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O'BRIEN AND GERE ENGINEERS INC PHILADELPHIA PA JUSTIN--ETC F/G 13/2
NATIONAL DAM INSPECTION PROGRAM. TAYLOR POND DAM (NDI-PA 00315,--ETC(U)
MAY 79

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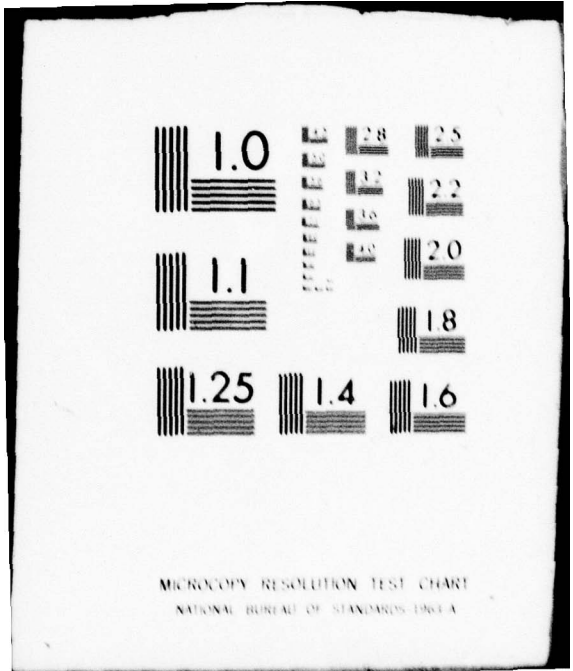
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DELAWARE RIVER BASIN
TAYLOR CREEK, PIKE COUNTY

PENNSYLVANIA

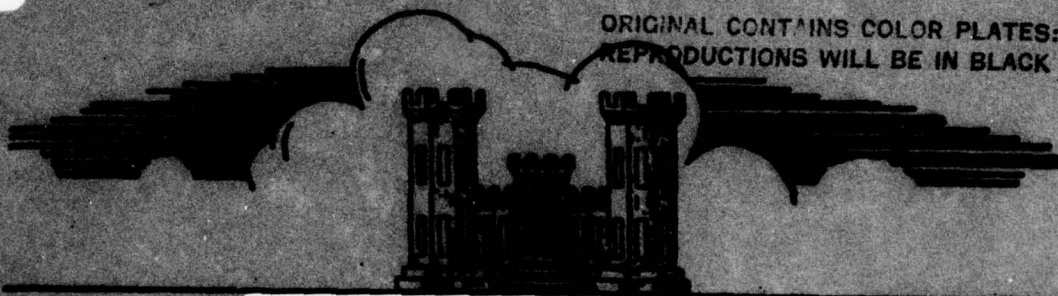
TAYLOR POND DAM

NDI - PA 00315
PA DER 52-152
SCS - PA-446

LEVEL

PHASE I INSPECTION REPORT NATIONAL DAM INSPECTION PROGRAM

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Prepared By
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Justin & Courtney Division
PHILADELPHIA, PENNSYLVANIA
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FOR
DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT CORPS OF ENGINEERS
BALTIMORE, MARYLAND
21203

MAY 1979

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DELAWARE RIVER BASIN

Name of Dam: Taylor Pond Dam

County and State: Pike and Monroe Counties, Pennsylvania

Inventory Number: PA 00315

15 DACW31-79-C-0010

PHASE I INSPECTION REPORT

NATIONAL DAM INSPECTION PROGRAM

6 National Dam Inspection Program. Taylor Pond Dam (NDI-PA 00315, PA DER 52-152, SCS PA-446), Delaware River Basin, Taylor Creek, Pike County, Pennsylvania. Phase I Inspection Report.

Prepared by:

O'BRIEN & GERE ENGINEERS, INC.
JUSTIN & COURTNEY DIVISION

For:

DEPARTMENT OF THE ARMY
Baltimore District, Corps of Engineers
Baltimore, Maryland 21203

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PREFACE

This report is prepared under guidance contained in the Recommended Guidelines for Safety Inspection of Dams, for Phase I Investigations. Copies of these guidelines may be obtained from the Office of Chief of Engineers, Washington, D.C. 20314. The purpose of a Phase I investigation is to identify expeditiously those dams which may pose hazards to human life or property. The assessment of the general condition of the dam is based upon available data and visual inspections. Detailed investigations, and analyses involving topographic mapping, subsurface investigations, testing, and detailed computational evaluations are beyond the scope of a Phase I investigation; however, the investigation is intended to identify any need for such studies.

In reviewing this report, it should be realized that the reported condition of the dam is based on observations of field conditions at the time of inspection along with data available to the inspection team. In cases where the reservoir was lowered or drained prior to inspection, such action, while improving the stability and safety of the dam, removes the normal load on the structure and may obscure certain conditions which might otherwise be detectable if inspected under the normal operating environment of the structure.

It is important to note that the condition of a dam depends on numerous and constantly changing internal and external conditions, and is evolutionary in nature. It would be incorrect to assume that the present condition of the dam will continue to represent the condition of the dam at some point in the future. Only through frequent inspections can unsafe conditions be detected, and only through continued care and maintenance can these conditions be prevented or corrected.

Phase I inspections are not intended to provide detailed hydrologic and hydraulic analyses. In accordance with the established Guidelines, the spillway design flood is based on the estimated "Probable Maximum Flood" for the region (greatest reasonably possible storm runoff), or fractions thereof. The spillway design flood provides a measure of relative spillway capacity and serves as an aid in determining the need for more detailed hydrologic and hydraulic studies, considering the size of the dam, its general condition and the downstream damage potential.

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PHASE I REPORT

NATIONAL DAM INSPECTION PROGRAM

Name of Dam: Taylor Pond Dam - ID # PA 00315
State Located: Pennsylvania
County Located: Pike and Monroe Counties
Stream: Taylor
Coordinates: Latitude 41° 14.5', Longitude 75° 20.2'
Date of Inspection: December 5, 1978

ASSESSMENT

Taylor Pond Dam is a zoned compacted earth and rockfill embankment. The dam is approximately 2,300 feet long and 76 feet high at its maximum section. The level of the reservoir is controlled by means of a single stage, drop inlet, closed conduit spillway (Principal Spillway). A grass covered spillway (Emergency Spillway) is located at the right abutment (looking downstream). The primary purpose of the structure is flood control.

Examination of the results of the hydrologic and hydraulic analyses indicates that the spillway system (Principal & Emergency Spillway) is capable of passing the entire Probable Maximum Flood (PMF) without the dam being overtopped. Therefore, the spillway system is classified as "Adequate". The Spillway Design Flood (SDF) for this "High" hazard structure is the PMF.

Based on visual observations and review of the information obtained from the Pennsylvania Department of Environmental Resources, Taylor Pond Dam appears to be in good condition. However, certain items require attention:

1. The trees and brush growing on the rockfill face of the compacted earth and rockfill embankment slopes should be removed.
2. Low areas along the top of dam should be filled with suitable material in order to restore the surface to design elevation. After this is completed, the top of dam should be monitored on a monthly basis to check for possible differential settlement.
3. A maintenance program, independent of the yearly inspection reports, should be developed and implemented. This program should include, but not be limited to, cutting of the brush and trees on a regular basis and periodic inspection and operation of the sluice gate.

4. A warning system should be developed. During periods of heavy rainfall, the dam should be monitored and downstream residents alerted in the event of an impending failure.

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JUSTIN & COURTNEY DIVISION

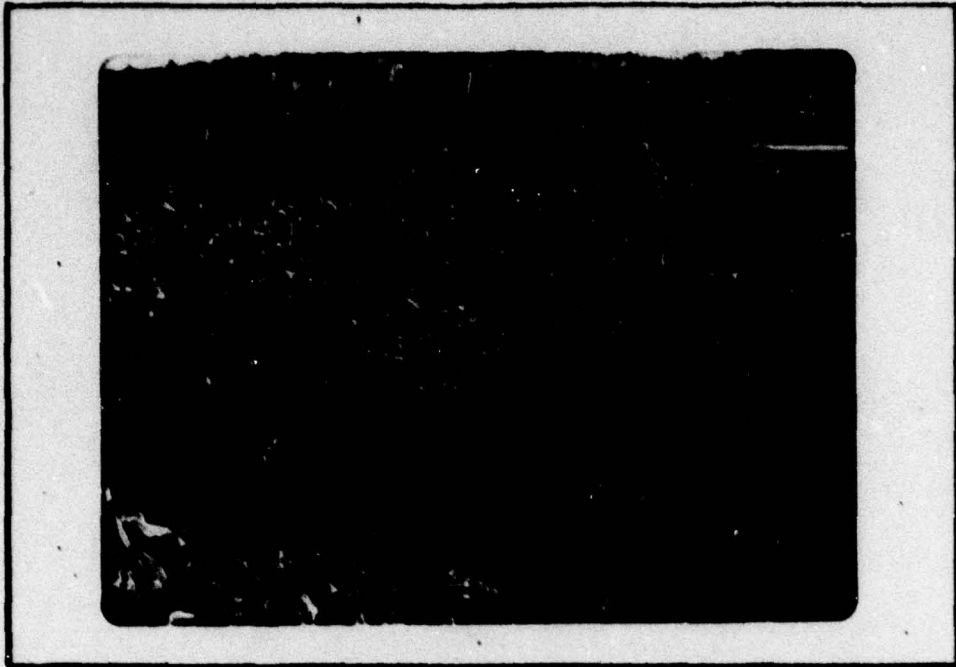
Will M. Heiser
Will M. Heiser, P.E.
Vice-President
Pennsylvania Registration #6926



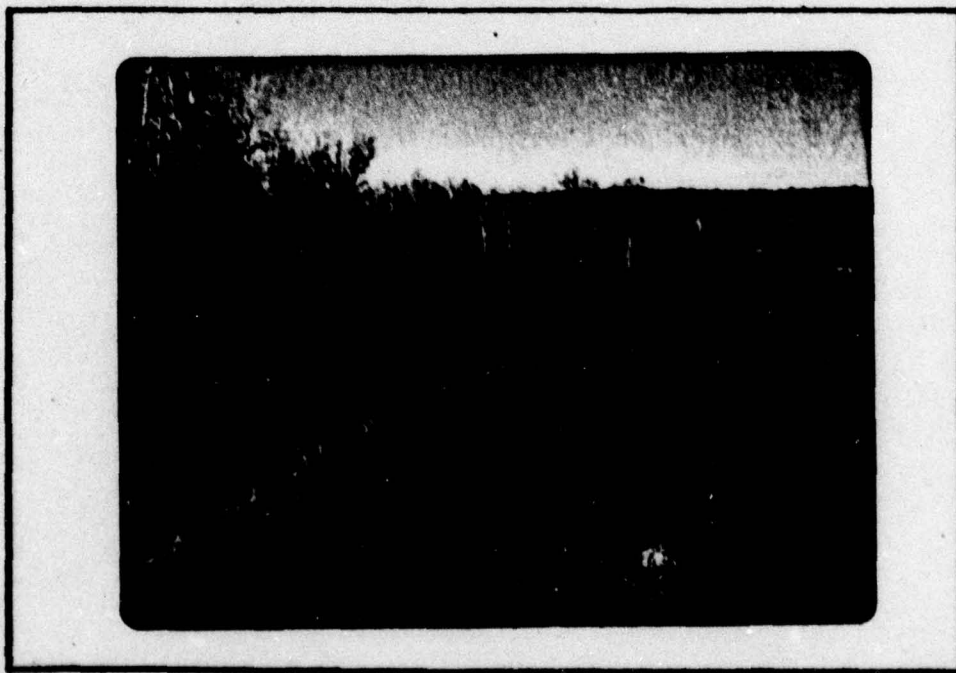
Date: June 8, 1979

James W. Peck
Approved By
JAMES W. PECK
Colonel, Corps of Engineers
District Engineer

Date: 16 July 1979



*UPSTREAM FACE OF THE DAM
LOOKING TOWARDS THE RIGHT ABUTMENT*



*DOWNSTREAM FACE OF THE DAM
LOOKING TOWARDS THE RIGHT ABUTMENT*

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PHASE I REPORT
NATIONAL DAM INSPECTION PROGRAM
TAYLOR POND DAM
NDI I.D. NO. 00315
DER # 52-152

SECTION 1
PROJECT INFORMATION

1.1 General

- a. Authority. The Dam Inspection Act, Public Law 92-367, authorized the Secretary of the Army, through the Corps of Engineers, to initiate a program of inspection of dams throughout the United States.
- b. Purpose. The purpose of this inspection is to evaluate the structural and hydraulic conditions at Taylor Pond Dam, and to determine if the dam constitutes a hazard to human life or property.

1.2 Description of Project (Supplemented by information obtained from the Pennsylvania Department of Environmental Resources (DER), Division of Dam Safety, Harrisburg, Pennsylvania, and the Soil Conservation Service (SCS) State Office, Harrisburg, Pennsylvania.)

- ABSTRACT* →
- a. Dam and Appurtenances. Taylor Pond Dam is a zoned earth and rockfill embankment, approximately 2,300 feet in length with a maximum height of 76 feet. The embankment is constructed with a change in alignment (78 degree bend) to the right, starting approximately 1,100 feet from the left abutment. The top of the dam is 22 feet wide at design Elevation 1829. The embankment side slopes are 2 horizontal to 1 vertical (2H:1V) both upstream and downstream.

According to the as-built plans, the embankment is constructed in three zones. A central impervious core to Elevation 1821 and a cutoff trench extending to 22 feet below natural ground are composed of silt (ML) and clay (CL) materials (Zone 1). The core side slopes are 0.4H:1V and the top width is 10 feet. The cutoff trench has 1H:1V side slopes and a 10 foot bottom width. Zone 2 material is an intermediate layer between the core and the shell and consists of silty sand (SM), silty gravel (GM), and cobbles from the designated borrow areas. Zone 2 extends to Elevation 1827 with a top width of 20 feet and side slopes which are slightly steeper than 2H:1V. Zone 3 material, which forms the upstream and downstream shells, is composed of rocks larger than 6 inches

cont →

obtained from the Emergency Spillway excavation and oversize material raked out of Zone 1 and Zone 2 material. A 15-foot wide berm composed of Zone 3 material is also provided along the upstream toe between stations 10+00 and 15+55. Another 15-foot wide berm is provided along the downstream toe between stations 12+15 and 17+36. A filter trench of variable depth underlies the upstream portion of the downstream toe berm and a filter blanket protects the upstream side of the filter trench and the downstream portion of the base of Zone 2.

AS-5242

According to the as-built plans, the Principal Spillway consists of a reinforced concrete riser, a prestressed reinforced concrete pipe, and a stilling basin excavated into bedrock. The riser crest is at Elevation 1785.0 (the 50 year sedimentation level). At this level, flow occurs over two 8-foot long sidewall weirs. A reinforced concrete gate-well on the upstream side of the riser houses a sluice gate which is used to regulate flow from a 30-inch diameter pond drain pipe into the base of the riser. The 36-inch diameter, prestressed reinforced concrete pipe rests on a reinforced concrete cradle. Seven reinforced concrete anti-seep collars (9 feet by 13 feet) are spaced at 22- to 24-foot intervals along the pipe. The stilling basin at the outlet of the pipe is excavated into bedrock with a bottom approximately 20 feet long and 12 feet wide at Elevation 1744.5. The side slopes of the stilling basin are 1H:1V in rock and 2H:1V above the rock surface. Immediately downstream of the stilling basin is a trapezoidal shaped outlet channel with a bottom width of 12 feet and 2H:1V side slopes. The outlet channel merges with the natural channel about 200 feet downstream of the stilling basin.

The Emergency Spillway, which is located in the right abutment, is a 250-foot wide trapezoidal channel with 2H:1V side slopes. It has a 30-foot long level section, at Elevation 1821.6, located just downstream from the centerline of the dam. The forebay channel, about 320 feet in length, slopes upward to the level section on a 1 percent grade. The exit channel slopes away from the level section on a 2.3 percent grade for about 550 feet before blending in with natural ground. A compacted earth dike (300 feet long) acts as a barrier between the Emergency Spillway and the earth embankment to prevent spillway flow from damaging the downstream face of the earth embankment.

- b. Location. Taylor Pond Dam is located on Taylor Creek, approximately 6 miles northwest of Canadensis, Pennsylvania, and about 24 miles southeast of Scranton, Pennsylvania. The dam lies across the Pike and Monroe County border, within Greene Township on the Pike County side and within Coolbaugh Township on the Monroe County side. The dam is shown on the USGS Quadrangle, entitled "Buck Hill Falls, Pennsylvania", at coordinates N 41° 14.5', W 75° 20.2'. A regional location plan of Taylor Pond Dam is enclosed as Plate 1, Appendix E.
- c. Size Classification. Taylor Pond Dam has a maximum height of 76.0 feet and a top of dam storage capacity of 1390 acre-feet. This places it in the "Intermediate" size category.

- d. Hazard Classification. A dam failure could result in loss of lives and extensive property damage in the downstream town of La Anna. Therefore, the dam is classified as "High" hazard.
- e. Ownership. Taylor Pond Dam is owned by the Pike County Commissioners, County Courthouse, Milford, Pennsylvania, 18337.
- f. Purpose of Dam. The dam functions as a floodwater control structure.
- g. Design and Construction History. Taylor Pond Dam was designed by the engineering staff of the Soil Conservation Service (SCS) of the United States Department of Agriculture and was constructed by C. Davis, Inc., of Conshohocken, Pennsylvania. Construction began in March of 1962 and was completed in July of 1963. There is no record of subsequent modifications to the structure.
- h. Normal Operating Procedures. For this type of structure, the reservoir is normally maintained at the crest of the Principal Spillway, Elevation 1785.0. The pond drain provided at the base of the riser allows for drawdown of the reservoir. The sluice gate which controls the pond drain is the only operating device in the dam. During the annual inspection of Taylor Pond Dam by SCS in 1968, it was recommended that the sluice gate be operated on a yearly basis.

1.3 Pertinent Data

a.	<u>Drainage Area</u>	
	Square miles	4.80
b.	<u>Discharge at Dam Site (cfs)</u>	
	Drop Inlet Closed Conduit Spillway Capacity (reservoir surface at the earth and rock cut spillway crest, Elev. 1821.6)	200
	Maximum Combined Spillway Capacity	14,580
c.	<u>Elevation (feet above MSL)</u>	
	Pond Drain Inlet	1768.35
	Principal Spillway Crest (50-year sedimentation level)	1785.0
	Emergency Spillway Crest	1821.6
	Top of Dam (Design)	1829.0
	Top of Dam Low Point	1828.7
	Principal Spillway Pipe Invert (inlet)	1757.5
	Principal Spillway Pipe Invert (outlet)	1754.6
	Streambed Elevation at Centerline	1756.0
d.	<u>Reservoir (miles)</u>	
	Length of Normal Pool	0.24
	Length of Maximum Non-overtopping Pool	0.71
e.	<u>Storage (acre-ft.)</u>	
	Normal Pool (sedimentation storage), Elev. 1785.0	51.0

Emergency Spillway Crest (100-year storm), Elev. 1821.6	927.6
Top of Dam, Elev. 1829.0	1390.0

f. Reservoir Surface Area (acres)

Normal Pool, Elev. 1785.0	8.0
Emergency Spillway Crest, Elev. 1821.6	53.4
Top of Dam, Elev. 1829.0	69.5

g. Dam Data

Type	Compacted Earth and Rockfill
Length	2,300 feet
Height	76.0 feet
Crest Width	22 feet
Side Slopes	2H:1V (Upstream and Downstream)
Zoning	Yes, refer to Section 1.2.a
Impervious Core	A central core of relatively impervious silt (ML) and clay (CL).
Cutoff	A cutoff trench of core material
Grout Curtain	No

h. Spillways

1. Principal

Type	Drop inlet closed conduit
Length of Weir	16 feet
Crest Elevation	1785.0
Gates	30-inch diameter on the upstream end wall of the riser, invert Elev. 1758.0
Upstream Channel	None
Downstream Channel	A rock and riprap lined trapezoidal stilling basin outlets into a trapezoidal outlet channel which outlets into the original streambed.

2. Emergency

Type	Vegetated earth cut
Width	250 feet
Crest Elevation	1821.6
Gates	None
Upstream channel	A curved channel about 320 feet in length slopes upward to the level section on a 1 percent grade.
Downstream Channel	A 550-foot long channel slopes away from the level section on a 2.3 percent grade before blending into the natural ground.

SECTION 2
ENGINEERING DATA

2.1 Design

a. Data Available. The information available in the DER main office files in Harrisburg, Pennsylvania, concerning Taylor Pond Dam includes the following:

- 1) Application, Report Upon the Application, and Permit to construct Taylor Pond Dam.
- 2) Set of design drawings, including location and contour maps.
- 3) Yearly inspection reports for 1968 and 1970 through 1977.
- 4) Construction progress reports and photographs.
- 5) Miscellaneous correspondence and memoranda.

Additional information obtained from the SCS State Office, Harrisburg, Pennsylvania, includes a complete set of As-Built Plans and a complete set of design calculations.

b. Design Features. The design features are described in Section 1.2.a and shown on the plates in Appendix E.

2.2 Construction

Based on the field investigation and the information available in the construction reports, the dam appears to have been constructed in general conformance with the design drawings.

2.3 Operation

Operational procedures are limited to the control of the sluice gate for the reservoir drain system.

2.4 Evaluation

- a. Availability. The engineering data utilized in this report were provided by DER and SCS.
- b. Adequacy. The material provided by DER and SCS is adequate for a Phase I investigation.
- c. Validity. There is no reason to question the validity of the data available from DER and SCS

SECTION 3
VISUAL INSPECTION

3.1 Findings

- a. General. The field inspection of Taylor Pond Dam took place on December 5, 1978. At the time of the inspection, the reservoir surface was slightly above the spillway crest, Elevation 1785.0. No underwater areas were inspected. The observations and comments of the field inspection team are in the checklist which is Appendix B of this report. The appearance of the facility indicates that the dam and its appurtenances are fairly well maintained.
- b. Dam. The upstream and downstream faces of the embankment are composed of 6-inch to 3-foot rocks, which appear to be well-graded. Minor undulations are apparent along both the upstream and downstream faces, which may be due to the variable size of the rock. The upstream and downstream rock embankment slopes show no visible sign of instability.

On the date of the inspection, brush and small trees with trunks as thick as 6 inches in diameter were observed growing on both faces of the embankment.

Larger trees are located immediately upstream of the dam, toward the left abutment. These trees are 40 to 50 feet in height and are founded on natural ground, a few feet above the reservoir surface.

During the inspection, running water was observed along the downstream toe from the left abutment to the drop inlet closed conduit spillway outlet channel. This flowing water appears to be surface runoff, as the natural ground downstream of the dam slopes toward the embankment, creating a channel along the downstream toe. In the area of the change in alignment of the dam, some standing water was observed. Several localized areas of standing water along the top of the dam were also noted during the inspection.

- c. Appurtenant Structures. The Principal Spillway appears to be in good operating condition. At the time of the inspection, approximately 20 cfs. was discharging from the spillway pipe. The owner was not available during the day of inspection to operate the hoist for the pond drain sluice gate.

The Emergency Spillway also appears to be in good condition. The grass cover is adequate and the slopes show no signs of instability. The earth dike which separates the embankment from the earth and rock cut

spillway extends approximately 550 feet downstream and appears to provide adequate protection for the downstream face of the embankment from flow through the Emergency Spillway.

- d. Reservoir Area. The reservoir side slopes average about 10 percent and are well vegetated. There is no visible evidence of slope instability or excess siltation.
- e. Downstream Channel. Flow from the Principal Spillway enters a trapezoidal riprap lined stilling basin which outlets into an unlined, trapezoidal channel. The excavated trapezoidal channel terminates at the natural stream channel of Taylor Creek about 200 feet downstream of the dam. Taylor Creek flows through the town of La Anna about a half-mile downstream of the dam. There are approximately 4 homes and 20 people that would be affected at the damage center in the event the dam would fail.

SECTION 4

OPERATIONAL PROCEDURES

4.1 Procedures

Drawdown of the reservoir may be accomplished by operating the sluice gate for the pond drain. The hoist for the sluice gate is located on the top slab of the riser. There are no other known operational features for the dam.

4.2 Maintenance of the Dam

Annual inspection reports by SCS are available in the DER files for 1968 and 1970 through 1977. Maintenance of the dam is performed in accordance with requirements specified in these yearly reports. In general, the required maintenance has consisted of cutting the grass, removal of debris from the spillway areas, and cutting of the trees and brush. It is not known if inspections were performed prior to 1968 or in 1969.

4.3 Maintenance of Operating Facilities

According to the DER records, sluice gate repairs were performed in 1971 and 1976 as recommended in the yearly inspection reports. A report dated February 23, 1978, stated that the gate was again in need of repair. The 1968 inspection report recommended that the gate be operated annually.

4.4 Warning Systems in Effect

There is no formal warning system or procedures to be followed during periods of heavy rainfall.

4.5 Evaluation

The brush and trees growing in the embankment indicate a need for additional maintenance. A maintenance program independent of the yearly inspection reports would probably be more efficient.

The dam is accessible under all weather conditions for inspection and emergency action.

SECTION 5

HYDRAULICS AND HYDROLOGY

5.1 Evaluation of Features

- a. Design Data. The complete hydrologic and hydraulic design was obtained from SCS. Refer to Sheet 10 in Appendix C for the SCS hydraulic and hydrologic design summary.

Taylor Pond Dam has a drainage area of 4.80 square miles and impounds a reservoir with a floodwater retardation storage capacity of 927.6 acre-feet. The combined spillway system has a maximum discharge capacity of 14,580 cfs. The Principal Spillway crest was originally designed as a 3-foot by 9-foot section, but was constructed as a 3-foot by 8-foot section. Therefore, the hydraulic capacity is reduced by an insignificant amount (see calculation, Appendix C).

- b. Experience Data. There are no known reservoir level records or rainfall records kept for this dam. According to Mr. Frank Razny, Pike County Dam Inspector, the maximum reservoir surface elevation that he has observed is about 2 feet below the emergency spillway crest (about Elevation 1819.6).
- c. Visual Observations. On the date of the inspection, there were no adverse conditions that would prevent either spillway from operating as designed. Further observations are given in Appendix B.
- d. Overtopping Potential. The Spillway Design Flood for an Intermediate size, "High" hazard structure is the full PMF. The corresponding peak inflow and outflow rates are 10,310 cfs. and 10,110 cfs. respectively. Based on the hydrologic analysis, the combined spillway system is capable of discharging 100 percent of the PMF without overtopping of the embankment (see Appendix C for computations).
- e. Spillway Adequacy. The Taylor Pond Dam spillway system is classified as adequate.

SECTION 6

STRUCTURAL STABILITY

6.1 Evaluation of Structural Stability

- a. Visual Observations. Some minor deterioration of the rockfill is evident on both faces of the embankment, however, the integrity of the structure does not appear to have been affected. There are no visible signs of erosion or slope instability.

Several small areas of standing water are located along the top of the dam. Although these areas could be the result of differential settlement, it is more likely that they are the result of poor drainage or surface irregularities formed by maintenance vehicles. (See profile of the top of the dam in Appendix E.)

Many trees with trunks up to 6 inches in diameter are growing on the slopes of the embankment. The roots of these trees create potential seepage paths. In the event of a tree being blown down, a portion of the embankment might be removed.

The structural features of the Principal Spillway appear to be in good condition. There is no evidence of cracking or spalling of the concrete in the riser or in the outlet pipe. The stilling basin also appears to be in satisfactory condition with no visible signs of slope instability or misplaced riprap.

- b. Design and Construction Data. As-built plans and the complete design folder were obtained from SCS. This material along with the information obtained from DER are sufficient for a Phase I analysis. Slope stability analysis results showing adequate factors of safety are included in the SCS design data.
- c. Operating Records. There are no official operating records maintained for this dam.
- d. Post-Construction Changes. There is no record of any structural changes made on the dam subsequent to the completion of construction.
- e. Seismic Stability. Taylor Pond Dam is located in Seismic Zone 1 on the Seismic Zone Map of Contiguous States. A dam located in Seismic Zone 1 is generally considered to be safe under any expected Zone 1 earthquake loading conditions if it is safe under static loading conditions.

SECTION 7

ASSESSMENT, RECOMMENDATIONS, AND PROPOSED REMEDIAL MEASURES

7.1 Dam Assessment

- a. Evaluation. Based on the visual inspection, the dam and appurtenant structures are considered to be in good condition.

Trees on the rockfill embankment slopes represent potential problem areas and should be removed. However, the rockfill embankment slopes show no visible signs of instability or surface erosion.

The standing water that is evident along the top of the dam is an indication that the top of the dam is not properly graded in localized areas, or that localized surface irregularities are caused by maintenance vehicles. However, differential settlement should not be ruled out unless future inspections reveal no further change in surface elevation or condition.

The combined spillway system is capable of discharging the full PMF and shows no signs of structural or hydraulic deficiency.

- b. Adequacy of Information. The information available from DER and SCS is adequate for a Phase I investigation.
- c. Urgency. The remedial measures recommended in Section 7.2 should be effected as soon as possible.
- d. Necessity for Further Investigation. No further investigations are recommended at this time.

7.2 Recommendations and Proposed Remedial Measures

a. Facilities.

1. The trees and brush growing on the rockfill embankment slopes should be cut near ground level.
2. Low areas along the top of dam should be filled with suitable material in order to restore the surface to design elevation. After this is completed, the top of dam should be monitored on a monthly basis to check for differential settlement.

b. Operation and Maintenance Procedures.

1. A maintenance program independent of the yearly inspection reports should be developed and implemented. This program should include,

but not be limited to, cutting of the brush and trees on a regular basis and periodic inspection and operation of the sluice gate.

2. A warning system should be developed. During periods of heavy rainfall, the dam should be monitored and downstream residents alerted in the event of an impending failure.

APPENDIX

A

**Check List Engineering Data
Design, Construction, Operation
Phase I**

NAME OF DAM TAYLOR POND

ID # 00315

Sheet 1 of 4

CHECK LIST
ENGINEERING DATA
DESIGN, CONSTRUCTION, OPERATION
PHASE I

REMARKS

ITEM

AS-BUILT DRAWINGS

SET OF AS BUILT PLANS
WERE OBTAINED FROM SCS.

REGIONAL VICINITY MAP

INCLUDED IN THE
AS BUILT PLANS. SEE
PLATE I, APPENDIX E.

CONSTRUCTION HISTORY

CONSTRUCTION PROGRESS REPORTS AND
PHOTOGRAPHS ARE AVAILABLE FROM PDER.

TYPICAL SECTIONS OF DAM

INCLUDED IN DESIGN DRAWINGS AND
IN AS BUILT PLANS. SEE PLATES
IN APPENDIX E.

OUTLETS - PLAN

DETAILS

CONSTRAINTS

SEE PLATES IN APPENDIX E
FOR AVAILABLE DRAWINGS.

DISCHARGE RATINGS

INCLUDED IN DESIGN CALCULATIONS.

RAINFALL/RESERVOIR RECORDS

NONE

ITEM

REMARKS

DESIGN REPORTS

INCLUDED IN DESIGN INFORMATION OBTAINED FROM SCS.

GEOLOGY REPORTS

GENERAL GEOLOGY GIVEN IN THE "REPORT UPON THE APPLICATION".

DESIGN COMPUTATIONS
HYDROLOGY & HYDRAULICS
DAM STABILITY
SEEPAGE STUDIES

THE DESIGN CALCULATIONS OBTAINED FROM SCS INCLUDED HYDROLOGY & HYDRAULICS, SCOUR STABILITY, AND STRUCTURAL COMPUTATIONS. NO SEEPAGE STUDIES WERE PROVIDED.

MATERIALS INVESTIGATIONS
BORING RECORDS }
LABORATORY }
FIELD }

TRIAxIAL SHEAR DATA, COMPACTION AND PENETRATION RESISTANCE DATA, AND A DISCUSSION OF SOIL MECHANICS LABORATORY DATA ARE ALL INCLUDED IN THE DESIGN INFORMATION OBTAINED FROM SCS. BORING LOGS WERE INCLUDED IN THE A-1 FULT PLANS.

POST-CONSTRUCTION SURVEYS OF DAM

SCS AS BUILT SURVEY

BORROW SOURCES

INCLUDED IN A-1 GUILT PLANS.

ITEM

REMARKS

MONITORING SYSTEMS

NONE.

MODIFICATIONS

NONE.

HIGH POOL RECORDS

NO RECORDS AVAILABLE.

POST CONSTRUCTION ENGINEERING
STUDIES AND REPORTS

NONE.

PRIOR ACCIDENTS OR FAILURE OF DAM
DESCRIPTION
REPORTS

NONE.

MAINTENANCE
OPERATION
RECORDS

YEARLY INSPECTION REPORTS
LIST THE REQUIRED MAINTENANCE
ON THE DAM.

ITEM

REMARKS

SPILLWAY PLAN

SECTIONS

DETAILS

SEE PLATES IN
APPENDIX E FOR AVAILABLE
DRAWINGS.

OPERATING EQUIPMENT
PLANS & DETAILS

NONE.

MISCELLANEOUS

APPENDIX

B

Check List
Visual Inspection
Phase I

CHECK LIST
VISUAL INSPECTION
PHASE I

Sheet 1 of 11

Name Dam TAYLOR POND County PIKE - MONROE State PENNA. National ID # 00315
Type of Dam EARTH AND ROCKFILL Hazard Category HIGH
Date(s) Inspection DEC. 5, 1978 Weather SUNNY, COOL Temperature 40°

Pool Elevation at Time of Inspection ~1785 M.S.L. Tailwater at Time of Inspection ~1754 M.S.L.

Inspection Personnel:

MR. GEORGE ELIAS MR. ROBERT BOWERS
MR. DAVID CAMPBELL MR. THOMAS AHN
MR. DANA PIZARRO MR. DAVID CAMPBELL Recorder

Remarks:

MR. FRANK RAZNY, THE CARETAKER, WAS PRESENT FOR A PORTION OF THE INSPECTION.

CONCRETE/MASONRY DAMS

Sheet 2 of 11

VISUAL EXAMINATION OF OBSERVATIONS REMARKS OR RECOMMENDATIONS

ANY NOTICEABLE SEEPAGE

N/A

STRUCTURE TO
ABUTMENT/EMBANKMENT
JUNCTIONS

N/A

DRAINS

N/A

WATER PASSAGES

N/A

FOUNDATION

N/A

CONCRETE/MASONRY DAMS

Sheet 3 of 11

VISUAL EXAMINATION OF OBSERVATIONS REMARKS OR RECOMMENDATIONS

SURFACE CRACKS
CONCRETE SURFACES

N/A

STRUCTURAL CRACKING

N/A

VERTICAL AND HORIZONTAL
ALIGNMENT

N/A

MONOLITH JOINTS

N/A

CONSTRUCTION JOINTS

N/A

OUTLET WORKS
(MUNICIPAL SPILLWAY)

Sheet 6 of 11

VISUAL EXAMINATION OF	OBSERVATIONS	REMARKS OR RECOMMENDATIONS
CRACKING AND SPALLING OF CONCRETE SURFACES IN OUTLET CONDUIT	NONE OBSERVED.	
INTAKE STRUCTURE	INTAKE STRUCTURE WAS SUBMERGED AND WAS NOT INSPECTED.	
OUTLET STRUCTURE	OUTLET CONDUIT PIPE - APPEARED TO BE IN GOOD CONDITION.	
OUTLET CHANNEL	A TRAPEZOIDAL, RIPRAP LINED SCOUR BASIN LEADS INTO A 12-FOOT WIDE (AT THE BASE) TRAPEZOIDAL CHANNEL.	
EMERGENCY GATE	THE SLUICE GATE FOR THE POND DRAIN WAS NOT OPERATED.	

URGATED SPILLWAY
(EMERGENCY SPILLWAY)

Sheet 7 of 11

<u>VISUAL EXAMINATION OF</u>	<u>OBSERVATIONS</u>	<u>REMARKS OR RECOMMENDATIONS</u>
CONCRETE WEIR	N/A	THE EMERGENCY SPILLWAY IS AN EARTH SPILLWAY IN THE RIGHT ABUTMENT AREA.
APPROACH CHANNEL	A 280-FOOT LONG, 250-FOOT WIDE, CURVING CHANNEL APPROACHES THE CONTROL SECTION ON A 1% GRADE.	THE CONTROL SECTION IS THE 30-FOOT LONG, 250-FOOT WIDE LEVEL SECTION WHICH ACTS AS THE CREST.
DISCHARGE CHANNEL	A 550-FOOT LONG, 250-FOOT WIDE CHANNEL LEADS AWAY FROM THE CONTROL SECTION ON A 2.3% GRADE	
BRIDGE AND PIERS	N/A	

GATED SPILLWAY

Sheet 8 of 11

<u>VISUAL EXAMINATION OF</u>	<u>OBSERVATIONS</u>	<u>REMARKS OR RECOMMENDATIONS</u>
CONCRETE SILL	N/A	
APPROACH CHANNEL	N/A	
DISCHARGE CHANNEL	N/A	
BRIDGE AND PIERS	N/A	
GATES AND OPERATION EQUIPMENT	N/A	

2

INSTRUMENTATION

Sheet 9 of 11

VISUAL EXAMINATION OBSERVATIONS REMARKS OR RECOMMENDATIONS

MONUMENTATION/SURVEYS

NONE.

OBSERVATION WELLS

NONE.

WEIRS

NONE.

PIEZOMETERS

NONE.

OTHER

NONE.

RESERVOIR

Sheet 10 of 11

REMARKS OR RECOMMENDATIONS

OBSERVATIONS

VISUAL EXAMINATION OF

SLOPES

THE SLOPES WERE
RELATIVELY STEEP, FAIRLY WELL
VEGETATED, AND SHOWED NO
SIGNS OF PREVIOUS SLOPE
FAILURES.

SEDIMENTATION

THE PRINCIPAL SPILLWAY CREST
ELEVATION IS ALSO THE 50-YEAR
SEDIMENTATION LEVEL ESTIMATED.

DOWNSTREAM CHANNEL

Sheet 11 of 11

VISUAL EXAMINATION OF	OBSERVATIONS	REMARKS OR RECOMMENDATIONS
CONDITION (OBSTRUCTIONS, DEBRIS, ETC.)	THE DOWNSTREAM CHANNEL APPEARED TO BE FREE OF OBSTRU- CTIONS AND DEBRIS.	
SLOPES	THE CHANNEL CONTINUES DOWNSTREAM ON A 2% GRADE TO THE TOWN OF LAANNA.	
APPROXIMATE NO. OF HOMES AND POPULATION	THERE ARE APPROXIMATELY 10 HOMES SUBJECT TO DAMAGE IN THE TOWN OF LAANNA, ABOUT 1/2 MILE DOWNSTREAM OF TAYLOR POND DAM.	

APPENDIX

C

Hydrologic & Hydraulic Data

SUBJECT	SHEET	BY	DATE	JOB NO
TAYLOR POND DAM				

TABLE OF CONTENTS APPENDIX C

HYDROLOGIC & HYDRAULIC DATA

PMP CALCULATIONS	SHEET 1
SNYDER COEFFICIENTS	SHEET 1
SPILLWAY DISCHARGE	SHEET 2
STAGE - STORAGE	SHEET 3
HEC - 1 DAM SAFETY VERSION	
COMPUTER OUTPUT	SHEETS 4-9
SCS DESIGN SUMMARY	SHEET 10

SUBJECT	SHEET	BY	DATE	JOB NO.
	2	RRB		

DISCHARGE AT DAMSITE (FROM SCS DESIGN DATA)

THE PRINCIPAL SPILLWAY WAS DESIGNED TO HAVE AN 18' WEIR LENGTH (3' x 9' INSIDE DIMENSIONS), BUT WAS CONSTRUCTED WITH ONLY A 16' WEIR LENGTH (3' x 8' INSIDE DIMENSIONS). ALSO, THE SCS DESIGN CRITERION FOR THE VALUE OF C WAS CHANGED IN JUNE, 1965 (THIS DAM WAS BUILT IN 1961). THIS, C = 3.4 IN THE DESIGN BUT SHOULD BE C = 3.1. DISCHARGE DIFFERENTIALS ARE SHOWN BELOW.

WEIR FLOW → AS DESIGNED: $Q = CLH^{3/2} = 3.4(18')(H^{3/2}) = 61.2 H^{3/2}$
 ACTUAL: $Q = CLH^{3/2} = 3.1(16')(H^{3/2}) = 49.6 H^{3/2}$

PIPE FLOW → $Q = KAP \sqrt{2g H_p} = 24.17 H_p^{1/2}$

STAGE	H _w	Q _w (DESIGN)	Q _w (ACTUAL)	H _p	Q _p	H _{e/c}	Q _{e/c}	Q _{TOTAL}
1785	0	0	0	31.8	136.3			0
1786	1	61.2	49.6	32.8	138.5			49.6
1787	2	173.2	140.3	33.8	140.7			140.3
1788	3	317.6		34.8	142.6			142.6
1789				35.8	144.3			144.3
1790				36.8	146.7			146.7
1795				41.8	156.4			156.4
1800				46.8	164.8			164.8
1805				51.8	176.7			176.7
1810				56.8	182.8			182.8
1815				61.8	190.2			190.2
1820				66.8	198.2			198.2
1821.6				68.4	200.6	0	0	200.6
1823.3				70.1	202.3	1.7	1259.2	1461.5
1824.2				71.0	203.8	2.6	2529.2	2733.0
1824.9				71.7	204.7	3.3	3807.0	4011.7
1825.6				72.4	205.7	4.0	5093.2	5298.9
1826.7				73.5	207.1	5.1	7683.0	7890.1
1827.7				74.5	208.6	6.1	10296.0	10504.6
1828.7				75.4	210.0	7.0	12930.0	13140.0

THE DIFFERENTIAL WEIR FLOW HAS AN INSIGNIFICANT EFFECT ON THE HYDRAULICS OF THE DAM.

SUBJECT

SHEET

3

BY

FRB

DATE

JOB NO

STAGE - STORAGE DATA INPUT TO HEC-2 PROGRAM ASSUMES
50 YEAR SEDIMENTATION LEVEL AS DOES THE DAM DESIGN.
50 YEARS OF SEDIMENT IS 50 ACRE-Feet IN VOLUME.
STAGE-STORAGE DATA IS TAKEN FROM SCS DESIGN DATA.

STAGESTORAGE (ACRE-FT)

1785	0
1790	42.0
1800	185.4
1810	441.0
1820	851.4
1830	1458.9

.....
 FLOOD HYDROGRAPH PACKAGE (MEC-1)
 DA-4 SAFETY VERSION JULY 1978
 LAST MODIFICATION 25 SEP 78

	NATIONAL DAM INSPECTION PROGRAM									
	TAYLOR POND DAM					PHF HYDROGRAPH				
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	300	0	15	0	0	0	0	0	0	0
4	5	0	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0	0	0
6	1	0	0	0	0	0	0	0	0	0
7	.20	0	.40	.30	.50	.60	.70	.80	.90	1.00
8	0	0	0	0	0	0	0	0	0	0
9	1	1	4.60	1	1	1	1	1	1	1
10	0	0	111	123	133	143	153	163	173	183
11	0	0	22	111	123	133	143	153	163	173
12	0	0	0	0	0	0	0	0	0	0
13	1.73	0.45	2	2	2	2	2	2	2	2
14	-1.5	-0.05	0	0	0	0	0	0	0	0
15	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1
19	1785	1785	1785	1785	1785	1785	1785	1785	1785	1785
20	1815	1815	1815	1815	1815	1815	1815	1815	1815	1815
21	0	0	0	0	0	0	0	0	0	0
22	190.2	190.2	190.2	190.2	190.2	190.2	190.2	190.2	190.2	190.2
23	0	0	0	0	0	0	0	0	0	0
24	1785	1785	1785	1785	1785	1785	1785	1785	1785	1785
25	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829
26	0	0	0	0	0	0	0	0	0	0
27	99	99	99	99	99	99	99	99	99	99

RUNOFF TO RESERVOIR
 ROUTING THROUGH TAYLOR POND

1800 1805 1810
 1826.7 1827.7 1828.6
 164.8 176.7 182.8
 7890.1 10504.6 13140.0

.....
 FLOOD HYDROGRAPH PACKAGE (HEC-1)
 DAM SAFETY VERSION JULY 1978
 LAST MODIFICATION 25 SEP 78

RUN DATE= 04/11/79
 TIME= 08.35.58.

NATIONAL DAM INSPECTION PROGRAM
 TAYLOR POND DAM
 PHF HYDROGRAPH

JOB SPECIFICATION
 NO NHR MNM IDAY IHR IMIN METRC IPLT IPRT NSTAN
 300 0 15 0 0 0 0 0 0 0 0 0
 JOBER JOPER MWT LROPT TRACE
 5 0 0 0 0

MULTI-PLAN ANALYSES TO BE PERFORMED
 NPLAN= 1 NRATIO= 9 LRTIO= 1

RTIOS= .20 .30 .40 .50 .60 .70 .80 .90 1.00

SUB-AREA RUNOFF COMPUTATION

RUNOFF TO RESERVOIR

ISTAO ICOMP IECON ITAPE IJPLT JPRT INAME ISTAGE IAUTO
 A1 0 0 0 0 0 0 0 0 0 0 0

HYDROGRAPH DATA

IMYD IUMG TAREA SNAP TRSDA TRSPC RATIO ISNOW ISAME LOCAL
 1 1 4.00 0.00 4.00 0.00 0.00 0.00 0.00 0.00 1 0 0

PRECIP DATA

SPFE PMS R6 R12 R24 R48 R72 R96
 0.00 22.00 111.00 123.00 133.00 0.00 0.00 0.00

TRSPC COMPUTED BY THE PROGRAM IS .000

LOSS DATA

LROPT STMR DLTKR RTIOL ERAIN STRKS RTIOK STRTL CMSTL ALSMX RTIMP
 0 0.00 0.00 1.00 0.00 0.00 0.00 1.00 1.00 1.00 0.05 0.00 0.00

UNIT HYDROGRAPH DATA

FR= 1.73 CR= .45 NTA= 0

RECESSION DATA

STRGS= 1.50 ORCSM= .05 RTFOR= 2.00

UNIT HYDROGRAPH 62 END-OF-PERIOD ORDINATES. LAG= 1.74 HOURS. CP= .45 VOL= 1.00

39.	144.	203.	265.	328.	390.	452.	514.	576.	638.	700.	762.	824.	886.	948.	1010.	1072.	1134.	1196.	1258.	1320.	1382.	1444.	1506.	1568.	1630.	1692.	1754.	1816.	1878.	1940.	2002.	2064.	2126.	2188.	2250.	2312.	2374.	2436.	2498.	2560.	2622.	2684.	2746.	2808.	2870.	2932.	2994.	3056.	3118.	3180.	3242.	3304.	3366.	3428.	3490.	3552.	3614.	3676.	3738.	3800.	3862.	3924.	3986.	4048.	4110.	4172.	4234.	4296.	4358.	4420.	4482.	4544.	4606.	4668.	4730.	4792.	4854.	4916.	4978.	5040.	5102.	5164.	5226.	5288.	5350.	5412.	5474.	5536.	5598.	5660.	5722.	5784.	5846.	5908.	5970.	6032.	6094.	6156.	6218.	6280.	6342.	6404.	6466.	6528.	6590.	6652.	6714.	6776.	6838.	6900.	6962.	7024.	7086.	7148.	7210.	7272.	7334.	7396.	7458.	7520.	7582.	7644.	7706.	7768.	7830.	7892.	7954.	8016.	8078.	8140.	8202.	8264.	8326.	8388.	8450.	8512.	8574.	8636.	8698.	8760.	8822.	8884.	8946.	9008.	9070.	9132.	9194.	9256.	9318.	9380.	9442.	9504.	9566.	9628.	9690.	9752.	9814.	9876.	9938.	10000.
-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	--------

46. 36. 33. 30. 28. 25. 23. 21. 19. 18.

SHEET 6

16. 15. 13. 12. 11. 10. 9. 8. 7.

NO.DA HR.MN PERIOD RAIN EXCS LOSS COMP 0 NO.DA HR.MN PERIOD RAIN EXCS LOSS COMP 0
 END-OF-PERIOD FLOW
 SUM 23.41 21.55 1.86 268661.
 (595.11 547.11 47.11 7607.63)

.....

HYDROGRAPH ROUTING
 ROUTING THROUGH TAYLOR POND

STAGE	1705.00	1786.00	1787.00	1788.00	1789.00	1790.00	1795.00	1800.00	1805.00	1810.00	1820.00	1825.60	1826.70	1827.70	1828.00
FLOW	0.00	49.60	140.30	142.60	144.30	146.70	156.40	164.00	176.70	182.00	182.00	182.00	182.00	182.00	182.00
CAPACITY	0.	42.	185.	441.	851.	1459.									
ELEVATION	1785.	1798.	1800.	1810.	1820.	1830.									

CREL SPWD COO EXPW ELEV COOL CAREA EXPL
 1785.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

DAM DATA
 TOPEL COOD EXPD DAMWID
 1828.0 3.1 1.6 2300.

- PEAK OUTFLOW IS 198. AT TIME 25.75 HOURS
- PEAK OUTFLOW IS 1566. AT TIME 21.00 HOURS
- PEAK OUTFLOW IS 2999. AT TIME 19.50 HOURS
- PEAK OUTFLOW IS 4590. AT TIME 18.75 HOURS
- PEAK OUTFLOW IS 5646. AT TIME 18.50 HOURS
- PEAK OUTFLOW IS 6827. AT TIME 18.25 HOURS

PEAK FLOW AND STORAGE (END OF PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
 FLOWS IN CUBIC FEET PER SECOND (CUBIC METERS PER SECOND)
 AREA IN SQUARE MILES (SQUARE KILOMETERS)

SHEET 8

OPERATION	STATION	AREA	PLAN	RATIO 1	RATIO 2	RATIO 3	RATIO 4	RATIO 5	RATIO 6	RATIO 7	RATIO 8	RATIO 9
				.20	.30	.40	.50	.60	.70	.80	.90	1.00
HYDROGRAPH AT	A1	4.80 (12.43)	1	2062. (58.38)	3092. (87.57)	4123. (116.76)	5154. (145.96)	6185. (175.13)	7216. (204.32)	8246. (233.51)	9277. (262.76)	10308. (291.09)
	A2	4.80 (12.43)	1	198. (5.60)	1366. (38.69)	2999. (84.93)	4390. (124.31)	5646. (159.87)	6827. (193.31)	7960. (225.41)	9044. (256.11)	10107. (286.19)
ROUTED TO												

RATIOS APPLIED TO FLOWS

SHEET 9

SUMMARY OF DAM SAFETY ANALYSIS

PLAN 1 INITIAL VALUE SPILLWAY CREST TOP OF DAM LOW POINT - 1828.7
 ELEVATION STORAGE 1785.00 1785.00 1829.00
 OUTFLOW 0. 0. 1398.
 0. 0. 13261.

RATIO OF PMF	MAXIMUM RESERVOIR M.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
.20	1819.70	0.00	839.	198.	0.00	25.75	0.00
.30	1823.17	0.00	1044.	1366.	0.00	21.00	0.00
.40	1824.35	0.00	1115.	2999.	0.00	19.50	0.00
.50	1825.11	0.00	1162.	4390.	0.00	18.75	0.00
.60	1825.75	0.00	1201.	5646.	0.00	18.50	0.00
.70	1826.25	0.00	1231.	6827.	0.00	18.25	0.00
.80	1826.73	0.00	1260.	7960.	0.00	18.00	0.00
.90	1827.14	0.00	1285.	9044.	0.00	17.75	0.00
1.00	1827.55	0.00	1310.	10107.	0.00	17.75	0.00

SUBJECT	<i>Taylor Pond Dam</i>	SHEET	<i>10</i>	BY		DATE		JOB NO.	
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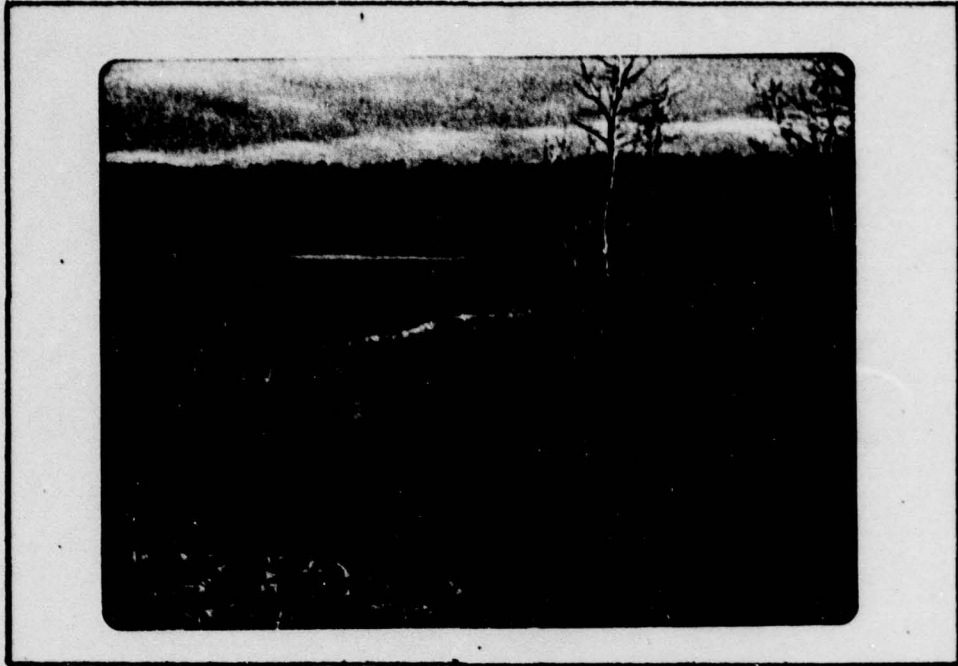
Factor Which Determines Stage	Surface Area Acres	Runoff in Inches	Peak Inflow c.f.s.	Peak Outflow c.f.s.	Elev. Maximum Stage	Storage Ac.-Ft.	Element of Structure Determined by Maximum Stage
50-year sediment deposit	8.0	-	-	-	1785.0	51	Crest of reservoir
100-year frequency storm	53.4	4	3402	200.6	1821.6	927.6	Crest of emergency spillway
1.25x6-hour rainfall condition III design storm	63.0	10.3	8499	6600	1826.2	1200	Design high water
2.50x6-hour rainfall condition II freeboard storm	69.5	19.4	15,572	14,580	1829.0	1390	Check top of dam

SCS Hydrologic & Hydraulic Design Summary

APPENDIX

D

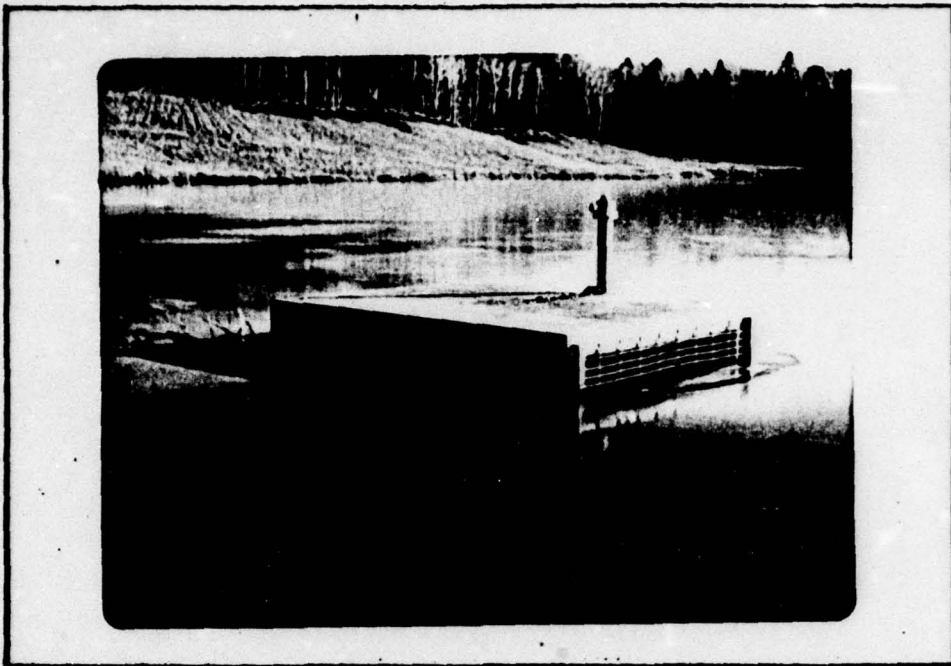
Photographs



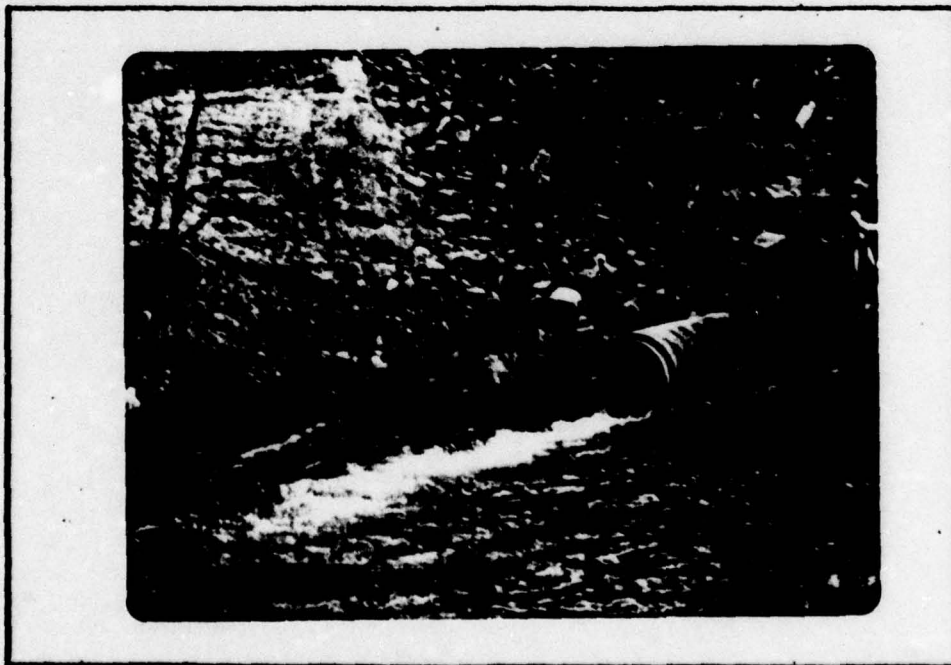
*VIEW OF THE RESERVOIR SHOWING THE APPROACH
CHANNEL TO THE EMERGENCY SPILLWAY IN THE
BACKGROUND*



*UPSTREAM FACE OF THE DAM
SHOWING THE OVERGROWN BRUSH*



*TOP OF THE RISER SHOWING TRASH RACK
DETAILS AND THE GATE HOIST*



*PRINCIPAL SPILLWAY CONDUIT OUTLET
AND SCOUR BASIN*



EMERGENCY SPILLWAY LOOKING DOWNSTREAM



*DOWNSTREAM EARTH LEVEE ON THE LEFT SIDE
OF THE EMERGENCY SPILLWAY LOOKING DOWNSTREAM*

APPENDIX

E

Drawings

SUBJECT Taylor Pond Dam	SHEET	BY	DATE	JOB NO.
----------------------------	-------	----	------	---------

APPENDIX "E" Table of Contents

Regional Vicinity Map	Plate 1
Dam site (As Built Plan)	" 2
Profiles (As Built Plan)	" 3
Plan - Profile of Principal Spillway (As Built Plan)	" 4
General Plan Drawing Showing Problem Areas	" 5
Profile of Top of Dam @ Time of Inspection	" 6

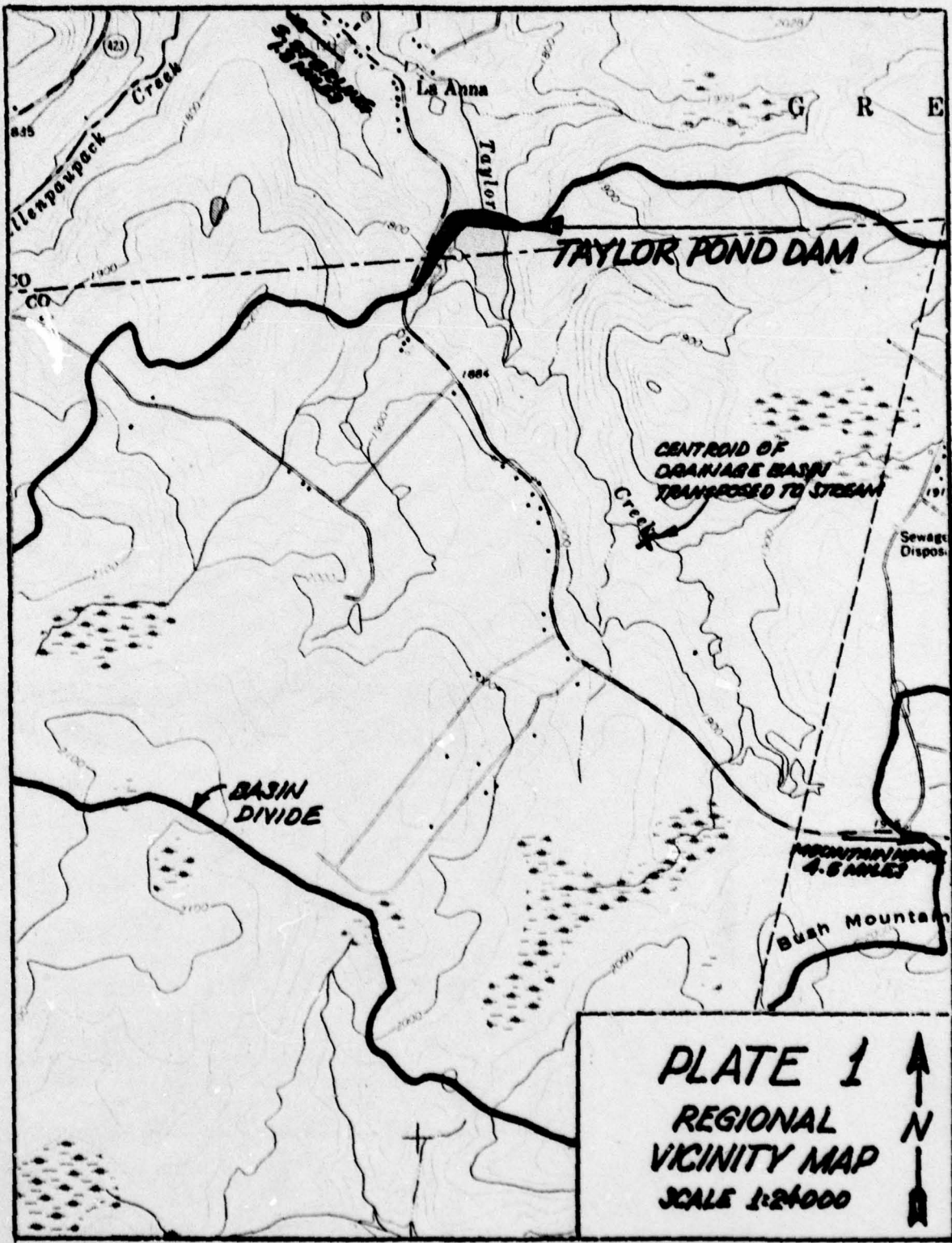
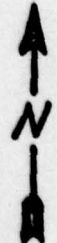
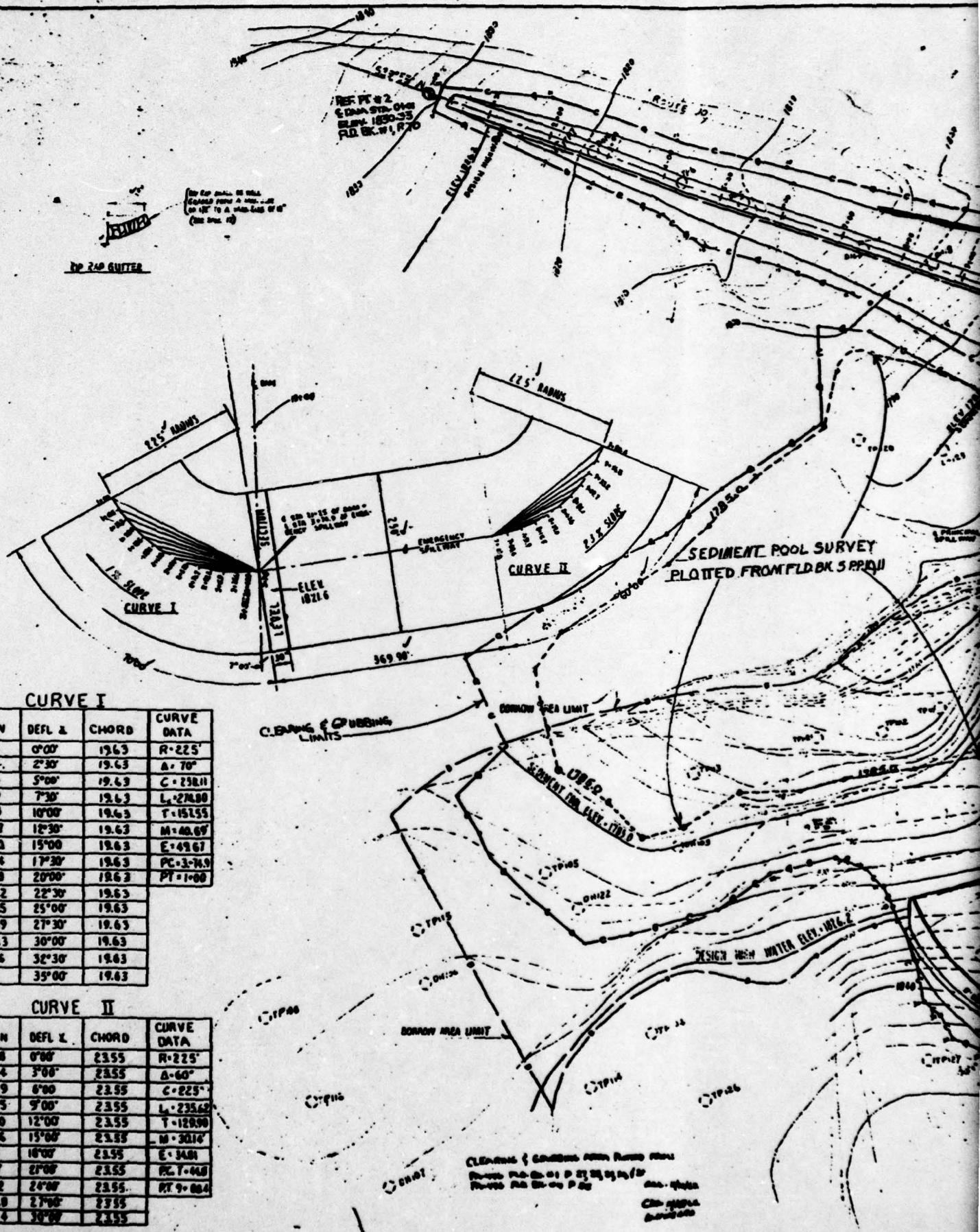


PLATE 1
REGIONAL
VICINITY MAP
SCALE 1:24000



SP 240 QUITE

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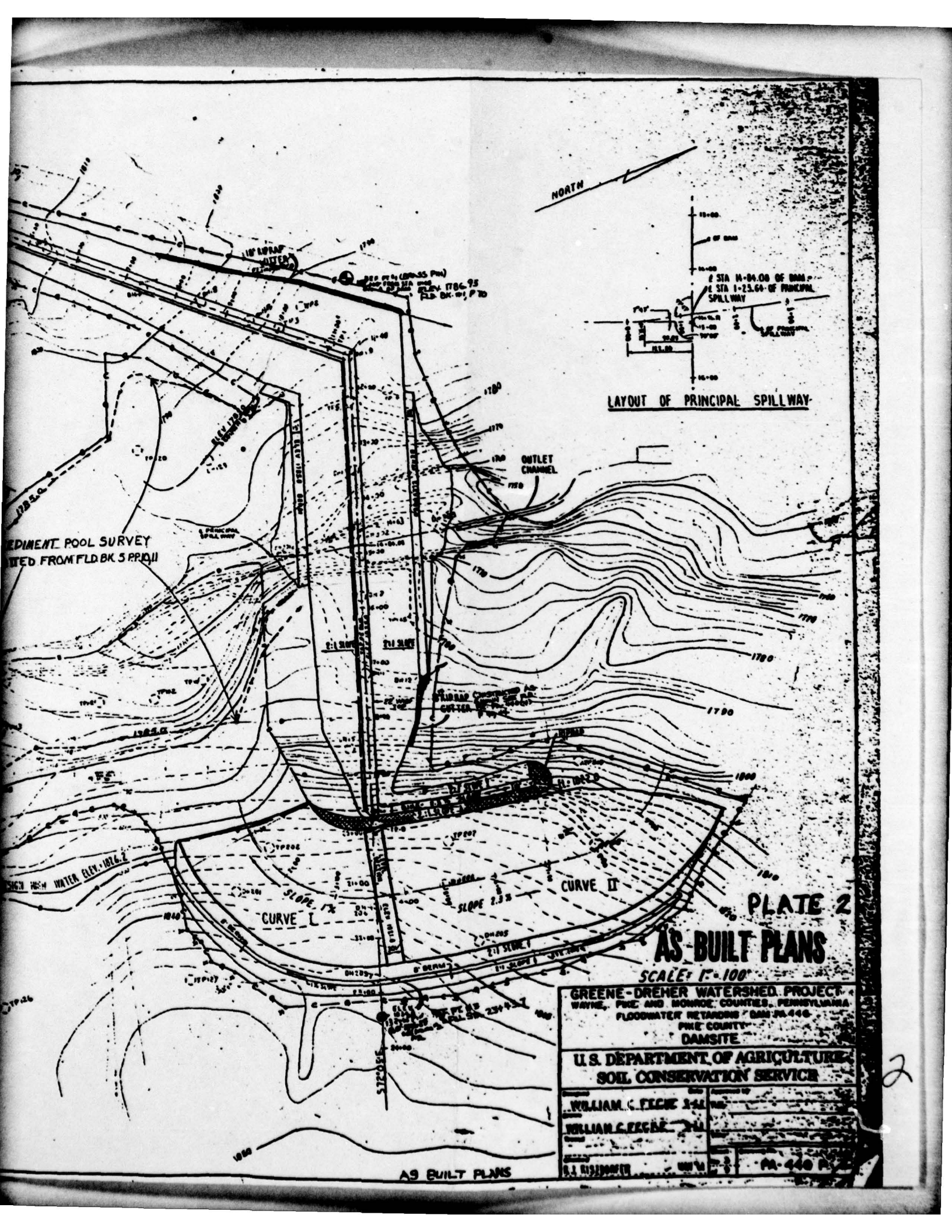


CURVE I

STATION	DEFL. \angle	CHORD	CURVE DATA
374.9	0°00'	19.63	R=225'
355.2	2°30'	19.63	$\Delta=70^\circ$
335.6	5°00'	19.63	C=238.11
315.9	7°30'	19.63	L=278.80
296.3	10°00'	19.63	T=151.55
276.7	12°30'	19.63	M=40.69
257.0	15°00'	19.63	E=49.67
237.4	17°30'	19.63	PC=3+34.9
217.8	20°00'	19.63	PT=1+00
198.2	22°30'	19.63	
178.5	25°00'	19.63	
158.9	27°30'	19.63	
139.3	30°00'	19.63	
119.6	32°30'	19.63	
100	35°00'	19.63	

CURVE II

STATION	DEFL. \angle	CHORD	CURVE DATA
744.8	0°00'	23.55	R=225'
728.4	3°00'	23.55	$\Delta=60^\circ$
711.9	6°00'	23.55	C=225'
695.5	9°00'	23.55	L=235.62
679.0	12°00'	23.55	T=128.90
662.6	15°00'	23.55	M=30.14
646.1	18°00'	23.55	E=34.81
629.7	21°00'	23.55	PC=7+44.8
613.2	24°00'	23.55	PT=9+04.4
596.8	27°00'	23.55	
580.4	30°00'	23.55	



NORTH

LAYOUT OF PRINCIPAL SPILLWAY

SEDIMENT POOL SURVEY
 DATED FROM FLD BK 5 P.P. 111

PLATE 2
AS BUILT PLANS

SCALE 1" = 100'

GREENE-DREHER WATERSHED PROJECT
 WAYNE, FINE AND MONROE COUNTIES, PENNSYLVANIA
 FLOODWATER RETARDING DAM NO. 448
 FINE COUNTY
 DAMSITE

U.S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE

Drawn by	WILLIAM C. FEENE	Scale	1" = 100'
Checked by	WILLIAM C. FEENE	Date	
Project No.	PA-448	Sheet No.	2

AS BUILT PLANS

2

AS BUILT PROFILE
 PLOTTED FROM FLD. DN.
 PA 446 BY AGCS 2, 25, 25, 25

CONSTRUCTION ELEVATIONS



AFTER CLEARING & GRUBBING & BEFORE STRAPPING
 PLOTTED FROM FLD. DN. (PA 446)
 PLOTTED BY: AGCS 2, 25, 25, 25
 CHECKED BY: A. J. B. 4/2/63

AFTER STRAPPING PLOTTED FROM FLD. DN. (PA 446)
 PLOTTED BY: AGCS 2, 25, 25, 25
 CHECKED BY: A. J. B. 4/2/63

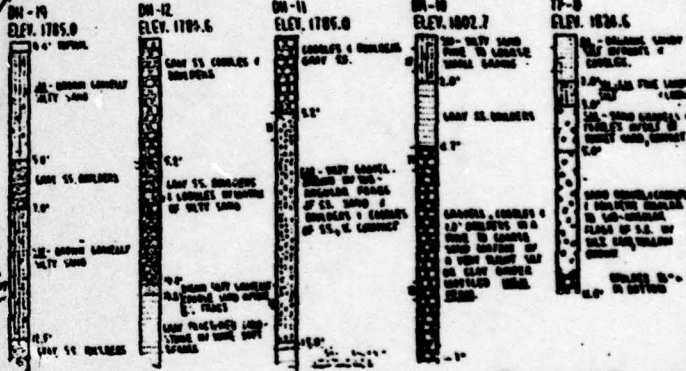
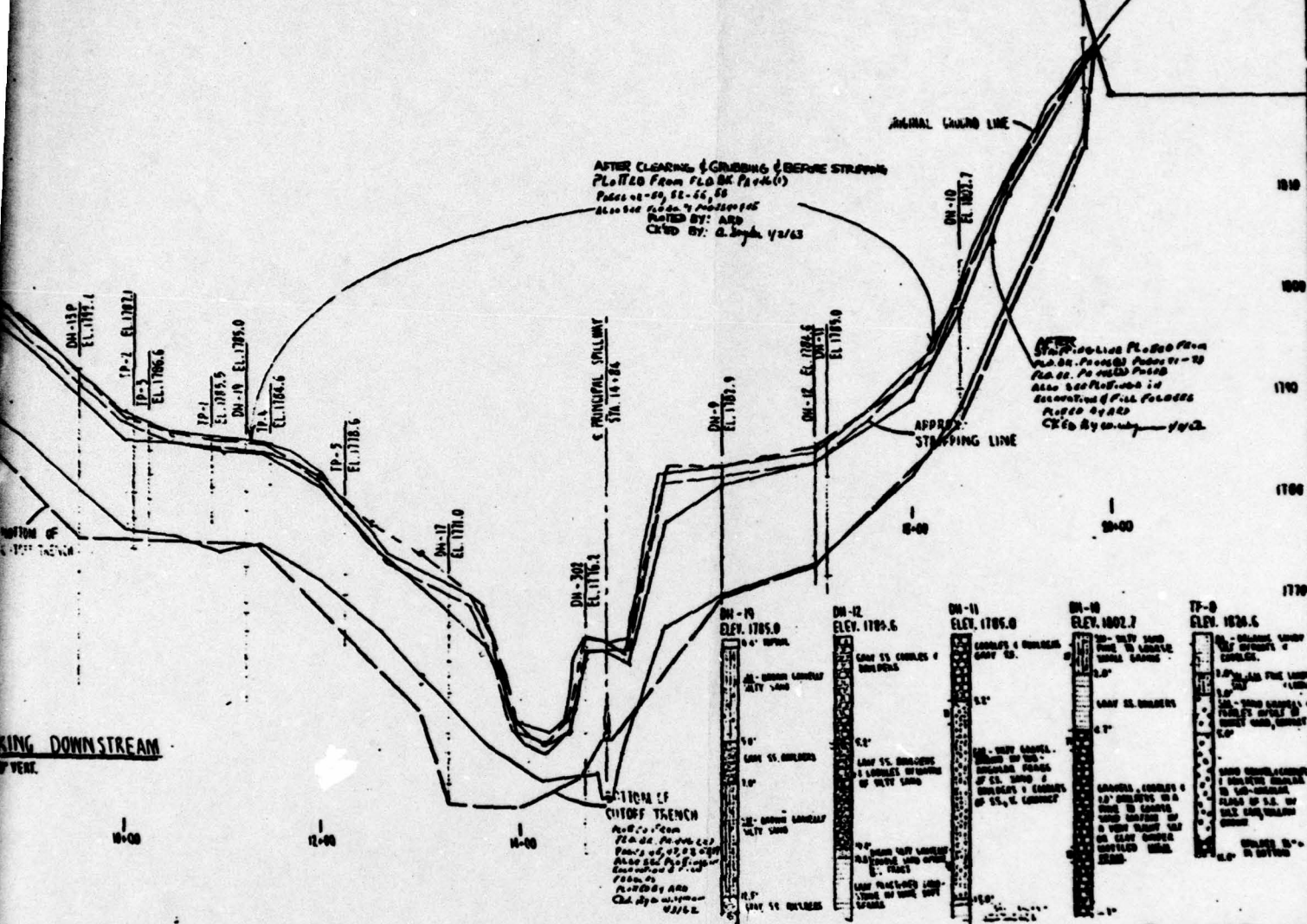
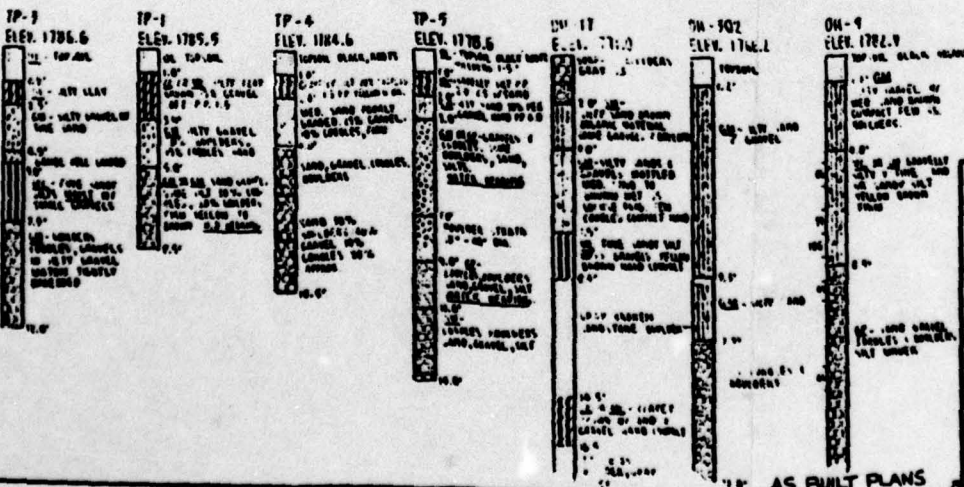


PLATE 3



DATE OF GEOMATIC INVESTIGATION: DEL. 1960
 METHOD: SOIL INVESTIGATION BY VISUAL INSPECTION

NOTE: NUMBERS TO LEFT OF DRAIN LINES INDICATE
 DRAIN COURT.
 "INCHES WT. 140"
 "DRY 50"

GREENE - DREHER WATERSHED PROJECT
 WAYNE, PIKE AND MONROE COUNTIES, PENNSYLVANIA
 FLOODWATER RETARDING DAM PA-446
 PIKE COUNTY
PROFILES

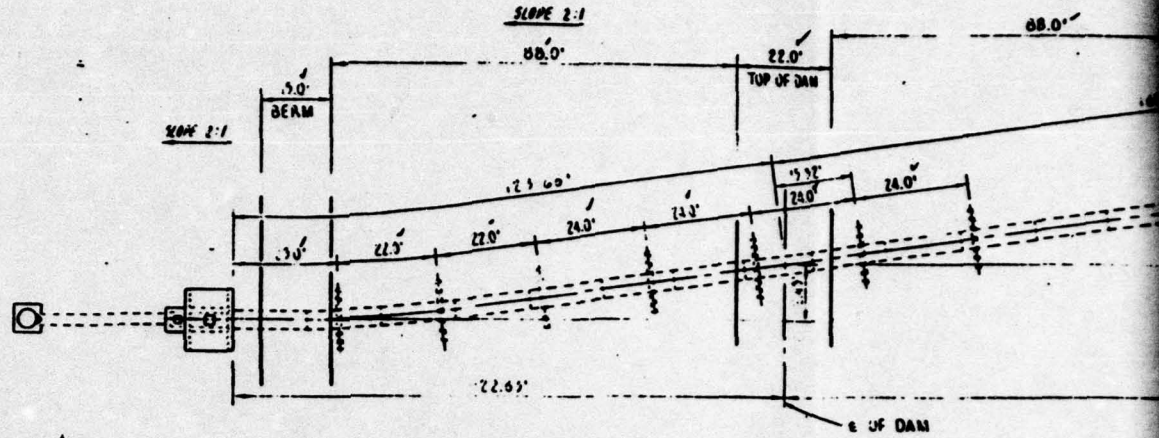
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed by C. PECRE
 Drawn by W. H. MORGAN
 Checked by
 Approved by
 Date
 Date
 Date
 Date

Sheet PA-446-
 Drawing No. 2

AS BUILT PLANS

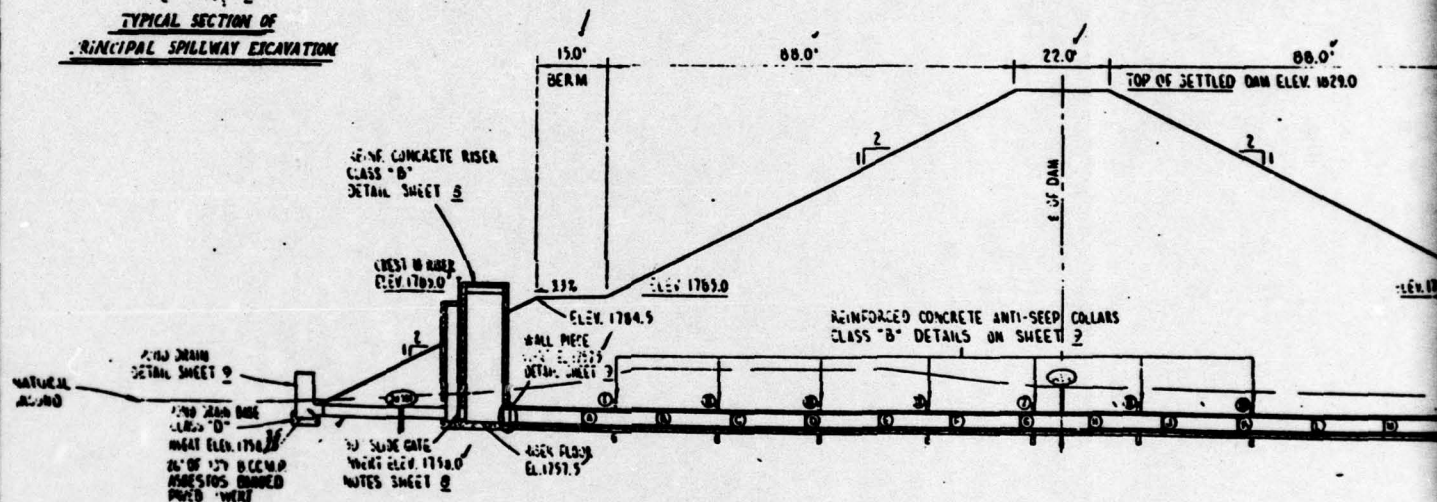
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COMPACTED FILL CLASS "B"

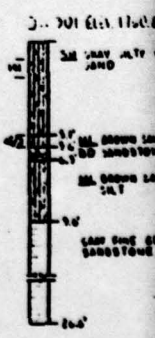
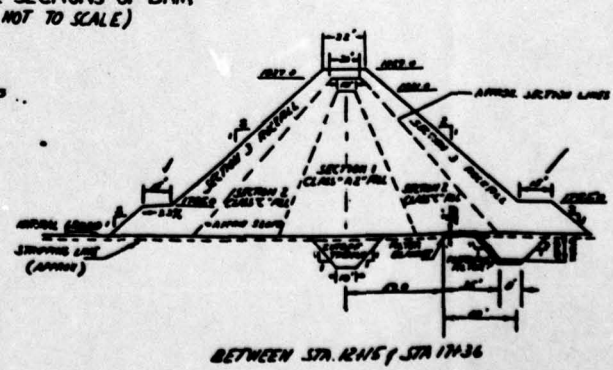
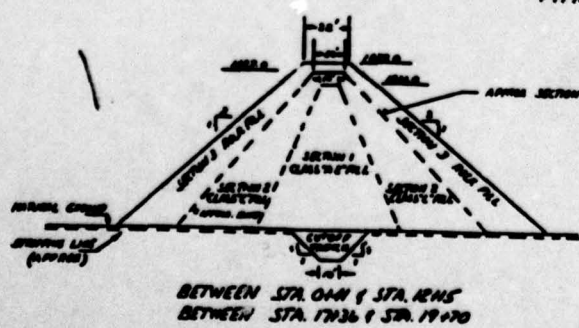


NOTE: FINAL ELEVATION OF PRINCIPAL SPILLWAY EXCAVATION WILL BE GIVEN BY ENGINEER IN THE FIELD.



NOTES.

1. ALL ORGANIC MATERIAL, LOOSE SOIL, & BOULGERS ARE TO BE REMOVED FROM UNDER THE FILL AREA AS DIRECTED BY THE ENGINEER. (SEE SPEC. 90)
2. ALL STEEP SLOPES & STEEP ROCK FACES IN THE FOUNDATION SHALL BE CUT TO A 1:1 SLOPE OR DIRECTED BY THE ENGINEER.
3. SECTION 1 SHALL CONSIST OF SILT (SM) & CLAY (CL) MATERIAL AS REPRESENTED ON THE LOG OF SOILS
 (a) 0'-02" FROM 3.0' TO 7.5'
 (b) 0'-11" FROM 5.0' TO 7.0'
 (c) 0'-11" FROM 1.5' TO 6.0'
 (d) 0'-11" FROM 1.5' TO 6.0'
 (SEE SPEC. 9 "EARTH FILL")
4. SECTION 2 SHALL CONSIST OF SILTY SANDS (SM), SILTY GRAVELS (GM) & CONCRETES FROM THE DESIGNATED SOURCE AREAS (SEE SPEC. 9A "EARTH FILL - CLAY")
5. SECTION 3 SHALL CONSIST OF ROCK OBTAINED BY MAKING SECTION 1 & 2 OR EXCAVATING SANDSTONE FROM THE EMERGENCY SPILLWAY CUT. (SEE SPEC. 8 "ROCK FILL")
6. THE FINAL PLACEMENT OF FILL MATERIALS & PROPORTIONING OF SECTIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.



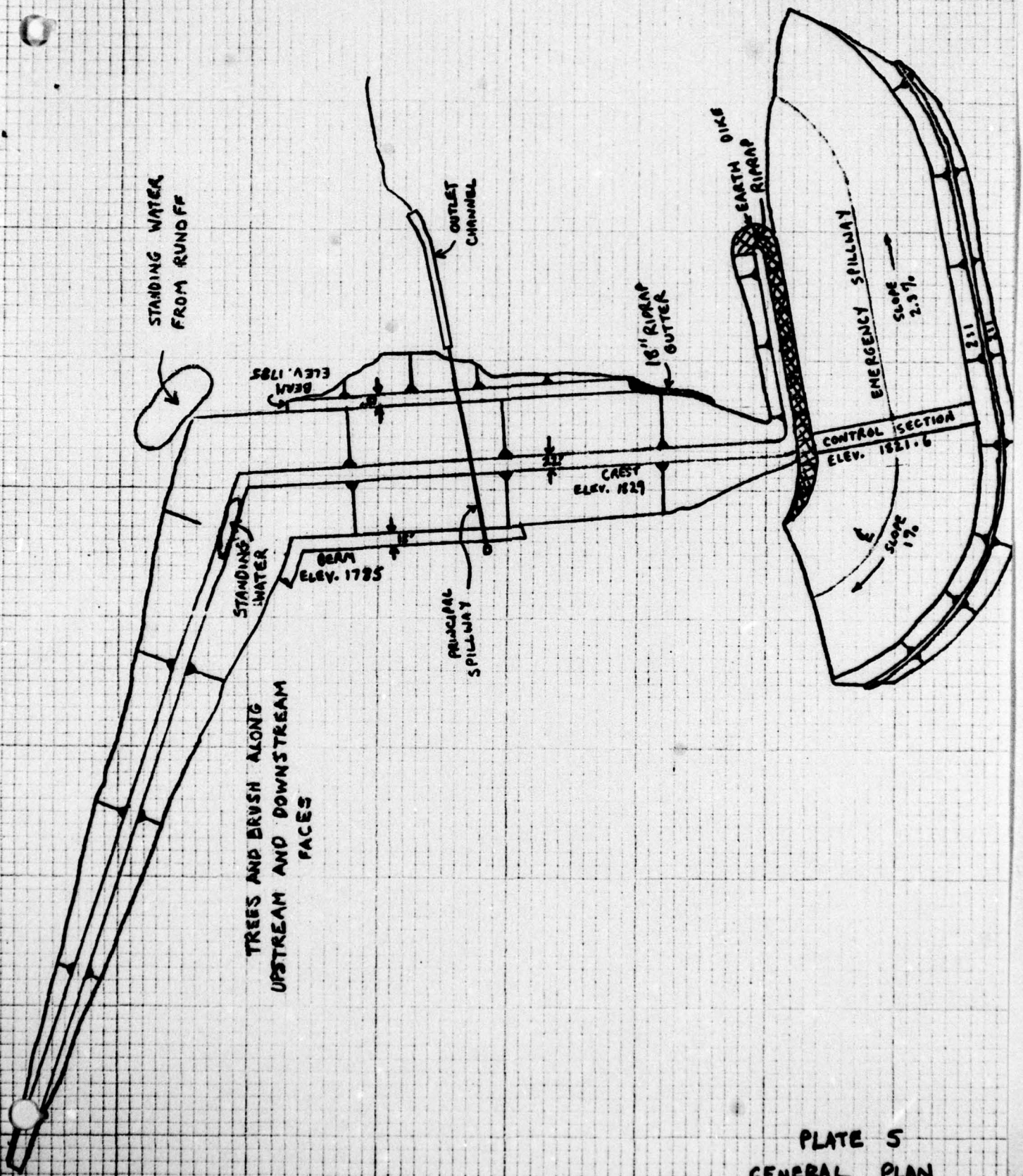
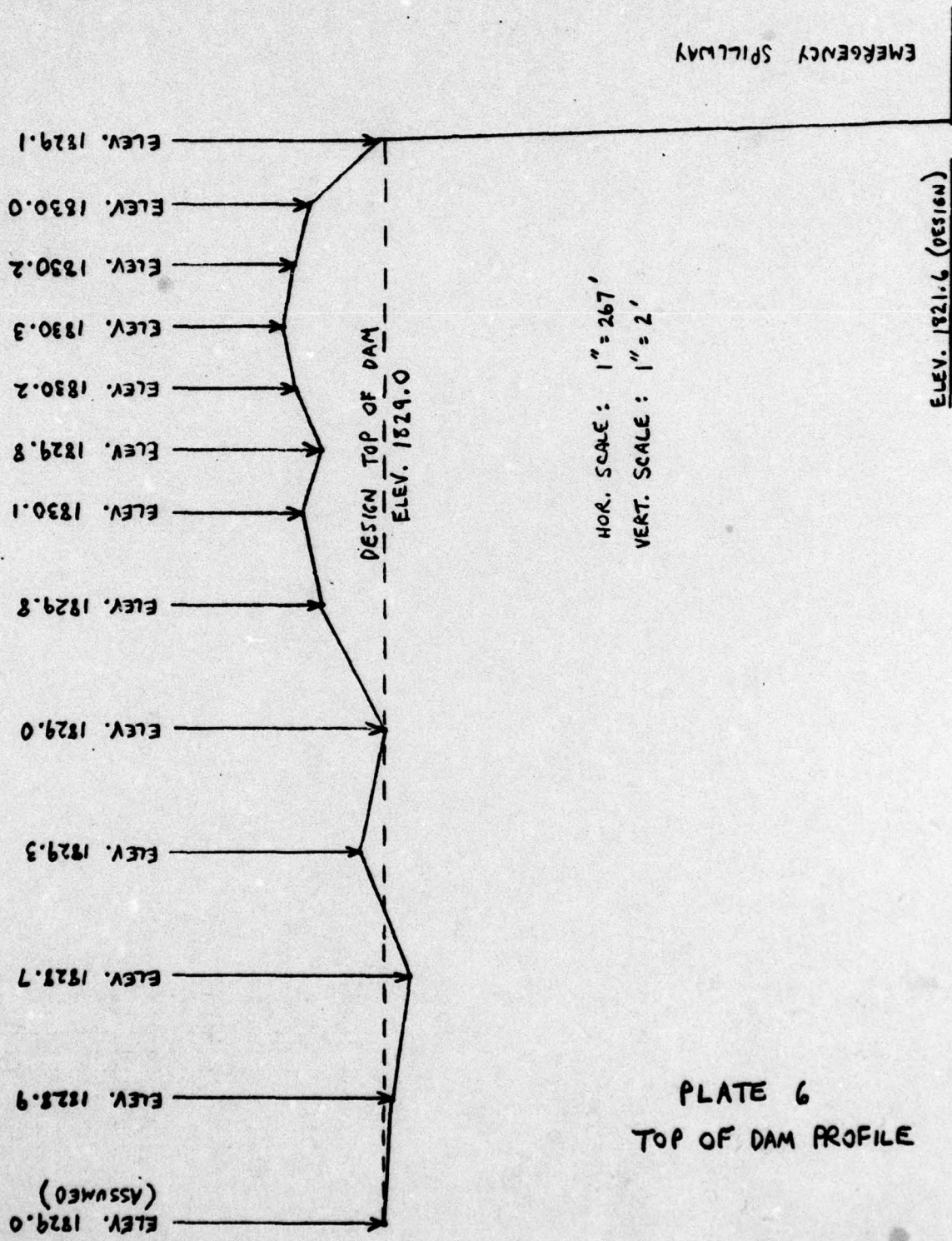


PLATE 5
 GENERAL PLAN
 DRAWING

PROJECT	TAYLOR POND DAM	SHEET	BY	DATE	JOB NO.
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HOR. SCALE: 1" = 267'
VERT. SCALE: 1" = 2'

ELEV. 1821.6 (DESIGN)

PLATE 6
TOP OF DAM PROFILE

U

APPENDIX

F

Site Geology

O

SITE GEOLOGY

TAYLOR POND DAM

Taylor Pond Dam is situated in Pike County and within the limits of the Eastern Glaciated section of the Appalachian Plateau physiographic province. Thick deposits of glacially derived debris and till cover the nearly horizontally bedded, red, gray and green shale and sandstone units of the Devonian Catskill group of marine and continental sediments. The dam and lake both rest on glacial till and ground moraine deposits which are dense, compact and relatively permeable. Sandstone bedrock lies at relatively shallow depths in some portions of the site and was encountered and removed during construction of the emergency spillway.

No known faults or major structural defects occur in the bedrock in the vicinity of the dam and lake.

