DAM SAFETY INSPECTION REPORT

NAME	COUNTY	NO.	INSPECTED BY	DATE
Cliffside Inactive Ash Basin 1-4 Main Dam	CLEVE	047	EPLIN, KORMANIK	3/1/2014

OWNER	ADDRESS	PHONE
See file	See file	

TYPE DAM: ☐ Concrete gravity ☐ Concrete arch ☒ Other ☒ Embankment ☐ Concrete buttress ☐ Stone masonry Ash basin

TYPE INSPECTION: ☒ Periodic ☐ Initial ☐ Follow-up ☒ Other

SITE CONDITIONS: ☒ Wet ☐ Dry ☐ Snow cover ☐ Other

HAZARD DESCRIPTION: See file

HAZARD CLASS: ☐ Low (A) ☐ Intermediate (B) ☒ High (C)

REMARKS: Steve Hodges, Rick Roper, Tim Russell, Wade Hollifield in attendance, Partial inspection for outfall characterization

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 ☐ 2.Trees ☐ 3.High bushes ☐ 4.Burrows ☐ 5.Wave erosion ☐ 6.Livestock damage ☐ 7.Slides ☐ 8.Depressions ☐ 9.Bulges ☐ 10.Sparse rip rap ☐ 11.Displaced rip rap ☐ 12.Cracks ☐ 13.Undermining ☐ 14.Holes ☐ 15.Spalling ☐ 16.Displaced joints ☐ 17.Deteriorated joints ☐ 18.Exposed reinforcement ☐ 19.Other	COVER: ☒ Vegetation ☐ Rip rap ☐ Concrete ☐ Asphalt ☐ Other Bare areas along fence line
TOP OF DAM	☐ 1.None ☐ 2.Trees ☐ 3.High bushes ☐ 4.Burrows ☐ 5.Ruts ☐ 6.Livestock damage ☐ 7.Depressions ☐ 8.Unlevel ☐ 9.Misalignment ☐ 10.Has overtopped ☐ 11.Cracks ☐ 12.Spalling ☐ 13.Deteriorated joints ☐ 14.Displaced joints ☐ 15.Exposed reinforcement ☐ 16.Other	COVER: ☒ Vegetation ☐ Gravel ☐ Concrete ☐ Asphalt ☐ Other Bare areas on crest
DOWNSTREAM SLOPE / FACE	☐ 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.Other	COVER: ☒ Vegetation ☐ Rip rap ☐ Concrete ☐ Other Trees > 6"Ø - mostly 19) Irregular slope, historic, appears unchanged from prior inspections Downed trees should be removed near toe drains
TOE / CONTACT	☐ 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 ≈ 14 embankment drains, Numbering starts at the east. Drains 1-10 have varying degrees of seepage + corrosion (iron oxide) Drains 2 + 11 have separated joints 14 is a clay pipe.

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 Trees in right abutment
PRINCIPAL SPILLWAY	☐ 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 collasped ☐ 17.Spalling ☐ 18.Outlet undercutting ☐ 19.Misalignment ☐ 20.Other	TYPE/SIZE: 4'x3.5' CONCRETE RISER w/ 30" CMP BARREL Historically, seepage noted w/ iron oxide present from barrel outlet, minor flow. On 2/27/2014, see email from Jeff Menzel, notification provided for increased flow observed at outflow. See comments ✡
EMERGENCY SPILLWAY	☐ 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: Same as PSW
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: See comments toe section

KETCHES/COMMENTS

✡ Steve Hodges stated increased flow was observed during routine monthly inspection. Flow was measured at the time to be ~0.75 gal/min. He stated the flow was clear. At the time of our inspection, sand bags were in-place around a pvc pipe collecting flow from the barrel and directing to 5-300gl tanks on site. He stated the flow was being pumped daily to another ash basin on-site. We were able to observe wetness at joint above barrel inside the riser. The barrel has a damaged section/break about 2ft from the bend; according to Mr Hodges, he stated that an attempt was made to seal the break with flowable fill cement, but was unsuccessful. We discussed the requirement for repairs to be approved by our section beforehand

DAM SAFETY INSPECTION REPORT

NAME	COUNTY	NO.	INSPECTED BY	DATE
Offside Inactive Ash Basin 1-4 Main Dam	CLEVE	047	KOLIN KARMANK, BROADWAY	3/4/2014
OWNER	**ADDRESS**			**PHONE**
See file				

TYPE DAM: ☐ Concrete gravity ☐ Concrete arch ☑ Other (Ash) ☑ Embankment ☐ Concrete buttress ☐ Stone masonry

TYPE INSPECTION: ☐ Initial ☐ Followup ☑ Periodic ☐ Other

SITE CONDITIONS: ☐ Dry ☐ Snowcover ☑ Wet ☐ Other

HAZARD DESCRIPTION: See file

HAZARD CLASS: ☐ Low (A) ☐ Intermediate (B) ☑ High (C)

REMARKS: 40's sunny
Steve Hodges, Sean DeNeal, Scott Nordgren, Alex Papp in attendance

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 ☐ 2.Trees ☐ 3.High bushes ☐ 4.Burrows ☐ 5.Wave erosion ☐ 6.Livestock damage ☐ 7.Slides ☐ 8.Depressions ☐ 9.Bulges ☐ 10.Sparse rip rap	☐ 11.Displaced rip rap ☐ 12.Cracks ☐ 13.Undermining ☐ 14.Holes ☐ 15.Spalling ☐ 16.Displaced joints ☐ 17.Deteriorated joints ☐ 18.Exposed reinforcement ☐ 19.Other	COVER: ☐ Vegetation ☐ Rip rap ☐ Concrete ☐ Asphalt ☐ Other No changes observed since 3/1/2014 inspection
TOP OF DAM	☐ 1.None ☐ 2.Trees ☐ 3.High bushes ☐ 4.Burrows ☐ 5.Ruts ☐ 6.Livestock damage ☐ 7.Depressions ☐ 8.Unlevel ☐ 9.Misalignment ☐ 10.Has overtopped	☐ 11.Cracks ☐ 12.Spalling ☐ 13.Deteriorated joints ☐ 14.Displaced joints ☐ 15.Exposed reinforcement ☐ 16.Other	COVER: ☐ Vegetation ☐ Gravel ☐ Concrete ☐ Asphalt ☐ Other
DOWNSTREAM SLOPE / FACE	☐ 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.Other	COVER: ☐ Vegetation ☐ Rip rap ☐ Concrete ☐ Other
TOE CONTACT	☐ 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

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
PRINCIPAL SPILLWAY	☐ 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 collasped ☐ 17.Spalling ☐ 18.Outlet undercutting ☐ 19.Misalignment ☐ 20.Other	TYPE/SIZE:
EMERGENCY SPILLWAY	☐ 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