



TVA Disposal Facility Assessment Phase 1 Plant Summary Colbert Fossil Plant (COF)

Location:	Colbert Fossil Plant (COF) 900 Steam Plant Road Tuscumbia, Colbert County, AL 35674
	Latitude: 34.735 N Longitude: 87.854 W
Plant Contact:	Micheal Gean Program Administrator, Environmental Conformance Engineering Phone: 256-389-7152 Email: magean@tva.gov
Facts and Figures:	The Colbert Fossil Plant has five coal-fired generating units and eight combustion turbines. Construction began in 1951 and was completed in 1965. The plant consumes approximately 8,900 tons of coal per day. It is located on Pickwick Reservoir on the Tennessee River, about 50 miles west of Huntsville, AL.
Coal Combustion Byproduct Disposal:	Approximately 350,000 tons of dry fly ash is collected in silos each year and hauled to an onsite dry stack disposal area (Disposal Area 5). Approximately 30,000 tons per year of bottom ash is wet-slucied to Ash Pond 4. Dewatered bottom ash is removed from Ash Pond 4 and stacked within its west side.
Geology and Seismicity:	TVA's Colbert Fossil Plant is underlain by the Tuscumbia Limestone formation. Residual plastic clay soils are above bedrock. The Tuscumbia limestone is known for karst activity. Two known sinkhole collapses have occurred in the past at COF; one in an abandoned/unused area of Disposal Area 5, and one at the area of the closed chemical pond adjacent to Ash Pond 4. Three zones of earthquake activity affecting northern Alabama are the New Madrid Seismic Zone (NMSZ), the Southern Appalachian Seismic Zone (SASZ), and the South Carolina Seismic Zone (SCSZ). Most earthquakes in Alabama occur within the SASZ. Historical records show that earthquakes with epicenters in Alabama have been recorded throughout most of the state, but they are often not strong enough to be felt on the surface, and would most likely do little or no damage. In contrast, if a large earthquake were to occur within the New Madrid zone to the northwest, damage to northern Alabama would be possible.
Facilities Reviewed:	Ash Pond 4 Disposal Area 5 Dry Stack Disposal Area 5 Drainage Basin Closed Disposal Area 1



TVA Disposal Facility Assessment
Phase 1 Coal Combustion Product Disposal
Facility Summary
Colbert Fossil Plant (COF)
Ash Pond 4 (AP-4)

1. General Facility Information

Facility Status:	Active	NID Identification:	Not Available
Surface Area (inside dikes):	51.7 acres (estimated)	Maximum Height (toe to top of dike):	40 ft
Free Water Volume:	455,327 CY (January, 2008 data)	Maximum Water Storage:	703,260 CY (January, 2008 data)
Estimated CCB Storage:	1,159,013 CY (current)	Dike Length:	6,700 ft (estimated)
Plant Discharge to Facility:	12 MGD	Current Pool Elevation:	Approx. 456 feet

2. Site Visit Information

Stantec Assessment Team: Randy Roberts, PE and Paul Cooper, EIT

TVA Staff Present: Michael Gean and Allison Horton on January 14, 2009

Field Assessment Dates: January 14, 2009 and February 3, 2009

Weather/Site Conditions: Mid-40 degrees F, partly cloudy, moist ground both days

3. History/Description of Usage

History and Operation: Approximately 30,000 tons per year of bottom ash is wet sluiced to Ash Pond 4. Outlet is through four 48 inch RCP riser pipe/weirs that discharge through four 36 inch RCP sections into an open channel. Ash Pond 4 was initially constructed in 1972 with 20-foot tall clay dikes. The dikes were reportedly raised 20 feet using an upstream method with new clay dikes in 1984. Raised dikes were constructed over sluiced ash. Dried bottom ash is being excavated, dewatered, and stacked within the west side of the pond area. This operation reportedly began in 1999. The stacking is active.

Past Failures/Releases: No failures or releases reported.



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4. Owner's Operations, Maintenance and Inspection Information

Emergency Action Plan:	No EAP has been prepared for this facility.
Operations Manual:	A coal combustion products operations manual is available for the Colbert Fossil Plant covering all active facilities.
TVA Maintenance:	Exterior slopes mowed twice annually. Annual sealing of RCP spillway inlet riser joints using oakum; joints in top 12 feet or so are treated.
TVA Inspections:	TVA Engineering performs annual dike inspections and prepares reports. Plant personnel recently started making daily observations and performing weekly reviews of seepage areas.
Problems Previously Identified During Past TVA Inspections:	Mid-slope seepage on east dike, isolated trees on exterior slopes, need for annual joint repairs in RCP spillway inlet joints.

5. Documents Reviewed

See attached Document Log for complete list of documents provided by TVA for review. In particular, the following provided pertinent information for the assessment of this facility:

TVA Design Drawings:	Drawing numbers 10N290, 291, 292, 293, 294-1 thru 294-7, 213, 287.
TVA As-Built Drawings:	None available.
TVA Construction Testing Records:	None available.
TVA Annual Inspection Reports:	TVA Annual Inspection Reports 1993 to 2008.
Geotechnical Data:	"Colbert Steam Plant - Proposed Ash Disposal Area 4 - Dikes - Soil Investigation", Memorandum from Gene Farmer to F.P. Lacy, October 13, 1972. "Colbert Steam Plant - Ash Disposal Area No. 4 Dike Raising - Soils Exploration and Testing - En Des Soils Schedule No. 67", Memorandum from Gene Farmer to G.L. Buchanan, March 27, 1978.



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6. Stantec Field Observations

See attached Concerns/Photo Log, Photos, and Site Plan Drawing.

6.1. Interior Slopes

Vegetation:	Tall grass, cattails and dense coverage.
Trees:	None were observed.
Wave Wash Protection:	None was observed.
Erosion:	Few locations of wave erosion, size and length vary.
Instabilities:	None were observed.
Animal Burrows:	Past annual inspection reports indicated beaver activity on east dike interior slopes. Dense/tall grass and cattail coverage prevented thorough assessment.
Freeboard:	Measured: 4.3 feet at Section 6, 5.2 feet at Section 7 (see drawing for section locations) Design: 4 feet (from Drawing 10N292)
Encroachments:	A dry stack is operated within the west side of the ash pond, reducing pool storage capacity.
Slope:	Measured: 2.0H:1.0V at both Sections 6 and 7. Design: 2.0 H:1.0V (from Drawing 10N292)

6.2. Crest

Crest Cover and Slope:	Gravel/ash covered access road, crest appeared relatively flat.
Erosion:	None was observed.
Alignment:	Alignment appeared to agree with design drawings. No issues observed.
Settlement/Cracking:	None was observed.
Bare Spots/Rutting:	None was observed.
Width:	Measured: 25 feet at both Sections 6 and 7. Design: 25 feet (from Drawing 10N292)



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6.3. Exterior Slopes

Vegetation:	Mostly grass, adequate coverage. Thick brush at seepage areas on east dike face where mowing cannot be done due to soft ground.
Trees:	There are numerous 6 inch to 12 inch trees near bottom of slope and toe area of north dike. There are also a few trees at isolated areas on west dike.
Erosion:	None was observed.
Instabilities:	No evidence of instability was observed.
Uniform Appearance:	Good.
Seepage:	Yes, at mid-slope area intermittent along entire length of east dike (see drawing for locations). Most areas are wet, with no flow observed. Minor flow observed being collected in mid-slope drainage ditch along access road at south part of east dike - water was clear. Seepage areas contain cattails and long grass coverage and cannot be mowed due to soft/saturated ground.
Benches:	Approximate 3 to 5-foot wide bench at elevation 440.
Foundations, Drains, Relief Wells, Instrumentation:	No provisions for drainage/seepage control, or instrumentation were observed.
Animal Burrows:	None were observed.
Slope:	Measured: 3.0H:1.0V at Sections 6 and 7. Design: 3.0H:1.0V (from Drawing 10N292)
Height:	Measured: 40 feet (estimated) on east side. Design: 40 feet decreasing on west side

6.4. Spillway Weirs/Riser Inlets

Number:	4 located in the stilling pond at the north end of the facility.
Size, Type and Material:	48 inch RCP push-together riser sections with standard TVA steel skimmers.
Height of Riser Inlets:	Approximately 34 feet



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Access:	All spillways accessible via floating catwalks.
Joints:	Joints are sealed annually by divers using oakum joint sealant. Only joints located within top 12 feet can be accessed. Unable to observe below inlet level any joint leakage or sealant.
Mis-Alignment:	None reported or observed.
Closed/Abandoned Conduits:	None reported or observed.

6.5. Outlet Pipes

Number:	Four (4)
Size, Type and Material:	36 inch RCP
Headwall:	Yes, appears to be in good shape.
Joint Separations:	Unknown, unable to observe.
Mis-Alignment:	Unknown, unable to observe.
Closed/Abandoned Conduits:	None reported or observed.

7. Notable Observations and Concerns

- The seepage along east dike at mid-slope is a concern. It has been reportedly ongoing since about 1984, when the dikes were initially raised. The seepage has been continuously monitored by TVA with little or no change being reportedly noticed through the years. In 2007, TVA retained a geotechnical consultant to investigate the seepage. The investigation identified a seepage zone between the two phases of dike construction where a thin zone of bottom ash and organic material was found. The report recommended to continue monitoring the seepage, and to install a collection system below the seeps. A collection system has not been installed.
- Raising the dikes by using upstream construction over sluiced ash is a potential slope stability concern.
- Excavating and stacking dried bottom ash in the west portion of the pond is a concern. Constructing embankments over hydraulically placed ash requires engineering analysis and geotechnical explorations. The rate and manner of placement is critical to the integrity and stability. Also, placement of embankment within the ash pond pool area reduces storm and process water storage capacity.



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Ash Pond 4 (AP-4)**

- RCP push-together riser structure spillways are a concern. The joints of the riser pipes at Ash Pond 4 reportedly receive annual repair using oakum joint sealant, suggesting that there is a historic joint leakage issue.
- Dikes are mowed twice annually and are well-maintained, except for interior slopes and seepage areas where ground is soft. Cutting the tall brush would facilitate better observations of seepage areas and interior slopes.
- Trees located on north dike, and at a few other isolated locations are a concern. Recommendations for tree removal have been provided in past annual reports, but have not yet been performed.
- Wave action erosion was noted at several locations along interior slopes just above pool level.
- Both inlet and outlet ends of the drainage pipe beneath the access road northwest of the pond outlet was observed to be buried/covered with sedimentation. Some flow from this pipe through the sedimentation and into the discharge channel was observed.
- Previous inspection reports appear adequate, but there is a trend of not all maintenance recommendations being executed.
- The absence of an Emergency Action Plan, Operation and Maintenance Plan, as-built drawings and construction testing records is a concern.

8. Recommendations

8.1. Phase 2 Engineering and Programmatic Recommendations

- It is recommended that Ash Pond 4 undergo further Phase 2 engineering study to evaluate the seepage on the east dike face, to evaluate slope stability, and to evaluate the stacking plan on the west side of the facility. The geotechnical work should include installation of piezometers. It is also recommended that a hydraulic and hydrologic analysis be performed to check freeboard and pond outlet adequacy relative to process flow and storm water.
- It is recommended that the Operations and Maintenance Plan be updated.
- It is recommended that a program to develop as-built drawings and construction records for future maintenance and construction activities be established.



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8.2. Maintenance Recommendations

- Remove trees from north exterior slope and from isolated areas on west dike.
- Cut and maintain heavy/tall cattail and grass growth on interior slopes to permit better observation.
- Repair erosion on interior slopes, and line with rip-rap to help reduce future erosion.
- Cut tall brush and cattails at seepage areas to permit better observations.
- Monitor seepage areas on east dike for change until engineering evaluation can be completed and remedial actions developed.
- Continue annual joint repairs of RCP risers. This spillway system may ultimately be modified or replaced, pending Stantec-TVA assessment of replacement system. Monitor until that time.
- Continue mowing of exterior slopes.
- Continue annual inspection program and execute recommendations.
- Clean sedimentation from drainage pipe that lies beneath access road leading up to Ash Pond 4. The inlet and outlet ends of this pipe are completely buried, but some water still trickles through into the discharge channel. This pipe is not associated with the ash pond, but should be cleaned and inlet/outlet ends re-opened and maintained for positive site drainage.



TVA Disposal Facility Assessment Phase 1b Byproduct Disposal Facility Summary Colbert Fossil Plant (COF) Disposal Area 5 Dry Stack (DS-5)

1. General Facility Information

Facility Status: Active

Surface Area:	75 acres (estimated)	Maximum Height (toe to top of stack):	120 feet (estimated from drawing 10W283-14)
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2. Site Visit Information

Stantec Assessment Team: Randy Roberts, PE and Paul Cooper, EIT

TVA Staff Present: Michael Gean and Allison Horton on January 14, 2009

Field Assessment Dates: January 14, 2009 and February 3, 2009

Weather/Site Conditions: Mid-40 degrees F, partly cloudy, moist ground both days

3. History/Description of Usage

History, Operation and Stacking Plan:

Disposal Area 5 perimeter dikes were constructed in 1984. The disposal area was initially intended to be an ash pond, but a sinkhole failure occurred in northwest portion upon initial filling. Sinkhole was reportedly treated and capped, and disposal operations then shifted to dredge cell method in south and southeast portions (2 cells). Entire north and northwest portions of Disposal Area 5 are not in use and are now thickly wooded. From mid-1980's until 1990, ash was dredged in slurry fashion from Ash Pond 4 to Area 5 dredge cells 1 and 2. In 1990, dredging was stopped and disposal methods were converted to a dry stacking operation. COF personnel reported that sluiced ash storage reached only a few feet thick in these two cells prior to conversion. Dry disposal operation is following a stacking plan developed in the early 1990's. Ultimate height of stack will range from 100 to 120 feet from top to toe of original perimeter dikes. Stacked fly ash is being constructed on 4H:1V slopes, with benches every 20 feet in height. Stack appears fully built out in south and west portions. Current disposal activity is on east side.



TVA Disposal Facility Assessment Phase 1b Byproduct Disposal Facility Summary Colbert Fossil Plant (COF) Disposal Area 5 Dry Stack (DS-5)

Stacking over Dredge Cells or CCB Ponds: Cells 1 and 2 beneath the existing stack were initially operated as dredge cells. Ash was dredged from Ash Pond 4 into these cells from mid-1980's until 1990. COF personnel report that just a few feet of sluiced ash storage existed before operation shifted to stacking. There is also a small area at the extreme northeast portion of the stack that was operated as a temporary stilling pool for material dredged from the adjacent drainage basin. This pool was reportedly in operation only for about a month.

Past Failures/Releases: There was a release of sluiced ash through a sinkhole collapse in 1984 shortly after pond was placed into operation. This occurred in northeast portion of Area 5. The sinkhole was reportedly capped. This area has since been abandoned and is not in use.

4. Owner's Operations, Maintenance and Inspection Information

TVA Maintenance: Cover and vegetate completed stack slopes semi-annually, repair erosion areas as needed, re-grade perimeter ditch as needed.

TVA Inspections: TVA engineering performs annual inspections and prepares reports. Plant personnel recently started making daily observations, and documenting on a weekly basis.

Problems Previously Identified During Past TVA Inspections: Areas of erosion and sparse vegetation, sedimentation and need to regrade perimeter ditches, rutting on dike access roads, trees on slopes, "bubbling seepage" in drainage ditch along southern toe of Cells 1 and 2.

5. Documents Reviewed

See attached Document Log for complete list of documents provided by TVA for review. In particular, the following provided pertinent information for the assessment of this facility:

TVA Design Drawings: Drawing numbers 10W279, 10W283-1 thru 5, 283-10 thru 20.



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TVA As-Built Drawings:	None available.
TVA Construction Testing Records:	None available.
TVA Annual Inspection Reports:	TVA Annual Inspection Reports 1993 to 2008.
Geotechnical Data:	"Colbert Steam Plant - Ash Disposal Area 5 - Soils Exploration and Testing - En Des Soil Schedule No. 67.2", Memorandum from Frank VanMeter to G. L. Buchanan dated June 9, 1982 "Colbert Steam Plant - Additional Ash Disposal Area No. 5 - Engineering Report", Memorandum from M.M. Sprouse to H.S. Fox dated December 21, 1982. "Colbert Steam Plant - Dry Fly Ash Facility" Memorandum from R.C. Weir to O.P. Thornton dated October 31, 1986. "Report of Geotechnical Exploration, Ash Stack Area 5, Colbert Fossil Plant, Tuscumbia, Alabama", prepared by MACTEC Engineering and Consulting, Inc., March 19, 2004

6. Stantec Field Observations

See attached Concerns/Photo Log, Photos, and Site Plan Drawing.

6.1. Exterior Slopes and Benches

Vegetation:	Grass, sparse coverage on dry stack slopes in several areas. Thick vegetation on initial perimeter dike faces below dry stack.
Trees:	Trees are numerous on face of initial perimeter dikes on northwest and southwest sides.
Erosion:	Several areas of erosion along faces of dry stack were noted where vegetation is sparse. Also, severe rill/gully erosion noted along face of initial perimeter dike at few locations (see drawing) on northwest face. Few minor areas of erosion noted along perimeter dike access road at west corner.



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Phase 1b Byproduct Disposal Facility Summary
Colbert Fossil Plant (COF)
Disposal Area 5 Dry Stack (DS-5)**

Instabilities:	No evidence of instability was observed.
Uniform Appearance	Good, except at areas of severe rill/gully erosion on face of initial perimeter dike on northwest side. Stacking plan appears to agree with design drawings.
Benches:	Yes, placed at approximate 20 feet intervals in elevation, 25 feet wide, sloped toward stack (from drawing 10W283-14).
Slope:	Design: 4H:1V for dry stack slopes, 2H:1V for initial perimeter dike (from drawing 10W283-14). Dry stack slopes appear to agree with design. Lower perimeter dike slopes appear to agree with design, except for southwest area where steeper slopes were observed. Measured: 1.4H:1V at Section 1 (perimeter dike only) 1.9H:1V at Section 2 (perimeter dike only)
Height:	100 to 120 feet (estimated)
Other:	None.

6.2. Perimeter Drainage Ditches and Down-Drains

Vegetation:	Tall grass/cattail growth present in some intervals of perimeter ditch, and sparsely along down-drains. Isolated trees also noted.
Rip-Rap Channel Lining:	Rip-rap was observed on down drains only, no rip-rap in perimeter ditches.
Erosion:	No significant erosion noted, but sedimentation had accumulated in ditch at several areas from erosion along stack faces.
Siltation in Ditches:	Yes. Siltation noted throughout perimeter ditch.
Standing Water in Ditches or on Benches:	Yes. Standing water noted along most of northwest perimeter ditch west of the haul road.
Silted/Impeded Drainage Pipes:	Yes. Perimeter ditch drainage pipe beneath haul road is severely silted and flow through pipe is slowed. Outlet end is buried. This has caused standing water in portion of perimeter ditch along northwest side. It is also believed that during rain events, the perimeter ditch



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floods and water probably flows across the access road and down the slopes of the perimeter dike, which has lead to the severe rill/gully erosion noted under item 6.1.

Other: None.

7. Notable Observations and Concerns

- The area beneath the current dry stack was initially operated as dredge cells. Dredged ash was sluiced from Ash Pond 4 in the mid to late 1980's. Constructing embankments over hydraulically placed ash is a potential slope stability issue and requires engineering analysis and geotechnical explorations.
- Storm water flow through the perimeter ditch drainage pipe that lies beneath the haul road on the northwest side of the stack is impeded (inlet end is partly impeded by siltation and outlet end is buried and not visible). This has lead to poor drainage and ponded water within the portion of the perimeter drainage ditch upstream of the pipe crossing. Stantec also observed significant rill and gully erosion along the exterior perimeter dike slopes below this ditch interval. It is believed that during rain events, the perimeter ditch floods and water flows across the adjacent access road and down the slope, which has lead to the erosion.
- Minor rill/gully erosion was noted along perimeter access road at west corner of stack.
- Vegetative cover is sparse along slopes of dry stack above initial perimeter dike.
- Areas of rill/gully erosion were noted on all sides of dry stack exterior slopes.
- One animal burrow was noted along east perimeter dike face.
- The slope of the initial perimeter dike along the south area (at Section 1 on drawing) is relatively steep, on the order of 1.4H to 1V. The design drawings call for perimeter slopes to be 2H:1V.
- Siltation and erosion was noted throughout much of the length of the perimeter drainage ditch.
- The absence of as-built drawings and construction testing records is a concern.
- Previous inspection reports appear adequate, but there is a trend of not all maintenance recommendations being executed.



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Phase 1b Byproduct Disposal Facility Summary
Colbert Fossil Plant (COF)
Disposal Area 5 Dry Stack (DS-5)**

8. Recommendations

8.1. Phase 2 Engineering and Programmatic Recommendations

- It is recommended that Disposal Area 5 Dry Stack undergo further engineering study to evaluate the stacking plan and slope stability. Geotechnical work should include test borings, and piezometers; followed by laboratory testing and slope stability analysis of critical cross sections.
- It is recommended that a program be established to develop as-built drawings and construction records for future maintenance and construction activities.

8.2. Maintenance Recommendations

- Repair locations of significant rill and gully erosion at the northwest face of the perimeter dike. The areas should be excavated, foundation benches cut into the slopes, and new fill placed to reform the slope. After grading, clay cover should be placed, the area seeded, and then protected with an erosion control blanket. Monitor for future erosion/sparse vegetation and repair as needed.
- It is recommended that siltation be cleaned from the perimeter ditch drainage pipe that crosses beneath the haul road at the northwest area to improve perimeter ditch drainage. Both inlet and outlet ends need cleaning. Extend inlet and outlet ends past haul road as needed. The grades along the entire length of the perimeter ditch should also be checked and the ditch re-graded as necessary for positive drainage. Sedimentation and long grass/cattail growth should also be removed. Last, it is recommended that the perimeter ditch be lined with rip-rap to help reduce future erosion.
- It is recommended that areas of erosion and sparse vegetation on dry stack slopes be reworked to repair erosion, and seeded/re-seeded to establish vegetation. Monitor for erosion/sparse vegetation and repair as needed.
- Repair areas of erosion along perimeter access road at west corner.
- Establish a mowing program for this disposal area.
- Repair animal burrows where noted.
- Continue annual inspection program and execute recommendations.



TVA Disposal Facility Assessment
Phase 1 Coal Combustion Product Disposal
Facility Summary
Colbert Fossil Plant (COF)
Disposal Area 5 Drainage Basin (P-1)

1. General Facility Information

Facility Status:	Active	NID Identification:	Not Available
Surface Area (inside dikes):	12 acres (estimated)	Maximum Height (toe to top of dike):	17 feet
Free Water Volume:	116,000 CY (Stantec estimate)	Maximum Water Storage:	209,000 (Stantec estimate)
Estimated CCB Storage:	Basin does not store CCB.	Dike Length:	3,000 feet (estimated)
Plant Discharge to Facility:	N/A	Current Pool Elevation:	468 feet (estimated)

2. Site Visit Information

Stantec Assessment Team: Randy Roberts, PE and Paul Cooper, EIT

TVA Staff Present: Michael Gean and Allison Horton on January 14, 2009

Field Assessment Dates: January 14, 2009 and February 3, 2009

Weather/Site Conditions: Mid-40 degrees F, partly cloudy, moist ground both days

3. History/Description of Usage

History and Operation: The Disposal Area 5 Drainage Basin was constructed in the early 1980's with initial development of this disposal area. The basin receives storm water runoff from the adjacent Area 5 Dry Stack. Storm water enters the basin at the southeast corner. Outlet is through two 48 inch RCP riser pipe/weirs that discharge through two 36 inch RCP sections into an open channel.

Past Failures/Releases: No failures or releases reported.



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Disposal Area 5 Drainage Basin (P-1)**

4. Owner's Operations, Maintenance and Inspection Information

Emergency Action Plan:	No EAP has been prepared for this facility.
Operations Manual:	A coal combustion products operations manual is available for the Colbert Fossil Plant covering all active facilities.
TVA Maintenance:	Exterior slopes mowed twice annually, where accessible (i.e. no trees).
TVA Inspections:	TVA Engineering performs annual dike inspections and prepares reports. Plant personnel recently started making daily observations, with documented inspections made weekly.
Problems Previously Identified During Past TVA Inspections:	Leakage was reported in top joint of RCP riser section for northwest spillway/weir in 1999 and 2000 reports. No mention of repair or continued problem in subsequent reports. Trees on exterior slopes, leaning wood inlet, and cenospheres forming in basin also mentioned in reports.

5. Documents Reviewed

See attached Document Log for complete list of documents provided by TVA for review. In particular, the following provided pertinent information for the assessment of this facility:

TVA Design Drawings:	10W279, 10W283-1 thru 283-5, 283-10 thru 20 for Disposal Area 5 (drawings contain some information pertinent to drainage basin).
TVA As-Built Drawings:	None available.
TVA Construction Testing Records:	None available.
TVA Annual Inspection Reports:	TVA Annual Inspection Reports 1993 to 2008.
Geotechnical Data:	None available.



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Disposal Area 5 Drainage Basin (P-1)

6. Stantec Field Observations

See attached Concerns/Photo Log, Photos, and Site Plan Drawing.

6.1. Interior Slopes

Vegetation:	Tall grass and cattail growth, dense coverage.
Trees:	None were observed.
Wave Wash Protection:	None was observed.
Erosion:	Some erosion due to wave action noted.
Instabilities:	One small slough approximately 12 feet wide on southwest dike.
Animal Burrows:	None were observed.
Freeboard:	Measured: 4.8 feet at Section 3, 8.6 feet at Section 4 (see drawing for section locations). Design: Not available on drawings provided.
Encroachments:	None were observed.
Slope:	Measured: 2.0H:1V at Section 3, 1.6H:1V at Section 4 Design: 1.5H:1V at NE dike at outlets, 2H:1V at SW dike (from Drawing 10W283-2,5)

6.2. Crest

Crest Cover and Slope:	Ash-covered road on NE,SE dikes, grass covered on NW,SW dikes, crest appeared relatively flat.
Erosion:	None was observed.
Alignment:	Alignment appears to agree with design drawings.
Settlement/Cracking:	None was observed.
Bare Spots/Rutting:	None were observed.
Width:	Measured: 16 feet at Section 3, 19 feet at Section 4 Design: 16 feet at SW dike, 32 feet at NE dike at outlets (Drawing 10W283-2,5).



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Disposal Area 5 Drainage Basin (P-1)

6.3. Exterior Slopes

Vegetation:	Trees and woody growth on NE and NW dikes; grass cover on SE and SW dikes.
Trees:	Numerous trees noted on NE and NW dikes.
Erosion:	None was observed.
Instabilities:	None were observed.
Uniform Appearance:	Good.
Seepage:	None was observed.
Benches:	None were observed.
Foundations, Drains, Relief Wells, Instrumentation:	No provisions for drainage/seepage control, or instrumentation were observed.
Animal Burrows:	One noted on NE dike south of outlet area (see drawing)
Slope:	Measured: 2H:1V at Sections 3 and 4 Design: 2H:1V (from Drawing 10W283-2,5)
Height:	Measured: 17.2 feet at Section 3, 16 feet at Section 4 Design: 16 feet at SW dike (from Drawing 10W283-2,5)

6.4. Spillway Weirs/Riser Inlets

Number:	Two (southeast weir is above pool and inactive) located at NE side of basin.
Size, Type and Material:	48 inch RCP push-together riser sections with standard TVA steel skimmers.
Height of Riser Inlets:	23 feet (estimated from Drawing 10W283-3).
Access:	Spillways are accessed via walkway between spillways.
Joints:	No leakage visible in upper portion of southeast weir, which is above pool and inactive. Unable to observe below inlet level at active northwest weir.
Mis-Alignment:	None reported or observed.
Closed/Abandoned Conduits:	None reported or observed.



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6.5. Outlet Pipes

Number:	Two (2)
Size, Type and Material:	36 inch RCP
Headwall:	Yes, appears to be in good shape.
Joint Separations:	Unknown, could not observe. None reported.
Mis-Alignment:	Unknown, could not observe. None reported.
Closed/Abandoned Conduits:	None reported or observed.

7. Notable Observations and Concerns

- RCP push-together riser structure spillways are a concern. The annual reports from 1999 and 2000 indicated water flowing between pipe joints in the northwest spillway riser.
- Wave action erosion was noted at a few locations along interior slopes just above pool level.
- One animal burrow was noted along the toe of the northeast dike.
- A small sloughed area was noted along the interior slope of the southwest dike.
- The wood inlet structure located along the southeast side (where drainage from Disposal Area 5 enters pond) is leaning toward the pond.
- The absence of an Emergency Action Plan, Operation and Maintenance Plan, as-built drawings and construction testing records is a concern.
- Trees located throughout the northeast and northwest exterior dike slopes are a concern. Recommendations for tree removal have been provided in past annual reports, but have not yet been performed.
- Tall brush and cattails are present on interior slopes. Cutting the tall brush would facilitate better observations of interior slopes.



**TVA Disposal Facility Assessment
Phase 1 Coal Combustion Product Disposal
Facility Summary
Colbert Fossil Plant (COF)
Disposal Area 5 Drainage Basin (P-1)**

8. Recommendations

8.1. Phase 2 Engineering and Programmatic Recommendations

- It is recommended that the Operations and Maintenance Plan be updated.
- It is recommended that a program to develop as-built drawings and construction records for future maintenance and construction activities be established.

8.2. Maintenance Recommendations

- Remove trees from exterior sides of northeast and northwest dikes.
- Cut and maintain heavy/tall cattail and grass growth on interior slopes of pond to allow better observations.
- Repair erosion and sloughed areas where noted on interior slopes of pond. Line interior pond slopes with rip-rap to help reduce future erosion.
- The spillway risers at Disposal Area 5 Drainage Basin may ultimately be modified or replaced, pending Stantec-TVA assessment of replacement system. Monitor the spillway systems until that time.
- Repair animal burrows where noted.
- Continue mowing program for grass-covered dikes. Establish new mowing program on northeast and northwest dikes following tree removal.
- Continue annual inspection program and execute recommendations.
- Perform soundings and monitor for storage capacity, and perform dredging as needed to maintain storage capacity.



TVA Disposal Facility Assessment
Phase 1 Coal Combustion Product Disposal
Facility Summary
Colbert Fossil Plant (COF)
Closed Disposal Area 1 (CDA1)

1. General Facility Information

Facility Status:	Closed	NID Identification:	Not Available
Surface Area (inside dikes):	40 acres (estimated)	Maximum Height (toe to top of dike):	40 feet (estimated)
Free Water Volume:	N/A	Maximum Water Storage:	N/A
Estimated CCB Storage:	Unknown; disposal area is abandoned and closed.	Dike Length:	3,000 ft (estimated)
Plant Discharge to Facility:	None. Disposal area is closed.	Current Pool Elevation:	N/A

2. Site Visit Information

Stantec Assessment Team: Randy Roberts, PE and Paul Cooper, EIT

TVA Staff Present: Michael Gean and Allison Horton.

Field Assessment Dates: February 17, 2009 and March 24 and 25, 2009.

Weather/Site Conditions: Mid-40 degrees F, partly cloudy, moist ground on February 17, 2009; Mid-60 degrees F , partly cloudy on March 24, 2009, rain showers on March 25, 2009.

3. History/Description of Usage

History and Operation: This disposal area was the first ash pond constructed at COF. Ash has not been sluiced to this area since 1975. A reclamation/final grading plan was developed in 1976 for final grading and storm water management. The plant reportedly periodically dry-stacked ash in this area from Disposal Area 4 between 1982 and 1990. The area is currently heavily vegetated and wooded.

Past Failures/Releases: None reported.



**TVA Disposal Facility Assessment
Phase 1 Coal Combustion Product Disposal
Facility Summary
Colbert Fossil Plant (COF)
Closed Disposal Area 1 (CDA1)**

4. Owner's Operations, Maintenance and Inspection Information

Emergency Action Plan:	N/A, the area is closed and abandoned.
Operations Manual:	A coal combustion products operations manual is available for the Colbert Fossil Plant covering active facilities.
TVA Maintenance:	None reported. The area is closed and heavily vegetated.
TVA Inspections:	TVA Engineering performs annual dike inspections and prepares reports.
Problems Previously Identified During Past TVA Inspections:	Bare slope area northeast of old asbestos disposal area; some minor/small areas of sloughing and erosion along riverbank at river level.

5. Documents Reviewed

See attached Document Log for complete list of documents provided by TVA for review. In particular, the following provided pertinent information for the assessment of this facility:

TVA Design Drawings:	10W298, 10W299, 10N213
TVA As-Built Drawings:	None available.
TVA Construction Testing Records:	None available.
TVA Annual Inspection Reports:	TVA Annual Inspection Reports 1993 to 2008.
Geotechnical Data:	None available.

6. Stantec Field Observations

See attached Concerns/Photo Log, Photos, and Site Plan Drawing.

6.1. Interior Slopes

Vegetation:	N/A, interior portion of closed disposal area has been filled/graded and contains thick vegetation and wooded areas.
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TVA Disposal Facility Assessment
Phase 1 Coal Combustion Product Disposal
Facility Summary
Colbert Fossil Plant (COF)
Closed Disposal Area 1 (CDA1)

Trees:	N/A
Wave Wash Protection:	N/A
Erosion:	N/A
Instabilities:	N/A
Animal Burrows:	N/A
Freeboard:	Measured: N/A Design: N/A
Encroachments:	N/A
Slope:	Measured: N/A Design: N/A

6.2. Crest

Crest Cover and Slope:	Grass and light brush covered access road, some sparse areas of gravel, crest appeared relatively flat.
Erosion:	None was observed.
Alignment:	Alignment appeared to agree with design drawings. No problem.
Settlement/Cracking:	None was observed.
Bare Spots/Rutting:	None was observed.
Width:	Measured: 25 feet at both Sections 9 and 10. Design: Not shown on available drawings.

6.3. Exterior Slopes

Vegetation:	Trees, brush and woody growth noted throughout. Dense coverage.
Trees:	Yes. Numerous trees noted.
Erosion:	None was observed. Riprap protection was observed at the toe of the slope, near the river.
Instabilities:	None were observed.
Uniform Appearance:	Good.



TVA Disposal Facility Assessment
Phase 1 Coal Combustion Product Disposal
Facility Summary
Colbert Fossil Plant (COF)
Closed Disposal Area 1 (CDA1)

Seepage:	None was observed.
Benches:	Yes, 19 feet wide at Section 9, 45 feet wide at Section 10.
Foundations, Drains, Relief Wells, Instrumentation:	No provisions for drainage/seepage control, or instrumentation were observed.
Animal Burrows:	None were observed.
Slope:	Measured: 2.9H:1V at Section 9, 1.8H:1V at Section 10. Design: 3H:1V (from TVA drawing 10N213)
Height:	Measured: Not measured. Design: Approximately 40 feet from top to edge of river, as estimated from TVA drawings. Stantec observations agree with drawings relative to slope height.

6.4. Spillway Weirs/Riser Inlets

Number:	N/A, disposal area is closed.
Size, Type and Material:	N/A
Height of Riser Inlets:	N/A
Access:	N/A
Joints:	N/A
Mis-Alignment:	N/A
Closed/Abandoned Conduits:	Drawing 10N213 shows two weir inlets, one at northwest portion and one at southeast. Northwest weir was visible and open, with no apparent abandonment/closure effort observed (i.e. filling with concrete). Weir is approximately 41 feet deep, with 48" RCP riser inlet. Southeast weir inlet was not observed (possibly buried).

6.5. Outlet Pipes

Number:	N/A, disposal area is closed.
Size, Type and Material:	N/A



**TVA Disposal Facility Assessment
Phase 1 Coal Combustion Product Disposal
Facility Summary
Colbert Fossil Plant (COF)
Closed Disposal Area 1 (CDA1)**

Headwall:	N/A
Joint Separations:	N/A
Mis-Alignment:	N/A
Closed/Abandoned Conduits:	Drawing 10N213 shows two pipe outlets, one at northwest portion and one at southeast. Both pipe outlet ends were found at toe of slopes. They were observed to be 30" diameter RCP sections. Both outlets were open and no apparent abandonment/closure efforts were observed.

7. Notable Observations and Concerns

- The northwest weir inlet structure was found. It was open and no apparent abandonment/closure effort was observed. The southeast weir inlet was not found.
- Both RCP pipe outlet ends were found to be open with no apparent abandonment/closure effort observed.

8. Recommendations

8.1. Phase 2 Engineering and Programmatic Recommendations

- Phase 2 engineering is not recommended at this time for this closed facility.

8.2. Maintenance Recommendations

- It is recommended that the two old outlet structures be properly abandoned and closed by filling with grout or concrete to the extent practical. Filling should progress from both the inlet and outlet ends. Efforts to locate the possible buried southeast weir inlet should be made by excavating with a backhoe.
- Continue annual dike and facility inspections.
- Downed trees along the old dike crest should be removed and brush mowed/maintained to provide access for annual inspections.



Drawing Mark AP-4-1 Typical photo representing mid-slope seepage locations along the east and southeast dike.



Drawing Mark AP-4-2 Stacked RCP riser outlet structures.



Drawing Mark AP-4-3 Stacking operation at west side of ash pond, located at left in photo.



Drawing Mark AP-4-4 Typical photo of inner slope wave erosion.



Drawing Mark AP-4-5 Buried drainage pipe located at access road.



Drawing Mark AP-4-6 Trees located at toe of North dike.



Drawing Mark DS-5-1 View showing perimeter ditch and dry stack slope, siltation in ditch, sparse vegetation on stack.



Drawing Mark DS-5-2 View of typical downdrain on the dry stack.



Drawing Mark DS-5-3

View showing perimeter ditch and dry stack slope, siltation in ditch, sparse vegetation on stack.



Drawing Mark DS-5-4

View showing perimeter ditch and dry stack slope, siltation in ditch, vegetation on stack.



Drawing Mark DS-5-5 View of perimeter ditch and stack.



Drawing Mark DS-5-6 View of perimeter ditch and stack.



Drawing Mark DS-5-7 Erosion on exterior slope of dike, ruts on access road



Drawing Mark DS-5-7 Erosion on exterior slope of dike.



Drawing Mark DS-5-7 Erosion on exterior slope of dike.



Drawing Mark DS-5-7 Erosion on exterior slope of dike.



Drawing Mark DS-5-8 Significant rill/gully erosion on northwest face of perimeter dike.



Drawing Mark DS-5-8 Significant rill/gully erosion on northwest face of perimeter dike.



Drawing Mark DS-5-10 Outlet of perimeter ditch drainage pipe beneath haul road, buried.



Drawing Mark DS-5-11 Perimeter ditch drainage pipe inlet where ditch crosses haul road, partly silted closed.



Stantec

TVA Disposal Facility Assessment
Phase 1 Coal Combustion Product Disposal Facility Summary
Colbert Fossil Plant (COF)
Disposal Area 5
Photos, Concerns/Photo Log

Concerns/Photo Log		
Drawing Mark	Comments	Photo/GPS ID
DS-5-1	View showing perimeter ditch and dry stack slope, siltation in ditch, sparse vegetation on stack.	Photo 1B
DS-5-2	View of a typical downdrain on the dry stack.	Photo 2B
DS-5-3	View showing perimeter ditch and dry stack slope, siltation in ditch, sparse vegetation on stack.	Photo 3B
DS-5-4	View showing perimeter ditch and dry stack slope, siltation in ditch, vegetation on stack.	Photo 4B
DS-5-5	View of perimeter ditch and stack.	Photo 5B
DS-5-6	View of perimeter ditch and stack.	Photo 6B
DS-5-7	Erosion on exterior slope of dike, ruts on access road.	Photo 7B, 8B, 11B, 12B
DS-5-8	Significant rill/gully erosion on northwest face of perimeter dike.	Photo 9B, 10B
DS-5-9	Animal burrow, mid-slope of perimeter dike.	No photo
DS-5-10	Outlet of perimeter ditch drainage pipe beneath haul road, buried.	Photo 14B
DS-5-11	Perimeter ditch drainage pipe inlet where ditch crosses haul road, partly silted closed.	Photo 13B



Drawing Mark P-1-1 Small inner slope slough.



Drawing Mark P-1-3 Stacked RCP riser outlets.



Drawing Mark P-1-5 Tree growth on NE dike (to the left in photo).



N/A General photo of basin.



Drawing Mark CDA-1-1 Northwest weir RCP inlet (looking down inlet).



Drawing Mark CDA-1-1 Northwest weir RCP inlet.



Drawing Mark CDA-1-2 Northwest outlet pipe.



Drawing Mark CDA-1-3 Typical photo of dike slope near Section 10.



Drawing Mark CDA-1-4 Typical wave erosion protection near river.



Drawing Mark CDA-1-5 Southeast outlet pipe.



**Coal Combustion Product Disposal Facility Assessment
Phase 1 Document Review Form
Colbert Fossil Plant (COF)**

Date Reviewed	Reviewed by	File Name	File Type
1/30/2009	RLR/PJC	Colbert.pdf (This Is An Aerial View W/ Structures Located - Also Includes Top And Toe Of Dike Elevations)	PDF
1/30/2009	RLR/PJC	01-10-1992 Red Water Seepage.pdf	PDF
1/30/2009	RLR/PJC	013 Ash Pond Leachate Treat Wetlands Npdes AI0003867 04-1987.pdf	PDF
1/30/2009	RLR/PJC	10-28-1987 COF Proposed Admin Order.pdf	PDF
1/30/2009	RLR/PJC	11-10-1997 Yrly Free Water Vol 97-15497-99.pdf	PDF
2/23/2009	PJC	1-14-09 Bottom Ash Pond Inspection.Tif	TIF
1/30/2009	RLR/PJC	12-02-1987 COF 013 Wetland Treatment System.pdf	PDF
2/23/2009	PJC	1-21-09 Pond Dike Inspections.Tif	TIF
1/30/2009	RLR/PJC	12-19-1986 Effluent Limits Violation.pdf	PDF
1/30/2009	RLR/PJC	12-22-1986 Incomp Rept AI0003867 Discharge Monitoring Rept .pdf	PDF
2/23/2009	PJC	1-29-09 Pond Dike Inspection.Tif	TIF
1/30/2009	RLR/PJC	1-30-1990 No4 And 5 Ash Pond Dikes.pdf	PDF
3/30/2009	PJC	2-10-09 Pond Dike Inspection.pdf	PDF
3/30/2009	PJC	2-19-09 Pond Dike Inspection.pdf	PDF
3/30/2009	PJC	2-27-09 Pond Dike Inspection.pdf	PDF
3/30/2009	PJC	2-6-09 Pond Dike Inspection.pdf	PDF
1/30/2009	RLR/PJC	3-12-1987 Npdes Permit AI0003867 Ash Pond Leachate Letter.pdf	PDF
3/30/2009	PJC	3-6-09 Pond Dike Inspection.pdf	PDF
1/30/2009	RLR/PJC	4-01-1987 AI0003867 013 Outfall Ash Pond Leachate.pdf	PDF
1/30/2009	RLR/PJC	4-05-1990 No 4 Ash Pond Sample Of Redwater.pdf	PDF
1/30/2009	RLR/PJC	5-23-1986 Redwater Invest Insp Rept.pdf	PDF
1/30/2009	RLR/PJC	5-25-1993 Dike Inspection For 4-6-93.pdf	PDF
1/30/2009	RLR/PJC	7-25-1991 Npdes Permit AI0003867 Ash Pond Dikes Seep.pdf	PDF
1/30/2009	RLR/PJC	7-30-1986 Proposed Npdes Permit Mod M00072.pdf	PDF
1/30/2009	RLR/PJC	97-15497-00 Insp Wo Yrly Free Water Vol 12-16-1997 .pdf	PDF
1/30/2009	RLR/PJC	A60 910307 065 3-07-1991 Ash Pond Dikes Seepage.pdf	PDF
1/30/2009	RLR/PJC	A60 910312 066 3-14-1991 Water Sample Collection And Analys.pdf	PDF
1/30/2009	RLR/PJC	A60 910312 066 3-14-1991 Water Sample Collection And Analyses.pdf	PDF
1/30/2009	RLR/PJC	A60 910312 066 3-14-1991 Water Sample Collection.pdf	PDF
1/30/2009	RLR/PJC	A60 910312 066 Water Sample Collection And Analyses.pdf	PDF
1/30/2009	RLR/PJC	A60 930816 002 8-09-1993 Proposed Copper Pond Closure Plan.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond 4 Increment Vol Oct 7-1997.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Vol Cert Dec 16-1997.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume 11-26-1996.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume 1990 Data.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume 1990.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume 1992 Fax Copy.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume 1992.pdf	PDF



**Coal Combustion Product Disposal Facility Assessment
Phase 1 Document Review Form
Colbert Fossil Plant (COF)**

Date Reviewed	Reviewed by	File Name	File Type
1/30/2009	RLR/PJC	Ash Pond Free Water Volume 2008.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume Chart 1999.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume Draft 1990 Continued.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume Draft 1993.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume Draft 1994 Data.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume Draft 1994.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume Report 1992 Cover Letter.pdf	PDF
1/30/2009	RLR/PJC	Ash Pond Free Water Volume Report 1993.pdf	PDF
1/30/2009	RLR/PJC	B65 980417 270 4-17-1998 Inspect Of Waste Disposal Areas.pdf	PDF
1/30/2009	RLR/PJC	B65 990623 702 6-23-1999 Annual Insp Waste Disposal Areas.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection 2006.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection April 1995 (2).pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection April 1995.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection April 1997 Pictures.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection April 1997.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection April 2000.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection Dec 2006.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection Dec 2007.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection Jan 1997.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection Jan 1998.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection Jan 1999.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection Jan 2002.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection July 1993.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection March 1994.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection May 2006.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection Nov 2004.pdf	PDF
1/30/2009	RLR/PJC	Bottom Ash Pond Annual Inspection November 2002.pdf	PDF
1/30/2009	RLR/PJC	COF 10-04-1978 Noncompliance With Metal Cleaning Wastes N.pdf	PDF
1/30/2009	RLR/PJC	COF 11-03-2000 No 4 Ash Pond Sediment Oil Study Report.pdf	PDF
1/30/2009	RLR/PJC	COF 94-318-Fh39 Coal Yard Drainage Basin Study Gp-168.pdf	PDF
1/30/2009	RLR/PJC	COF A60 900917 066 9-19-1990 Water Pollution Control Compl.pdf	PDF
1/30/2009	RLR/PJC	COF Coppm-M84-23 6-04-1990 Plant Procecd-Chemical Cleaning.pdf	PDF
1/30/2009	RLR/PJC	COF M01 920723 001 7-20-1992 Copper Pond Release.pdf	PDF
1/30/2009	RLR/PJC	COF M72 910514 503 Water Qual Control Compliance Improv Ta.pdf	PDF
1/30/2009	RLR/PJC	COF N01 921102 802 11-02-1992 Copper Pond Release.pdf	PDF
1/30/2009	RLR/PJC	COF 10-04-1978 Noncompliance With Metal Cleaning Wastes.pdf	PDF
1/30/2009	RLR/PJC	COF 1-10-1992 Special Groundwater Monitoring Near Chemical.pdf	PDF
1/30/2009	RLR/PJC	COF 1-10-1992 Special Groundwater Monitoring Newr Chemical .pdf	PDF



**Coal Combustion Product Disposal Facility Assessment
Phase 1 Document Review Form
Colbert Fossil Plant (COF)**

Date Reviewed	Reviewed by	File Name	File Type
1/30/2009	RLR/PJC	COF 1-16-1992 Analytical Results For Samples.pdf	PDF
1/30/2009	RLR/PJC	COF 1-31-1992 Coal Yard Runoff Pond Cyp Bypass Info.pdf	PDF
1/30/2009	RLR/PJC	COF 2-06-1992 Groundwater Monitoring Data For Wells Mc1-Mc4.pdf	PDF
1/30/2009	RLR/PJC	COF 2-06-1992 Groundwater Monitoring-Review Of Data For Wel.pdf	PDF
1/30/2009	RLR/PJC	COF 3-08-1991 Nonchemical Metal Cleaning Waste.pdf	PDF
1/30/2009	RLR/PJC	COF 7-08-1997 Fugitive Oil-Sheen Project.pdf	PDF
1/30/2009	RLR/PJC	COF Ash Pond Insp Fy 2005.pdf	PDF
1/30/2009	RLR/PJC	COF Ash Pond Insp Fy 2006.pdf	PDF
1/30/2009	RLR/PJC	COF Ash Pond Insp Fy 2007.pdf	PDF
1/30/2009	RLR/PJC	COF Ash_Pond_Insp_Summaries.doc	DOC
1/30/2009	RLR/PJC	COF M36 920124 045 1-24-1992 Diary Note From Water Chemist.pdf	PDF
1/30/2009	RLR/PJC	COF M56 910806 585 8-07-1991 High Iron Concentration In Cop.pdf	PDF
1/30/2009	RLR/PJC	COF-10N211-Sht -Rev 8 Main Plant General Grading Plan Coal Yard.cal	CAL
1/30/2009	RLR/PJC	COF-10N212-Sht -Rev 2 Main Plant Coal Yard Drainage Plan At Protective Fence And Coal Track.cal	CAL
3/30/2009	PJC	COF-10N213 Rev 3.cal	CAL
2/23/2009	PJC	COF-10N213 Rev 3.cal	CAL
1/30/2009	RLR/PJC	COF-10N213-Sht -Rev 6 Main Plant Ash Disposal Areas.cal	CAL
3/30/2009	PJC	COF-10N287 Rev 1.cal	CAL
2/23/2009	PJC	COF-10N287 Rev 1.cal	CAL
1/30/2009	RLR/PJC	COF-10N287-Sht -Rev 1 Main Plant Ash Disposal Area No. 4 Divider Dike & Floating Skimmer.cal	CAL
3/30/2009	PJC	COF-10N290 Rev 6.cal	CAL
2/23/2009	PJC	COF-10N290 Rev 6.cal	CAL
3/30/2009	PJC	COF-10N290 Rev 8.cal	CAL
2/23/2009	PJC	COF-10N290 Rev 8.cal	CAL
1/30/2009	RLR/PJC	COF-10N290-Sht -Rev 8 Main Plant Ash Disposal Area No. 4 Plan.cal	CAL
3/30/2009	PJC	COF-10N291 Rev 4.cal	CAL
2/23/2009	PJC	COF-10N291 Rev 4.cal	CAL
1/30/2009	RLR/PJC	COF-10N291-Sht -Rev 4 Main Plant Ash Disposal Area No. 4 Spillway & Channel Plan.cal	CAL
3/30/2009	PJC	COF-10N292 Rev 3.cal	CAL
2/23/2009	PJC	COF-10N292 Rev 3.cal	CAL
1/30/2009	RLR/PJC	COF-10N292-Sht -Rev 3 Main Plant Ash Disposal Area No. 4 Sections And Details.cal	CAL
3/30/2009	PJC	COF-10N293 Rev 1.cal	CAL
2/23/2009	PJC	COF-10N293 Rev 1.cal	CAL
3/30/2009	PJC	COF-10N293 Rev 2.cal	CAL
2/23/2009	PJC	COF-10N293 Rev 2.cal	CAL
1/30/2009	RLR/PJC	COF-10N293-Sht -Rev 2 Standard Drawing Ash Disposal Spillway.cal	CAL
3/30/2009	PJC	COF-10N295-01 Rev 3.cal	CAL
2/23/2009	PJC	COF-10N295-01 Rev 3.cal	CAL



**Coal Combustion Product Disposal Facility Assessment
Phase 1 Document Review Form
Colbert Fossil Plant (COF)**

Date Reviewed	Reviewed by	File Name	File Type
3/30/2009	PJC	COF-10N295-02 Rev 0.cal	CAL
2/23/2009	PJC	COF-10N295-02 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10N295-1-Sht -Rev 3 Main Plant Ash Disposal Area No. 4 Misc. Details - Sh 1.cal	CAL
1/30/2009	RLR/PJC	COF-10N295-2-Sht -Rev 0 Main Plant Ash Disposal Area No. 4 Misc Details Sheet 2.cal	CAL
1/30/2009	RLR/PJC	COF-10N295-Sht -Rev 0 Main Plant Ash Dpspl Area 4 Misc Det.cal	CAL
3/30/2009	PJC	COF-10N296 Rev 1.cal	CAL
2/23/2009	PJC	COF-10N296 Rev 1.cal	CAL
3/30/2009	PJC	COF-10N297 Rev 1.cal	CAL
2/23/2009	PJC	COF-10N297 Rev 1.cal	CAL
3/30/2009	PJC	COF-10N297 Rev 2.cal	CAL
2/23/2009	PJC	COF-10N297 Rev 2.cal	CAL
1/30/2009	RLR/PJC	COF-10N297-Sht -Rev 2 Standard Drawing Weir For Ash Disposal Spillway.cal	CAL
3/30/2009	PJC	COF-10N309 Rev 1.cal	CAL
2/23/2009	PJC	COF-10N309 Rev 1.cal	CAL
1/30/2009	RLR/PJC	COF-10N400-Sht -Rev 1 Yard Concrete Ash Disposal Trench Outline & Reinforcement.cal	CAL
1/30/2009	RLR/PJC	COF-10N401-Sht -Rev 4 Yard Concrete Ash Disposal Supports Outline & Reinf.cal	CAL
1/30/2009	RLR/PJC	COF-10N405-Sht -Rev 2 Yard Concrete Ash Disposal Trench Outline & Reinf - Sh 1.cal	CAL
1/30/2009	RLR/PJC	COF-10N406-Sht -Rev 1 Yard Concrete Ash Disposal Trench Outline & Reinf - Sh 2.cal	CAL
1/30/2009	RLR/PJC	COF-10N410-Sht -Rev 0 Yard Ash Disposal Area No. 4 Bridge Across Cane Creek Abutment 1.cal	CAL
1/30/2009	RLR/PJC	COF-10N411-Sht -Rev 2 Yard Ash Disposal Area No. 4 Bridge Across Cane Creek Bent.cal	CAL
1/30/2009	RLR/PJC	COF-10N412-1-Sht -Rev 1 Yard Ash Disposal Area No. 4 Bridge Across Cane Creek Abutment 2 & Sump Sh 1.cal	CAL
1/30/2009	RLR/PJC	COF-10N412-2-Sht -Rev 0 Yard Ash Disposal Area No. 4 Bridge Across Cane Creek Abutment 2 & Sump Sh 2.cal	CAL
1/30/2009	RLR/PJC	COF-10N413-1-Sht -Rev 1 Yard Ash Disposal Area No. 4 Bridge Across Cane Creek Deck Slab & Drainage Sh 1.cal	CAL
1/30/2009	RLR/PJC	COF-10N413-2-Sht -Rev 0 Yard Ash Disposal Area No. 4 Bridge Across Cane Creek Deck Slab & Drainage Sh 2.cal	CAL
1/30/2009	RLR/PJC	COF-10N414-1-Sht -Rev 0 Yard Ash Disposal Area No. 4 Road Crossing Pipe Protection Station 37_68-Sh 1.cal	CAL
1/30/2009	RLR/PJC	COF-10N414-2-Sht -Rev 0 Yard Ash Disposal Area No. 4 Road Crossing Pipe Protection Station 37_68-Sh 2.cal	CAL
1/30/2009	RLR/PJC	COF-10N415-1-Sht -Rev 1 Yard Ash Disposal Area No. 4 Road Crossing Removable Bridge Sta 41.00.cal	CAL
1/30/2009	RLR/PJC	COF-10N415-2-Sht -Rev 0 Yard Ash Disposal Area No. 4 Road Crossing Removable Bridge Sta 41+00.cal	CAL
1/30/2009	RLR/PJC	COF-10N416-1-Sht -Rev 0 Yard Ash Disposal Area No. 4 Road Crossing Removabe Bridge Sta 46+87.5.cal	CAL
1/30/2009	RLR/PJC	COF-10N416-2-Sht -Rev 1 Yard Ash Disposal Area No. 4 Road Crossing Removable Bridge Sta 46+87.5.cal	CAL
1/30/2009	RLR/PJC	COF-10N5410-Sht -Rev 5 Yard Unit 5 Concrete Ash Disposal Trench Outline & Reinforcement - Sh 1.cal	CAL
1/30/2009	RLR/PJC	COF-10N5411-Sht -Rev 2 Yard Unit 5 Concrete Ash Disposal Trench Outline & Reinforcement Sh 2.cal	CAL
3/30/2009	PJC	COF-10W200-01 Rev 3.cal	CAL
2/23/2009	PJC	COF-10W200-01 Rev 3.cal	CAL
3/30/2009	PJC	COF-10W200-1-Sht -Rev 3.cal	CAL
2/23/2009	PJC	COF-10W200-1-Sht -Rev 3.cal	CAL
3/30/2009	PJC	COF-10W201-02 Rev 3.cal	CAL
2/23/2009	PJC	COF-10W201-02 Rev 3.cal	CAL



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Date Reviewed	Reviewed by	File Name	File Type
3/30/2009	PJC	COF-10W201-03 Rev 4.cal	CAL
2/23/2009	PJC	COF-10W201-03 Rev 4.cal	CAL
3/30/2009	PJC	COF-10W202-01 Rev 2.cal	CAL
2/23/2009	PJC	COF-10W202-01 Rev 2.cal	CAL
3/30/2009	PJC	COF-10W203-01 Rev 5.cal	CAL
2/23/2009	PJC	COF-10W203-01 Rev 5.cal	CAL
3/30/2009	PJC	COF-10W203-02 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W203-02 Rev 0.cal	CAL
3/30/2009	PJC	COF-10W206 Rev 5.cal	CAL
2/23/2009	PJC	COF-10W206 Rev 5.cal	CAL
1/30/2009	RLR/PJC	COF-10W253-1-Sht -Rev 0 Main Plant Road Crossing At Dry Fly Ash Piping Plan, Profile, Sections & Miscellaneous Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W253-2-Sht -Rev 0 Main Plant Road Crossing At Dry Fly Ash Piping Profiles, Sections & Miscellaneous Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W279-Sht -Rev 0 Main Plant General Plan Proposed Ash Disposal Area No. 5.cal	CAL
3/30/2009	PJC	COF-10W283-01 Rev 10.cal	CAL
2/23/2009	PJC	COF-10W283-01 Rev 10.cal	CAL
3/30/2009	PJC	COF-10W283-02 Rev 11.cal	CAL
2/23/2009	PJC	COF-10W283-02 Rev 11.cal	CAL
3/30/2009	PJC	COF-10W283-03 Rev 7.cal	CAL
2/23/2009	PJC	COF-10W283-03 Rev 7.cal	CAL
3/30/2009	PJC	COF-10W283-04 Rev 6.cal	CAL
2/23/2009	PJC	COF-10W283-04 Rev 6.cal	CAL
3/30/2009	PJC	COF-10W283-05 Rev 5.cal	CAL
2/23/2009	PJC	COF-10W283-05 Rev 5.cal	CAL
3/30/2009	PJC	COF-10W283-10 Rev 7.cal	CAL
2/23/2009	PJC	COF-10W283-10 Rev 7.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-10-Sht -Rev 7 Main Plant Ash Disposal Area No. 5 Misc Details & Sections Sheet 10.cal	CAL
3/30/2009	PJC	COF-10W283-11 Rev 1.cal	CAL
2/23/2009	PJC	COF-10W283-11 Rev 1.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-11-Sht -Rev 1 Yard Ash Disposal Area No.5 Misc. Details & Sections Wooden Spillway - Skimmer.cal	CAL
3/30/2009	PJC	COF-10W283-12 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W283-12 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-12-Sht -Rev 0 Main Plant Ash Disposal Area No. 5 Misc. Details & Sections Sheet 12.cal	CAL
3/30/2009	PJC	COF-10W283-13 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W283-13 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-13-Sht -Rev 0 Main Plant Ash Disposal Area No. 5 Fly Ash Stacking Plan Sheet 13.cal	CAL
3/30/2009	PJC	COF-10W283-14 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W283-14 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-14-Sht -Rev 0 Main Plant Ash Disposal Area No. 5 Misc. Details & Sections Sheet 14.cal	CAL



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Date Reviewed	Reviewed by	File Name	File Type
3/30/2009	PJC	COF-10W283-15 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W283-15 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-15-Sht -Rev 0 Yard Ash Disposal Area No. 5 Fly Ash Stacking Plan Intermediate Stage 1.cal	CAL
3/30/2009	PJC	COF-10W283-16 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W283-16 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-16-Sht -Rev 0 Yard Ash Disposal Area No. 5 Fly Ash Stacking Plan Intermediate Stage 2.cal	CAL
3/30/2009	PJC	COF-10W283-17 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W283-17 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-17-Sht -Rev 0 Yard Ash Disposal Area No. 5 Fly Ash Stacking Plan Intermediate Stage 3.cal	CAL
3/30/2009	PJC	COF-10W283-18 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W283-18 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-18-Sht -Rev 0 Yard Ash Disposal Area No. 5 Fly Ash Stacking Plan Intermediate Stage 4.cal	CAL
3/30/2009	PJC	COF-10W283-19 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W283-19 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-19-Sht -Rev 0 Yard Ash Disposal Area No. 5 Fly Ash Stacking Plan Intermediate Stage 5.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-1-Sht -Rev 10 Main Plant Ash Disposal Area No. 5 Sheet 1.cal	CAL
3/30/2009	PJC	COF-10W283-20 Rev 0.cal	CAL
2/23/2009	PJC	COF-10W283-20 Rev 0.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-20-Sht -Rev 0 Yard Ash Disposal Area No 5 Fly Ash Stacking Plan Intermediate Stage 6.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-2-Sht -Rev 11 Main Plant Ash Disposal Area No. 5 Sheet 2.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-3-Sht -Rev 7 Main Plant Ash Disposal Area No. 5 Misc. Details & Sections Sheet 3.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-4-Sht -Rev 6 Main Plant Ash Disposal Area No. 5 Misc. Details & Sections Sheet 4.cal	CAL
1/30/2009	RLR/PJC	COF-10W283-5-Sht -Rev 5 Main Plant Ash Disposal Area No. 5 Misc Details & Sections Sheet 5.cal	CAL
3/30/2009	PJC	COF-10W284 Rev 3.cal	CAL
2/23/2009	PJC	COF-10W284 Rev 3.cal	CAL
3/30/2009	PJC	COF-10W284 Rev 4.cal	CAL
2/23/2009	PJC	COF-10W284 Rev 4.cal	CAL
1/30/2009	RLR/PJC	COF-10W284-Sht -Rev 4 Main Plant Chemical Treatment Pond & Ash Pond Divider Dike Plan And Details.cal	CAL
3/30/2009	PJC	COF-10W285-01 Rev 5.cal	CAL
2/23/2009	PJC	COF-10W285-01 Rev 5.cal	CAL
3/30/2009	PJC	COF-10W285-02 Rev 1.cal	CAL
2/23/2009	PJC	COF-10W285-02 Rev 1.cal	CAL
1/30/2009	RLR/PJC	COF-10W285-1-Sht -Rev 5 Yard Coal Yard Drainage Basin Plan & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W285-2-Sht -Rev 1 Yard Coal Yard Drainage Basin Sections & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W292-1-Sht -Rev 0 Main Plant Ash Disposal Area No. 4 Sections And Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W294-1-Sht -Rev 1 Yard Civil Ash Pond #4 Co2 Conditioning Location And Access Plan.cal	CAL
1/30/2009	RLR/PJC	COF-10W294-2-Sht -Rev 0 Yard Civil Ash Pond #4 Co2 Conditioning Partial Plan 1.cal	CAL
1/30/2009	RLR/PJC	COF-10W294-3-Sht -Rev 0 Yard Civil Ash Pond #4 Co2 Conditioning Partial Plan 2.cal	CAL



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Date Reviewed	Reviewed by	File Name	File Type
1/30/2009	RLR/PJC	COF-10W294-4-Sht -Rev 0 Yard Civil Ash Pond #4 Co2 Conditioning Partial Plan 3.cal	CAL
1/30/2009	RLR/PJC	COF-10W294-5-Sht -Rev 1 Yard Civil Ash Pond #4 Co2 Conditioning Partial Plan, Profiles, & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W294-6-Sht -Rev 0 Yard Civil Ash Pond #4 Co2 Conditioning Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W294-7-Sht -Rev 0 Yard Civil-Ash Pond #4 Co2 Conditioning Antenna Mast Foundation Plan, Sections & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W298-Sht -Rev 0 Main Plant Ash Disposal Area No 1 Reclamation - Sheet 1.cal	CAL
1/30/2009	RLR/PJC	COF-10W299-1-Sht -Rev 5 Project Facilities Dry Fly Ash Coll . Fac. Tva Contract 88Pkg-06298A Civil - Plot Plan.cal	CAL
1/30/2009	RLR/PJC	COF-10W299-2-Sht -Rev 2 Project Facility Dry Fly Ash Coll. Fac. Tva Contract# 88Pkg-06298A Civil Maintenance Road & Storm Drainage Plan.cal	CAL
1/30/2009	RLR/PJC	COF-10W299-3-Sht -Rev 2Project Facility Dry Fly Ash Collection Facilities Tva Contract# Civil Ash Silo Area Paving Plan And Grading .cal	CAL
1/30/2009	RLR/PJC	COF-10W299-Sht -Rev 0 Main Plant Ash Disposal Area No 1 Reclamation - Sheet 2.cal	CAL
1/30/2009	RLR/PJC	COF-10W371-1-Sht -Rev 1 Yard Coal Storage Yard & Gas Turbine Area Existing Facilities.cal	CAL
1/30/2009	RLR/PJC	COF-10W450-1-Sht -Rev 4 Project Facility Dry Fly Ash Facilities Tva Contract Concrete Surge Bin Trench - Plan, Section & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W450-2-Sht -Rev 5 Project Facility Dry Fly Ash Facilities Tva Contract Structural Surge Bin Trench Steel Grating Plan & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W450-3-Sht -Rev 4 Dry Fly Ash Collection Facilities Concrete Surge Bin - Sump Pit, Plan, Sections & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W450-4-Sht -Rev 2 Dry Fly Ash Collection Facilities Structural Surge Bin & Ash Silo Sump Pits Plan & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W450-5-Sht -Rev 3 Dry Fly Ash Collection Facilities Concrete Ash Pipe Trench Type 1 Plan, Sections & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W450-6-Sht -Rev 1 Dry Fly Ash Collection Facilities Structural Ash Pipe Trench Type 1 & 11 Steel Grating Plans & Detail.cal	CAL
1/30/2009	RLR/PJC	COF-10W450-7-Sht -Rev 1 Concrete Ash Pipe Trench Type 11 Plan Sections & Details.cal	CAL
1/30/2009	RLR/PJC	COF-10W460-1-Sht -Rev 1 Yard - Units 1-5 Dry Fly Ash Facilities Concrete Storage Silos Pile Location Plan.cal	CAL
3/30/2009	PJC	COF-17W412-01 Rev 3.cal	CAL
2/23/2009	PJC	COF-17W412-01 Rev 3.cal	CAL
3/30/2009	PJC	COF-17W412-02 Rev 2.cal	CAL
2/23/2009	PJC	COF-17W412-02 Rev 2.cal	CAL
3/30/2009	PJC	COF-17W412-03 Rev 2.cal	CAL
2/23/2009	PJC	COF-17W412-03 Rev 2.cal	CAL
3/30/2009	PJC	COF-17W412-03 Rev 3.cal	CAL
2/23/2009	PJC	COF-17W412-03 Rev 3.cal	CAL
3/30/2009	PJC	COF-18W250-01 Rev 2.cal	CAL
2/23/2009	PJC	COF-18W250-01 Rev 2.cal	CAL
3/30/2009	PJC	COF-18W250-02 Rev 4.cal	CAL
2/23/2009	PJC	COF-18W250-02 Rev 4.cal	CAL
3/30/2009	PJC	COF-18W255-01 Rev.cal	CAL
2/23/2009	PJC	COF-18W255-01 Rev.cal	CAL
3/30/2009	PJC	COF-67W301-01 Rev 1.cal	CAL
2/23/2009	PJC	COF-67W301-01 Rev 1.cal	CAL
3/30/2009	PJC	COF-67W301-02 Rev 1.cal	CAL
2/23/2009	PJC	COF-67W301-02 Rev 1.cal	CAL



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Date Reviewed	Reviewed by	File Name	File Type
3/30/2009	PJC	COF-67W301-03 Rev 1.cal	CAL
2/23/2009	PJC	COF-67W301-03 Rev 1.cal	CAL
3/30/2009	PJC	COF-67W301-04 Rev 1.cal	CAL
2/23/2009	PJC	COF-67W301-04 Rev 1.cal	CAL
3/30/2009	PJC	COF-67W301-05 Rev 1.cal	CAL
2/23/2009	PJC	COF-67W301-05 Rev 1.cal	CAL
3/30/2009	PJC	COF-67W301-06 Rev 1.cal	CAL
2/23/2009	PJC	COF-67W301-06 Rev 1.cal	CAL
3/30/2009	PJC	COF-67W301-07 Rev 1.cal	CAL
2/23/2009	PJC	COF-67W301-07 Rev 1.cal	CAL
3/30/2009	PJC	Colbertfossilplantashstackingplandisposalareano4September2002.pdf	PDF
3/30/2009	PJC	Colbertfossilplantgeologyofthecolbertsteamplantcharlespbenziger.pdf	PDF
3/30/2009	PJC	Colbertfossilplantlawreportofgeologicalandgeophysicalinvestigationaugust1989.pdf	PDF
3/30/2009	PJC	Colbertfossilplantletterdrsmithtoronpowelljanuary182002Contract99998970Bottomashstackingplanpr0362.pdf	PDF
3/30/2009	PJC	Colbertfossilplantmactecreportofgeotechnicalexplorationashstackarea5March192004.pdf	PDF
3/30/2009	PJC	Colbertfossilplantmactecreportofgeotechnicalexplorationproposedborrowareamarch172004.pdf	PDF
3/30/2009	PJC	Colbertfossilplantmactecreportofgeotechnicalexplorationproposedgypsumdisposalfacilitynovember72003.pdf	PDF
3/30/2009	PJC	Colbertfossilplantmemofvanmetertoglbuchananashdisposalarea5Soilsexplorationandtestingendessoilscheduleno672June91982.pdf	PDF
3/30/2009	PJC	Colbertfossilplantmemoglbuchananantogenefarmerapril51977Ashdisposalarea4Dikeraisingsoilsexplorationandtestingendessoilsschedno67.pdf	PDF
3/30/2009	PJC	Colbertfossilplantmemojfmurdocktojlgoldenborrowareaseand5Permeabilitytestmarch151988.pdf	PDF
3/30/2009	PJC	Colbertfossilplantmemomnsproutetohsfoxadditionalashdisposalareano5Engineeringreportdecember211982.pdf	PDF
3/30/2009	PJC	Colbertfossilplantsandmeprojectno143202511Reportofsubsurfaceexplorationfgddisposal site.pdf	PDF
3/30/2009	PJC	Colbertsteamplantashdisposalarea5Soilsexplorationandtestingendessoilscheduleno672Duplicate.pdf	PDF
3/30/2009	PJC	Colbertsteamplantashpondno5Engineeringreportapril251985.pdf	PDF
3/30/2009	PJC	Colbertsteamplantborrowareafsoilsinvestigationmesoi87030November131987.pdf	PDF
3/30/2009	PJC	Colbertsteamplantdryashfacilitysingletonreport.pdf	PDF
3/30/2009	PJC	Colbertsteamplantgenefarmertoplacyoctober131972Proposedashdisposalareano4Dikesoilinvestigation.pdf	PDF
3/30/2009	PJC	Colbertsteamplantjaraulstontoothorntondecember141984Ashpond5Fieldpermeabilitytestsoesoilschedule673.pdf	PDF
3/30/2009	PJC	Colbertsteamplantmemogenefarmertoglbuchananmarch271978Ashdisposalareano4Dikeraisingsoilsexplorationandtestingendessoils schedno67.pdf	PDF
3/30/2009	PJC	Colbertsteamplantmemomnsproutetohsfoxundatedashdisposalarea5Evaluationofstructuralstability.pdf	PDF
3/30/2009	PJC	Colbertsteamplantmemoreharrishwrobinsontofossilenggprojectsfilesnovember301984Leakageinashpond5.pdf	PDF
3/30/2009	PJC	Colbertsteamplantwestongeophysicalashpond5Electromagneticterrainconductivitysurveyemay1988.pdf	PDF
3/30/2009	PJC	Colbertsteamplantwestongeophysicalashpond5Geophysicalsurveyjanuary1985.pdf	PDF
1/30/2009	RLR/PJC	Colbert-Summary Of Groundwater Elevations-Quality Data Wr2.pdf	PDF
1/30/2009	RLR/PJC	Compliance Sampling Insp M10 812 .pdf	PDF
1/30/2009	RLR/PJC	document Dec 14-1998.pdf	PDF
1/30/2009	RLR/PJC	document Dec 8-1999.pdf	PDF



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Date Reviewed	Reviewed by	File Name	File Type
1/30/2009	RLR/PJC	document June 27-2000.pdf	PDF
1/30/2009	RLR/PJC	document June11-2001.pdf	PDF
1/30/2009	RLR/PJC	document June12-2002.pdf	PDF
1/30/2009	RLR/PJC	document1.pdf	PDF
1/30/2009	RLR/PJC	documentfed Ex.pdf	PDF
1/30/2009	RLR/PJC	documentfed Ex2.pdf	PDF
1/30/2009	RLR/PJC	documentjun28-04pdf.pdf	PDF
1/30/2009	RLR/PJC	documentjune13-2003.pdf	PDF
1/30/2009	RLR/PJC	Free Water Volume No 4 Ash Pond Email Jun 24-1998.pdf	PDF
1/30/2009	RLR/PJC	Free Water Volume Reports Email 2-16-1999.pdf	PDF
1/30/2009	RLR/PJC	M01 840213 339 2-10-1984 Compliance Sampling Insp M10-812.pdf	PDF
1/30/2009	RLR/PJC	M63 830111 930 1-23-1986 Recomm For Proactive Investigation.pdf	PDF
1/30/2009	RLR/PJC	M63 861196 860 12-01-1986 Red Water Seep - Insp Prog And Re.pdf	PDF
1/30/2009	RLR/PJC	M63 870508 841 5-21-1987 Ash Pond Leachate Dsn 013.pdf	PDF
1/30/2009	RLR/PJC	M63 870528 873 6-05-1987 Ash Pond Leachate Treat Wetlands.pdf	PDF
1/30/2009	RLR/PJC	M63 871109 853 Dsn 013 Proposed Admin Order.pdf	PDF
1/30/2009	RLR/PJC	M72 870123 969 12-19-1986 Effluent Limits Violation AI0003867.pdf	PDF
1/30/2009	RLR/PJC	M72 870401 802 3-30-1987 Ash Pond Leachate M00071.pdf	PDF
1/30/2009	RLR/PJC	M72 870605 836 6-04-1987 Ash Pond Leachate Dsn 013.pdf	PDF
1/30/2009	RLR/PJC	M72 910125 989 1-25-1994 Ash Pond Dikes Seepage Insp.pdf	PDF
1/30/2009	RLR/PJC	M72 910222 446 2-15-1991 Red Water Seepage Rept.pdf	PDF
1/30/2009	RLR/PJC	M72 920115 630 1-15-1992 No 4-5 Red Water Seepage Rept.pdf	PDF
1/30/2009	RLR/PJC	M72 920115 630 1-15-1992 Red Water Seepage Rept.pdf	PDF
1/30/2009	RLR/PJC	M72 920115 630 1-15-1992 Red Water Seepage Rept2.pdf	PDF
1/30/2009	RLR/PJC	M72 930128 825 1-27-1993 Ash Pond Dikes Seepage Insp.pdf	PDF
1/30/2009	RLR/PJC	M72 930128 825 1-27-1993 Ash Pond Dikes Seepage Insp2.pdf	PDF
1/30/2009	RLR/PJC	M72 9501129 109 1-20-1995 Ash Pond Dikes Seepage Insp.pdf	PDF
1/30/2009	RLR/PJC	M72 951218 229 Ash Pond Free Water Vol Cert 12-18-1995.pdf	PDF
1/30/2009	RLR/PJC	M72 960124 246 1-24-1996 Ash Pond Dikes Seepage Insp.pdf	PDF
1/30/2009	RLR/PJC	M72 961205 328 Dec 12-1996 Ash Pond Free Water Vol Cert.pdf	PDF
1/30/2009	RLR/PJC	M72 961220 336 Dec 20-1996 Revised Ash Pond Free Water Vol.pdf	PDF
1/30/2009	RLR/PJC	M72 970124 348 1-24-1997 Ash Pond Dikes Seepage Insp.pdf	PDF
1/30/2009	RLR/PJC	M72 980123 436 Ash Pond Dikes Seep Insp AI0003867.pdf	PDF
1/30/2009	RLR/PJC	Mass Balance 10-2-97 To 9-2-99.pdf	PDF
1/30/2009	RLR/PJC	Material Into Pond 4 Jan 2-1997.pdf	PDF
1/30/2009	RLR/PJC	Material Poned Between Surveys 10-1-1995 To 9-30-1996.pdf	PDF
1/30/2009	RLR/PJC	Memo-Email Jan 13-1998.pdf	PDF
1/30/2009	RLR/PJC	No 4 Ash Pond Free Water Volume 1990-2002.pdf	PDF



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Date Reviewed	Reviewed by	File Name	File Type
1/30/2009	RLR/PJC	No 4 Ash Pond Free Water Volume 1990-2003.pdf	PDF
1/30/2009	RLR/PJC	No4 Ash Pond Info 1996.pdf	PDF
1/30/2009	RLR/PJC	Npdes Permit AI0003867 Ash Pond Dikes Seepage Insp.pdf	PDF
1/30/2009	RLR/PJC	Short-Long Term Disposal Plan Fy2000.pdf	PDF
1/30/2009	RLR/PJC	Yrly Free Water Vol Insp Wo 12-12-1996.pdf	PDF