

DAM SAFETY INSPECTION REPORT

NAME <i>Cliffside Inactive Ash Basin 5 Main Dam</i>	COUNTY <i>RUTHE</i>	NO. <i>070</i>	INSPECTED BY <i>EPLIN, KORMANIK</i>	DATE <i>3/1/2014</i>
OWNER <i>See file</i>	ADDRESS			PHONE

TYPE DAM ☒ Embankment ☐ Concrete gravity ☐ Concrete arch ☒ Other ☐ Concrete buttress ☐ Stone masonry <i>Ash Basin</i>	TYPE INSPECTION ☐ Initial ☐ Followup ☒ Other	SITE CONDITIONS ☐ Dry ☐ Snowcover ☒ Wet ☐ Low (A) ☒ High (C)
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HAZARD DESCRIPTION <i>See file</i>	HAZARD CLASS ☐ Low (A) ☒ High (C)
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REMARKS <i>Steve Hadge, Rick Roper, Tim Russell, Wade Hollfield in attendance Partial inspection for outfall characterization</i>	ACTION ☐ None ☐ Maintenance ☐ Monitoring ☐ Minor repair ☐ Engineering	RECOMMENDATIONS ☐ Inspection letter ☐ Deficiency letter ☐ RE notice ☐ Engineering study ☐ Inspection by RE ☐ Inspection by DSE ☐ Dam safety order ☐ Enforcement ☐ Periodic reinspection ☐ Other reinspection
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AREA	PROBLEMS	COMMENTS
UPSTREAM SLOPE / FACE	☐ 1. None ☐ 11. Displaced rip rap ☐ 2. Trees ☐ 12. Cracks ☐ 3. High bushes ☐ 13. Undermining ☐ 4. Burrows ☐ 14. Holes ☐ 5. Wave erosion ☐ 15. Spalling ☐ 6. Livestock damage ☐ 16. Displaced joints ☐ 7. Slides ☐ 17. Deteriorated joints ☐ 8. Depressions ☐ 18. Exposed reinforcement ☐ 9. Bulges ☐ 19. Other ☐ 10. Sparse rip rap	COVER: ☐ Vegetation ☐ Rip rap ☐ Concrete ☐ Asphalt ☐ Other DNZ
TOP OF DAM	☐ 1. None ☐ 11. Cracks ☐ 2. Trees ☐ 12. Spalling ☐ 3. High bushes ☐ 13. Deteriorated joints ☐ 4. Burrows ☐ 14. Displaced joints ☐ 5. Ruts ☐ 15. Exposed reinforcement ☐ 6. Livestock damage ☐ 16. Other ☐ 7. Depressions ☐ 8. Uneven ☐ 9. Misalignment ☐ 10. Has overtopped	COVER: ☐ Vegetation ☐ Gravel ☐ Concrete ☐ Asphalt ☐ Other DNZ
DOWNSTREAM SLOPE / FACE	☐ 1. None ☐ 11. Seepage ☐ 2. Trees ☐ 12. Bolls ☐ 3. High bushes ☐ 13. Cracks ☐ 4. Burrows ☐ 14. Holes ☐ 5. Erosion ☐ 15. Spalling ☐ 6. Livestock damage ☐ 16. Displaced joints ☐ 7. Slides ☐ 17. Deteriorated joints ☐ 8. Depressions ☐ 18. Exposed reinforcement ☐ 9. Bulges ☐ 19. Other ☐ 10. Wetness	COVER: ☐ Vegetation ☐ Rip rap ☐ Concrete ☐ Other DNZ
TOP OF CANTY	☐ 1. None ☐ 11. Seepage ☐ 2. Trees ☐ 12. Bolls ☐ 3. High bushes ☐ 13. Cracks ☐ 4. Burrows ☐ 14. Holes ☐ 5. Erosion ☐ 15. Spalling ☐ 6. Livestock damage ☐ 16. Displaced joints ☐ 7. Slides ☐ 17. Deteriorated joints ☐ 8. Depressions ☐ 18. Exposed reinforcement ☐ 9. Bulges ☐ 19. Undermining ☐ 10. Wetness ☐ 20. Other	COVER: ☐ Vegetation ☐ Rip rap ☐ Concrete ☐ Other DNZ

AREA	PROBLEMS	COMMENTS
ABUTMENT CONTACTS	☐ 1. None ☐ 2. Trees ☐ 3. High bushes ☐ 4. Burrows ☐ 5. Erosion ☐ 6. Livestock damage ☐ 7. Slides ☐ 8. Depressions ☐ 9. Bulges ☐ 10. Wetness ☐ 11. Seepage ☐ 12. Boils ☐ 13. Cracks ☐ 14. Holes ☐ 15. Spalling ☐ 16. Displaced joints ☐ 17. Deteriorated joints ☐ 18. Exposed reinforcement ☐ 19. Undermining ☐ 20. Other	COVER: ☐ Vegetation ☐ Rip rap ☐ Concrete ☐ Other <i>DNL</i>
PRINCIPAL SILEWAY	☐ 1. None ☐ 2. No trashguard ☐ 3. Obstructed ☐ 4. Plugged ☐ 5. Rusted ☐ 6. Damaged ☐ 7. Gates leaking ☐ 8. Joints leaking ☐ 9. Cracks ☐ 10. Joint deterioration ☐ 11. Joint displacement ☐ 12. Undermined ☐ 13. Voids ☐ 14. Erosion ☐ 15. Holes ☐ 16. Conduit collapsed ☐ 17. Spalling ☐ 18. Outlet undercutting ☐ 19. Misalignment ☐ 20. Other	TYPE/SIZE: <i>RCP riser / barrel</i> <i>Clear flow, minor quantity</i> <i>Outlet appears stable</i>
EMERGENCY SILEWAY	☐ 1. None ☐ 2. No ES ☐ 3. Same as PS ☐ 4. Obstructed ☐ 5. Erosion ☐ 6. Displaced rip rap ☐ 7. Sparse rip rap ☐ 8. Joints leaking ☐ 9. Cracks ☐ 10. Joint deterioration ☐ 11. Joint displacement ☐ 12. Undermining ☐ 13. Voids ☐ 14. Holes ☐ 15. Exposed reinforcement ☐ 16. Spalling ☐ 17. Outlet erosion ☐ 18. Misalignment ☐ 19. Inadequate capacity ☐ 20. Other	TYPE/SIZE:
DRAINS / OTHER OUTLETS	☐ 1. None ☐ 2. No bottom drain ☐ 3. Bottom drain inoperable ☐ 4. Subsurface drain dry ☐ 5. Subsurface drain muddy flow ☐ 6. Subsurface drain obstructed ☐ 7. No animal guard ☐ 8. Other	TYPE:

SKETCHES/COMMENTS

DAM SAFETY INSPECTION REPORT

NAME <i>Cliffside Inactive Ash Basin # 5 Man Dam</i>		COUNTY <i>RUTHE</i>	NO. <i>070</i>	INSPECTED BY <i>EDLIN, KORMANIK THORPE, BROADWAY</i>	DATE <i>3/4/2014</i>	
OWNER <i>See file</i>		ADDRESS			PHONE	
TYPE DAM ☒ Embankment ☐ Concrete gravity ☐ Concrete arch ☒ Other ☐ Concrete buttress ☐ Stone masonry <i>Ash</i>		TYPE INSPECTION ☐ Initial ☐ Followup ☒ Periodic ☐ Other		SITE CONDITIONS ☐ Dry ☐ Snowcover ☒ Wet ☐ Other		
HAZARD DESCRIPTION <i>See file</i>				HAZARD CLASS ☐ Low (A) ☐ Intermediate (B) ☒ High (C)		
REMARKS <i>40's sunny Steve Hodges, Sean DeNeal, Scott Nordgren, Alex Papp in attendance</i>			ACTION ☐ None ☐ Maintenance ☐ Monitoring ☐ Minor repair ☐ Engineering		RECOMMENDATIONS ☐ Inspection letter ☐ Deficiency letter ☐ RE notice ☐ Engineering study ☐ Inspection by RE ☐ Inspection by DSE ☐ Dam safety order ☐ Enforcement ☐ Periodic reinspection ☐ Other reinspection	
AREA	PROBLEMS	COMMENTS				
UPSTREAM SLOPE / FACE	☐ 1. None ☐ 11. Displaced rip rap ☐ 2. Trees ☐ 12. Cracks ☐ 3. High bushes ☐ 13. Undermining ☐ 4. Burrows ☐ 14. Holes ☐ 5. Wave erosion ☐ 15. Spalling ☐ 6. Livestock damage ☐ 16. Displaced joints ☐ 7. Slides ☐ 17. Deteriorated joints ☐ 8. Depressions ☐ 18. Exposed reinforcement ☐ 9. Bulges ☐ 19. Other ☐ 10. Sparse rip rap	COVER: ☒ Vegetation ☐ Rip rap ☐ Concrete ☐ Asphalt ☐ Other <i>Inactive, now serves as sediment stormwater pond with majority of former impoundment area serving as "laydown yard."</i>				
	☒ 1. None ☐ 11. Cracks ☐ 2. Trees ☐ 12. Spalling ☐ 3. High bushes ☐ 13. Deteriorated joints ☐ 4. Burrows ☐ 14. Displaced joints ☐ 5. Ruts ☐ 15. Exposed reinforcement ☐ 6. Livestock damage ☐ 16. Other ☐ 7. Depressions ☐ 8. Unlevel ☐ 9. Misalignment ☐ 10. Has overtopped	COVER: ☒ Vegetation ☐ Gravel ☐ Concrete ☐ Asphalt ☐ Other				
DOWNSTREAM SLOPE / FACE	☐ 1. None ☐ 11. Seepage ☐ 2. Trees ☐ 12. Boils ☐ 3. High bushes ☐ 13. Cracks ☐ 4. Burrows ☐ 14. Holes ☐ 5. Erosion ☐ 15. Spalling ☐ 6. Livestock damage ☐ 16. Displaced joints ☐ 7. Slides ☐ 17. Deteriorated joints ☐ 8. Depressions ☐ 18. Exposed reinforcement ☐ 9. Bulges ☐ 19. Other ☐ 10. Wetness	COVER: ☒ Vegetation ☐ Rip rap ☐ Concrete ☐ Other <i>Signs of animal activity repair as needed 2 active seeps, noted in prior inspections clear flow, iron oxide present, left of tip- rap-lined area of toe</i>				
	☐ 1. None ☐ 11. Seepage ☐ 2. Trees ☐ 12. Boils ☐ 3. High bushes ☐ 13. Cracks ☐ 4. Burrows ☐ 14. Holes ☐ 5. Erosion ☐ 15. Spalling ☐ 6. Livestock damage ☐ 16. Displaced joints ☐ 7. Slides ☐ 17. Deteriorated joints ☐ 8. Depressions ☐ 18. Exposed reinforcement ☐ 9. Bulges ☐ 19. Undermining ☐ 10. Wetness ☐ 20. Other	COVER: ☐ Vegetation ☐ Rip rap ☐ Concrete ☐ Other <i>See comments</i>				
TOE CONTACT	☐ 1. None ☐ 11. Seepage ☐ 2. Trees ☐ 12. Boils ☐ 3. High bushes ☐ 13. Cracks ☐ 4. Burrows ☐ 14. Holes ☐ 5. Erosion ☐ 15. Spalling ☐ 6. Livestock damage ☐ 16. Displaced joints ☐ 7. Slides ☐ 17. Deteriorated joints ☐ 8. Depressions ☐ 18. Exposed reinforcement ☐ 9. Bulges ☐ 19. Undermining ☐ 10. Wetness ☐ 20. Other					

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ABUTMENT CONTACTS	☒ 1. None ☐ 2. Trees ☐ 3. High bushes ☐ 4. Burrows ☐ 5. Erosion ☐ 6. Livestock damage ☐ 7. Slides ☐ 8. Depressions ☐ 9. Bulges ☐ 10. Wetness ☐ 11. Seepage ☐ 12. Boils ☐ 13. Cracks ☐ 14. Holes ☐ 15. Spalling ☐ 16. Displaced joints ☐ 17. Deteriorated joints ☐ 18. Exposed reinforcement ☐ 19. Undermining ☐ 20. Other	COVER: ☒ Vegetation ☐ Rip rap ☐ Concrete ☐ Other
PRINCIPAL BRILLWAY	☐ 1. None ☐ 2. No trashguard ☐ 3. Obstructed ☐ 4. Plugged ☐ 5. Rusted ☐ 6. Damaged ☐ 7. Gates leaking ☐ 8. Joints leaking ☐ 9. Cracks ☐ 10. Joint deterioration ☐ 11. Joint displacement ☐ 12. Undermined ☐ 13. Voids ☐ 14. Erosion ☐ 15. Holes ☐ 16. Conduit collapsed ☐ 17. Spalling ☐ 18. Outlet undercutting ☐ 19. Misalignment ☐ 20. Other	TYPE/SIZE: CIP concrete riser barrel - outlet observed 3/1/2014 - inlet not accessible
EMERGENCY BRILLWAY	☐ 1. None ☐ 2. No ES ☐ 3. Same as PS ☐ 4. Obstructed ☐ 5. Erosion ☐ 6. Displaced rip rap ☐ 7. Sparse rip rap ☐ 8. Joints leaking ☐ 9. Cracks ☐ 10. Joint deterioration ☐ 11. Joint displacement ☐ 12. Undermining ☐ 13. Voids ☐ 14. Holes ☐ 15. Exposed reinforcement ☐ 16. Spalling ☐ 17. Outlet erosion ☐ 18. Misalignment ☐ 19. Inadequate capacity ☐ 20. Other	TYPE/SIZE:
DRAINS / OTHER OUTLETS	☐ 1. None ☐ 2. No bottom drain ☐ 3. Bottom drain inoperable ☐ 4. Subsurface drain dry ☐ 5. Subsurface drain muddy flow ☐ 6. Subsurface drain obstructed ☐ 7. No animal guard ☐ 8. Other	TYPE:

SKETCHES/COMMENTS

3 distinct areas of white / gray ^{colored} seepage in clear flow at toe of dam. The historically wet area was lowered 2 yrs ago (approx) with partial destruction of beaver dam. Discharge is at left of center toe just below rip rap. White / gray ^{colored} material originates from ground below rip rap. Iron oxide observed in large wet area below toe. White / gray colored material is a new condition.