VCFCerdin - 6/29/93

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

Preliminary Assessment

FOR

PENN POWER CO.
PA #1579

City of New Castle
Lawrence County
Pennsylvania

ORIGINAL
(Red)

Preliminary Assessment
Penn Power Co.
PA 1579
New Castle, Penna.
Lawrence County

Penn Power is a generation plant for electricity. Bituminous coal is the raw material with the final wastes being fly ash (80%) and bottom ash (20%).

The fly and bottom ash are disposed on 13 - 90 acres of Penn Power property, adjacent to the power plant. Currently, this disposal area is undergoing the permitting process by the Bureau of Waste Management and has been assigned Permit # 300818.

Currently, the fly ash disposal area is surrounded by diversion ditches to catch potential run-on and any run-off from the ash. This water is channeled to a settling pond which discharges its effluent to Beaver River under NPDES Permit # PA0005061. Effluent from a sump collection pond and one of two bottom ash settling ponds is charged to McKee Run, a tributary to Beaver River under the NPDES permit.

Electrostatic precipitators are used to reduce emissions from the boilers. These precipitators operate under Air Quality permits # 37-306-00003, 37-306-00004, 37-306-00005 and 37-306-00006.

Other wastes generated by the power plant are: 1,1,1 Trichloroethane, which is handled by Safety-Kleen; replaced asbestos from the boilers, which is disposed of as a hazardous waste; and transformer oil containing PCB's, which is handled by Sunohio.

Since the three above mentioned wastes are handled properly by Penn Power, and the ash disposal area is undergoing the permit process at this time, it is recommended that, unless and until, evidence that a problem actually exists at this site, no further action be taken.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
STATE | SITE NUMBER
PA | 1579
ORIGINAL (Red)

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Penn Power Co.	PA Route 168				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG. DIST.
New Castle	PA	16103	Lawrence	73	21
09 COORDINATES LATITUDE	LONGITUDE				
40 56 44	80 22 15				

10 DIRECTIONS TO SITE (Starting from nearest public road)

Interstate 80 West to Exit 1 (Sharon). Route 60 South to Route 168 South. Plant is on right side of Route 168 South.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
Penn Power Co.	1 East Washington Street		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
New Castle	PA	16103	(412) 656-5410
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)		
Penn Power Co.	Route 168 South		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
New Castle	PA	16103	(412) 535-4335

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES DATE 3 / 4 / 87 (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)

☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

1939 (BEGINNING YEAR) | ---- (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Fly Ash; Bottom Ash; 1,1,1 Trichloroethane; Asbestos; PCB's

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

No hazards to the environmental should exist at this site since all wastes are handled in a Department approved manner and/or according to its Rules and Regulations.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☒ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Mark Gorman	PA Department of Environmental Resources			(814) 724-8526
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Chris Dougherty	PA D.E.R.	Waste Management	(814) 797-1191	3 / 5 / 87 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

ORIGINAL (Red)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	1579

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

X A. SOLID
X B. POWDER, FINES
C. SLUDGE
E. SLURRY
X F. LIQUID
G. GAS
D. OTHER _____ (Specify)

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS approximately 73-90 acres
CUBIC YARDS
NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

X A. TOXIC
B. CORROSIVE
C. RADIOACTIVE
D. PERSISTENT
E. SOLUBLE
F. INFECTIOUS
G. FLAMMABLE
X H. IGNITABLE
I. HIGHLY VOLATILE
J. EXPLOSIVE
K. REACTIVE
X L. INCOMPATIBLE
M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	PCB's				
	1,1,1 Trichloroethane	25323-89-1	Recycled/Reclaimed		
	Bottom Ash				
	Fly Ash				
	Asbestos				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA D.E.R. County File
3/4/87 Site Inspection
Interview: Dale Billheimer, Production Plant Engineer, Penn Power
Interview: Richard Early, Project Engineer, Penn Power

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(Red)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: PA 02 SITE NUMBER: 1579

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Monitoring point data from water quality files is included after Map #4. According to this data and the secondary drinking limits, iron and sulfates are high at times. This groundwater is not used for drinking purposes by Penn Power.

01 ☐ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
See Attached.

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Electrostatic precipitators are utilized by the facility to reduce ash emmissions from the boilers to the air. These precipitators operate under Air Quality Permits #. 37-306-00003, 37-306-00004, 37-306-00005, 37-306-00006.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
No extraordinary fire/explosive conditions exist since the waste generated at this site is fly and bottom ash-by products of coal combustion. All other wastes are handled and disposed of in an approved manner which minimize fire/explosive conditions.

01 ☐ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
See Attached.

01 ☐ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 73-90 (Acres) 04 NARRATIVE DESCRIPTION
See Attached.

01 ☐ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Penn Power utilizes West Pittsburgh Water for domestic use and deep well water for cooling and fire water with the river as a back-up supply. No problems are reported with the drinking water quality.

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Work exposure/injury should be minimal since all wastes are handled in a secure, Department approved manner.

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
See Attached.

ORIGINAL
(Red)

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

B. McKee Run courses through the site of Penn Power. The sump collection pond and the bottom ash settling pond discharge to this creek under N.P.D.E.S. permit # PA0005061 issued by the Bureau of Water Quality. The Beaver River lies to the west of the site. Surface water is collected via perimeter ditches and is held in a collection pond. This water is also discharged to Beaver River under N.P.D.E.S. permit #PA0005061.

E. Fly and bottom ash are classified as a non-hazardous, residual waste by the Pennsylvania Department of Environmental Resources. The other wastes are handled by companies who have experience in handling the specific chemicals. Safety Kleen for 1,1,1 Trichloroethane; Sunohio for PCB; and a hazardous waste disposal site for asbestos.

F. The fly and bottom ash are disposed of on a portion of property owned by and adjacent to the Penn Power facility. This area is currently undergoing the permitting process of the Department and has been assigned Permit # 300818. The other wastes are prevented from coming in contact with the soil.

I. Any population exposure would be minimal since the site is fenced, thereby preventing people from coming in contact with the fly and bottom ash. When transformer oil containing PCB's are used and boiler asbestos is replaced, the used oil and asbestos, as well as, 1,1,1 Trichloroethane are handled and disposed of properly. These wastes are stored on the company's property prior to off-site shipment and therefore the chances of population exposure/injury would be minimal.

* how are they prevented from coming in contact with soil.

→ are they stored in drums or containers sealed with no holes on a pad or on soil directly

→ next 2 pages

ORIGINAL
(Red)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
PA	1579

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Various types of grass, trees and other vegetation cover the fly and bottom ash disposal areas. Vegetation is absent around the power plant, buildings and facilities. Woodlands are present to the east of the site.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
No fauna was seen during this site inspection. It is possible that water fowl may use some areas of the site. Most animals would be barred from the site by fencing.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There would be little chance of food chain contamination since the site is fenced and most wildlife would be barred.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
See Attached.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There are no allegations of damage to offsite property against Penn Power in Regional Office files of the Bureaus of Air Quality, Solid Waste Management and Water Quality.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There are no known allegations of Penn Power contamination sewers, storm drains or WWTPs.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There are no records or allegations of illegal/unauthorized dumping against Penn Power in the Regional Office files.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site Inspection
Regional Files-Bureau of Solid Waste Management, Air Quality and Water Quality

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

ORIGINAL
(Red)

M. Fly and bottom ash are disposed of on 90 acres of adjacent Penn Power property. This area is currently undergoing the permit process with the Department. Other wastes are contained in proper 55-gallon drums. Asbestos is bagged before being placed in drums. PCB containing oil is changed and handled by Sunohio. 1,1,1 Trichloroethane is handled by Safety-Klenn.

FIELD TRIP SUMMARY REPORT

This summary should be prepared in conjunction with the Preliminary Assessment, EPA Form 2070-12.

EPA Case Number PA 1579 Site Name Penn Power Co.

Site Description

The Penn Power plant occupies about 270 acres in Taylor Township, Lawrence County. The entire land area is fenced. Ninety acres are utilized as a fly and bottom ash disposal site.

ORIGINAL (Red)

Area of site (acres)	**Hazardous portion, if not entire site**
270 acres	Ash site (non-hazardous) 90 acres

Description of processes/operations which took place at the site

Combustion of coal for the generation of electricity. Raw material is bituminous coal and final products consist of fly ash (80%) and bottom ash (20%).

Waste handling/disposal practices

Fly and bottom ash is disposed of on Penn Power property adjacent to the power plant. This area is currently under permit process with the Department. 1,1,1,Trichloroethane is handled by Safety-Kleen which recycles the solvent. When old PCB-containing transformer oil is replaced, Sunohio performs the work and handles the disposal process. Asbestos, when replaced in the boiler system, is bagged and placed in 55-gallon drums and manifested and disposed of as a hazardous waste. — None

Site topography and runoff drainage pathways

The entire area is flat and diversion ditches are employed to catch potential run-on to the ash area. Run-off from the ash disposal area is also collected in these ditches and flows into a settling pond. Effluent from this settling pond is discharged to Beaver River under NPDES Permit # PA0005061. Effluent from a sump collection pond and 2 bottom ash settling ponds is discharged to McKee Run and ultimately Beaver River under NPDES Permit #PA0005061.

Surface or subsurface drainage areas (leachate) noted?	**Odors/stains noted?**
No leachate noted. Site had a light snow covering at time of inspection. Collection of run-on is via perimeter ditch. Run-off from the disposal area is collected in a settling pond.	None
	Stressed vegetation noted? None

Location and description of streams or receiving waters adjacent to site. Include flow direction and observations. Note location on attached map.

McKee Run flows through the site - to the south of the fly ash disposal area and in a westerly direction. McKee Run flows into the Beaver River which lies to the west of the ash disposal area and flow to the south (Map # 4).

Monitoring wells on site or in vicinity. Note location on attached map.

Penn Power utilizes 5 monitoring well and 2 springs througout the ash disposal area. Three boring monitoring points area also used. Locations are marked on Map # 4 .

Population within ½ mile of site:

- ☒ 0-10
- ☐ 10-100
- ☐ greater than 100

Population within 1 mile of site:

- ☐ 0-10
- ☐ 10-100
- ☒ 100-1000
- ☐ greater than 1000

Surrounding land use (woodlot, agricultural, recreation, industrial, etc.)

SOUTHEAST: West Pittsburg

NORTH	EAST
Industrial	Railroad; woodland
SOUTH	**WEST**
Power Plant; Industrial	Beaver River

ORIGINAL (Red)

Municipal water supply within 3-mile radius (note use of surface water and/or wells)

West Pittsburg Water Supply lies approximately 2200 feet south of the ash disposal site and uses 1 water wells (Map #4).

Reference: Knox District Office Maps

Domestic wells. Approximate number within ½ mile: _____

List nearest wells below and show locations on attached map.

Owner/Resident	Address	Phone

Groundwater flow direction, if known

Description of odor/taste problems

State inspection activity (including permits held)

Penn Power EPA ID number is: PAD000731521

The power plant operates under Water Quality Permits # 1952, 36313, 3778202 and 2782203. and NPDES permit #PA0005061.

The Electriostatic Precipitators are permitted under the Bureau of Air Quality and operate under Permits # 37-306-00003, 37-306-00004, 37-306-00005, 37-306-00006.

State/Federal/Private remedial activities

ORIGINAL
(Red)

Additional comments--further description of site

1,1,1 Trichloroethane is used by Penn Power. This solvent is handled by Safety-Kleen which recycles and reclaims the material.

When transformer oil containing PCB's is replaced, Sunohio handles the replacement and disposal.

Replaced asbestos from the boilers is placed in plastic bags and 55 gallon drums and disposed of as a hazardous waste.

SITE CONTACTS

Name and Title	Affiliation	Phone
Dale Billheimer, Production Plant	Engineer; Penn Power	412-535-4335
Richard Early, Project Engineer;	Penn Power	412-656-5410

INSPECTION INFORMATION

Name and title of inspector(s) Chris Dougherty

Agency Pennsylvania ~~Department of Environmental~~ Resources

Phone number 814-797-1191

Date 3/4/87

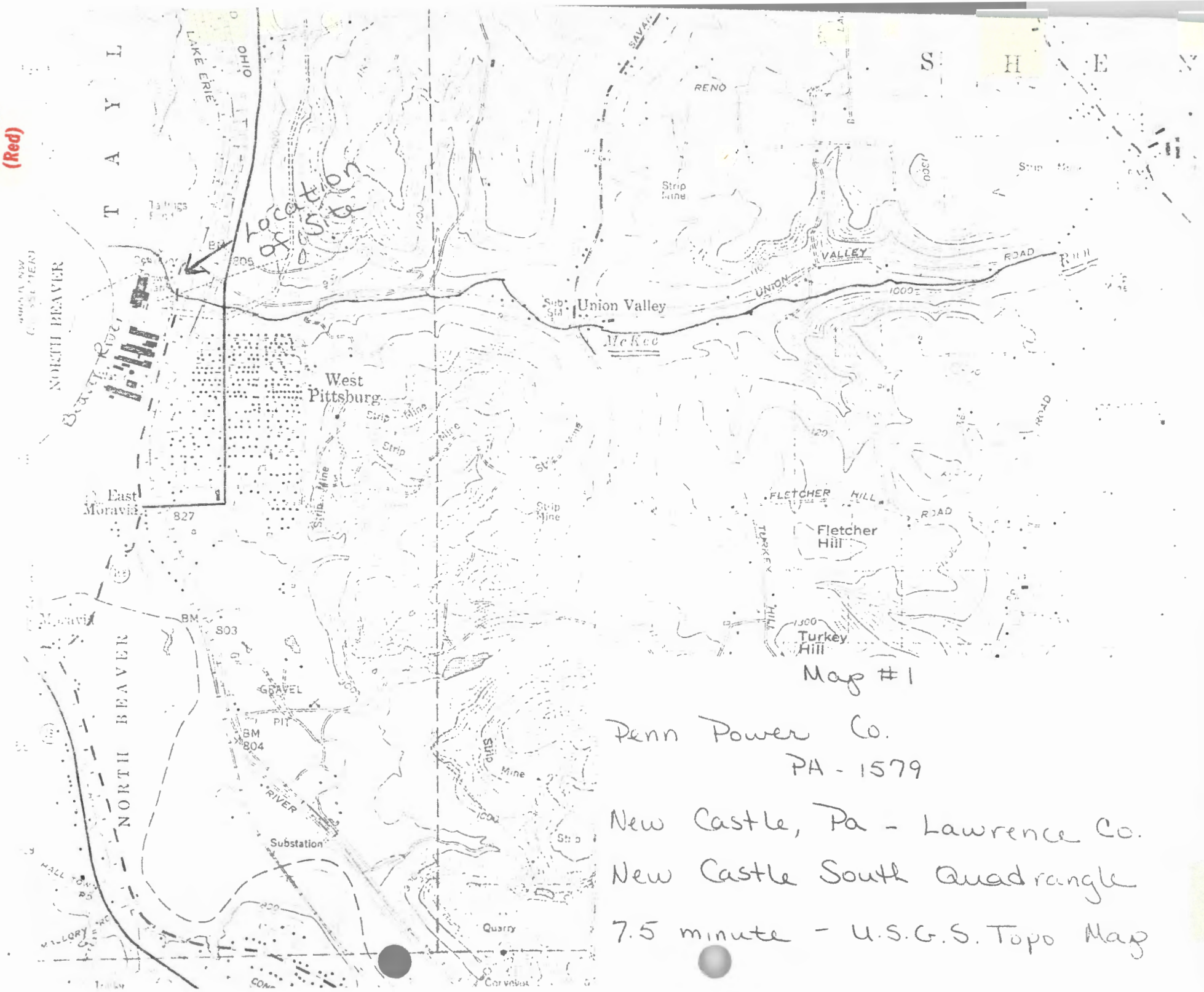
Time on site 1.5 hours

Weather conditions: clear; cold

ATTACHMENTS

- o Topographic map identifying site location. Include name of quadrangle map.
- o Site sketch map showing location of monitoring wells, domestic wells, municipal water supplies, and areas of concern (lagoons, leachate seeps, drums, etc.)
- o Any available sampling results or state monitoring data with map showing sample locations.

ORIGINAL (Red)



Map #1

Penn Power Co.
PA - 1579

New Castle, Pa - Lawrence Co.
New Castle South Quadrangle
7.5 minute - U.S.G.S. Topo Map

Mag ite
Penn Power Co.

ORIGINAL (Red)

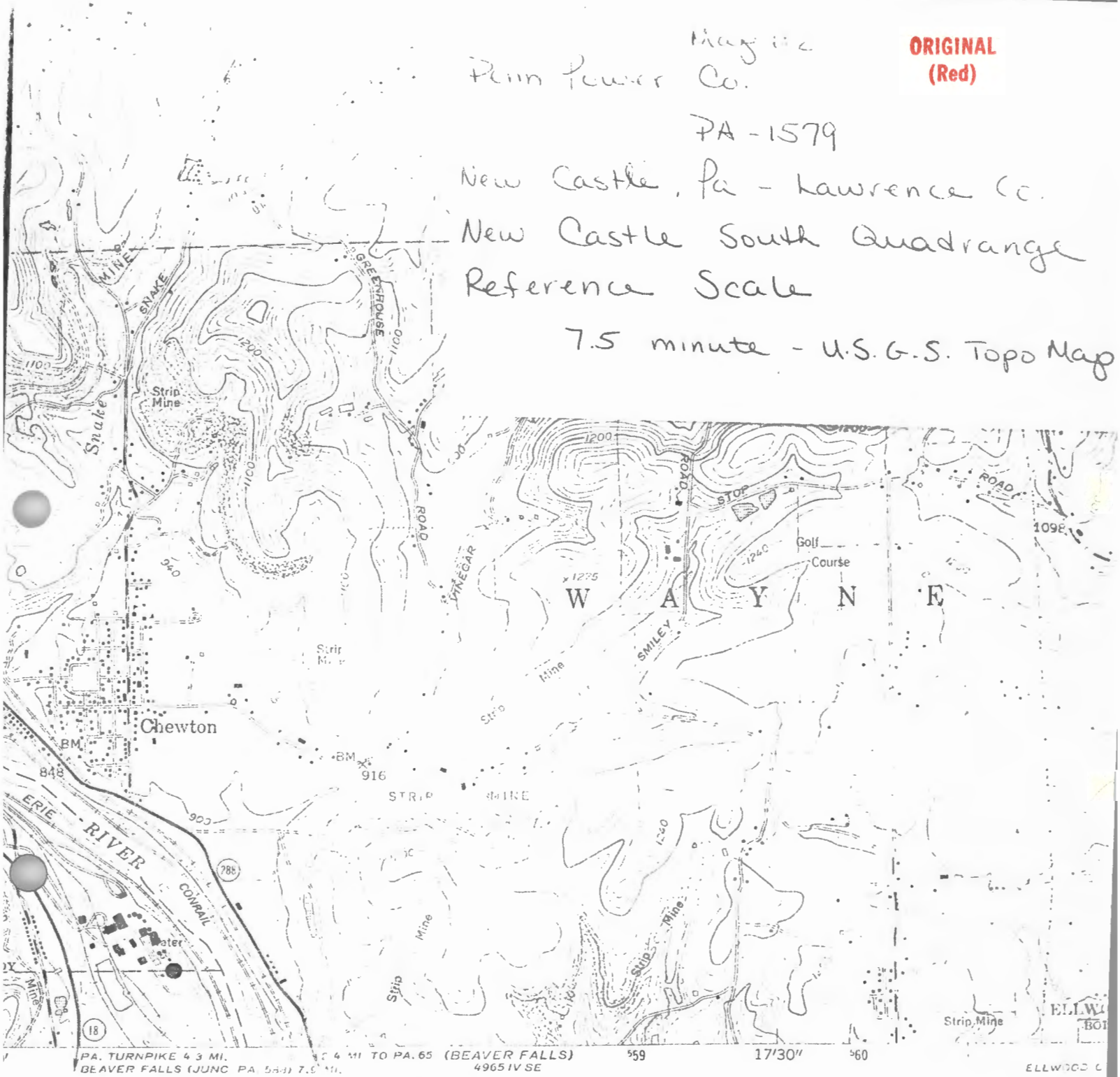
PA-1579

New Castle, Pa - Lawrence Co.

New Castle South Quadrangle

Reference Scale

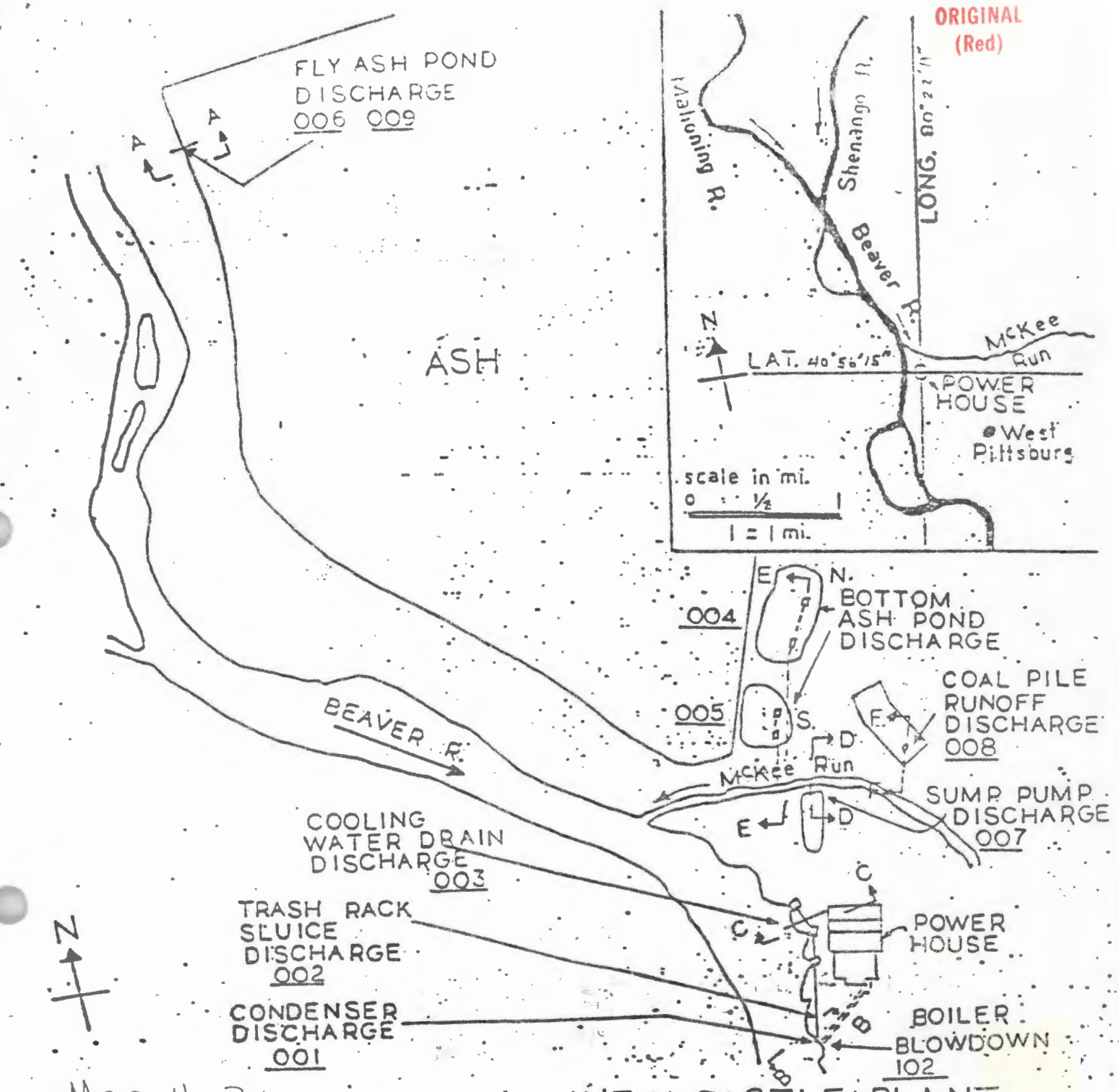
7.5 minute - U.S.G.S. Topo Map



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Revisions shown in purple compiled in cooperation with the Commonwealth of Pennsylvania and other agencies from aerial photographs. Other source data: [illegible]

ORIGINAL
(Red)



Map # 3

SITE PLAN

SCALE IN FEET

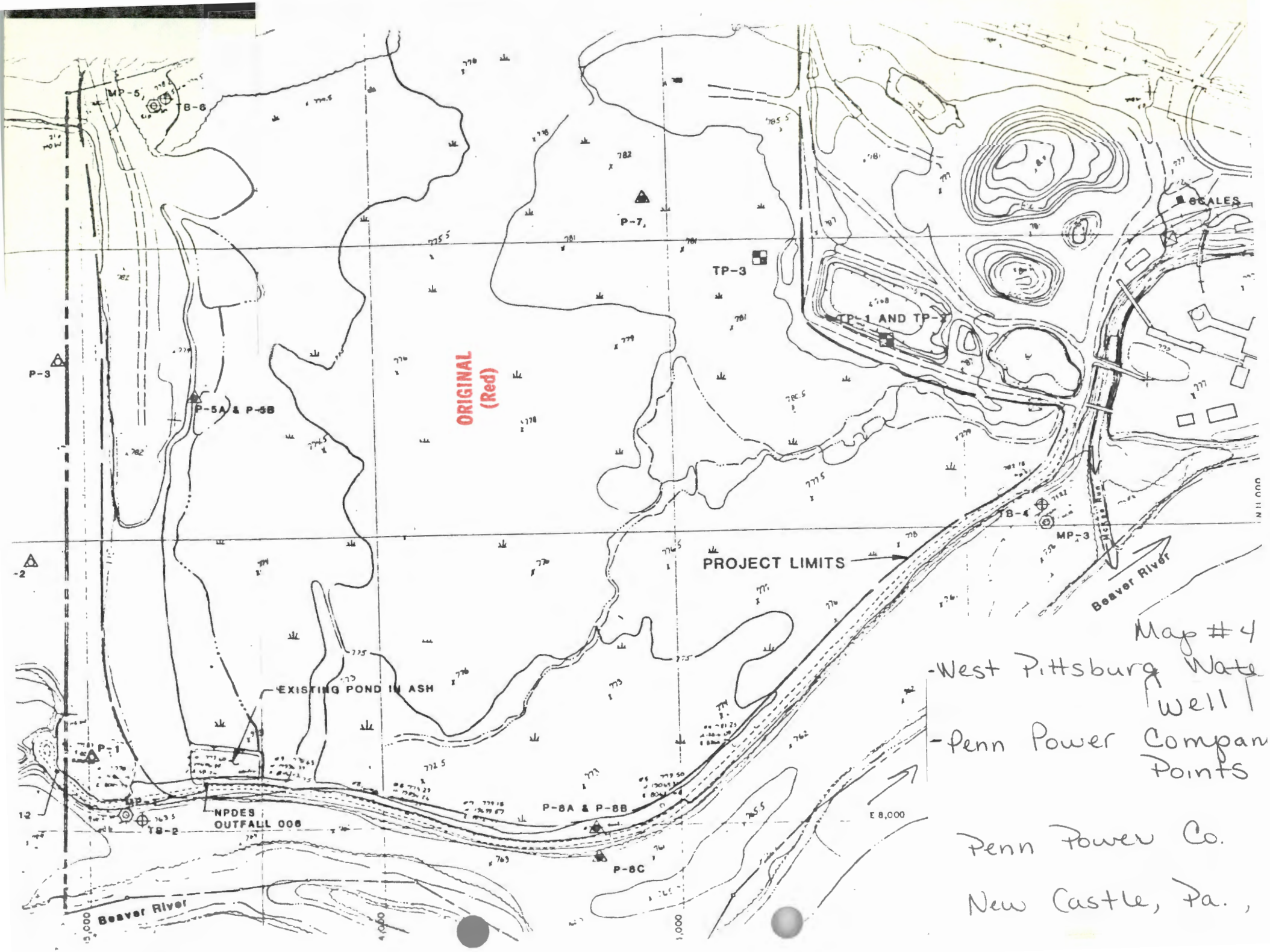
0' 300' 600' 900' 1200'

1" = 600'

NEW CASTLE PLANT
LAWRENCE COUNTY, PA.
WEST PITTSBURG, PA.

PENNSYLVANIA POWER CO.
NEW CASTLE, PA.

JAN. 21, 1985



Map #4

-West Pittsburg Water Well

-Penn Power Company Points

Penn Power Co.

New Castle, Pa.,

PENNSYLVANIA POWER
NEW CASTLE, PENNS

ORIGINAL (Red)

LEGEND

- PROPERTY LINE (APPROXIMATE)
- P-1 ABANDONED PIEZOMETER
- P-5 ACTIVE PIEZOMETER
- MP-1 MONITORING POINT (WELL)
- TB-2 BORING MONITORING POINT (WELL)
- SP-6 MONITORING POINT (SPRING)
- PUBLIC WATER SUPPLY WELL
- TEST PIT
- COLLECTOR DITCH
- EXISTING COLLECTOR DITCH
- DIVERSION DITCH
- EXISTING DIVERSION DITCH
- 6" ϕ UNDERDRAIN
- EXISTING 6" ϕ UNDERDRAIN
- PROJECT LIMITS
- PROPOSED SLOPE
- EXISTING SLOPE
- EXISTING GROUND SURFACE
- SILT FENCE

VICINITY MAP

SCALE

2000 0 2000 4000 FEET

Item #5
Reference for Map # 4

Water Quality Test Results
Penn Power Co.
Monitoring Points
PA - 1579

GAI CONSULTANTS, INC. Project 86-212

Table 1

WATER QUALITY TEST RESULTS - pH

ORIGINAL (Red)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	6.45	6.5	6.7	8.0	6.7	8.3	6.3
TB-2	7.25	7.6	7.6	8.2	7.7	8.5	6.5
MP-3	6.20	6.6	6.6	7.1	6.7	8.1	6.3
TB-4	7.00	7.8	8.0	8.2	8.1	8.4	6.5
MP-5	4.45	6.8	8.1	6.2	6.9	8.1	6.5
TB-6	7.50	7.9	6.8	8.1	8.0	8.4	6.3
MP-7	6.80	7.2	7.4	8.0	7.4	8.2	5.9
P-7	-	-	-	-	6.9	7.9	-
SW-8	7.70	8.1	-	8.2	7.8	-	7.2
SW-9	7.70	8.2	7.9	8.1	8.0	-	6.2
MP-10	-	-	-	-	-	-	6.1
P-11	-	-	-	-	-	-	6.0

DEPT OF ENV... BUREAU OF ... 1012 ... HARRISBURG

Table 2

WATER QUALITY TEST RESULTS
Specific Conductivity (umhos/cm)

ORIGINAL (Red)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	1000	994	837	1040	1250	1140	1220
TB-2	600	477	482	542	575	540	560
MP-3	2000	1740	1450	1610	2080	2400	2400
TB-4	500	421	446	572	520	510	525
MP-5	1100	503	487	702	525	550	540
TB-6	485	466	449	554	480	460	470
MP-7	1500	1060	846	812	1060	1170	350
P-7	-	-	-	-	2030	2200	-
SW-8	1400	1310	-	1240	1380	-	1540
SW-9	320	401	403	332	500	-	340
MP-10	-	-	-	-	-	-	1130
P-11	-	-	-	-	-	-	1450

ORIGINAL (Red)

Table 3

WATER QUALITY TEST RESULTS
Alkalinity (mg/l as $CaCO_3$)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	224	196	240	256	272	306	275
TB-2	226	192	228	220	238	218	230
MP-3	130	172	180	196	218	154	157
TB-4	160	128	216	160	216	210	226
MP-5	0	120	176	36.0	97	96	110
TB-6	126	148	140	244	298	180	212
MP-7	242	170	172	230	210	232	47.3
P-7	-	-	-	-	933	824	-
SW-8	184	166	-	258	172	-	247
SW-9	62.0	110	156	52.0	146	-	54.1
MP-10	-	-	-	-	-	-	252
P-11	-	-	-	-	-	-	126

ORIGINAL (Red)

GAI CONSULTANTS, INC.

Project 86-212

Table 4

WATER QUALITY TEST RESULTS
Chloride (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	66	19.6	36.0	42.5	44.0	37.0	39.6
TB-2	15	17.5	15.0	24.8	14.0	20.0	18.9
MP-3	101	55.0	67.0	79.8	82.0	70.0	86.5
TB-4	33	19.5	29.0	33.7	34.0	30.0	31.8
MP-5	42	8.0	29.0	17.7	12.0	10.0	12.6
TB-6	10	10.0	15.0	8.86	8.0	7.0	6.32
MP-7	71	10.0	38.0	39.0	34.0	32.0	33.3
P-7	-	-	-	-	73.0	72.0	-
SW-8	60	13.0	-	14.2	27.0	-	17.2
SW-9	17	10.0	13.0	<5.0	13.0	-	14.1
MP-10	-	-	-	-	-	-	49.4
P-11	-	-	-	-	-	-	31.3

DEP'T OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MGMT.
1012 WATER STREET
MEADVILLE, PA 16335
MAR 18 1986
RECEIVED

ORIGINAL (Red)

GAI CONSULTANTS, INC.

Project 86-212

Table 5

WATER QUALITY TEST RESULTS
COD (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	25	<5.0	<5.0	26.0	<5.0	22.0	13.4
TB-2	35	<5.0	<5.0	<5.0	<5.0	32.0	<5.0
MP-3	49	<5.0	<5.0	<5.0	<5.0	51.0	<5.0
TB-4	<5.0	<5.0	<5.0	17.2	<5.0	18.0	21.0
MP-5	<5.0	<5.0	<5.0	24.8	<5.0	7.0	34.2
TB-6	5	<5.0	<5.0	<5.0	<5.0	24.0	<5.0
MP-7	15	<5.0	<5.0	62.0	<5.0	<5.0	<5.0
P-7	-	-	-	-	<5.0	200	-
SW-8	<5.0	<5.0	-	42.8	<5.0	-	15.0
SW-9	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0
MP-10	-	-	-	-	-	-	10.8
P-11	-	-	-	-	-	-	<5.0

ORIGINAL (Red)

Table 6

WATER QUALITY TEST RESULTS
Aluminum (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	1.1	3.58	0.30	<0.10	0.13	<0.10	<0.10
TB-2	0.4	6.48	0.40	<0.10	0.10	<0.10	<0.10
MP-3	4.8	6.89	1.50	<0.10	0.16	<0.10	<0.10
TB-4	0.5	8.64	0.20	<0.10	0.10	<0.10	<0.10
MP-5	11.0	8.39	0.10	<0.10	<0.10	<0.10	<0.10
TB-6	1.2	10.6	0.10	<0.10	<0.10	<0.10	<0.10
MP-7	0.1	9.89	<0.10	<0.10	<0.10	<0.10	<0.10
P-7	-	-	-	-	0.10	<0.10	-
SW-8	0.3	12.5	-	<0.10	<0.10	-	<0.10
SW-9	0.4	4.40	0.10	<0.10	<0.10	-	<0.10
MP-10	-	-	-	-	-	-	0.12
P-11	-	-	-	-	-	-	<0.10

ORIGINAL (Red)

Table 7

WATER QUALITY TEST RESULTS
Calcium (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	170	34.4	86.9	139	90.7	128	42.0
TB-2	74	29.5	44.1	78.7	46.8	43.1	44.8
MP-3	270	46.8	182	202	212	208	46.4
TB-4	60	35.9	26.8	26.0	27.9	29.1	20.7
MP-5	200	31.1	64.3	114	63.7	68.8	35.1
TB-6	100	24.2	59.0	87.5	64.9	55.4	38.8
MP-7	260	48.3	88.5	161	128	173	21.7
P-7	-	-	-	-	298	346	-
SW-8	240	38.0	-	163	112	-	44.9
SW-9	47	35.1	57.5	30.4	700	-	24.8
MP-10	-	-	-	-	-	-	50.0
P-11	-	-	-	-	-	-	44.8

ORIGINAL (Red)

Table 8

WATER QUALITY TEST RESULTS
Total Iron (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	13	1.32	4.28	2.06	36.8	11.3	7.88
TB-2	2.9	0.50	0.72	0.08	73.7	36.1	53.7
MP-3	120	45.9	75.5	33.21	82.9	56.7	83.3
TB-4	14	0.14	0.38	0.03	13.3	10.5	11.8
MP-5	5.5	0.10	0.39	0.04	19.6	16.2	7.36
TB-6	6.3	0.25	0.44	<0.03	62.0	23.5	17.5
MP-7	0.9	0.10	1.03	0.04	1.75	0.55	1.24
P-7	-	-	-	-	243	183	-
SW-8	0.7	0.01	-	0.04	0.92	-	0.17
SW-9	1.2	0.04	0.05	0.04	8.10	-	2.81
MP-10	-	-	-	-	-	-	67.7
P-11	-	-	-	-	-	-	31.5

ORIGINAL (Red)

Table 9

WATER QUALITY TEST RESULTS
Sulfate (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	270	661	242	316	365	257	300
TB-2	48	107	59.0	42.0	38.0	50.0	39.5
MP-3	780	1040	922	968	1380	1080	860
TB-4	63	138	11.0	17.3	<10.0	<10.0	21.0
MP-5	485	275	220	275	143	136	123
TB-6	64	121	140	56.6	66.0	43.0	37.0
MP-7	420	366	405	250	310	394	46.0
P-7	-	-	-	-	408	44.0	-
SW-8	530	854	-	768	510	-	500
SW-9	55	147	79	68.0	94.0	-	72.5
MP-10	-	-	-	-	-	-	320
P-11	-	-	-	-	-	-	460

ORIGINAL (Red)

Table 10

WATER QUALITY TEST RESULTS
Magnesium (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	-	20.2	20.0	19.8	19.6	21.7	22.7
TB-2	-	9.17	8.81	7.30	7.79	6.81	7.80
MP-3	-	19.5	20.8	18.2	22.1	26.7	19.5
TB-4	-	12.2	9.38	8.62	8.78	8.66	8.50
MP-5	-	9.56	11.6	9.33	8.67	8.20	8.20
TB-6	-	10.3	9.97	12.3	11.6	12.3	12.7
MP-7	-	27.6	26.9	25.3	23.2	33.2	6.26
P-7	-	-	-	-	51.1	60.0	-
SW-8	-	91.4	-	106	62.0	-	65.6
SW-9	-	13.6	14.4	9.04	13.2	-	7.89
MP-10	-	-	-	-	-	-	26.7
P-11	-	-	-	-	-	-	32.1

ORIGINAL (Red)

Table 11

WATER QUALITY TEST RESULTS
Potassium (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	10	18.1	12.7	10.2	27.6	14.7	11.4
TB-2	2.3	8.20	2.51	6.99	3.60	2.21	2.24
MP-3	10	18.3	11.6	9.40	15.1	26.7	10.4
TB-4	3.2	8.10	2.63	2.47	4.13	2.87	3.13
MP-5	15	13.6	6.36	8.26	7.63	8.05	6.84
TB-6	4.8	9.60	6.73	2.54	4.41	2.63	2.26
MP-7	3.8	7.80	3.15	2.36	3.44	3.45	2.68
P-7	-	-	-	-	32.5	13.7	-
SW-8	4.1	11.0	-	4.04	6.45	-	4.25
SW-9	1.8	4.60	2.16	1.21	2.47	-	1.44
MP-10	-	-	-	-	-	-	2.70
P-11	-	-	-	-	-	-	22.3

ORIGINAL (Red)

Table 12

WATER QUALITY TEST RESULTS
Sodium (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	50	71.4	69.2	48.0	69.4	59.4	74.6
TB-2	51	31.2	55.2	54.1	64.0	47.8	51.0
MP-3	217	92.8	65.3	224	289	250	223
TB-4	37	9.50	73.7	54.6	70.7	61.4	63.8
MP-5	9	11.3	13.3	8.50	13.3	12.1	11.2
TB-6	11	34.8	12.3	8.68	11.4	8.83	11.2
MP-7	25	17.4	26.9	21.3	25.9	21.6	16.8
P-7	-	-	-	-	81.9	62.4	-
SW-8	16	11.1	-	15.4	29.9	-	13.0
SW-9	4	5.50	6.20	2.92	6.00	-	5.51
MP-10	-	-	-	-	-	-	32.7
P-11	-	-	-	-	-	-	79.4

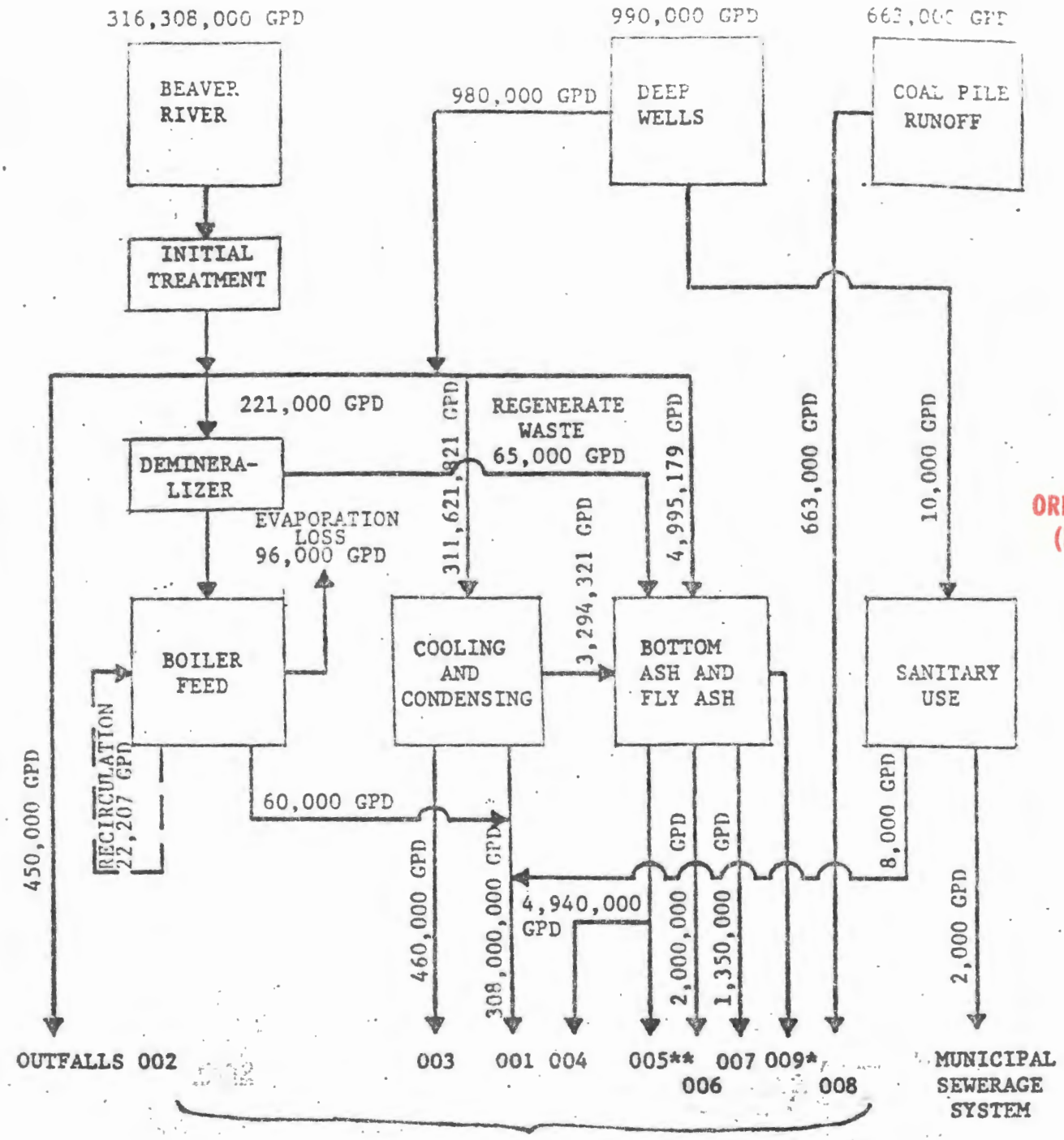
DEP'T OF ENVIRON... RESOURCES
BUREAU OF SOL...
1012 WAT...
MEADVILLE...
MAR 18 ...
RECEIV...

ORIGINAL (Red)

Table 13

WATER QUALITY TEST RESULTS
P-Alkalinity (mg/l)

Monitoring Point	Sampling Date 4/84	7/84	10/84	4/85	8/85	10/85	1/86
MP-1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TB-2	<1.0	<1.0	<1.0	<1.0	<1.0	4.0	<1.0
MP-3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TB-4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MP-5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TB-6	<1.0	<1.0	<1.0	<1.0	<1.0	2.0	<1.0
MP-7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
P-7	-	-	-	-	<1.0	<1.0	-
SW-8	<1.0	<1.0	-	<1.0	<1.0	-	<1.0
SW-9	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0
MP-10	-	-	-	-	-	-	<1.0
P-11	-	-	-	-	-	-	<1.0



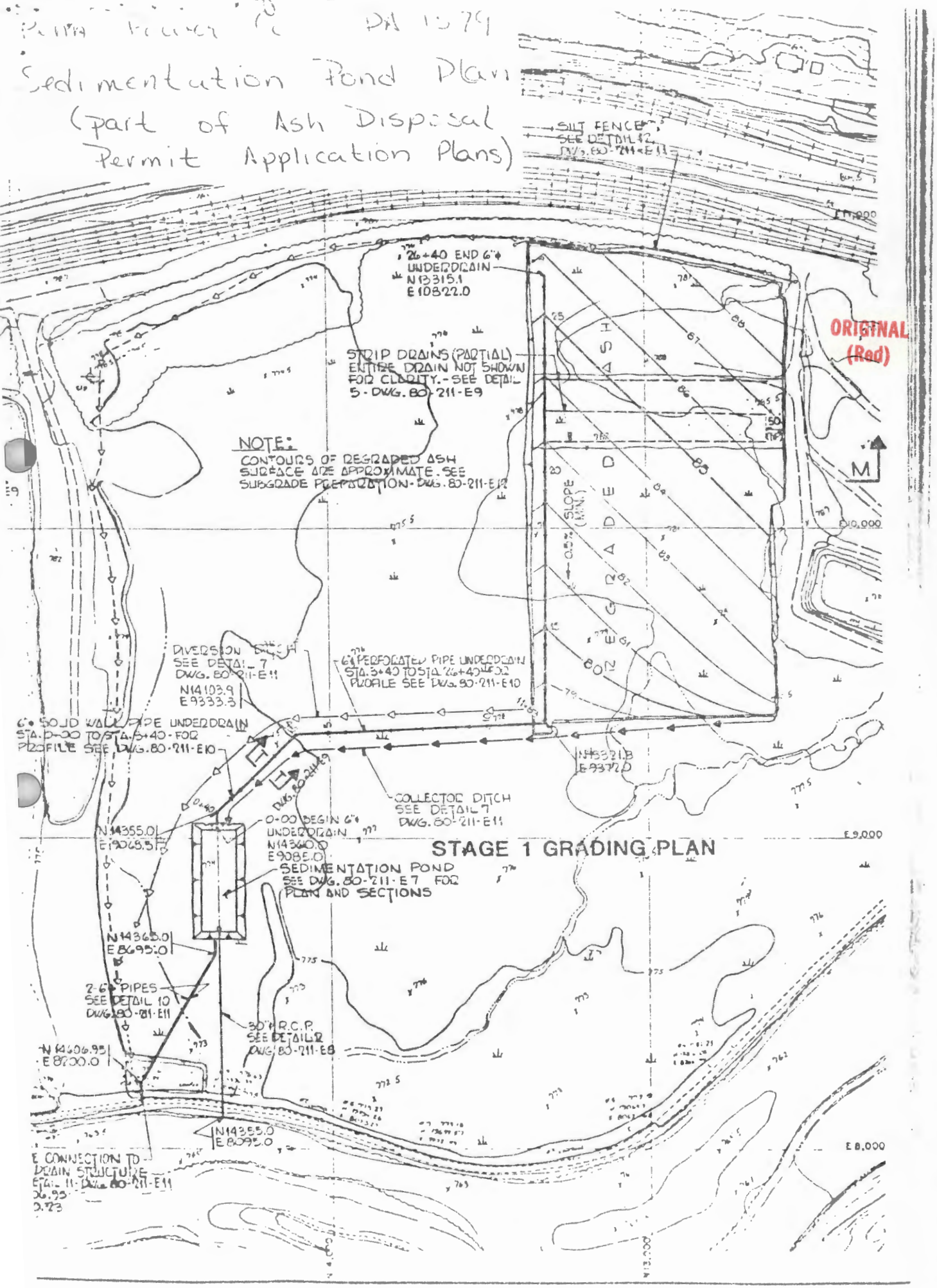
ORIGINAL (Red)

TOTAL DISCHARGE INTO BEAVER RIVER
317,863,000 GPD + 009

*009 is Future Discharge associated with PPCo Solid Waste Disposal Application. Permitted flow rates non-existent as of 1-30-85.

**Metal cleaning solutions are neutralized in pond associated with 005 discharge.

Item # 7
harge Flow into Beaver River

Pennsylvania Power & Light Co. DA 1579

Sedimentation Pond Plan
(part of Ash Disposal
Permit Application Plans)