

UNDERWATER INSPECTION

Of The

***Beaver Dam Lake Dam Low Level
Outlet Valves***

For

***O'Brien & Gere Engineers, Inc.
512 Township Line Road
Two Valley Square, Suite 210
Blue Bell, PA 19422***

At

***Beaver Dam Lake Dam
Salisbury Mills, NY***

March 29, 2006

PREPARED & INSPECTED BY

***WALKER DIVING CONTRACTORS, INC.
75 WATERFORD RD
HAMMONTON, NJ 08037
PH 609-704-8650
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WALKER DIVING UNDERWATER CONSTRUCTION CORP

DIVERS INSPECTION REPORT

Customer: O'Brien & Gere Engineers, Inc.
 Date Inspected: March 29, 2006
 Item Inspected: Beaver Dam Lake Dam Valve Inspections
 Location: Salisbury Mills, NY

Job Number: 9242
 Diver: Walt Widzins
 Page: Page 1 of 3

ITEM	DESCRIPTION	CONDITION
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General Notes:

A swim-by inspection of the top 3' of the spillway sections of the dam was performed and the concrete and masonry were noted to be in generally fair condition with a few bricks missing causing 3-4" gaps at the top edge. The flow over the west spillway was approximately 2" and 3" over the east spillway during the inspection.

The West gate valve was noted to be partially buried by rock and debris and was excavated by the diver for access. This caused poor visibility for the video inspection of this gate. Both gates were cleaned prior to inspection. All stem guides were noted to either fused to the shaft or broken away from the wall and in poor condition. It is strongly recommended to not open the gates until the stem and guides are replaced or repaired.

West Gate Valve Assembly	Sluice Gate Type Valve For 24" Outlet with 37'9" Stem	Overall condition of the gate valve was noted to be in poor condition due to failure of the stem wall guides.
East Gate Operator	Manual with screw handle Rising Stem	Condition fair with some rust, however the operator was not manipulated.
West Shaft	Mild Steel 2" Diameter	20% deterioration
First Wall Bracket	Mild Steel	Corrosion around bolts and welds possible fusion of collar to shaft.
Flange Coupling	Four bolt mild steel (bolts stainless steel) Two through bolts holding shaft to coupling	Good condition with minor surface rust and corrosion.
Second Wall Bracket	Mild Steel	Corrosion around bolts and welds possible fusion of collar to shaft.
Third Wall Bracket	Mild Steel	Corrosion around bolts and welds possible fusion of collar to shaft.
Stem Thrust Nut	Stainless Steel Approximately 2 3/4"	Good condition

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ITEM	DESCRIPTION	CONDITION
West Gate Tracks 4'x 2'5"	Cast rails, five bolts on each rail with mild steel anchors into wood framing (embedded into concrete)	Good condition with minor surface rust and corrosion.
West Gate Valve 24"	Cast 2'9" High 2'3" Wide	<p>The valve appeared to be in good condition with minor surface rust and corrosion, however the gate was not manipulated, therefore the operation of the gate is unknown.</p> <p>The gate was initially buried by rock and debris, which was excavated to allow for inspection. Waited 90 minutes after excavation, however visibility remained poor preventing video inspection and only allowing for a hands-on tactical inspection.</p>
Spillway Areas	Brick, Rock & Concrete	Few bricks missing 3" to 4" gaps at top edge. Concrete in good condition. Rock in good condition-2" water level over west spillway, east side level 3" below edge of spillway. Video taped 3' of spillways.
East Gate Valve Assembly	Sluice Gate Type Valve For 18" Outlet with 31'3" Stem	Overall condition of the gate valve was noted to be in poor condition due to failure of the stem wall guides.
East Shaft Operator	Manual with screw handle Rising Stem	Condition fair with some rust, however the operator was not manipulated.
Top Stem	Mild Steel 17'3"	Minor pitting, corrosion 20% loss
Coupling 5" High each side	Four bolt Mild Steel (stainless steel bolts) Two through bolts holding shaft to coupling	Good condition with minor surface rust and corrosion.
Thrust Nut	2 3/4" Stainless Steel	Good condition

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DIVERS INSPECTION REPORT

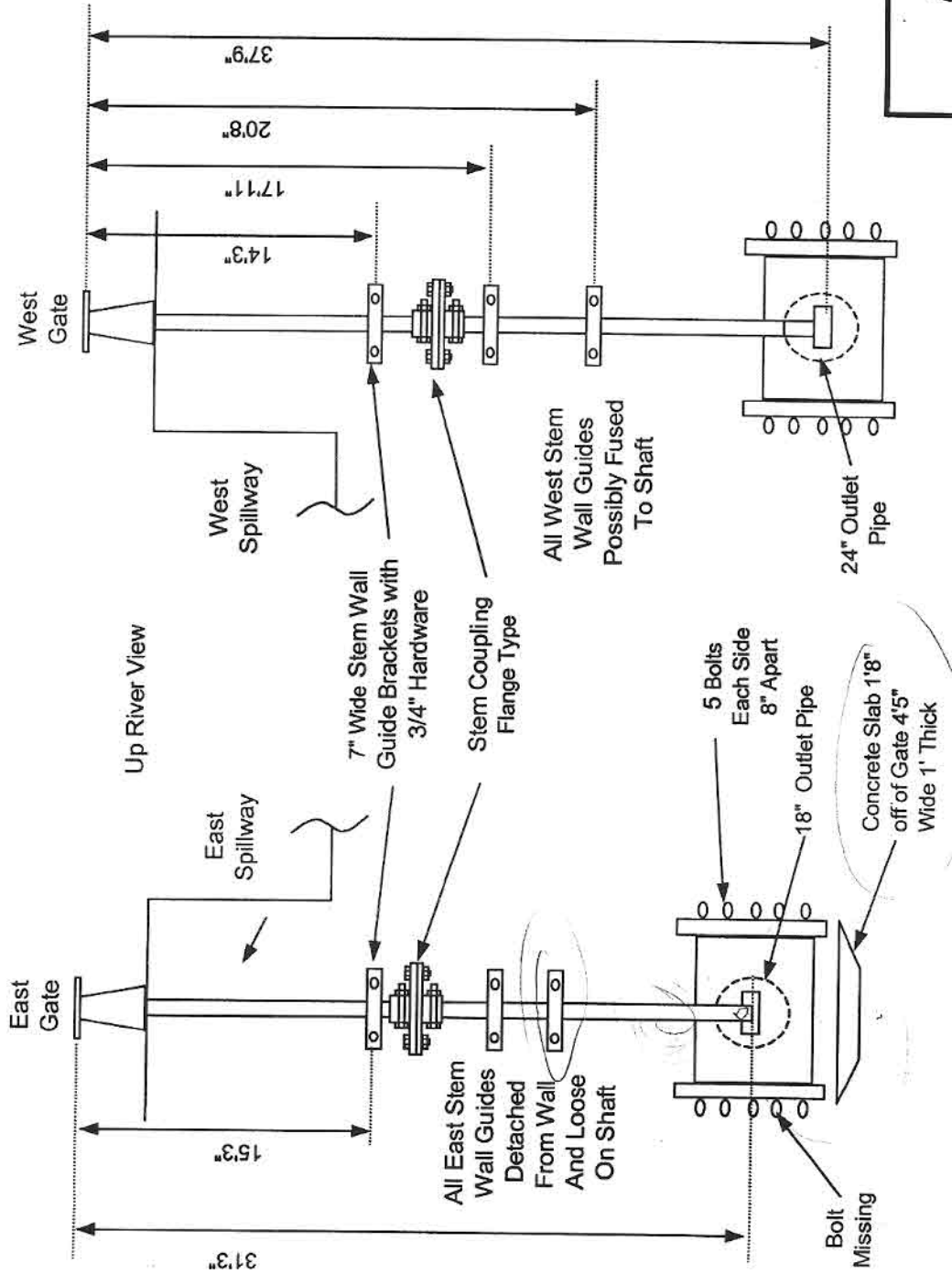
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ITEM	DESCRIPTION	CONDITION
First Wall Bracket	Mild Steel	Not attached to wall, in poor condition. All hardware still attached although cannot get exact measurements to wall placement.
Second Wall Bracket	Mild Steel	Not attached to wall, in poor condition. All hardware still attached although cannot get exact measurements to wall placement.
Third Wall Bracket	Mild Steel	Not attached to wall, in poor condition. All hardware still attached although cannot get exact measurements to wall placement.
Gate Tracks	Cast Five Bolts each side (8" apart) Width 2'3" Height 3'2"	Gate tracks appeared to be in overall good condition with minor surface rust and corrosion. Far east side of gate fourth bolt down missing (head deteriorated)
Concrete Apron	Concrete 1'8" off of gate 4'5" wide 1' thick	Good condition
East Gate Valve	Cast 2' High 2'3" Wide	The valve appeared to be in good condition with minor surface rust and corrosion, however the gate was not manipulated, therefore the operation of the gate is unknown.

Beaver Dam Lake Dam Low Level Valves Inspection



Notes:

- 1) Lower stem nut estimated at approximately 2-3/4 to 2-7/8"
- 2) East Gate - Track Width = 2'3", height = 3'2" -Noted to be in good condition and mounted to embedded timber.
- 3) West Gate - Track Width = 2'3", height = 2'9" -Noted to be in good condition and mounted to embedded timber.
- 4) Stem wall guides note to be approximately 7" wide with 3/4" hardware and in poor condition.

The Commercial Diving Experts™
WALKER DIVING
 UNDERWATER CONSTRUCTION
 75 Waterford Road • Hammonton, NJ 08037

Project: Beaver Dam Lake Dam
Engineer: O'Brien & Gere Engineers, Inc.
Location: Salisbury Mills, PA
Item: Lower Level Outlet Valves
Date: March 29, 2006
Dwg.: Walt Widzens / Dan Streit
 Not To Scale