



Table 7.1 Deficiencies by Discipline

Deficiency	Text Citation	Concern Safety ⁽¹⁾ / Operation ⁽²⁾	Mitigation Plan	Planning Horizon	Estimated Cost ⁽³⁾
GEOTECHNICAL					
Surface running water/drainage trench at Gate 4	2.1.1.1	Safety - Standard Operation - No	7.2.1.1.1	Near Term	28K\$
Sinkholes behind Lock 3 Corps Side wall	3.1 2.1.1.2	Safety - Standard Operation - No	7.2.1.1.2	Near Term	44K\$
Seepage at Gate 4 Corps Side monolith	2.1.1.1 3.0	Safety - Standard Operation - No	7.2.1.2.1	5-Year	1,042K\$
Seepage Remediation – Alternative 1	2.1.2.3.2	Safety - No Operation - No	7.2.1.2.2	5-Year	872K\$
Seepage Remediation – Alternative 2	2.1.2.3.2	Safety - No Operation - No	7.2.1.2.3	5-Year	170K\$
STRUCTURAL					
Through wall leakage, Mill Side	2.1.2.3.3	Safety - No Operation - No	No	-	-
Access ramp foundation undermining, downstream approach, Corps Side	2.1.2.5.1	Safety - No Operation - Yes	No	-	-
Dredging	2.2	Safety - No Operation - Yes	No	-	-
Gudgeon anchorage system	2.1.2.4.2 6.0	Safety - DSAC 1 Operation - No	7.2.2.1.1	Near Term	710K\$
Timber brace for wall lagging	2.1.2.2.3 2.2	Safety - Standard Operation - No	7.2.2.1.2	Near Term	3K\$
Walkway framing	2.1.2.5.2 2.2	Safety - Standard Operation - Yes	7.2.2.1.3	Near Term	51K\$
Monolith stability	4.1.2	Safety - DSAC 1 Operation - No	7.2.2.1.4	Near Term	663K\$
Wall stability	4.1.3	Safety - DSAC 1 Operation - No	7.2.2.1.5	Near Term	3,445K\$
Gate 4, Corps Side, operator support	2.1.2.4.3	Safety - No Operation - Yes	7.2.2.2.1	5-Year	206K\$
Gate 2, Corps Side, operator support	2.1.2.4.3	Safety - No Operation - Yes	7.2.2.2.2	5-Year	288K\$
Chamber ladders	2.2	Safety - Standard Operation - Yes	7.2.2.2.3	5-Year	55K\$
Guardrails	2.2	Safety - Standard Operation - Yes	7.2.2.2.4	5-Year	163K\$
Lock control stand at Gate 6, Mill Side	2.2	Safety - Standard Operation - Yes	7.2.2.2.5	5-Year	5K\$
Loss of masonry at lowest course at the downstream approach, Mill Side	2.1.2.2.1 2.2	Safety - No Operation - No	7.2.2.3.1	Long Term	353K\$
Timber facing	2.1.2.2.2	Safety - No Operation - No	7.2.2.3.2	Long Term	746K\$
MECHANICAL					
Gate and valve control system	2.1.3.1	Safety - No Operation - Yes	No	-	-
Debris	2.1.3.4	Safety - No Operation - Yes	No	-	-
Bottom seal	2.1.3.6	Safety - No Operation - Yes	No	-	-
Gate and valve limit switches	2.1.3.7 5.1	Safety - No Operation - Yes	7.2.3.1.1	Near Term	419K\$
Fire protection equipment	5.1	Safety - Standard Operation - Yes	7.2.3.1.2	Near Term	782K\$
Limit switches (Second Set)	5.1	Safety - No Operation - Yes	7.2.3.1.3	Near Term	CES
Valve seals	2.1.3.5	Safety - No Operation - Yes	7.2.3.2.1	5-Year	1,625K\$
Bubbler system	2.1.3.8 2.2	Safety - No Operation - Yes	7.2.3.2.2	5-Year	176K\$
Hydraulic cylinder	2.1.3.5 5.1	Safety - No Operation - Yes	7.2.3.2.3	5-Year	280K\$
Miter blocks	2.1.3.3	Safety - No Operation - Yes	7.2.3.3.1	Long Term	2,183K\$



ELECTRICAL					
Electrical distribution system- conduit, conductors, enclosures, and supports	2.1.4.1	Safety - No Operation - No	No	-	-
Remote monitoring/ operating system	2.1.4.2 2.2	Safety - No Operation - Yes	No	-	-
Standby Generator	2.1.4.5	Safety - No Operation - No	No	-	-
Lighting system	2.1.4.3 2.2	Safety - Standard Operation - Yes	7.2.4.1.2	Near Term	702K\$
Gate open limit switches (2 nd set)	2.1.4.2 5.2	Safety - No Operation - Yes	7.2.4.1.3	Near Term	320K\$
Gate valve limit switches	2.1.4.2 5.2	Safety - No Operation - Yes	7.2.4.1.4	Near Term	50K\$
CCTV- replace/add to provide full coverage	2.1.4.4 2.2	Safety - Standard Operation - Yes	7.2.4.1.5	Near Term	521K\$
Gate open limit switches	5.2	Safety - No Operation - Yes	7.2.4.2.2	5-Year	426K\$
Control system replacement	2.1.4.2	Safety - No Operation - Yes	7.2.4.2.3	5-Year	1,532K\$
Gate fill Valve Limit Switch- Replace All	5.2	Safety - No Operation - Yes	7.2.4.3.2	Long Term	727K\$
CCTV- replace/upgrade all cameras with pan-tilt-zoom	2.1.4.4 5.2	Safety - No Operation - Yes	7.2.4.3.3	Long Term	1,649K\$

(1) *Safety Concern - Yes or No, (If Yes, either DSAC I or Standard)*

DSAC I - Deficiency contributes to an urgent and compelling issue that requires taking immediate and expedited actions to reduce and manage the risk.

Standard Safety - Deficiency which adversely affects staff and visitor safety but does not present a DSAC I level concern.

(2) *Operational Concern - Yes or No*

(3) *Construction cost at mid-point of construction, in 2011 dollars Costs are fully funded and are comprised of Construction cost + contingency, plus E&D + E&D Contingency, plus S&A + S&A contingency. Costs are then escalated from their effective price date to mid-point of construction for Construction and S&A cost and to mid-point of design for E&D cost.*