

DAM INSPECTION CHECKLIST
Department of Environmental Protection
Bureau of Waterways Engineering
Division of Dam Safety

NAME OF DAM: Milltown Dam

DEP DAM NO.: 15-146

LOCATION: Municipality: East Goshen Township

County: Chester

DEP CLASSIFICATION DATA: Size: C

Hazard: 1

PHYSICAL DATA:

Type of Dam: Earth w/
Concrete Core

Height of Dam: 20 feet

Normal Pool Storage Capacity: 114 ac-ft

ELEVATIONS:

Normal Pool: 345 ft

Pool at Inspection: 345.2 ft +/-

Tailwater at Inspection: 329 ft +/-

DAM OWNER: East Goshen Township

OPERATOR: East Goshen Township

ADDRESS: 1580 Paoli Pike

West Chester, PA

PHONE: 610 692 7171

FAX NO.: 610 692 8950

E-MAIL ADDRESS: rsmith@eastgoshen.org

A completed and signed Dam Owners Notice Checklist is to accompany this Inspection Checklist.

PERSONS PRESENT AT INSPECTION:

Name

Title/Position

Representing

Rick Smith

Township Manager

East Goshen Township

Steve Biondi

Asst. Public Works Foreman

East Goshen Township

Abdel Nassani

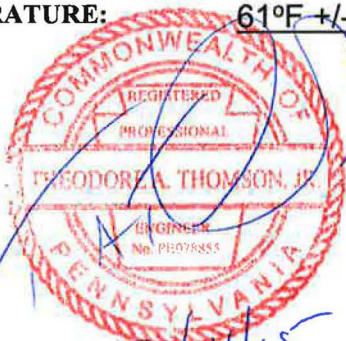
Dam Engineer

PA DEP Dam Safety

DATE OF INSPECTION: 5/20/2015

WEATHER: Sunny

TEMPERATURE: 61°F +/-



This is to certify that the above dam has been inspected and the following are the results of this inspection.

[Signature]
Signature of Registered Professional Engineer
(P.E. Seal Required)

7/14/15
Date

NAME OF DAM: Milltown Dam	DEP DAM NO.: 15-146	DATE: 7-14-15
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ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
EMBANKMENT: CREST					
1	Surface Cracking	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Sinkhole, Animal Burrow	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Low Area(s)	Very minor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Horizontal Alignment	Good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Ruts and/or Puddles	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Vegetation Condition	See note below	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Warning Signs	1 sign @ entrance – minor graffiti but remains readable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable): - Crest generally consists of flat gravel surface - See attached Photograph No. 1 for general view of crest - Item #6 – West side of spillway – good, very minor vegetation East side of spillway – remove vegetation					
EMBANKMENT: UPSTREAM FACE					
10	Slide, Slough, Scarp	Good – trace missing rip-rap	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Slope Protection	Good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Sinkhole, Animal Burrow	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Emb.-Abut. Contact	Good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Erosion	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Vegetation Condition	Sparse vegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable): - Upstream face generally consists of rip-rap choked with PA DOT 2A Modified stone - See Photograph No. 2 for general condition of upstream face					

NAME OF DAM: Milltown Dam	DEP DAM NO.: 15-146	DATE: 7-14-15
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ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
EMBANKMENT: DOWNSTREAM FACE					
18	Wet Area(s) (No Flow)	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Seepage	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	Slide, Slough, Scarp	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	Emb. - Abut. Contact	Good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Sinkhole, Animal Burrow	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Erosion	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Unusual Movement	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	Vegetation Control	Significant vegetation on downstream face	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable): - See Photograph 3 for general condition of downstream face - Photograph 4 illustrates northeast end of downstream face where apparent mass concrete was placed within the past 2 years as per East Goshen					
EMBANKMENT: INSTRUMENTATION					
28	Piezometers/Observ. Wells	Not Present (NP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	Staff Gauge and Recorder	NP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	Weirs	NP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	Survey Monuments	NP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	Drains	NP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	Low Flow Release	NP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	Frequency of Readings	Not Applicable (N/A)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	Location of Records	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable): No instrumentation observed.					

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ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
DOWNSTREAM AREA					
38	Abutment Leakage	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39	Foundation Seepage	None observed – See Item 43	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40	Slide, Slough, Scarp	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41	Drainage System	Good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42	Boils	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43	Wet Areas	See note below	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44	Reservoir Slopes	Good, moderately to heavily wooded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45	Access Roads	Good, see note below	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46	Security Devices	Good, see note below	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47	Act 91 Run-of-the-River Signs or Bouys	Warning sign present on locked gate on south west side of dam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable): <ul style="list-style-type: none"> - Item 43 – area noted as being wet in August 2014 Yerkes inspection report was observed, but no standing water or wetness was observed during current site visit (see Photograph 5) - Item 45 – access to dam is from small concrete stone surface “lot” off of Reservoir Rd - Item 46 – access to crest of dam secured by locked gate with warning sign (see Photograph 1). Access to top of spillway protected by stone outlet structure on south west side and chain link fence on north east side. 					
SPILLWAYS: ERODABLE CHANNEL					
50	Slide, Slough, Scarp	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51	Erosion	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52	Vegetation Condition	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53	Debris	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable): <ul style="list-style-type: none"> - Spillway is concrete (see Photograph 6) 					

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ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
SPILLWAYS: NON-ERODABLE CHANNEL					
56	Sidewalls	Moderate – see Photograph Nos. 7 to 9 – see note below	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
57	Channel Floor	Moderate – see Photograph 7 – see note below	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
58	Unusual Movement	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59	Approach Area	Good – no blockage observed – See Photograph 10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60	Weir or Control	Good – no blockage observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61	Discharge Channel	Generally clear – no significant blockage – see Photograph Nos. 6 & 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62	Boils	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable): - Item Nos. 56 & 57 – epoxy coating on spillway appears to be peeling on some locations. No leakage was observed behind peeled sections					
SPILLWAYS: DROP INLET					
65	Intake Structure	Not accessible – see note below	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
66	Trashrack	Not accessible – see note below	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
67	Stilling Basin	Not accessible – see note below	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
68			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable): - Item Nos. 65 to 67 – this section refers to the inlet for the structure shown in Photograph 11. The intake for this structure was below the water surface at the time of our site visit and was not accessible.					

DATE: 7-14-15

Additional Comments (Refer to item number if applicable):

NAME OF DAM: Milltown Dam	DEP DAM NO.: 15-146	DATE: 7-14-15
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ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
CONCRETE/MASONRY DAMS: DOWNSTREAM FACE					
89	Surface Conditions	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90	Condition of Joints	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
91	Unusual Movement	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
92	Abutment-Dam Contacts	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
93	Drains	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
94	Leakage	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
95			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
96			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable):					
CONCRETE/MASONRY DAMS: CREST					
97	Surface Conditions	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
98	Horizontal Alignment	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99	Vertical Alignment	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100	Condition of Joints	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
101	Unusual Movements	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
102			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
103			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable):					

NAME OF DAM: Milltown Dam	DEP DAM NO.: 15-146	DATE: 7-14-15
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ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
RESERVOIR AREA					
104	Sedimentation	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
105	Slope Stability	Good – no sloughing, surface cracking, movement observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
106	Sinkholes	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
107	Fractures	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
108	Unwanted Growth	None observed contributing to structural concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
109	Storage Gage	None observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
110			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
111			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable):					
<p>Final Comments:</p> <p>Recommended repairs as a result of the 2015 inspection consist of:</p> <ol style="list-style-type: none"> 1. Control vegetation on east side of spillway crest as well as upstream and downstream embankment faces in accordance with PADEP “Inspection, Maintenance, and Operation of Dams in Pennsylvania,” manual. 2. Repair epoxy facing on spillway. 3. Repair secondary outlet closure mechanism. 4. Fill apparent void beneath concrete slab at entrance to stone outlet structure. <p>Items recommended for “Monitoring” consist of:</p> <ol style="list-style-type: none"> 1. “Wet area” indicated in 2014 inspection report below downstream slope. 2. Crest of dam for signs of subsidence. 3. Upstream face of dam for rip rap which becomes dislodged 					

DAM OWNERS NOTICE CHECKLIST
Department of Environmental Protection
Bureau of Waterways Engineering
Division of Dam Safety

NAME OF DAM:

DEP DAM NO.:

This is to certify that both the Downstream Hazard Description is accurate and the Posted Notice locations listed below have been inspected and the following are the results of these inspections.

 Name of Dam Owner

 Signature of Dam Owner

 Date

This Dam Owners Notice Checklist is to accompany the Inspection Checklist filed by the Engineer.

EMERGENCY ACTION PLAN

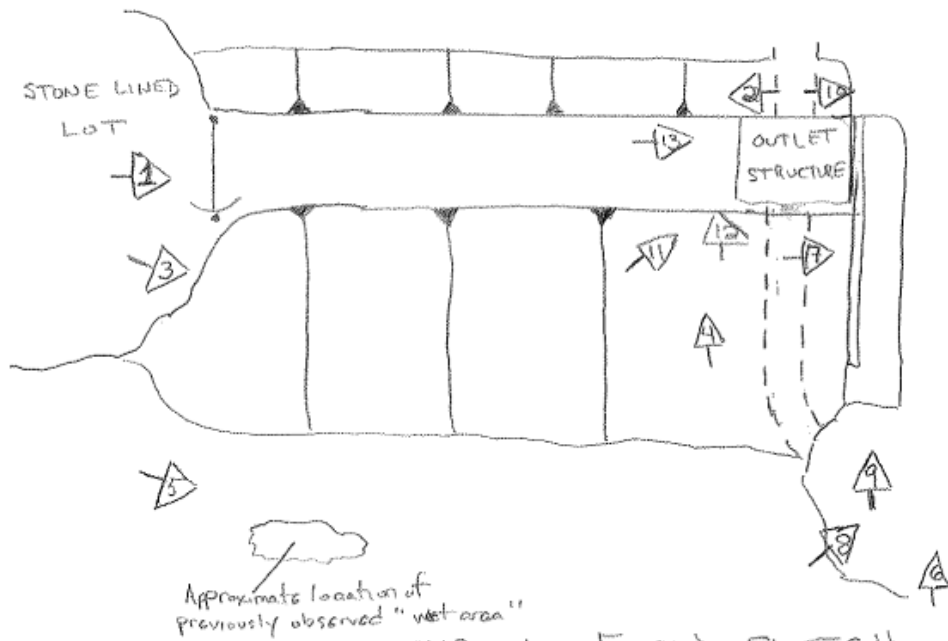
Date of Last Update of Emergency Plan: _____

Downstream Hazard Description (Refer to sections II.C and II.D in the EAP), additionally, specify any new developments, structures, etc. downstream within the inundation area:


POSTED NOTICES (Refer to section V.A in the EAP)

ITEM	DATE INSPECTED	LOCATION	COMMENTS	EXISTING	MISSING	REPLACED
1				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):



TYPICAL FIELD SKETCH
(NOT TO SCALE)

LEGEND
 - direction of photo graph

Top of Slope  Toe of Slope

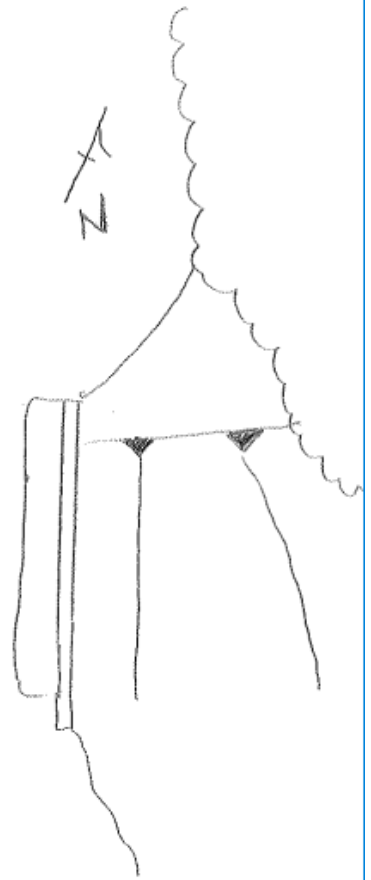




Photo 1. Dam crest looking northeast

Note: This photo was obtained by Pennoni on May 20, 2015.



Pennoni Associates, Inc.
One South Church Street, 2nd Floor
West Chester, PA 19382

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TAT

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NTS

DATE:

6/24/15

PHOTOGRAPH No.

P-1

MILLTOWN DAM 2015 INSPECTION REPORT PHOTO LOG



Photo 2. Upstream face looking southwest.

Note: This photo was obtained by Pennoni Associates on May 20, 2015.



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P-2

MILLTOWN DAM 2015 INSPECTION REPORT PHOTO LOG



Photo 3. Downstream face looking northeast

Note: This photo was obtained by Pennoni Associates on May 20, 2015.


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		TAT			
PROJECT No:	P-3				
EGOS0613					
MILLTOWN DAM 2015 INSPECTION REPORT PHOTO LOG					



Photo 4. Downstream face at northeast end – Mass concrete

Note: This photo was obtained by Pennoni Associates on May 20, 2015.



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PHOTOGRAPH No.

P-4

MILLTOWN DAM 2015 INSPECTION REPORT PHOTO LOG



Photo 5. Downstream 2104 wet area

Note: This photo was obtained by Pennoni Associates on May 20, 2015.


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		TAT			
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Photo 6. Spillway

Note: This photo was obtained by Pennoni Associates on May 20, 2015.


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		TAT		
		PROJECT No:	P-6	
		EGOS0613		
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Photo 7. Spillway walls

Note: This photo was obtained by Pennoni Associates on May 20, 2015.



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PHOTOGRAPH No.

P-7

MILLTOWN DAM 2015 INSPECTION REPORT PHOTO LOG



Photo 8. Northeast Spillway wall

Note: This photo was obtained by Pennoni Associates on May 20, 2015.


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		PENNONI	NTS	6/24/15
		CHECKED BY:	PHOTOGRAPH No.	
		TAT		
PROJECT No:	P-8			
EGOS0613				
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Photo 9. Southwest Spillway wall

Note: This photo was obtained by Pennoni Associates on May 20, 2015.



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One South Church Street, 2nd Floor
West Chester, PA 19382

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Photo 10. Spillway approach

Note: This photo was obtained by Pennoni Associates on May 20, 2015


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Photo 11. Outlet Structure

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Photo 12. Outlet void facing downstream

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Photo 13. Outlet void facing upstream

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