OHIO VALLEY ELECTRIC CORPORATION
INDIANA- KENTUCKY ELECTRIC CORPORATION
3932 U. S. Route 23
P.O. Box 468
Piketon, Ohio 45661
740-289-7200

WRITER'S DIRECT DIAL NO:
(740) 289-7267

November 13, 2017

Mr. Bruno Pigott
Commissioner
Indiana Department of Environmental Management
100 N. Senate Avenue
Mail Code 50-01
Indianapolis, IN 46204-2205

Re: Indiana-Kentucky Electric Corporation
Clifty Creek Station
Notification of CCR Rule Information Posting
Annual Certified CCR Surface Impoundment Inspection Report

Dear Mr. Pigott:

As required by 40 CFR 257.106(g), the Indiana-Kentucky Electric Corporation (IKEC) is providing notification to the Commissioner (State Director) of the Indiana Department of Environmental Management that a qualified professional engineer has completed the annual CCR surface impoundment inspection in accordance with 40 CFR 257.83(b) for IKEC's Clifty Creek Station. The inspection report has been placed in the facility's Operating Record, as well as on the company's publically accessible internet site, which can be viewed at:

http://www.ovec.com/CCRCompliance.php

If you have any questions, or require any additional information, please call me at (740) 289-7267.

Sincerely,

Gabriel S. Coriell

Gabriel S. Coriell
Environmental Services Manager

GSC:klr

2017 ANNUAL DAM AND DIKE INSPECTION REPORT

West Boiler Slag Pond
&
Landfill Runoff Collection Pond

CLIFTY CREEK PLANT

Indiana-Kentucky Electric Corporation

MADISON, INDIANA

November 7, 2017

Prepared for: Indiana-Kentucky Electric Corporation
3932 U.S. Route 23
P.O. Box 468
Piketon, Ohio 45661

Prepared by: American Electric Power Service Corporation
1 Riverside Plaza
Columbus, OH 43215

GERS-17-043

Dam & Dike Inspection Report
West Boiler Slag Pond &
Landfill Runoff Collection Pond

GERS-17-043

REVISION 0

CLIFTY CREEK PLANT

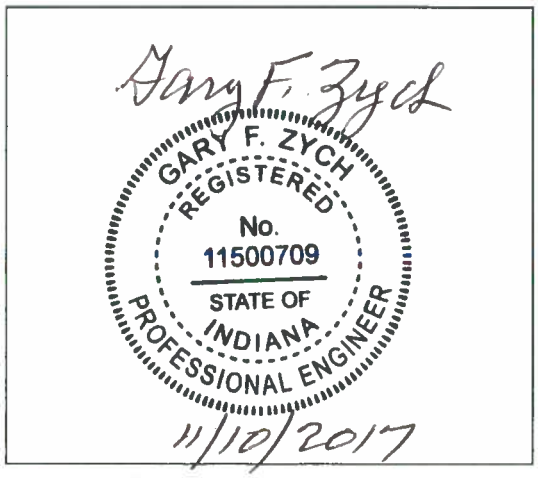
MADISON, INDIANA

INSPECTION DATE **October 12, 2017**

PREPARED BY Brett A. Dreger **DATE** 11/07/2017
Brett A. Dreger, P.E.

REVIEWED BY Mohammad A. Ajlouni **DATE** 11/8/2017
Mohammad A. Ajlouni, Ph.D.,P.E.

APPROVED BY Gary F. Zych **DATE** 11/10/2017
Gary F. Zych, P.E.
Manager - Geotechnical Engineering



PROFESSIONAL ENGINEER SEAL & SIGNATURE

I certify to the best of my knowledge, information and belief the information contained in this report meets the requirements of 40 CFR § 257.83(b).

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1.0 INTRODUCTION

This report was prepared by AEP- Geotechnical Engineering Services (GES) section, in part, to fulfill requirements of 40 CFR 257.83 and the Indiana Department of Natural Resource (IDNR), Division of Water and to provide Indiana-Kentucky Electric Corporation (IKEC) and Clifty Creek Station with an evaluation of the facility.

American Electric Power Service Corporation's Civil Engineering Division administers the Clifty Creek Station Dam Inspection and Maintenance Program (DIMP). As part of the DIMP, staff from the Geotechnical Engineering Services Section annually conducts dam and dike inspections. This report contains the inspection findings, observations, photographic descriptions, conclusions, and maintenance recommendations. This inspection report addresses the West Boiler Slag Pond (Previously known as West Bottom Ash Pond), and Landfill Runoff Collection Pond (Previously known as Fly Ash Pond) at the Clifty Creek Station. The East Bottom Ash Pond (EBAP) is no longer active for ash storage and waste water treatment. The EBAP was drained, backfilled and closed converted to a surface water collection pond in the 2014.

Mr. Danny Hunt, Plant Engineer, Clifty Creek Station provided onsite coordination for inspection activities. The inspection was performed on October 12, 2017 by Brett Dreger of AEP Geotechnical Engineering. Weather conditions were cloudy with temperatures in upper 50's F to low 60's F, with good visibility.

2.0 DESCRIPTIONS OF IMPOUNDMENTS

2.1 WEST BOILER SLAG POND

The West Boiler Slag Pond (WPSP) (Figure 1) is located southwest of the station. It is formed by natural grade to the north, east, and west and a dam on the south that runs along the bank of the Ohio River. The West Boiler Slag Pond serves as a settling basin for sluiced bottom ash produced at the station and receives stormwater runoff from approximately 510 acres (Stantec, 2010a). The West Boiler Slag Pond is used for the storage of bottom ash generated from all six generating Units. It consists of a single dike that is approximately 2,000 feet long and is approximately 35 feet high. The pond contains two primary areas: the eastern portion near the sluice pipes that is actively dredged and a western portion with minimal deposition or dredging activities. A vegetation delta separates the two as a natural filtering zone. The pond discharges to the Ohio River through a principal spillway at the southern edge of the impoundment.

2.2 LANDFILL RUNOFF COLLECTION POND

The Landfill Runoff Collection Pond (LRCP) is located at the southern edge of the station. It is bordered by the station's coal combustion residuals (CCR) landfill to the north, natural grade to the east and west, and by a dam to the south that runs along the bank of the Ohio River.

The LRCP dam is a cross valley dam located on a no-name tributary to the Ohio River. The dam is approximately 1,025 feet long and has a maximum height of 75 feet. Currently, the facility functions as the stormwater and leachate collection pond for the CCR landfill, and discharges to the Ohio River through a NPDES-permitted outfall.

Approximately 508 acres of both landfill contact water and stormwater runoff drain to the FAP/LRCP. Upon the completion of the CCR landfill, the area draining to the FAP/LRCP will be reduced to approximately 443 acres.

3.0 REVIEW OF AVAILABLE INFORMATION (257.83(b)(1)(i))

A review of available information regarding the status and condition of the West Boiler Slag Pond and the Landfill Runoff Collection Pond, which include files available in the operating record, such as design and construction information, previous periodic structural stability assessments, previous 7 day inspection reports, and previous annual inspections has been conducted. Based on the review of the data there were no signs of actual or potential structural weakness or adverse conditions.

4.0 INSPECTION (257.83(b)(1)(ii))

4.1 General

The summary of the visual observations uses terms to describe the general appearance or condition of an observed item, activity or structure. Their meaning is understood as follows:

Good: A condition or activity that is generally better or slightly better than what is minimally expected or anticipated from a design or maintenance point of view.

Fair or Satisfactory: A condition or activity that generally meets what is minimally expected or anticipated from a design or maintenance point of view.

Poor: A condition or activity that is generally below what is minimally expected or anticipated from a design or maintenance point of view.

Minor: A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is below what is normal or desired, but which is not currently causing concern from a structure safety or stability point of view.

Significant: A reference to an observed item (e.g. erosion, seepage, vegetation, etc.) where the current maintenance program has neglected to improve the condition. Usually, conditions that have been previously identified in the previous inspections, but have not yet been corrected.

Excessive: A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is below or worse than what is normal or desired, and which may have affected the ability of the observer to properly evaluate the structure or particular area being observed or which may be a concern from a structure safety or stability point of view.

In addition, a "deficiency" is some evidence that a dam or dike has developed a problem that could impact the structural integrity of the impoundment. There are four general categories of deficiencies. These four categories are described below:

1. Uncontrolled Seepage

   Uncontrolled seepage is seepage that is not behaving as the design engineer has intended. An example of uncontrolled seepage is seepage that comes through or around the embankment and is not picked up and safely carried off by a drain. Seepage that is collected by a drain can still be uncontrolled if it is not safely collected and transported, such as seepage that is not clear. Seepage that is unable to be measured and/or observe it is considered uncontrolled seepage. [Wet or soft areas are not considered as uncontrolled

seepage, but can lead to this type of deficiency. These areas should be monitored frequently.]

2. Displacement:

   Displacement is a large scale movement of the Coal Combustion By Products, structural fill or other earthen material associated with the landfill. Common signs of displacement are cracks, scraps, bulges, depressions, sinkholes and slides.

3. Blockage of Control Features:

   Blockage of Control Features is the restriction of flow at storm water ditches/channels, leachate collection and ground water interceptor drains.

4. Erosion:

   Erosion is the gradual movement of surface material by water, wind or ice. Erosion is considered a deficiency when it is more than a minor routine maintenance item.

Results of the visual inspection performed on October 12, 2017, are summarized below, with inspection photographs included in Appendices A and B.

4.2 BOILER SLAG POND

4.2.1 CHANGES IN GEOMETRY SINCE LAST INSPECTION (257.83(b)(2)(i))

No modifications have been made to the geometry of the Boiler Slag Pond since the 2016 annual inspection. The geometry of the impoundment has remained essentially unchanged.

4.2.2 INSTRUMENTATION (257.83(b)(2)(ii))

The location and type of instrumentation is shown on Figure 1. The results of the measurements of various piezometers since September 2015 are shown in Figure 2. The maximum recorded readings of each instrument since the previous annual inspection is shown in Table 1.

Table 1 WBSP Maximum recorded instruments reading since the previous annual inspection

INSTRUMENTATION DATA **West Boiler Slag Pond**			
Instrument	**Type**	**Maximum Reading since last annual inspection**	**Date of Reading**
PZ-1 (B-1)	Piezometer	Dry	N/A
PZ-3 (B-3)	Piezometer	436.1	7/12/2017
PZ-4 (B-4)	Piezometer	428.0	7/12/2017
PZ-5 (B-5)	Piezometer	431.0	8/04/2017

A review of the data contained on the WBSP static water elevation plot showed that all piezometers exhibit consistent water elevations. PZ-1 is a piezometer located at the crest of the constructed dike (shown as B-1 on location plan) which was dry for readings in 2017. PZ-2 is a piezometer located along a bench near the downstream toe of the constructed dike (shown as B-2 on location plan) which was damaged and abandoned. PZ-3 is a piezometer located at the crest of the constructed dike (shown as B-3 on location plan). PZ-4 is a piezometer located along a bench near the downstream toe of the constructed dike (shown as B-4 on location plan). PZ-5 is a piezometer located at the crest of

the constructed dike (B-5 on location plan) and was dry for a few of the past 12 months readings, but there were several readings with water levels recorded. There were also a few months were the well was under water.

4.2.3 IMPOUNDMENT *CHARACTERISTICS* (257.83(b)(2)(iii, iv, v))

Below is a summary of the minimum, maximum, and present depth and elevation of the impounded water & CCR since the previous annual inspection; the storage capacity of the impounding structure at the time of the inspection; and the approximate volume of the impounded water and CCR at the time of the inspection.

Table 2 Summary of Relevant Storage Information WBAP

IMPOUNDMENT CHARACTERISTICS **West Boiler Slag Pond**	
Approximate **Minimum** depth (Elevation) of impounded water since last annual inspection	13 ft. (446) ft.
Approximate **Maximum** depth (Elevation) of impounded water since last annual inspection	15.5 ft. (448.5) ft.
Approximate **Present** depth (Elevation) of impounded water since last annual inspection	13.4 ft. (446.4) ft.
Approximate **Minimum** depth (Elevation) of CCR since last annual inspection	7.5 ft. (440) ft.
Approximate **Maximum** depth (Elevation) of CCR since last annual inspection (ft.)	7.5 ft. (440 ft.)
Approximate **Present** depth (Elevation) of CCR since last annual inspection	7.5 ft. (440 ft.)
Storage Capacity of impounding structure at the time of the inspection	1,950,000 c.y.
Approximate volume of impounded water at the time of the inspection	837,000 c.y.
Approximate volume of CCR at the time of the inspection	782,000 c.y.

4.2.4 VISUAL INSPECTION (257.83(b)(2)(i))

A visual inspection of the West Boiler Slag Pond was conducted to identify any signs of distress or malfunction of the impoundment and appurtenant structures. The inspection also included hydraulic structures underlying the base of the dike. Specific items inspected included all structural elements of the dam such as inboard and outboard slopes, crest, and toe; as well as appurtenances such as the outlet structure at the West Boiler Slag Pond, and pipe discharge structure.

– See Appendix A for Photographs and photographs location plan

In general, the interior and exterior slopes of the dike appear to be in satisfactory and stable condition. No significant change to the exterior slope was noted from the previous inspection. No significant settlement or misalignment was observed. Seeps were not observed during the inspection. No animal burrows were observed during the inspection.

1. Photographs No. 1 and 2 illustrate a typical overview of the dike crest. The crest appears to be in good and stable condition. Signs of settlement, misalignment and cracking were not observed.

2. Photographs No. 3, 4 and 6 illustrate the condition of the interior slopes at the settling end of the pond and the present extent of boiler slag buildup. The interior slope of the east dike at this end of the pond appeared to be in satisfactory and stable condition.

3. Photograph No. 5 shows a location where the use of the remotely controlled mower, appear to have caused disturbance to the inboard slopes at areas where the soil is more granular (bottom ash).

4. Photograph No. 7 shows the Principal Spillway and Decant Structure along with some localized overgrown vegetation near the access stairs and water line. The overflow structure appeared to be in satisfactory condition.

5. The overflow discharge structure walkway, railings, metal decking, and visible concrete were found to be in satisfactory, functional condition. Photographs No. 7, 8, and 9 illustrate the access metal walkway, metal deck, spare stop logs and interior of the overflow discharge structure.

6. Photographs No. 10, 11 and 12 shows the general condition of the exterior slope of the south dike. The slope appeared in satisfactory and stable condition. There were no signs of settlement, misalignment, sloughing or erosion. No wet areas were noted during this inspection except along the toe area where it appears there was standing water in tire ruts caused from mowing activities.

7. Photograph No. 13 and No. 14 show the typical condition of the discharge pipe and outlet channel. Erosion at the confluence of the channel and the river was consistent with the conditions observed in the past years. The channel and outlet pipe were observed to be in good condition and were unobstructed and flowing steadily.

Overall the facility is in satisfactory condition. The impoundment is functioning as intended with no signs of potential structural weakness or conditions which are disrupting to the safe operation of the impoundment. Additional pictures taken during the inspection can be made available upon request.

4.2.5 CHANGES THAT EFFECT STABILITY OR OPERATION (257.83(b)(2)(vii))

Based on interviews with plant personnel and field observations there were no changes to the West Boiler Slag Pond since the last annual inspection that would affect the stability or operation of the impounding structure.

4.3 LANDFILL RUNOFF COLLECTION POND

4.3.1 CHANGES IN GEOMETRY SINCE LAST INSPECTION (257.83(b)(2)(i))

No modifications have been made to the geometry of the Landfill Runoff Collection Pond since the 2016 annual inspection. The geometry of the impoundment has remained essential unchanged. However, In June of 2017 a repair to the northern section of the downstream slope was performed to stabilize previous sloughing activity. A section of the downstream slope approximately 100 feet wide and extending from the toe to the crest was stabilized by excavating the loose material from the sloughing activity and placing a geotextile fabric and approximately 18-24 of stone rip rap. A seepage collection pipe was installed along the toe area of the rip rap.

4.3.2 INSTRUMENTATION (257.83(b)(2)(ii))

The location and type of instrumentation is shown on Figure 3. The results of the measurements of various piezometers since September 2015 are shown in Figure 4. The maximum recorded readings of each instrument since the previous annual inspection is shown in Table 3 below.

Table 3 LRCP Maximum recorded instruments reading since the previous annual inspection

INSTRUMENTATION DATA **Landfill Runoff Collection Pond**			
Instrument	**Type**	**Maximum Reading since last annual inspection**	**Date of reading**
CF-9405	Piezometer	443.39	6/01/2017
CF-9406	Piezometer	443.25	6/01/2017
CF-9407	Piezometer	454.01	3/03/2017
SP-84-1	Piezometer	471.90	3/03/2017
SP-84-2	Piezometer	446.08	6/01/2017
SP-84-4	Piezometer	Dry	
SP-84-5	Piezometer	441.76	6/01/2017
SP-84-6	Piezometer	Dry	
SP-84-7	Piezometer	451.79	3/03/2017
SP-84-8A	Piezometer	453.26	3/03/2017

There are piezometers and monitoring wells installed in and around the LRCP dam. Plan views showing the location of those piezometers and monitoring wells can be found in Appendix C along with plots of the historical static water levels for each location.

A review of the LRCP static water elevation plot indicates that two of the piezometers (SP-84-1 and SP-84-6) located along the crest of the dam historically exhibit consistent water elevations. Further review of the static water elevation plot indicates that the static water levels for the other piezometers and monitoring wells generally fluctuate as a result of the fluctuations in the pool and the river elevations.

4.3.3 IMPOUNDMENT CHARACTERISTICS (257.83(b)(2)(iii, iv, v))

Below is a summary of the minimum, maximum, and present depth and elevation of the impounded water & CCR since the previous annual inspection; the storage capacity of the impounding structure at the time of the inspection; and the approximate volume of the impounded water and CCR at the time of the inspection.

Table 4 Summary of Relevant Storage Information LRCP

IMPOUNDMENT CHARACTERISTICS **Landfill Runoff Collection Pond**	
Approximate **Minimum** depth (Elevation) of impounded water since last annual inspection	10.5 ft. (485.5) ft.
Approximate **Maximum** depth (Elevation) of impounded water since last annual inspection	12.5 ft. (487.5) ft.
Approximate **Present** depth (Elevation) of impounded water since last annual inspection	11.25 ft. (486.25) ft.

Approximate **Minimum** depth (Elevation) of CCR since last annual inspection	45 ft. (475) ft.
Approximate **Maximum** depth (Elevation) of CCR since last annual inspection (ft.)	45 ft. (475) ft.
Approximate **Present** depth (Elevation) of CCR since last annual inspection	45 ft. (475) ft.
Storage Capacity of impounding structure at the time of the inspection	930,000 c.y.
Approximate volume of impounded water at the time of the inspection	553,000 c.y.
Approximate volume of CCR at the time of the inspection	3,150,000 c.y.

4.3.4 VISUAL INSPECTION (257.83(B)(2)(i))

A visual inspection of the Landfill Runoff Collection Pond was conducted to identify any signs of distress or malfunction of the impoundment and appurtenant structures. The inspection also included hydraulic structures underlying the base of the dike. Specific items inspected included all structural elements of the dam such as inboard and outboard slopes, crest, and toe; as well as appurtenances such as the outlet structure at the Landfill Runoff Collection Pond, and pipe discharge structure.

– See Appendix B for Photographs and photographs location plan

Overall, the exterior slope is well vegetated and in stable condition. There were no signs of new sloughing, depressions or areas of wetness and no seeps were apparent. Control of surface vegetation was considered satisfactory. The spillway outlet and discharge channel appear to have no obstructions or increased vegetation growth, however, flow was minimal at the time of the inspection.

1. Photographs Nos. 1, 2 and 3 show the generally condition of the crest of the dam. Signs of misalignment and settlement were not observed. Minor surface cracks in the pavement were observed. Those cracks are attributed to the age of the pavement and the effects from weathering.

2. Photographs Nos. 4, 5, 6 and 7 provide overviews of the interior slope of the dam above the operating pool. Vegetation control near the water line and the upper slope areas is lacking, however, erosion due to wave action was not observed. Overall the slope was found to be in satisfactory and stable condition.

3. Photographs No. 8, 9 and 10 are an overview of the principal spillway decant structure. Vegetation control was observed to be satisfactory. The decant structure and the access stairway appeared to be functioning properly and was free of obstructions. Photograph No.8 shows the recently added pipe to allow for treatment of discharged water.

4. Photograph Nos. 11 is an overview of the principal spillway outlet channel. The channel is unobstructed with minimal flow at the time of the inspection.

5. Photographs No's. 12 through 18 are all overviews of various areas of the exterior face of the dam as further described with each photograph. Throughout, vegetation control was adequate and there were no signs of sloughing, erosion or instability. No visible change was observed from previous inspections. In general, the exterior slope appeared to be in satisfactory and stable condition

6. Photograph No.13 and No. 14 shows the previously repaired slope area that experienced sloughing/slip near the left abutment. The repair also included installing a seepage collection pipe at the toe of rip rap placement. The pipe showed minimal flow at the time of inspection.

Overall the facility was in satisfactory condition. The impoundment is functioning as intended with no signs of potential structural weakness or conditions which are disrupting to the safe operation of the impoundment.

4.3.5 CHANGES THAT EFFECT STABILITY OR OPERATION (257.83(b)(2)(vii))

Based on interviews with plant personnel and field observations there were no changes to the Landfill Runoff Collection Pond since the last annual inspection that would affect the stability or operation of the impounding structure.

5.0 SUMMARY OF FINDINGS

5.1 MAINTENANCE ITEMS

The following maintenance items were identified during the visual inspection:

West Boiler Slag Pond

- An evaluation of the use of the remotely controlled mower, purchased by the plant indicates that the anchors in the tracks are apparently disturbing the inboard slopes at areas (photo #5) where soil is more granular (bottom ash). Weed waking or other mowing techniques is recommended for these areas.
- Vegetation height was moderate at local areas on the inboard slopes of the WBSP (photo #4). These areas should be weed waked to prevent damage to the existing riprap in these areas.

Landfill Runoff Collection Pond

- Vegetation height was moderate to high on the inboard slopes of the LCRP near the top of the slope and at the water line. These areas should be maintained on a regular basis.

5.2 ITEMS TO MONITOR

West Boiler Slag Pond

- There are no items to monitor.

Landfill Runoff Collection Pond

- There are no items to monitor.

5.3 DEFICIENCIES (257.83(b)(2)(vi))

There were no deficiencies or signs of structural weakness or disruptive conditions that were observed at the time of the inspection that would require additional investigation or remedial action. There were no deficiencies noted during any of the periodic 7-day or 30-day inspections. If any of these conditions occur before the next annual inspection contact AEP Geotechnical Engineering immediately.

If you have any questions with regard to this report, please contact Brett Dreger at 614-716-2258 (Audinet: 200-2258) or Gary Zych at 614-716-2917 (Audinet: 200-2917).

FIGURES

FIGURE 1. WEST BOILER SLAG POND INSTRUMENTS LOCATION PLAN

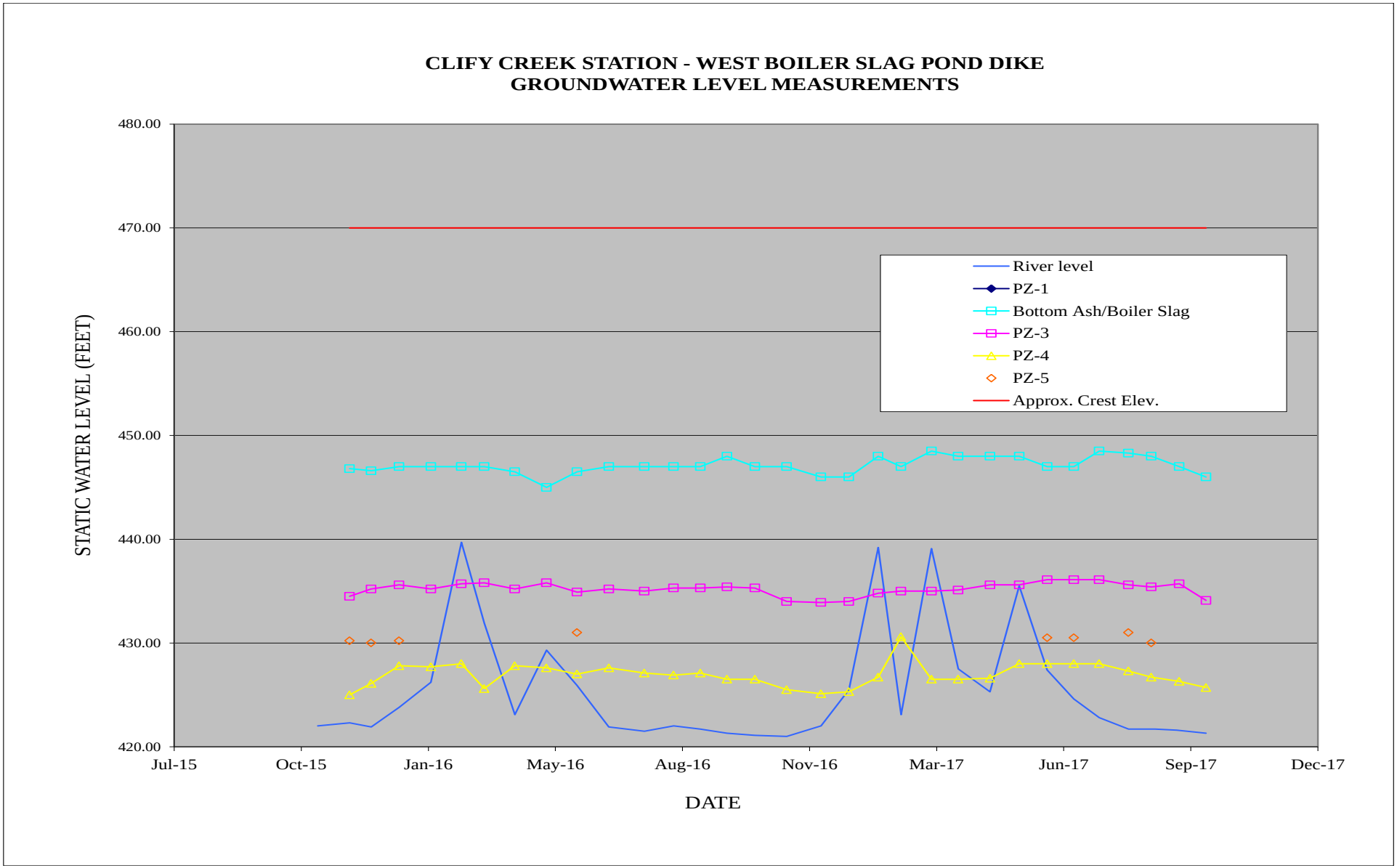

FIGURE 2. WEST BOILER SLAG POND GROUNDWATER LEVEL MEASUREMENTS

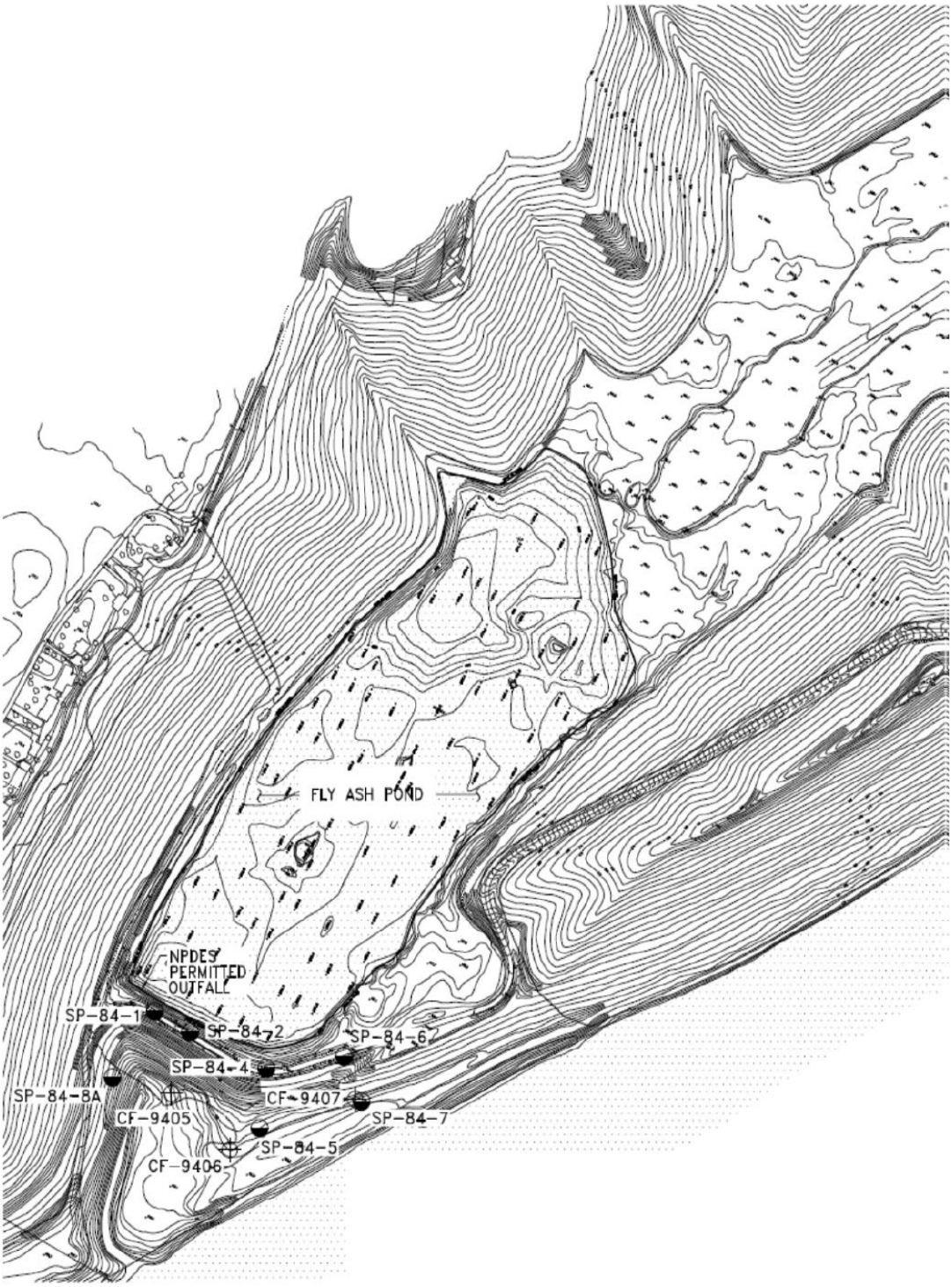

FIGURE 3. LANDFILL RUNOFF COLLECTION POND INSTRUMENTS LOCATION PLAN

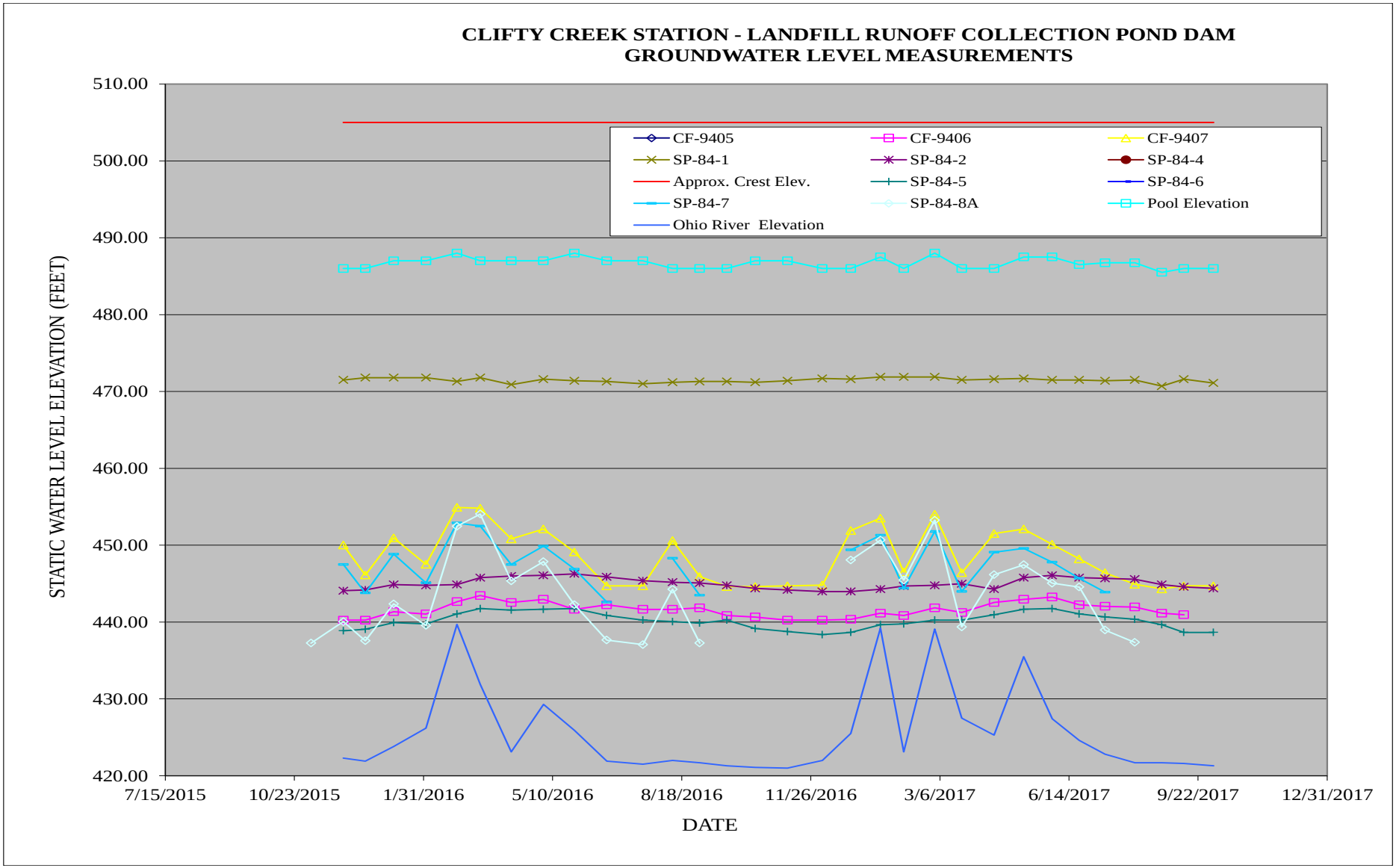

FIGURE 4. LANDFILL RUNOFF COLLECTION POND GROUNDWATER LEVEL MEASUREMENTS

APPENDICIES

APPENDIX A

WEST BOILER SLAG POND
DIKE INSPECTION PHOTOGRAPHS

APPENDIX A
CLIFTY CREEK WEST BOILER SLAG POND
DIKE INSPECTION PHOTOGRAPHS

	**Photo No. 1** West Boiler Slag Pond Dike From Crest Looking West. Overview of Crest
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	**Photo No. 3** West Boiler Slag Pond – Near West End of Interior Slope Area where some surface disturbance caused by the remotely controlled mower

APPENDIX A
CLIFTY CREEK WEST BOILER SLAG POND
DIKE INSPECTION PHOTOGRAPHS

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APPENDIX A
CLIFTY CREEK WEST BOILER SLAG POND
DIKE INSPECTION PHOTOGRAPHS

	**Photo No. 7** West Boiler Slag Pond – Principal Spillway and Decant Structure. Overview of General Condition
	**Photo No. 8** West Boiler Slag Pond – Principal Spillway and Decant Structure Stairway Access. Overview of General Condition
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APPENDIX A
CLIFTY CREEK WEST BOILER SLAG POND
DIKE INSPECTION PHOTOGRAPHS

	**Photo No. 10** West Boiler Slag Pond Dike – Exterior Slope From Toe Area Looking East Overview of general conditions.
	**Photo No. 11** West Boiler Slag Pond Dike – Exterior Slope From Toe Area Looking East. Overview of toe area showing ponding of water in tire ruts from mowing activitites.
	**Photo No. 12** West Boiler Slag Pond Dike – Exterior Slope form toes Area Looking West. General Condition.

APPENDIX A
CLIFTY CREEK WEST BOILER SLAG POND
DIKE INSPECTION PHOTOGRAPHS

	**Photo No. 13** West Boiler Slag Pond Dike – Principal Spillway Outlet Pipe Channel. Looking South Into Ohio River. Overview of Vegetation and General Condition
	**Photo No. 14** West Boiler Slag Pond Dike – Principal Spillway Outlet Pipe. Overview of General Conditions.

APPENDIX B

LANDFILL RUNOFF COLLECTION POND
INSPECTION PHOTOGRAPHS

APPENDIX B
CLIFTY CREEK LANDFILL RUNOFF COLLECTION POND
DAM INSPECTION PHOTOGRAPHS

	**Photo No. 1** Landfill Runoff Collection Pond Dam From Crest Looking Southwest Across Saddle Dam. General Overview.
	**Photo No. 2** Landfill Runoff Collection Pond Dam From Crest Looking Northeast. General Overview.
	**Photo No. 3** Landfill Runoff Collection Pond Dam From Crest Looking East. General Overview.

APPENDIX B
CLIFTY CREEK LANDFILL RUNOFF COLLECTION POND
DAM INSPECTION PHOTOGRAPHS

	**Photo No. 4** Landfill Runoff Collection Pond Dam From Up Stream Slope Overview of Current Operating Pool and Vegetation Conditions on Interior Slope. Significant vegetation Growth along the Upstream of Dam.
	**Photo No. 5** Landfill Runoff Collection Pond Dam From Up Stream Slope Overview of Current Operating Pool and Vegetation Conditions on Interior Slope Adjacent to Saddle Dam
	**Photo No. 6** Landfill Runoff Collection Pond Dam From Up Stream Slope Overview of Vegetation and General Conditions.

APPENDIX B
CLIFTY CREEK LANDFILL RUNOFF COLLECTION POND
DAM INSPECTION PHOTOGRAPHS

Photo No. 7

Landfill Runoff Collection Pond Dam From Upstream slope Looking South.

Overview of Pool Area and Vegetation Management and General Condition.

Photo No. 8

Landfill Runoff Collection Pond Principal Spillway Structure.

Recently Added Pipe To allow for treatment of discharged water.

Photo No. 9

Landfill Runoff Collection Pond Principal Spillway Structure.

Looking At Access Stairs General Condition.

APPENDIX B
CLIFTY CREEK LANDFILL RUNOFF COLLECTION POND
DAM INSPECTION PHOTOGRAPHS

	**Photo No. 10** Landfill Runoff Collection Pond Principal Spillway Structure. Looking at Drop Inlet for Treatment Pipe.
	**Photo No. 11** Landfill Runoff Collection Pond Principal Spillway Outlet. General Overview.
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APPENDIX B
CLIFTY CREEK LANDFILL RUNOFF COLLECTION POND
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	**Photo No. 13** Landfill Runoff Collection Pond Dam From Bottom of Saddle Dam/Rip/Rap Interface. Localized Sloughing and Slips Were Repaired with a Rock Rip Rap Placement.
	**Photo No. 14** Landfill Runoff Collection Pond Dam Seepage Drain Pipe From Bottom of Rip/Rap Slope Area. General Conditions. Pipe Showed Minimal Flow.
	**Photo No. 15** Landfill Runoff Collection Pond Dam From Roadway Leading to Crest Looking Northeast. General Overview.

APPENDIX B
CLIFTY CREEK LANDFILL RUNOFF COLLECTION POND
DAM INSPECTION PHOTOGRAPHS

	**Photo No. 16** Landfill Runoff Collection Pond Dam Looking Up at Roadway Leading to Crest Area. General Overview
	**Photo No. 17** Landfill Runoff Collection Pond Dam Exterior Slope Looking Southwest. Overview of Vegetation and General Conditions.
	**Photo No. 18** Landfill Runoff Collection Pond Dam Exterior Slope Looking From Top of Slope In Right Groin Looking East. Overview of Vegetation and General Conditions.