file shelves in the HRMB library. A second set, identical to that in the HRMB library, has been compiled for the technical staff person's personal use. The second set is in file folders in Jane Cramer's former file cabinet, marked **chrono, 93, 92, or 91.**

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3. Contacts and phone numbers

The following are the main players a new staff-person will interact with regarding the PNM facility.

facility representatives

Ron Johnson, PNM senior environmental manager,
ofc 848-2998
FAX 848-2340
mobile 263-3166
Public Service Company of New Mexico
Alvarado Square
Albuquerque, New Mexico 87158

Gary Richardson, Metric, Inc., consultant to PNM
ofc 828-2801
FAX 828-2803
mobile 269-2605

other NMED players

Baird Swanson, GWR&PB, Albuquerque District Office
ofc 841-9458

Dennis McQuillen, GWR&PB, Santa Fe
ofc 827-2831

citizen's groups

Dolores Herrera, San Jose Community Awareness Council (SJCAC)
Executive Director
ofc 243-4837
FAX 243-3085
2401 Broadway SE, Albuquerque, New Mexico 87102-5009
PO 12297, Albuquerque, New Mexico 87195-2297

Frances Ortega, Southwest Research & Information Center,
consultant to SJCAC
ofc 262-1862
FAX 262-1864

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4. Chronological log

Finally, the following chronological log contains all activities for the past six months plus.

filename=LOG.PNM - **chrono log** (disk: JAJUN93D)

DATE	DESCR
4/23/93	(letter: see chrono file) PNM's response to questions on B zone (second shallow zone) monitoring wells and weekly status reports.
5/29/93	(memo: see chrono file) HRMB memo re: may 25 mtg with PNM on status of shallow gw investigation and plans for deep gw contam.
6/7/93	(lett: see chrono file) PNM's submittal of workplan for investigation of deep plume contamination.
6/?/93	Phone call from Ron Johnson (PNM Environmental Manager) on permit limitations/how to do vapor extraction within permit; modify permit? I said I'd talk to permitting and get back to him Monday.
6/14/93	Rcvd FAX of status report 6/7 - 6/11. Installing 17-800, ESI selected as remedial contractor for Phase II of CAD, construction described.
6/15/93	Phone call w/ Ron Johnson. on disturbing integrity of cap and removing wastes. I said if "maintain integrity" or seal, while vapor extraction, we think we can approve without permit mod. They will sample 3rd 800 ft well next wk. Will also look into toluene from packer. Will give us 4 reports, 2 appendices sets; they need timeframe on approval letter for deep workplan.
6/15/93	(lett: see chrono file) HRMB's approval letter for investigation of deep plume contamination.
6/16/93	Phone call w/ Ron Johnson on hole (17-800) failure, PVC collapse at; 300 ft. Will begin again July 12th. 1st of Aug for 1st well cluster.
6/18/93	(lett: see chrono file) PNM letter to EPA are: public notice of approval of permit mod. of federal haz waste permit to EPA permit into coincidence w/ NM state post-closure care permit.

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- 6/18/93 Phoned Baird Swanson, ABQ Dist Ofc, for 2nd time this wk (he hasn't called back) to exchange info on PNM.
- 6/23/93 (lett: see chrono file) PNM letter re: submittal of cutting/core logs.
- 7/6/93 Phone call w/ Frances Ortega (SW Research 262-1862) re: technical info on extent and nature of gw contam. She was referred to me by Marc, permitting;. I spoke w/ her for 30 to 40 minutes on compounds, horizontal and vertiacal investigations, status of delineation of plume(s) and problems in understanding to date (shallow WT wells, clean, vs. PWS dirty. She is with community awareness group that formerly met regularly to discuss superfund site in SV and related issues (PNM PGS) which was dissolved when Schwartzman began to sue.
- 7/13/93 Phone call w/ Ron Johnson: meet Aug 10 to discuss any questions arising from review of Contaminant Assessment Report, meet Engineering Science, Inc., they would like oppo to ask questiosn. PNM 1/4ly sampling delayed til Aug. 800 ft well this month; multiple completion wells begin in Aug.
- 7/21/93 Phone call w/ Ron Johnson: 4" wells may be converted to P+T; then would install new mon wells. Will sample strategic CAD wells in AUG.
- 7/23/93 (lett: see chrono file) PNM letter re: submittal of Assessment Summary Report and Corrective Measures Technology REport.
- 7/28/93 Phone call w/ Ron Johnson: he will send me the 450 p EPA document outlining criteria for determination of presence of a DNAPL.
- 8/10/93 (lett: see chrono file) EPA FAXed copy of letter from San Jose Community Awareness council requesting public hearings.
- 8/10/93 (memo: see chrono file) HRMB memo re: meeting of completion of Phase I of the CAD and plans for pemit mod.s and corrective aciton.

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- 8/12/93 Phone call w/ San Jose Community Awareness Council. (243-4837). Dolores Herrera will be in next Tues. Woman I spoke with asked I call back then to set up mtg. with PNM, me, and them.
- 8/13/93 Phone calls w/ Baird Swanson and Dennis McQuillen. San Jose Community Awareness council has an EPA Community assistance grant and they have hired their own consultant. May be press also. Call them back with schedule of mtg. and any info on a group going down to observe 6-well cluster installation.
- 8/16/93 Ph call with EPA re: how does EPA eval gw model?. Left B. Driscoll message; V. Mallott says he used a contractor (faster) on a GE project using V-leach model. Can also call RSKERL, Ada lab (Okla.), they have a GW modeling center (405 436-8500). He will look for his booklet saying who does what there and try to get me a name.
- 8/17/93 Ph call with San Jose CAC to set up mtg. Was told to call 8/18.
- 8/17/93 Phone call w/ R. Johnson re: permit mod.s. He suggests anticipated non-compliance section
(p 7 para 13 in permit) or
"gw mon sys must consist of.." (270.2, Ap I)
changes to wells
A - #, loc, depth, design - Cl I mod
B - replcmnt - Cl II mod
(I said I'd call him tomorrow on that).
They tried to sample 1, 5, 6 (they pump all day and can't fill a VOA bottle); probs due to decline in WT, propose substi 11 for 5 (11 clean), and redrill / replace 6, subject to his mngmnt's approval. Also probs obtaining st st pipe to spec.s for the cluster wells; construc delayed til after Labor Day.
He is concerned about the RCRA monitoring section's proposed well network and how that relates to modifications of the permit.
I said (I'd talk w/ permitting) but that our letters would document changes in the interim prior to permit modification.
- 8/18/93 Ph call w/ San Jose CAC. Want to schedule mtg w/ myself and Ron Johnson, just me for awhile afterwards, soon, probably 3 citizens groups representatives.

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8/23/93 Ph call in my ofc w/ Marc Sides to Ron Johnson on disturbing cap over unit. Ron had my FAXed letter on ASR and CMT certified.

We discussed the wells listed in the letter, the POC well network vs. the CAD assessment well network. The two permits (state RCRA, EPA HSWA), what changes require permit modification, public comment concerns.

Marc suggests a good place to do public comment would be when PNM and HRMB are prepared to present info on how proposing to remediate. Hopefully the comments could be heard and incorporated within a 45 day time frame. but it might take 90 days. There is an element of unpredictability. Marc said he hoped it could be informal (w/out court reporters). Once HRMB is satisfied, permitting wil develop a fact sheet and public notice it.

Ron will send permitting a letter on non-compliance, due to wells (5 and 6) stranded above water table. Letter will say how long will be outa comppliance, what will do to get back in... they would like to substit. 11 for 5; re-drill 6. In discussing wells, Ron said 2,3,4 are checked for WL's. He said PNM considers 9 and 12A redundant.

Marc said; if wells are substantially changed, as to depth or design, roll into mod for disturbing cap, don't want to mod too many things at once. (wells, cap, change from post-closure care to corrective action bec of contam-no longer close).

Ron will also develop a letter to request for permit modification; why it's nec., to reduce threat to HHE, perf language-goal, what they will botain, what remed expects to achieve.

Ron also said the sounder had been stuck in 22-800 and they had to cut off 150 ft. They will be installing a sounding tube. New date for week to drill 1st cluster now Aug 30.

8/24/93 Phone call w/ Ron J., to 900 feet in 1st cluster (19), log Fri or Mon, install pipe 31st to 3rd. PPIPE problem solved. Hope to get WLs on deep zone next wk.

8/25/93 (lett: see chrono file) HRMB lett to PNM acknowledging completion of Phase I of the CAD.

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- 8/30/93 Ph call w/ Dolores Herrera, SJCAC, meeting set for thurs, 9 am, me, Marc Sides permitting, Ron Johnson and Gary Richardson to answer questions.
- 8/30/93 Ph call w/ Ron Johnson. 6-well cluster: hole down to 900 ft, lots of clay, have found 6 sandy zones post-logging to screen, will build bulk Wed, start Mon, and cement on Fri.
- 8/30/93 Ph call w/ Baird Swanson. Gave him 6-well cluster schedule. Jeff West, new hire for ABQ Dist ofc, may go down thurs or fri. Also informed him of SJCAC admin mtg. He said he'd be willing to give moral support when we meet with the citizens larger group later.
- 8/31/93 (lett: see chrono file) PNM letter to HRMB permitting re anticipated noncompliance.
- 9/2/93 Mtg w/ SJCAC, PNM objectives: background information exchange. see memo.
- 9/3,6,9 Field observaiton of 6-well cluster going in.
- 9/7/93 (memo: see chrono file) HRMB memo on Sep 2 meeting with public citizens group (SJCAC) and PNM to update group on background and status of activities at PNM.
- 9/10/93 Frances Ortega returned my call. Discussed answeres to some of the questions raised during 9/2 mtg. I will send her a copy of my well inventory of late 92.
- 9/14/93 (lett: see chrono file) PNM letter to HRMB permitting re: request for permit mod.
- 9/16/93 Ph call w/ Ron JOhnson, Gary, Rodgers drilling; problems with 6-well cluster. There are problems with the 6 well cluster. During installation of the gravel pack for one of the upper wells, the deepest well (already cemented off and supposedly hydraulically separate) began to make water. Their hypothesis is that the casing is leaking at the joints. They did nmot mention the possibilities of 1. breached (failed, cracked) casing or 2. of movement of drilling fluid through around the cement seal and through the aquifer. May need to talk with them face to face to really understand what is going on. Somewhat unclear over the phone. Need pictures.

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- 9/20/93 Ph call w/ Ron Johnson. Two deepest wells have holes in casing bec. sand (from shallower gravel jpack) was found in well when they circulated water in it. Will check other four wells today. Will either complete four or will abandon all six, extract and try to save the hole.
- 9/20/93 Ph call w/ D. Herrera, SJCAC, she would like me to come by their office and answer a few more questions re: the PNM ASR. She would also like to use me as a resource, to help them find what they need, so they don't re-invent the wheel.
- 9/22/93 Ph call w/ Ron Johnson. They will pull 6-cluster well over next three days. Hope to salvage hole.
- 9/24/93 Ph call w/ Gary Richardson. 6-well cluster is out of hole; cut into 40 foot lengths. No sign of catastrophic failure. Will pressure test lengths to determine character of leaks. two leaks identified during well extraction when water spewed out of small holes at points where rings welded to pipes. Holes burned thru pipes apparently.
- 10/20/93 (memo: see chrono file) HRMB memo re Oct 19 meeting with SJCAC re PNM activities
- 10/25/93 Ph call w/ Ron Johnson re: PNM met with ESI and will change their permit mod request to drill thru cap for SVE only; they will put a 2nd well outside cap, deeper, for P + T.
- 10/26/93 (let: see chrono file) GWPRB lett to PNM re: discharge of water.
- 11/4/93 (let: see chrono file) FAXed letter from R Johnson re: CMP won't be on time; request extension to Nov 19.
- 11/8/93 Ph call w/ R Johnson. Corrective Measures Proposal not in a form that would not have been worth anything if handed in on time; he hopes we will approve (I'll call back by next week) the extension requested by FAX and certified letter sent to SA. He is having difficulty with EPA, SWB, GWRPB on discharge of water from P+T system thrfr he believes a polishing unit will be necessary. They are negotiating with UNM to discharge the water on their golf courses. The first cluster well will be developed this week. Probably will not sample cluster wells until after Thanksgiving.

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- 11/16/93 (let: see chrono file) HRMB let to PNM re: extension granted.
- 12/7/93 Ph. call w/ RJ. 19A well cluster may have been lost due to being too close to old production well. At the surface, the wells are about 15 feet apart PLUS the produc well probably deviated some. THEORY: old produciton wells pumped lots of silt and sand. This may have resulted in creating a zone that was cleaned out; that was more permeable. This zone may have been encountered, and this may have been where mud was lost. He didn't feel it was a problem with mud thickness. He anticipates they will complete new hole by Wed., Dec 8.
- 12/8/93 (FAX: see chrono file) corrected listing of results of chemical analyses of groundwater samples.