Public Service Company
of New Mexico
Alvarado Square MS. 0408
Albuquerque, NM 87158

Ron K X
Teri

August 7, 1995

keep one copy, put the other three, one to Library

PNM

Certified Mail,
Return Receipt Requested

Mr. Benito Garcia
Chief, Hazardous and Radioactive
Materials Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, NM 87502

Dear Mr. Garcia:

Subject: Treatment Effectiveness Report, Second Quarter 1995, Groundwater Treatment System, Person Generating Station, NMT 360010342

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Toni Ristau
Director, Environmental Services

Enclosed please find three (3) copies of the subject report submitted pursuant to requirements contained in the Person Station Corrective Action Directive issued in September 1991. If you have any questions, please contact me at (505) 241-2998.

Ron D. Johnson
Sr. Environmental Scientist

RDJ:rdj
enclosure

AUG 14 1995

Michael,

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

Treatment Effectiveness Report
Second Quarter 1995

August 1, 1995

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

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Appendix A. Laboratory Reports

I. Groundwater Treatment Effectiveness

The Person Station Groundwater Treatment system was officially started on Friday, January 27, 1995 with treated effluent being sent to the University of New Mexico Championship Golf Course. Due to concerns about the ability of the single check valve in the effluent line to hold should an automatic shut down occur over the weekend, the system was manually shut down at the end of the day. On Saturday, January 28, a second check valve (just outside the treatment building) was installed in the effluent line to the golf course. The groundwater treatment system was re-started on Monday, January 30, and semi-continuously operated until a scheduled planned shutdown occurred on March 8, 1995.

During the approximately 30 plus days of first operation, a series of groundwater level measurements were taken at monitoring wells in the vicinity of PSMW-16 and the VEW in order to determine the radius of influence of each well on the surrounding aquifer. Results from that data indicate that PSMW-16 has a radius of influence of 600 feet when pumped at 13.3 gpm, and the VEW has a radius of influence of 80 feet when pumped at 5.6 gpm.

On March 8, 1995, the groundwater treatment system was shut down in order to evaluate the recovery characteristics of the pumped aquifer and to conduct maintenance activities and equipment replacement in the system. During the first 30 days of operation it was determined that a better system of throttle valves was needed on the extraction wells, and that small changes in piping configuration inside the treatment building were needed. These changes were scheduled to occur during the planned shut-down period.

The groundwater treatment system was re-started on April 10, 1995, after completion of the above mentioned maintenance activities. The system has operated semi-continuously during the second quarter of 1995. Down times have been related to minor system problems encountered during operation.

Figures 1 and 2 show graphs of concentration of total VOC's as measured at wells VEW and PSMW-16 over the operation of the groundwater treatment system. More detailed data for this operational year is shown in Tables 1 and 2. From February 1, 1995 through March 8, 1995 the total Chlorinated VOC's dropped from 318.4 ppb to 128.3 ppb at PSMW-16. During the same period total Chlorinated VOC's dropped from 6.1 ppb to 1.8 ppb at the VEW. As anticipated, concentrations rose again when the system was restarted in April. Laboratory reports are contained in Appendix A.

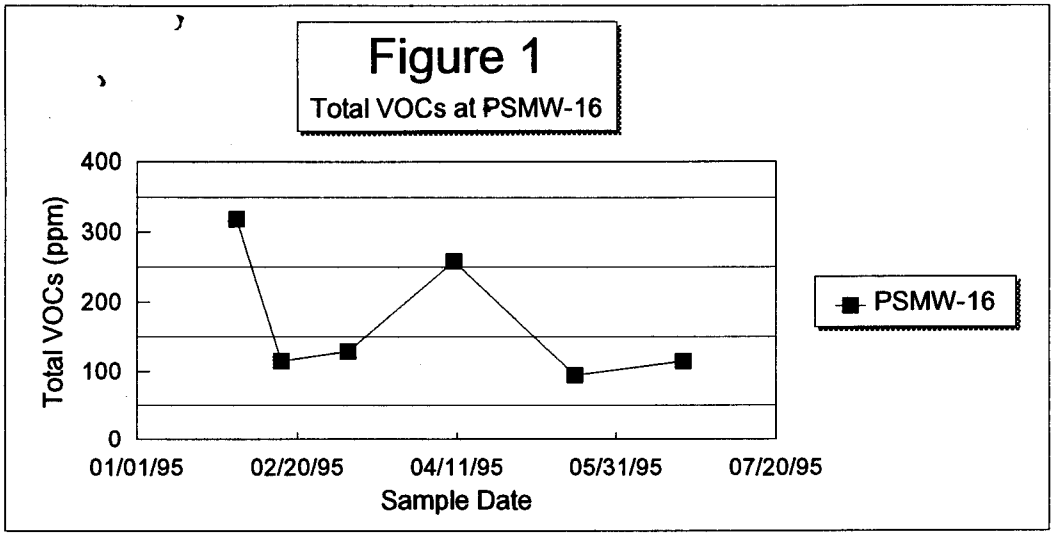
Figure 1
Total VOCs at PSMW-16
400
300
200
100
0
Total VOCs (ppm)
01/01/95
02/20/95
04/11/95
05/31/95
07/20/95
Sample Date
PSMW-16

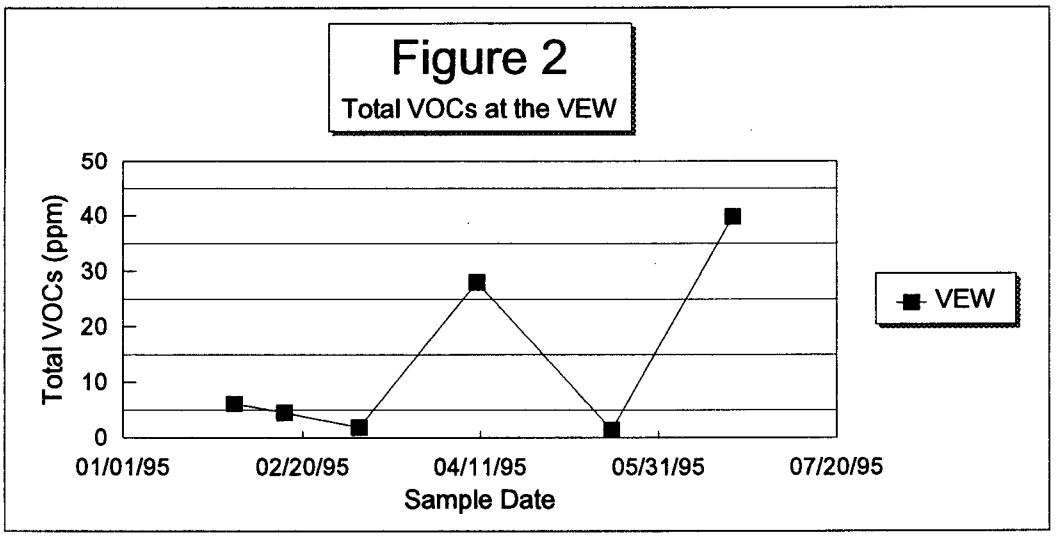
Figure 2
Total VOCs at the VEW
50
40
30
20
10
0
Total VOCs (ppm)
01/01/95
02/20/95
04/11/95
05/31/95
07/20/95
Sample Date
VEW

Table 1
Influent Concentrations From PSMW-16

Date	Laboratory Report No.	PCE (ppb)	DCE (ppb)	Total VOC's (ppb)
2/1/95	502304	200	110	318.4
2/15/95	502376	69	39	115.0
3/8/95	503317	78	46	128.3
4/10/95	504341	170	81	258.6
5/18/95	505371	62	30	94.6
6/21/95	506396	76	36	114.8

Table 2
Influent Concentrations From VEW

Date	Laboratory Report No.	PCE (ppb)	DCE (ppb)	Total VOC's (ppb)
2/1/95	502304	5.3	0.8	6.1
2/15/95	502376	4	0.5	4.5
3/8/95	503317	1.5	0.3	1.8
4/10/95	504341	21	5.8	28.1
5/18/95	505371	1.4	< 0.2	1.4
6/21/95	506396	25	9.4	39.8

II. Operational Dates

The Person Station Groundwater Treatment system was operated from April 10, 1995 through June 30, 1995 in an almost continuous mode. The table below details operational time periods and activities.

Table 3
Operational Activities

Date	Time	Activity
4/10/95	09:30	GTS system re-started up after maintenance activities and aquifer recovery study, effluent sent to golf course.
4/18/95	15:20	GTS system shut down, crack discovered in 4 inch line near first check valve (eff. line to golf course). Installed expansion joint at check valve.
4/19/95	13:40	GTS system re-started.
4/21/95	approx. 12:00 midnight	GTS system automatic shut down due high float level in air stripper.
4/21/95	09:50	GTS system started up again, effluent sent to golf course.
5/31/95	10:00	GTS system automatic shut down due to low level in surge tank (clay valve stuck). Performed maintenance on clay valve.
5/31/95	10:50	GTS system started up again, effluent sent to golf course.
5/31/95	12:30	GTS system shut down manually, check valve in 4 inch effluent line to golf course leaking. Replaced gasket.
5/31/95	14:10	GTS system re-started.
6/2/95	13:20	GTS system manually shut down for inspection.
6/2/95	15:30	GTS system re-started.
6/14/95	approx. 06:00	GTS system automatic shut down due to high float level in air stripper tank. Adjusted air stripper transfer pump flow valve.
6/14/95	15:25	GTS system re-started.
6/21/95	?	GTS system automatic shut down due to high float level in air stripper tank. Unable to immediately re-start system due to clay valve malfunction. Cleaned calcium deposits on clay valve, adjusted system flows.
6/22/95	14:00	GTS system re-started.
6/27/95	07:00	GTS system manually shut down. Moved location of air stripper flow meter downstream of bag filters.
6/28/95	08:00	GTS system re-started.

III. Influent / Effluent Volumes

Flow totalizing meters are present on each influent well line and on the effluent flow line. The table below details flow volumes from each influent well and the effluent line. Differences between total effluent and total influent may be attributed to water loss (evaporation) out the stack in the air stripper system and to differences, inaccuracies, and operational problems with the flow meters.

Table 4
Influent / Effluent Volumes

Source	Meter Number	Start Reading	End Reading	Volume (Gallons)
Flow Volumes for April 1995:				
Influent (VEW)	Badger Meter No. 94976130	313,680	453,210	139,530
Influent (PSMW-16)	Badger Meter No. 94398832	723,443	1,088,940	365,497
Effluent (to Golf Course)	Badger Meter No. 94398834	832,138	1,268,200	436,062
Flow Volumes for May 1995:				
Influent (VEW)	Badger Meter No. 94976130	453,210	681,380	228,170
Influent (PSMW-16)	Badger Meter No. 94398832	1,088,940	1,630,495	541,555
Effluent (to Golf Course)	Badger Meter No. 94398834	1,268,200	2,267,912	999,712
Flow Volumes for June 1995:				
Influent (VEW)	Badger Meter No. 94976130	681,380	802,807	121,427
Influent (PSMW-16)	Badger Meter No. 94398832	1,630,495	1,832,555	202,060
Effluent (to Golf Course)	Badger Meter No. 94398834	2,267,912	2,581,677	313,765
Quarterly Total for Influent (VEW + PSMW-16):				1,598,239
Quarterly Total for Effluent:				1,749,539

IV. Laboratory Analysis

A. Influent/Effluent Sampling for VOC's (8010 analysis)

During the second operational quarter of the groundwater treatment system, influent and effluent sampling was conducted pursuant to the routine schedule outlined in the NMED approved discharge plan, i.e., once each month. Sampling results are shown in the tables below. Laboratory analytical data reports are contained in Appendix A. All influent/effluent sampling results show that the treatment system has consistently removed chlorinated VOC contaminants in the 100 to 200 ppb range to levels below method detection limits in the effluent sent to the golf course. Laboratory analysis of the water stream at a point after the air stripper and before the granular activated carbon treatment also show that at these influent concentrations and a flow rate of approximately 20 gpm, the air stripper alone is capable of treating the groundwater to concentrations consistently below or near method detection limits for chlorinated VOCs.

Table 5
Summary of Influent and Effluent Analysis

Sampling Date: 4/10/95	Lab Report Number: 504341		
VOC Compound	Influent (ppb)	Effluent After Air Stripper (ppb)	Effluent After GAC Unit (ppb)
Chloroform	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	0.3	< 0.2	< 0.2
1,1-Dichloroethene	52	< 0.2	< 0.2
Tetrachloroethene	130	< 0.5	< 0.5
1,1,1-Trichloroethane	5.6	< 1.0	< 1.0
TOTAL VOC'S	187.9	BDL	BDL

Table 6
Summary of Influent and Effluent Analysis

Sampling Date: 5/18/95	Lab Report Number: 505371		
VOC Compound	Influent (ppb)	Effluent After Air Stripper (ppb)	Effluent After GAC Unit (ppb)
Chloroform	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	< 0.2	< 0.2	< 0.2
1,1-Dichloroethene	20	< 0.2	< 0.2
Tetrachloroethene	44	< 0.5	< 0.5
1,1,1-Trichloroethane	< 1.0	< 1.0	< 1.0
TOTAL VOC'S	233.9	BDL	BDL

Table 7
Summary of Influent and Effluent Analysis

Sampling Date: 6/21/95	Lab Report Number: 506396		
VOC Compound	Influent (ppb)	Effluent After Air Stripper (ppb)	Effluent After GAC Unit (ppb)
Chloroform	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	< 0.2	< 0.2	< 0.2
1,1-Dichloroethene	19	0.3	< 0.2
Tetrachloroethene	34	1.2	< 0.5
1,1,1-Trichloroethane	< 1.0	< 1.0	< 1.0
TOTAL VOC'S	184.0	BDL	BDL

B. Golf Course Pond Sampling

The GTS NMED Discharge Plan (DP 1006) requires monthly sampling of the East and West ponds for 8010 analysis after the first month of operation, and during each subsequent month of operation. During the second quarter of 1995, the ponds were sampled three times pursuant to this requirement. No EPA Method 8010 parameters were detected in the samples. Copies of the laboratory reports are contained in Appendix A.

Appendix A. Laboratory Reports

Analytical **Technologies,** Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. **504341**

April 18, 1995

Public Service Co. of NM
Alvarado Square MS-0408
Albuquerque, NM 87158

Project Name/Number: PERSON STATION REMEDIATION

Attention: Ron Johnson

On **04/10/95**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Letitia Krakowski, Ph.D.
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure

Analytical Technologies, Inc.

CLIENT	: PUBLIC SERVICE CO OF NM	DATE RECEIVED	: 04/10/95
PROJECT #	: REMEDIATION		
PROJECT NAME	: PERSON STATION	REPORT DATE	: 04/18/95

ATI ID: 504341

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	GTS-INFLUENT	AQUEOUS	04/10/95
02	GTS-AIR STRIPPER EFFLUENT	AQUEOUS	04/10/95
03	GTS-GAC EFFLUENT	AQUEOUS	04/10/95
04	VEW WELL INFLUENT	AQUEOUS	04/10/95
05	PSMW-16 WELL INFLUENT	AQUEOUS	04/10/95
06	TRIP BLANK	AQUEOUS	04/03/95

---TOTALS---

MATRIX	#SAMPLES
AQUEOUS	6

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS (EPA 8010)
CLIENT : PUBLIC SERVICE CO OF NM ATI I.D.: 504341
PROJECT # : REMEDIATION
PROJECT NAME : PERSON STATION

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	GTS-INFLUENT	AQUEOUS	04/10/95	NA	04/16/95	1
02	GTS-AIR STRIPPER	AQUEOUS	04/10/95	NA	04/14/95	1
03	GTS-GAC EFFLUENT	AQUEOUS	04/10/95	NA	04/14/95	1

PARAMETER	UNITS	01	02	03
BROMODICHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
BROMOFORM	UG/L	<0.5	<0.5	<0.5
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2	<0.2	<0.2
CHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
CHLOROETHANE	UG/L	<0.5	<0.5	<0.5
CHLOROFORM	UG/L	<0.5	<0.5	<0.5
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	UG/L	0.3	<0.2	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	UG/L	52 D(10)	<0.2	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0	<1.0	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2	<0.2	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TETRACHLOROETHENE	UG/L	130 D(10)	<0.5	<0.5
1,1,1-TRICHLOROETHANE	UG/L	5.6	<1.0	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TRICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2	<0.2	<0.2
VINYL CHLORIDE	UG/L	<0.5	<0.5	<0.5
SURROGATE:				
BROMOCHLOROMETHANE (%)		94	89	88

D(10)=DILUTED 10X, ANALYZED 04/14/95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS (EPA 8010)
CLIENT : PUBLIC SERVICE CO OF NM ATI I.D.: 504341
PROJECT # : REMEDIATION
PROJECT NAME : PERSON STATION

SAMPLE I.D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	VEW WELL INFLUENT	AQUEOUS	04/10/95	NA	04/14/95	1
05	PSMW-16 WELL INFLUENT	AQUEOUS	04/10/95	NA	04/14/95	1
06	TRIP BLANK	AQUEOUS	04/03/95	NA	04/14/95	1

PARAMETER	UNITS	04	05	06
BROMODICHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
BROMOFORM	UG/L	<0.5	<0.5	<0.5
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2	<0.2	<0.2
CHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
CHLOROETHANE	UG/L	<0.5	<0.5	<0.5
CHLOROFORM	UG/L	<0.5	0.6	<0.5
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2	0.4	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	UG/L	5.8	81 D(10)	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0	<1.0	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2	<0.2	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TETRACHLOROETHENE	UG/L	21 D(5)	170 D(10)	<0.5
1,1,1-TRICHLOROETHANE	UG/L	1.3	6.6	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TRICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2	<0.2	<0.2
VINYL CHLORIDE	UG/L	<0.5	<0.5	<0.5
SURROGATE:				
BROMOCHLOROMETHANE (%)		95	91	92

D(5)=DILUTED 5X, ANALYZED 04/15/95
D(10)=DILUTED 10X, ANALYZED 04/15/95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 504341
BLANK I.D.	: 041495	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 04/14/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	97

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 504341
BLANK I.D.	: 041495B	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 04/15/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	94

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST	: PURGEABLE HALOCARBONS (EPA 8010)		
MSMSD #	: 50434103	ATI I.D.	: 504341
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 04/15/95
PROJECT NAME	: PERSON STATION	SAMPLE MATRIX	: AQUEOUS
REF. I.D.	: 50434103	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
CHLOROBENZENE	<0.5	10	11	110	12	120	9
1,1-DICHLOROETHENE	<0.2	10	8.0	80	8.1	81	1
TRICHLOROETHENE	<0.2	10	11	110	12	120	9

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

AnalyticalTechnologies,Inc., Albuquerque, NM
San Diego ▪ Phoenix ▪ Seattle ▪ Pensacola ▪ Ft. Collins ▪ Portland ▪ Albuquerque

CHAIN OF CUSTODY

DATE: 4/10/95 PAGE 1 OF 1

ATI LAB I.D. 504 341

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: RON JOHNSON

COMPANY: PUBLIC SERVICE COMPANY OF NEW MEXICO
ADDRESS: ALVARADO SQUARE - 0408
ALBUQUERQUE, NM 87158
PHONE: (505) 241-2998
FAX: (505) 241-2340

BILL TO: SAME
COMPANY:
ADDRESS:
ATTN: RON JOHNSON

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)			Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.			Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)			SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal			The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)		NUMBER OF CONTAINERS
GTS - INFLUENT	4/10/95	1144	W	01							X																						3
GTS-AIR STRIPPER EFFLUENT	↓	1142	W	02							X																						3
GTS-GAC EFFLUENT	↓	1140	W	03							X																						3
~~UNM EAST RESERVOIR~~			~~W~~								~~X~~																						
~~UNM WEST RESERVOIR~~			~~W~~								~~X~~																						
VEW WELL ~~SAMPLE~~ Influent	4/10/95	1146	W	04							X																						3
PSMW-16 WELL ~~SAMPLE~~ Influent	↓	1148	W	05							X																						3
TRIP BLANK	4/3/95		W	06							X																						1

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJ. NO.:	REMEDIATION	NO. CONTAINERS	16
PROJ. NAME:	PERSON STATION	CUSTODY SEALS	(Y) N / NA
P.O. NO.:		RECEIVED INTACT	Y
SHIPPED VIA:		RECEIVED COLD	Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒ 2 WEEK

Comments:

PLEASE PROVIDE DATA ON DISKETTE AS WELL AS HARD COPY

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Ron Johnson Time: 1519	Signature: Time:	Signature: Time:
Printed Name: Ron Johnson Date: 4/10/95	Printed Name: Date:	Printed Name: Date:
Company: PNM Phone: 241-2998	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: Time:	Signature: Time:	Signature: Time: 1519
Printed Name: Date:	Printed Name: Date:	Printed Name: Date: 4/10/95
Company:	Company:	Analytical Technologies, Inc.

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777 DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR

Analytical Technologies, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. **504408**

May 2, 1995

Public Service Co of NM
Alvarado Square MS0408
Albuquerque, NM 87158

Project Name/Number: PERSON STATION REMEDIATION

Attention: Ron Johnson

On **04/27/95**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Letitia Krakowski, Ph.D.
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure

Analytical Technologies, Inc.

CLIENT	: PUBLIC SERVICE CO OF NM	DATE RECEIVED	: 04/27/95
PROJECT #	: REMEDIATION		
PROJECT NAME	: PERSON STATION	REPORT DATE	: 05/02/95

ATI ID: 504408

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	UNM EAST RESERVOIR	AQUEOUS	04/27/95
02	UNM WEST RESERVOIR	AQUEOUS	04/27/95
03	TRIP BLANK	AQUEOUS	04/27/95

---TOTALS---

MATRIX	#SAMPLES
AQUEOUS	3

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS (EPA 8010)
CLIENT : PUBLIC SERVICE CO OF NM ATI I.D.: 504408
PROJECT # : REMEDIATION
PROJECT NAME : PERSON STATION

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	UNM EAST RESERVOIR	AQUEOUS	04/27/95	NA	04/28/95	1
02	UNM WEST RESERVOIR	AQUEOUS	04/27/95	NA	04/28/95	1
03	TRIP BLANK	AQUEOUS	04/27/95	NA	04/28/95	1

PARAMETER	UNITS	01	02	03
BROMODICHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
BROMOFORM	UG/L	<0.5	<0.5	<0.5
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2	<0.2	<0.2
CHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
CHLOROETHANE	UG/L	<0.5	<0.5	<0.5
CHLOROFORM	UG/L	<0.5	<0.5	<0.5
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0	<1.0	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2	<0.2	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TETRACHLOROETHENE	UG/L	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0	<1.0	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TRICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2	<0.2	<0.2
VINYL CHLORIDE	UG/L	<0.5	<0.5	<0.5
SURROGATE:				
BROMOCHLOROMETHANE (%)		90	84	90

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 504408
BLANK I.D.	: 042895	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 04/28/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	84

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 504408
BLANK I.D.	: 050195	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 05/01/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	90

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST	: PURGEABLE HALOCARBONS (EPA 8010)		
MSMSD #	: 50440403	ATI I.D.	: 504408
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 04/28/95 05/01/95
PROJECT NAME	: PERSON STATION	SAMPLE MATRIX	: AQUEOUS
REF. I.D.	: 50440403	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
CHLOROBENZENE	<0.5	10	11	110	10	100	10
1,1-DICHLOROETHENE	<0.2	10	7.7	77	6.8	68	12
TRICHLOROETHENE	<0.2	10	12	120	11	110	9

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque

CHAIN OF CUSTODY

DATE: 4-27-95 PAGE 1 OF 1

ATI LAB I.D. 504408

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PROJECT MANAGER: RON JOHNSON

COMPANY: PUBLIC SERVICE COMPANY OF NEW MEXICO
ADDRESS: ALVARADO SQUARE - 0408
ALBUQUERQUE, NM 87158
PHONE: (505) 241-2998
FAX: (505) 241-2340

BILL TO: SAME
COMPANY:
ADDRESS:
ATTN: RON JOHNSON

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)			Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.			Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)			SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal			The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)		NUMBER OF CONTAINERS
~~GTS - INFLUENT~~			~~W~~								~~X~~																						
~~GTS-AIR STRIPPER EFFLUENT~~			~~W~~								~~X~~																						
~~GTS-GAC EFFLUENT~~			~~W~~								~~X~~																						
UNM EAST RESERVOIR	4-27-95	1421	W	01							X																						3
UNM WEST RESERVOIR	4-27-95	1430	W	02							X																						3
~~VEW WELL SAMPLE~~			~~W~~								~~X~~																						
~~PSMW-16 WELL SAMPLE~~			~~W~~								~~X~~																						
TRIP BLANK	4-27	—	W	03							X																						1

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJ. NO.:	REMEDIATION	NO. CONTAINERS	7
PROJ. NAME:	PERSON STATION	CUSTODY SEALS	(Y) N / NA
P.O. NO.:		RECEIVED INTACT	Y
SHIPPED VIA:		RECEIVED COLD	Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☑ 2 WEEK

Comments:

PLEASE PROVIDE DATA ON DISKETTE AS WELL AS HARD COPY

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Chuck Armijo Time: 1500	Signature: Ron Johnson Time: 1610	Signature: Time:
Printed Name: CHUCK ARMIJO Date: 4-27-95	Printed Name: Ron Johnson Date: 4/27/95	Printed Name: Date:
Company: PNM Phone: 241-4744	Company: PNM	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY:(LAB) 3.
Signature: Ron Johnson Time: 1500	Signature: Time:	Signature: Time: 1610
Printed Name: Ron Johnson Date: 4-27-95	Printed Name: Date:	Printed Name: Dianne Luther Date: 4/27/95
Company: PNM 241-2998	Company:	Analytical Technologies, Inc.

Analytical Technologies, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. **505371**

June 1, 1995

Public Service Co of NM
Alvarado Square MS0408
Albuquerque, NM 87158

Project Name/Number: PERSON STATION REMEDIATION

Attention: Ron Johnson

On **05/18/95**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Letitia Krakowski, Ph.D.
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure

Analytical Technologies, Inc.

CLIENT	: PUBLIC SERVICE CO OF NM	DATE RECEIVED	: 05/18/95
PROJECT #	: REMEDIATION		
PROJECT NAME	: PERSON STATION	REPORT DATE	: 06/01/95

ATI ID: 505371

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	GTS-INFLUENT	AQUEOUS	05/18/95
02	GTS-AIR STRIPPER EFFLUENT	AQUEOUS	05/18/95
03	GTS-GAC EFFLUENT	AQUEOUS	05/18/95
04	UNM EAST RESERVOIR	AQUEOUS	05/18/95
05	UNM WEST RESERVOIR	AQUEOUS	05/18/95
06	VEW WELL SAMPLE	AQUEOUS	05/18/95
07	PSMW-16 WELL SAMPLE	AQUEOUS	05/18/95
08	TRIP BLANK	AQUEOUS	05/18/95

---TOTALS---

MATRIX	#SAMPLES
AQUEOUS	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS (EPA 8010)
CLIENT : PUBLIC SERVICE CO OF NM ATI I.D.: 505371
PROJECT # : REMEDIATION
PROJECT NAME : PERSON STATION

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	GTS-INFLUENT	AQUEOUS	05/18/95	NA	05/22/95	1
02	GTS-AIR STRIPPER EFFLUENT	AQUEOUS	05/18/95	NA	05/22/95	1
03	GTS-GAC EFFLUENT	AQUEOUS	05/18/95	NA	05/22/95	1

PARAMETER	UNITS	01	02	03
BROMODICHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
BROMOFORM	UG/L	<0.5	<0.5	<0.5
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2	<0.2	<0.2
CHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
CHLOROETHANE	UG/L	<0.5	<0.5	<0.5
CHLOROFORM	UG/L	<0.5	<0.5	<0.5
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	UG/L	20 D(5)	<0.2	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0	<1.0	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2	<0.2	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TETRACHLOROETHENE	UG/L	44 D(5)	<0.5	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0	<1.0	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TRICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2	<0.2	<0.2
VINYL CHLORIDE	UG/L	<0.5	<0.5	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	112	93	97

D(5)=DILUTED 5X, ANALYZED 05/23/95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS (EPA 8010)
CLIENT : PUBLIC SERVICE CO OF NM ATI I.D.: 505371
PROJECT # : REMEDIATION
PROJECT NAME : PERSON STATION

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	UNM EAST RESERVIOR	AQUEOUS	05/18/95	NA	05/22/95	1
05	UNM WEST RESERVIOR	AQUEOUS	05/18/95	NA	05/22/95	1
06	VEW WELL SAMPLE	AQUEOUS	05/18/95	NA	05/22/95	1

PARAMETER	UNITS	04	05	06
BROMODICHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
BROMOFORM	UG/L	<0.5	<0.5	<0.5
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2	<0.2	<0.2
CHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
CHLOROETHANE	UG/L	<0.5	<0.5	<0.5
CHLOROFORM	UG/L	<0.5	<0.5	<0.5
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0	<1.0	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2	<0.2	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TETRACHLOROETHENE	UG/L	<0.5	<0.5	1.4
1,1,1-TRICHLOROETHANE	UG/L	<1.0	<1.0	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TRICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2	<0.2	<0.2
VINYL CHLORIDE	UG/L	<0.5	<0.5	<0.5
SURROGATE:				
BROMOCHLOROMETHANE (%)		95	100	93

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS (EPA 8010)
CLIENT : PUBLIC SERVICE CO OF NM ATI I.D.: 505371
PROJECT # : REMEDIATION
PROJECT NAME : PERSON STATION

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	PSMW-16 WELL SAMPLE	AQUEOUS	05/18/95	NA	05/22/95	1
08	TRIP BLANK	AQUEOUS	05/18/95	NA	05/22/95	1

PARAMETER	UNITS	07	08
BROMODICHLOROMETHANE	UG/L	<0.2	<0.2
BROMOFORM	UG/L	<0.5	<0.5
BROMOMETHANE	UG/L	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2	<0.2
CHLOROBENZENE	UG/L	<0.5	<0.5
CHLOROETHANE	UG/L	<0.5	<0.5
CHLOROFORM	UG/L	0.8	<0.5
CHLOROMETHANE	UG/L	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5	<0.5
1,1-DICHLOROETHENE	UG/L	30 D(10)	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2
METHYLENE CHLORIDE	UG/L	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2	<0.2
TETRACHLOROETHENE	UG/L	62 D(10)	<0.5
1,1,1-TRICHLOROETHANE	UG/L	1.8	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2	<0.2
TRICHLOROETHENE	UG/L	<0.2	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2	<0.2
VINYL CHLORIDE	UG/L	<0.5	<0.5
SURROGATE:			
BROMOCHLOROMETHANE (%)		95	95

D(10)=DILUTED 10X, ANALYZED 05/23/95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 505371
BLANK I.D.	: 052295	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 05/22/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	91

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 505371
BLANK I.D.	: 052395	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 05/23/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 505371
BLANK I.D.	: 052495	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 05/24/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	99

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 505371
BLANK I.D.	: 052695	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 05/26/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	102

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST	: PURGEABLE HALOCARBONS (EPA 8010)		
MSMSD #	: 50537102	ATI I.D.	: 505371
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 05/24/95 05/26/95
PROJECT NAME	: PERSON STATION	SAMPLE MATRIX	: AQUEOUS
REF. I.D.	: 50537102	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
CHLOROBENZENE	<0.5	10	9.7	97	9.8	98	1
1,1-DICHLOROETHENE	<0.2	10	6.6	66	6.9	69	4
TRICHLOROETHENE	<0.2	10	11	110	11	110	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

AnalyticalTechnologies,Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque

CHAIN OF CUSTODY

DATE: 5-18-95 PAGE 1 OF 1

ATI LAB I.D. 505371

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: RON JOHNSON

COMPANY: PUBLIC SERVICE COMPANY OF NEW MEXICO
ADDRESS: ALVARADO SQUARE - 0408
ALBUQUERQUE, NM 87158
PHONE: (505) 241-2998
FAX: (505) 241-2340

BILL TO: SAME
COMPANY:
ADDRESS:
ATTN: RON JOHNSON

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)			Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.			Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)			SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal			The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)		NUMBER OF CONTAINERS
GTS - INFLUENT	5-13-95	1428	W	01							X																						3
GTS-AIR STRIPPER EFFLUENT	5-13-95	1426	W	02							X																						3
GTS-GAC EFFLUENT	5-13-95	1424	W	03							X																						3
UNM EAST RESERVOIR	5-13-95	1454	W	04							X																						3
UNM WEST RESERVOIR	5-13-95	1505	W	05							X																						3
VEW WELL SAMPLE	5-13-95	1431	W	06							X																						3
PSMW-16 WELL SAMPLE	5-13-95	1433	W	07							X																						3
TRIP BLANK	5-18-95		W	08							X																						1

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJ. NO.:	REMEDIATION	NO. CONTAINERS	22
PROJ. NAME:	PERSON STATION	CUSTODY SEALS	Y / N / NA
P.O. NO.:		RECEIVED INTACT	
SHIPPED VIA:		RECEIVED COLD	

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☑ 2 WEEK

Comments:

PLEASE PROVIDE DATA ON DISKETTE AS WELL AS HARD COPY
C.O.C. TO CHEMIST

SAMPLED & RELINQUISHED BY: 1.		RELINQUISHED BY: 2.		RELINQUISHED BY: 3.	
Signature: [illegible]	Time: 1620	Signature:	Time:	Signature:	Time:
Printed Name: Chuck Martin	Date: 5-18-95	Printed Name:	Date:	Printed Name:	Date:
Company: PNM	Phone: 241-4744	Company:		Company:	

RECEIVED BY: 1.		RECEIVED BY: 2.		RECEIVED BY:(LAB) 3.	
Signature:	Time:	Signature:	Time:	Signature: [illegible]	Time: 1620
Printed Name:	Date:	Printed Name:	Date:	Printed Name: Chris Frodlich	Date: 5/18/95
Company:		Company:		Analytical Technologies, Inc.	

Analytical Technologies, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 506396

June 26, 1995

Public Service Co. of NM
Alvarado Square MS0408
Albuquerque, NM 87158

Project Name/Number: PERSON STATION REMEDIATION

Attention: Ron Johnson

On **06/21/95**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure

Analytical Technologies, Inc.

CLIENT	: PUBLIC SERVICE CO OF NM	DATE RECEIVED	: 06/21/95
PROJECT #	: REMEDIATION		
PROJECT NAME	: PERSON STATION	REPORT DATE	: 06/26/95

ATI ID: 506396

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	GTS-INFLUENT	AQUEOUS	06/21/95
02	GTS-AIR STRIPPER EFFLUENT	AQUEOUS	06/21/95
03	GTS-GAC EFFLUENT	AQUEOUS	06/21/95
04	UNM EAST RESERVOIR	AQUEOUS	06/21/95
05	UNM WEST RESERVOIR	AQUEOUS	06/21/95
06	VEW WELL SAMPLE	AQUEOUS	06/21/95
07	PSMW-16 WELL SAMPLE	AQUEOUS	06/21/95
08	TRIP BLANK	AQUEOUS	06/21/95

---TOTALS---

MATRIX	#SAMPLES
AQUEOUS	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS (EPA 8010)
CLIENT : PUBLIC SERVICE CO OF NM ATI I.D.: 506396
PROJECT # : REMEDIATION
PROJECT NAME : PERSON STATION

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	GTS-INFLUENT	AQUEOUS	06/21/95	NA	06/22/95	1
02	GTS-AIR STRIPPER EFFLUENT	AQUEOUS	06/21/95	NA	06/22/95	1
03	GTS-GAC EFFLUENT	AQUEOUS	06/21/95	NA	06/22/95	1

PARAMETER	UNITS	01	02	03
BROMODICHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
BROMOFORM	UG/L	<0.5	<0.5	<0.5
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2	<0.2	<0.2
CHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
CHLOROETHANE	UG/L	<0.5	<0.5	<0.5
CHLOROFORM	UG/L	<0.5	<0.5	<0.5
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	UG/L	19	0.3	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0	<1.0	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2	<0.2	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TETRACHLOROETHENE	UG/L	34 D(10)	1.2	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0	<1.0	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TRICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2	<0.2	<0.2
VINYL CHLORIDE	UG/L	<0.5	<0.5	<0.5
SURROGATE:				
BROMOCHLOROMETHANE (%)		97	95	101

D(10)=DILUTED 10X, ANALYZED 06/23/95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS (EPA 8010)
CLIENT : PUBLIC SERVICE CO OF NM ATI I.D.: 506396
PROJECT # : REMEDIATION
PROJECT NAME : PERSON STATION

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	UNM EAST RESERVOIR	AQUEOUS	06/21/95	NA	06/22/95	1
05	UNM WEST RESERVOIR	AQUEOUS	06/21/95	NA	06/22/95	1
06	VEW WELL SAMPLE	AQUEOUS	06/21/95	NA	06/22/95	1

PARAMETER	UNITS	04	05	06
BROMODICHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
BROMOFORM	UG/L	<0.5	<0.5	<0.5
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2	<0.2	<0.2
CHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
CHLOROETHANE	UG/L	<0.5	<0.5	<0.5
CHLOROFORM	UG/L	<0.5	<0.5	<0.5
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2	<0.2	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2	<0.2	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2	<0.2	0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2	<0.2	9.4
CIS-1,2-DICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0	<1.0	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2	<0.2	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2	<0.2
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TETRACHLOROETHENE	UG/L	<0.5	<0.5	25 D(10)
1,1,1-TRICHLOROETHANE	UG/L	<1.0	<1.0	5.2
1,1,2-TRICHLOROETHANE	UG/L	<0.2	<0.2	<0.2
TRICHLOROETHENE	UG/L	<0.2	<0.2	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2	<0.2	<0.2
VINYL CHLORIDE	UG/L	<0.5	<0.5	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	107	100	103

D(10)=DILUTED 10X, ANALYZED 06/23/95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS (EPA 8010)
CLIENT : PUBLIC SERVICE CO OF NM ATI I.D.: 506396
PROJECT # : REMEDIATION
PROJECT NAME : PERSON STATION

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	PSMW-16 WELL SAMPLE	AQUEOUS	06/21/95	NA	06/22/95	1
08	TRIP BLANK	AQUEOUS	06/21/95	NA	06/23/95	1

PARAMETER	UNITS	07	08
BROMODICHLOROMETHANE	UG/L	<0.2	<0.2
BROMOFORM	UG/L	<0.5	<0.5
BROMOMETHANE	UG/L	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2	<0.2
CHLOROBENZENE	UG/L	<0.5	<0.5
CHLOROETHANE	UG/L	<0.5	<0.5
CHLOROFORM	UG/L	0.7	<0.5
CHLOROMETHANE	UG/L	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5	<0.5
1,1-DICHLOROETHENE	UG/L	36 D(10)	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2	<0.2
METHYLENE CHLORIDE	UG/L	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2	<0.2
TETRACHLOROETHENE	UG/L	76 D(10)	<0.5
1,1,1-TRICHLOROETHANE	UG/L	2.1	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2	<0.2
TRICHLOROETHENE	UG/L	<0.2	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2	<0.2
VINYL CHLORIDE	UG/L	<0.5	<0.5
SURROGATE:			
BROMOCHLOROMETHANE (%)		98	92

D(10)=DILUTED 10X, ANALYZED 06/23/95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 506396
BLANK I.D.	: 062295	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 06/22/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	109

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 8010	ATI I.D.	: 506396
BLANK I.D.	: 062395	MATRIX	: AQUEOUS
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 06/23/95
PROJECT NAME	: PERSON STATION	DIL. FACTOR	: 1

PARAMETER	UNITS	
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5

SURROGATE:

BROMOCHLOROMETHANE (%)	97

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST	: PURGEABLE HALOCARBONS (EPA 8010)		
MSMSD #	: 50640201	ATI I.D.	: 506396
CLIENT	: PUBLIC SERVICE CO OF NM	DATE EXTRACTED	: NA
PROJECT #	: REMEDIATION	DATE ANALYZED	: 06/22/95
PROJECT NAME	: PERSON STATION	SAMPLE MATRIX	: AQUEOUS
REF. I.D.	:	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
CHLOROBENZENE	<0.5	10	10	100	11	110	10
1,1-DICHLOROETHENE	<0.2	10	7.9	79	8.2	82	4
TRICHLOROETHENE	<0.2	10	11	110	12	120	9

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque

CHAIN OF CUSTODY

DATE: 6-21-95 PAGE 1 OF 1

ATI LAB I.D. 506396

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: RON JOHNSON

COMPANY: PUBLIC SERVICE COMPANY OF NEW MEXICO
ADDRESS: ALVARADO SQUARE - 0408
ALBUQUERQUE, NM 87158
PHONE: (505) 241-2998
FAX: (505) 241-2340

BILL TO: SAME
COMPANY:
ADDRESS:
ATTN: RON JOHNSON

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)			Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.			Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)			SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal			The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)		NUMBER OF CONTAINERS
GTS - INFLUENT	6-21-95	1520	W	01							X																						3
GTS-AIR STRIPPER EFFLUENT	6-21-95	1516	W	02							X																						3
GTS-GAC EFFLUENT	6-21-95	1513	W	03							X																						3
UNM EAST RESERVOIR	6-21-95	1410	W	04							X																						3
UNM WEST RESERVOIR	6-21-95	1423	W	05							X																						3
VEW WELL SAMPLE	6-21-95	1523	W	06							X																						3
PSMW-16 WELL SAMPLE	6-21-95	1525	W	07							X																						3
TRIP BLANK	6-21-95		W	08							X																						1

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJ. NO.:	REMEDIATION	NO. CONTAINERS	
PROJ. NAME:	PERSON STATION	CUSTODY SEALS	Y / N / NA
P.O. NO.:		RECEIVED INTACT	
SHIPPED VIA:		RECEIVED COLD	

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☑ 2 WEEK

Comments:

PLEASE PROVIDE DATA ON DISKETTE AS WELL AS HARD COPY

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Time: 16:00	Signature: Time:	Signature: Time:
Printed Name: Date: 6-21-95	Printed Name: Date:	Printed Name: Date:
Company: PNM Phone: 241-4744	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: Time:	Signature: Time:	Signature: Time: 4:00
Printed Name: Date:	Printed Name: Date:	Printed Name: Date: 6/21/95
Company:	Company:	Analytical Technologies, Inc.

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