

Tennessee Valley Authority  
Regulatory Submittal for Kingston Fossil Plant

Documents submitted:  
Site Storm Water Management Plan

Date Submitted:  
08/24/2010

Submitted to whom  
Craig Zeller

Concurrence

Received      Not Applicable

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Tennessee Valley Authority, 1134 Swan Pond Road Trailer Park, Harriman, Tennessee 37748

August 25, 2010

Mr. Craig Zeller  
U.S. Environmental Protection Agency  
Region 4  
61 Forsyth Street Southwest  
Atlanta, Georgia 30303

Dear Mr. Zeller:

Please find enclosed the revised Site Storm Water Management Plan. The enclosed plan fulfills the requirements of Section IX, paragraph 28, item a. of the Administrative Order and Agreement on Consent. This monitoring plan is being changed as part of the transition from Time-Critical work activities to Non-Time-Critical work activities. Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "S. H. McCracken".

Steven H. McCracken

Enclosures

**EPA-AO-002**

# **Site Storm Water Management Plan**

## **Kingston Ash Recovery Project**

**Kingston Fossil Plant**

**Tennessee Valley Authority**

**August 18, 2010**

**Revision 1**

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Attachment 1	Major Activities Log (Form 006A)
Attachment 2	Runoff Coefficient Calculation
Attachment 3	Kingston Fossil Plant Vicinity Topographic Map, Kingston Ash Recovery Project Site Map, and Storm Water Management Plan Drawings
Attachment 4	Storm Water Management Plan Contacts
Attachment 5	Sequence of Control Measure Implementation, Maintenance, and Removal Log (Form 007A)
Attachment 6	Daily Rainfall Gage Record (Form 005A)
Attachment 7	Storm Water Management Inspection and Maintenance Report (Form 008A)
Attachment 8	Storm Water Management Compliance Condition Report (Form 009A) and Noncompliance Condition Report (Form 009B)

### List of Acronyms

cy	cubic yard
EMS	Environmental Management System
EPA	U.S. Environmental Protection Agency
KIF	Kingston Fossil Plant
msl	mean sea level
NPDES	National Pollutant Discharge Elimination System
PA-E	Program Administrator-Environmental
SWMP	Storm Water Management Plan
TDEC	Tennessee Department of Environment and Conservation
TVA	Tennessee Valley Authority

## 1 PURPOSE OF THE CONSTRUCTION STORM WATER MANAGEMENT PLAN

This Storm Water Management Plan (SWMP) is being prepared to facilitate compliance with the Tennessee Department of Environment and Conservation (TDEC) General Permit for Storm Water Discharges Associated with Construction Activities.

Compliance with the SWMP is mandatory for the following reasons:

- To protect water quality, which may be adversely impacted by sediment reaching receiving streams
- To prevent project delays caused by Cease and Desist orders, or being required to stop construction and obtain an individual permit, which could severely delay the project
- To prevent receiving Notices of Violations

Retaining sediment onsite is paramount for compliance. This SWMP contains specific guidance on controls being selected as well as design and installation requirements. A copy of the plan as well as inspection records must be kept onsite and provided to the plant Program Administrator-Environmental (PA-E) or onsite PA-E. The Erosion and Sedimentation Control Specialist for this construction activity is F. M. "Butch" Parton who can be contacted by phone at (865) 660-4458 or email [fmuparton@tva.gov](mailto:fmuparton@tva.gov).

## 2 CONSTRUCTION SITE DESCRIPTION

### 2.1 GENERAL INFORMATION

On Monday, December 22, 2008, a dike failed at the Tennessee Valley Authority's (TVA) Kingston Fossil Plant (KIF) releasing approximately 5.4 million cubic yards (cy) of coal ash. TVA, Roane County Office of Emergency Management, and Homeland Security responded immediately, and response and recovery continue.

TVA's KIF is located on the Emory River close to the confluence of the Clinch and Tennessee Rivers near Kingston, Tennessee. Construction of the plant began in 1951 and was completed in 1955.

Immediately following the failure of the ash containment dike, construction of a temporary dike (Dike 2) and temporary weir (Weir 1) was initiated as emergency features to control the further release of ash. Weir 1 was installed upstream of the plant intake channel in the Emory River and is meant to control underwater creep of ash downstream. Dike 2 is in the Swan Pond Embayment and is meant to resist further movement of ash into the main channel. The recovery from the ash release ("time-critical" removal action) called for the dredging of ash materials from the Emory River, excavation of the dredged material from the Rim Ditch and Sluice Trench, and mechanical excavation of ash materials east of Dike 2. The time-critical removal action also required the construction of clean water ditches to bypass water around the ash, and construction of "dirty" water ditches and two settling areas to collect all storm and surface water that falls within the ash areas. The two settling areas discharge to a "clean" water ditch which discharges directly to the Emory River.

During "non-time critical" activities a North Embayment Settling Area was constructed. This settling area was initially labeled the dirty water ditch but has been converted to a settling area. The settling area was designed for the 5 yr – 24-hour storm event. The discharge from this

settling area is pumped from the settling area to the clean water ditch which discharges to the Emory River.

This SWMP will address the “non-time-critical” phase of operations which consists of removing the remaining ash and associated material within the north and middle sections of Swan Pond Embayment, Dike 2, settling basins, and associated ditches; dewatering the material to near optimum moisture content; and placing the material in dry, compacted lifts in the former Dredge Cell, Lateral Expansion Area, and Ash Pond.

## **2.2 STORM WATER MANAGEMENT**

As a part of the “time-critical” removal action the storm water was separated into two distinct flows: (1) run-on from surrounding tributary watersheds, and (2) runoff from ash-contained areas.

### **2.2.1 Run-on**

The run-on controls were constructed so that water from upstream watersheds that flows onto the fly ash area is intercepted and rerouted to the Emory River without direct contact with the ash. The intent of this action is to minimize the contamination of additional waters and reduce the transport of fly ash off the incident site.

A diversion berm is now located in the North Embayment upstream of the ash deposits to collect and prevent run-on of the “clean” water into the ash. This berm directs the clean water to a channel that conveys the storm water to the Emory River. This channel is lined as needed with suitable material to prevent the scour of exposed trench soils. Ash consolidation from the north is also underway to remove ash to a location southward from beneath power lines to dry and to allow additional “clean” water to be diverted around the ash and into the “clean” water ditch system.

At present ash, within the West Embayment and the East Embayment areas has been removed and run-on is discharged directly to the Emory River. The West Embayment clean water ditch begins at the culvert passing under Swan Pond Road and continues to the Emory River. The run-on channel from the North Embayment intersects the channel from the West Embayment. All of these channels are rock lined where necessary for scour protection purposes.

### **2.2.2 Runoff**

The main features of this drainage area are drainage channels and settling areas. After the initial incident, channels were excavated in the fly ash to convey storm water or other water that comes into contact with ash materials to the settling areas. The North Embayment settling area is also sized for the 5 yr – 24-hour storm event.

A series of erosion control structures and devices will be employed such as ditch dugout structures, straw wattle check dams and rock check dams within the former Dredge Cell, and embayment areas to minimize the migration of ash materials to the settling areas. The ditch dugouts act like a sediment trap within the main ash drainage channel. The rock and straw wattle check dams provide an opportunity for water to pond and allow ash to settle out. These structures are generally shown on the attached SWMP sketches, but the actual locations are subject to change due to storage activities, drying activities, or for other reasons.

Long uniform slopes will be broken up by installing diversion berms, down slope flumes, erosion eels, slope roughening berms, or other similar structures to spread the water and minimize erosion rills.

Seeding and mulching will be accomplished as areas are stabilized.

Additional measures will be evaluated and installed as necessary.

#### 2.2.2.1 Settling Areas

The settling areas were originally designed by Worley Parsons to meet the TDEC requirement of 134 cy/acre drained. This equated to 175 acres draining to the settling areas and a volume of 24,500 cy of storage volume (water and sediment). The Worley Parsons design then sized the outlet structures from the settling areas for the 25 yr – 24-hr storm event and checked the settling areas against the 100 yr – 24-hr storm event. Freeboard and clean out elevations were set based on this design. The original design included a rock baffle in Settling Area 1A and an access road between the two settling areas.

A series of modifications to the settling areas were undertaken to improve operating efficiency and to aid in settling area clean out.

These modifications included:

- Removal of the skimmers from Settling Area 1A and installing them in Settling Area 2a to minimize a direct discharge of ash laden water to the Emory River.
- Removal of the rock baffle from Settling Area 1A.
- Removal of the road between the two settling areas.
- Constructing the baffles in Settling Area 2A out of jute instead of rock materials.
- Installing finger dikes into the combined settling area to aid in clean out by track hoe and trucks.

The settling area volumes are summarized below:

- |                          |           |
|--------------------------|-----------|
| • As designed            | 24,500 cy |
| • As constructed         | 26,154 cy |
| • Baffle/road removed    | 28,935 cy |
| • Finger dikes installed | 24,706 cy |

As can be seen above the volume of the settling areas was and still is greater than the design volume.

Additional actions are underway to further improve the efficiency and effectiveness of the settling areas. These actions are discussed below.

North Embayment ash consolidation – This activity will consolidate the ash in the northern portion of the North Embayment to the south allowing the offsite run-on storm water to be routed around the ash materials and discharged to the clean water ditch system.

Re-grading the Relic and Test Embankment – The Relic area and the Test Embankment areas are being re-graded so that storm water from these areas are directed to the south east and then piped to the Ash Pond, thus eliminating this flow from reaching the settling areas.

North Embayment Settling Area – The area that is now labeled the North Embayment dirty water ditch will be reconfigured into a settling area. The “ditch” was constructed to drain to a stand pipe with a pumping system so it has in fact been operating as a settling area to some degree. The standpipe will be reconfigured to allow for the 5 yr – 24-hour storm event. The standpipe is designed per the TDEC Erosion and Sediment Control Handbook. A designed clean-out elevation with freeboard will also be established. This settling area will discharge via pump to the clean water ditch system and will operate as a settling area until the excavation in the North Embayment reaches a point lower in elevation than the standpipe.

All of the above changes will result in a drainage area for Settling Area 1A & 2A of 134 acres. This is a reduction in drainage area from the original 175 acres (23% reduction). These changes plus the addition of sediment and erosion controls upstream of the settling area (gabion check dams, filter rings, etc.) will increase the effectiveness of the settling areas. A settling area clean out plan has also been established to ensure the settling areas are cleaned out on a routine basis and functioning as designed.

#### 2.2.2.2 Ball Field (Ash Processing Area)

TVA installed the ash processing and temporary ash storage areas to support ash removal operations. The Ash Processing Area (“Ball Field”) is located within the triangle area bordered by the existing ash disposal area, the ash Sluice Trench, and the plant entrance road (see attached sketches SK-SWPPP-002 and 003). The area previously contained several abandoned ball fields, a closed ash disposal area with soil cover, and two chemical ponds. The area is currently being used for temporary storage of ash removed from the Emory River and includes an area on the southeast side of the Sluice Trench. The disturbed area is approximately 94 acres (see Table 3-1).

Railroad spurs have been installed along the north and west perimeter of the triangle area and an additional spur has been constructed in the middle of the Ash Processing Area. A perimeter ditch has been constructed around the Ball Field to collect run-off and direct the water back into the Rim Ditch. Type C silt fence will be utilized in the areas where the drainage surrounds the containment area. The Ash Processing Area includes the area shown on the drawings, which is located on both the northwest and southeast sides of the Sluice Trench and the remaining portion of the triangle area as shown on the drawings in Attachment 5.

#### 2.2.2.3 Embayment Excavation

The embayments will be excavated in phases working from the highest elevations down to the bottom of the embayments.

The Middle Embayment will be excavated down to elevation 750 ft above mean sea level (msl) to allow the use of the dirty water ditches, the clean water ditches and the settling areas, and to reach the elevation of the new perimeter dike along the north edge of the former Dredge Cell. The second phase of the Middle Embayment ash removal will excavate to approximately elevation 741 ft msl. This will continue to allow the ditches and embayments to be used. The final phase of the Central Embayment ash removal will excavate below the dirty water ditch elevation and will rely on Dike 2 as the barrier between the ash and the Emory River.

The North Embayment will be also excavated in phases. The initial excavation in the North Embayment is an action called ash consolidation. This task will remove the ash from the far north end of the embayment and from along the west edge where it abuts Swan Pond Circle Road. This will allow the springs and run-on water to be collected “clean” and routed around the

ash excavation areas. The first phase of excavation will start along the east side of the embayment near the top of the clean water ditch and be graded to the west to the top of the dirty water ditch located along the western edge. This will allow both the clean water and dirty water ditch systems to remain in service for this phase. The second phase will remove the remainder of the ash down to the bottom of the embayment. The water collected within the dirty water ditch will continue to be pumped to the settling areas. The clean water ditch will remain in service until all the ash is removed.

Once all ash is removed from both embayments, the haul road under Swan Pond Road will be removed and a channel will be excavated to the deepest part of both embayments, thus allowing the water from the North Embayment to flow into the Middle Embayment.

#### 2.2.2.4 Dredge Cell Ash Stacking

The Dredge Cell will be filled in phases by dry-stacking ash excavated from the embayments. A series of ditches will be constructed within the ash fill to carry runoff to the existing settling areas. Interim cover, temporary seeding, and other erosion control methods will be used to minimize erosion and ash transport to the settling areas.

#### 2.2.2.5 Relic and Test Embankment

Ash material is being removed from the Relic and the Test Embankment as a part of “time critical” operations. This material is being taken to the Ball Field for disposal offsite. As a part of this removal the two sites are being graded to slope to the south east so runoff water can be collected and discharged to the Ash Pond. This will reduce the volume of water flowing to the settling areas and should make the settling areas more efficient.

### **3 DISTURBED AREAS**

The estimated area of the KIF is approximately 800 acres. The area disturbed by the “non-time critical” construction is approximately 366 acres, as shown in Table 3-1. The Construction Manager will determine the exact construction sequence. The Major Activities Log (Attachment 1) will record major grading and stabilization dates. All disturbed areas will be permanently stabilized to the extent practicable, as individual phases of the project are completed. Permanent stabilization, such as grass seeding, will be completed before erosion controls are removed. Stabilization will be provided as appropriate.

**Table 3.1 Interim Drainage Area**

<b>Activity Description</b>	<b>Disturbed Areas (Acres)</b>
North Embayment	37
Middle Embayment	38
North Dredge Cell	26
Middle Dredge Cell	70
Ball Field (Ash Processing Area)	75
Relic	17
Test Embankment	8
Ash Pond / Lateral Expansion	94
Construction Support Facilities	1
<b>Total Acres</b>	<b>366</b>

The Ball Field, Relic, Test Embankment, and Lateral Expansion drains to the Ash Pond. The North Embayment drains to the North Embayment Settling Area. The Middle Embayment, North Dredge Cell, and Central Dredge Cell drains to Settling Area 1A & 2A. The Construction Support Facilities drain offsite.

#### **4 SITE TOPOGRAPHY**

The general topography of the KIF varies across the site. In areas where the majority of the construction activities occur, the terrain will be relatively flat. The ash will be dry stacked and compacted in lifts with slopes, varying from flat to 3(H):1(V) or 33%. Exterior side slopes following closure will be no steeper than 3:1.

The Ash Processing Area is relatively flat (<2%).

The former Dredge Cell and embayment excavation areas drain to the settling areas prior to discharge to the Emory River.

#### **5 SOIL TYPES**

The project site is located in the city of Harriman, Roane County, Tennessee. According to soil borings and soils mapping of the area, the soils in the Interim Drainage Area and Ash Processing Area are labeled Ash Disposal Soil. The majority of the soil in the project area is ash fill and topsoil.

The quality of discharge from the properly implemented and maintained erosion and sedimentation control measures is expected to be sufficient to comply with the terms and conditions of the general construction permit.

The soils used for fill is classified as random fill or a mixture of bottom and fly ash. Soil sampling and testing was previously performed for the onsite borrow areas. The borrow area testing shows that there are lean clay and fat clay residuum underlying the topsoil. Chert was also encountered in the clay layers. The residuum encountered in the testing consisted of red-

brown, reddish-orange, orange-brown, brown and tan, clay, silt, and sand with varying amounts of chert fragments. The fill soils consisted primarily of brown, red-brown, and reddish-orange, silty clay with gravel and a few chert fragments. These soil types have been used as cover material for ash disposal areas on the KIF reservation. These are fine-grained cohesive soils that compact readily. TVA's experience at Kingston has been that the onsite soil supports the growth of vegetation. As such, the soil type does not dictate that any unusual or special measures are taken to minimize erosion. Routine best management practices will be the primary method to ensure discharge quality is not affected by the construction project. The expected storm water discharge quality is to be essentially the same as that before construction begins.

## **6 SITE DRAINAGE AND RUNOFF**

None of the processing areas are vegetated. The Swan Pond Embayment and Dredge Cell are covered with fly ash, some areas are seeded. After the development of the proposed project area, the pre- and post-development runoff curve numbers of the site were calculated as provided in Attachment 2.

Control measures have been selected and utilized to control runoff in order to minimize erosion and reduce the displacement of ash and soil that would otherwise flow into the receiving stream during construction. The primary outfall to the receiving stream at the KIF is National Pollutant Discharge Elimination System (NPDES) Permitted Outfall 001 which is the permanent outfall from the Ash Pond and Stilling Pond. Pond effluent is discharged through diffuser pipes that drain to the plant intake channel off the Emory River. These diffuser pipes are located beneath the surface of the water and are designed to distribute the flow across the channel to ensure that the flow of plant effluent is not concentrated in the receiving stream.

The clean water ditches in the Interim Drainage Area will be lined as necessary to prevent erosion. The clean water ditches will be piped through Dike 2, and will discharge directly to the Emory River (see Attachment 3, sheets SK-SWPPP-005 and 006).

## **7 EROSION PREVENTION AND SEDIMENT CONTROL MEASURES**

The site map and drawings (Attachment 3) depict the construction areas. The Ash Processing Area will drain to the existing Ash Pond and discharge to the Emory River through NPDES Outfall 001. The Interim Drainage Area, and all other ash-laden areas drain thru the settling areas into the clean water ditch system and then into the Emory River.

## **8 INDUSTRIAL ACTIVITY DISCHARGE**

The site discharges process wastewater and storm water associated with industrial activity (coal-fired, steam electric generation) in accordance with NPDES permit number TN0005452 (001) and the Tennessee Stormwater Multi-Sector General Permit for Industrial Activities (TMSP) permit number TNR051787. There is no additional source of storm water (other than construction storm water) or process wastewater on the plant site not under the control of the operator.

## **9 AFFECTED WETLANDS**

The receiving water for the Kingston Ash Recovery Project is Watts Bar Lake (Emory River). The affected wetland area in the west embayment is approximately 4 acres of forested

wetlands. These wetlands will be restored after the removal of ash. These waters are not 303(d) impaired for sediment or high quality streams.

## **10 EROSION CONTROL PLAN**

### **10.1 EROSION CONTROL DURING CONSTRUCTION**

#### **10.1.1 General Erosion and Sediment Control Measures**

Erosion and sediment controls will be designed to keep ash and/or sediment in place and onsite. Control measures must be properly selected, installed, and maintained. If a measure proves to be ineffective, it must be replaced or modified.

Erosion and sediment controls must be in place and functional before any activities disturbing earth begins, and must be maintained throughout the construction period. Temporary measures may be removed to facilitate work but must be replaced after the work or at the end of each workday.

Construction will be sequenced to minimize the exposure time of the disturbed area. Existing vegetation will not be removed or disturbed more than 10 days before clearing and excavation begins, unless the area is seeded and mulched. These activities must be logged in the Major Activities Log (Attachment 1).

Clearing/grubbing must be held to the minimum necessary for grading and equipment operation.

Silt fence, settling areas, ditch dugouts, rock check dams, erosion eels, and other appropriate controls including temporary cover and seeding will be used as needed to minimize exposure of soil and to prevent eroded soil from leaving the work area.

Upland storm water diversion measures will be used to control run-on as needed. These will be installed prior to or concurrent with construction and the construction drawings will be updated as needed. Refer to SWMP drawings (Attachment 3) for details concerning storm water diversion measures.

Berm and ditch slopes will be 3(H):1(V) or flatter.

#### **10.1.2 Roads and Access Areas**

Access roads for construction currently exist and will be improved with crushed stone, concrete, or asphalt, as necessary. When necessary, riprap, rock check dams, or berms will be used to control erosion caused by runoff. Runoff water will be diverted onto stable areas, or other devices will be used to control erosion at the discharge location.

Sediment tracking onto public roads will be minimized by the use of a series of wheel wash stations and manual spray washing of vehicles (as necessary). All public roads are cleaned with a sweeper truck on a routine basis. Daily checks of the road surrounding the project and plant access roads will be conducted and immediate corrective action pursued if sediment migrates to road surfaces. Sediment tracked onto public roads will be removed immediately.

### 10.1.3 Inspections and Maintenance

All erosion controls will be inspected and repaired as necessary, a minimum of 2 days per calendar week and a minimum of 72 hours between inspections. Settling areas will be cleaned as indicated below, as a minimum. All other erosion and sediment control structures and devices will be cleaned out when reaching 50% of their capacity or as directed by the SWMP Inspector. A certified State of Tennessee Level 1 Inspector, who is appointed by TVA, is responsible for the inspections. The qualified personnel who have a general understanding of erosion controls must perform the inspections. Inspectors must have successfully completed the "Fundamentals of Erosion Prevention and Sediment Control" or an equivalent course. The results of these inspections and necessary repairs will be logged on the SWMP Inspection and Maintenance Report (Attachment 7). Areas to be inspected include outfalls, drainage locations, silt fences and other controls, inlet protection, vehicular entrance points, weekly litter pick up, stockpiled soil, material storage areas, disturbed areas not finally stabilized, etc. A separate sheet will be used for each area or control being inspected. For example, the silt fence will have its own sheet(s) so that a running record of the condition of that particular area can be segregated from the documentation on a rock lay down area. Inspection sheets will be maintained in a log by the Construction Manager.

During prolonged rainfall, daily inspections will be suggested and repairs will be made as needed. The SWMP Inspector or the designee will make inspections on non-work days (weekends and holidays) if necessary. The official rainfall amount will be the rainfall as recorded at the TVA onsite gage for the KIF. Records of rainfall gage readings will be maintained and tracked on the Daily Rainfall Gage Record (Attachment 6) by the Project Manager.

Copies of rainfall logs and inspection records will be provided to the PA-E at the end of each month for the life of the project. A copy of the major activity log will be provided to the PA-E on a monthly basis. These records will be maintained onsite with the environmental records for a minimum of 10 years after the notice to terminate coverage under the general permit has been filed in accordance with the TVA Environmental Management System (EMS) procedures.

Repairs to any controls will be made as soon as practicable before the next rain event, but no later than 7 days after any deficiency is noted. If a device appears to be inadequate for the job, the Construction Manager will be notified. As a part of the inspection, the Inspector will complete a SWMP Compliance Inspection Form. If any noncompliance conditions are found during the inspection, and noted on this form, a Noncompliance Condition Report will be issued. The Noncompliance Condition Report will be addressed and closed out within 14 calendar days.

Any modifications to this SWMP that are required in response to inspections will be implemented within 14 days following the inspection.

### 10.1.4 Stabilization Requirements

All disturbed areas will be stabilized as expeditiously as possible following completion of construction work in the area, but no later than 7 days after construction has permanently ceased (unless frozen ground conditions exist). Measures are required if construction temporarily ceases and will not commence again in 15 days.

### 10.1.5 Final Seeding

Final site seed mixtures will be as shown in Table 10-1.

**Table 10-1 Final Seeding Rate**

<b>Season / Location</b>	<b>Application Rate (Pounds per Acre)</b>
Spring/Summer:	
Weeping Lovegrass	3
Bermuda	5
Redtop Grass	5
Kentucky 31 Fescue	25
German Millet	25
Fall/Winter:	
Rye	15
Fescue	50
Red Clover	5
White Clover	5
Bermuda	5
Love	3
Wild Flowers	12
Perimeter Dikes Grass Seed Mix:	
Red Clover	5
White Clover	5
Bermuda	10
Love	3

**10.1.6 Fertilizer**

Apply fertilizer with the ratio of 19-19-19 at an application rate of 400 lbs/acre. Straw or mulch will be used to cover seeding. Straw or mulch will be applied at a rate of 2-1/2 tons/acre using hydroseeding methods.

**10.1.7 Soil and Sediment Control/Sediment Migration**

Silt fences or other measures will isolate stockpiled soil to prevent soil movement.

Sediments that leave the site but do not reach the receiving stream will be removed so that they are not washed into streets or any receiving streams. TVA Environmental Compliance will be contacted if sediment reaches a receiving stream.

**10.1.8 Dewatering of Work Areas/Vehicle Washing and Maintenance/Dust Suppression**

During dewatering of work areas (if required), water discharge will be directed to the existing settling basin or other discharge structure. The discharger will ensure that the discharge is not erosive and does not carry any visible traces of sediment into the receiving stream.

All water resulting from wheel wash stations will be directed to diversion ditches and conveyed to the existing settling basins or into the Sluice Trench, depending on location. No detergents will be used in onsite vehicle wash downs. No materials used for vehicle maintenance will be allowed to reach surface waters.

A water truck will be present during construction to provide dust suppression, if required. Water will be dispersed over disturbed areas that are being worked or are causing dusting. The truck will run at least once a day during dry periods, but may be required to run several times a day if necessary to control dusting.

#### **10.1.9 Housekeeping Requirements**

Litter, construction debris, and/or chemicals will be picked up and properly disposed of prior to the anticipated storm events forecasted by local weather reports. Regular litter pickup (e.g., weekly or more often as needed) may be conducted as an adequate alternate to picking up litter before forecast storm events to prevent entry of trash into receiving streams. These litter pickup events need to be recorded on the SWMP Compliance Condition Report (Attachment 8) and reported to the Erosion and Sedimentation Control Specialist.

#### **10.1.10 General Water Quality Requirements/Other Situations**

Stormwater discharges will not have visible floating scum, oil, or other matter or cause an objectionable color contrast in the receiving stream. If such conditions are observed, controls will be inspected and repaired or reinforced as necessary and the onsite Project Manager should be notified immediately. If repairs or changes are made, they will be recorded on the inspection sheet(s).

Any situation that arises and has not specifically been mentioned above will be addressed by the Construction Manager in consultation with onsite PA-E as described in this SWMP, and the Environmental Compliance group. At a minimum, industry standard best management practices will be used when addressing any new concerns.

#### **10.1.11 Settling Area 1A & 2A Maintenance and Clean Out Plan**

##### **10.1.11.1 Inspection and Maintenance**

The skimmers will be inspected once every month to insure they are in proper working order and cleaned out if fouled. The settling areas will also be monitored once per month to insure they are working properly.

The system is observed during the SWMP inspections that occur twice weekly and if needed will be cleaned prior to the scheduled cleaning.

All areas will be monitored during the SWMP inspections.

##### **10.1.11.2 Clean Out**

Settling Area 1A & 2A will be cleaned out (ash removed) when the clean out elevation is reached or it is deemed that an average of the ash elevation yields the clean out elevation. The clean out elevations are: Settling Area 1A =738.5 and Settling Area 2A=740.0. These elevations will be determined once a month by the use of sonar and/or other means. Once the ash elevation is determined the SWMP Manager will decide if clean out is required. Additional

clean out may be required if large storm events or other events warrant it, as determined by the SWMP Manager.

Settling Area 1A and 2A are proposed to be cleaned out using a combination of mechanical equipment (trackhoe and truck) and a remote controlled hydraulic dredge (see attached sketch INF-SK-096). The dredged material will be pumped to Lateral Expansion. Dredge pipe will be routed overland to the Lateral Expansion. The material removed by mechanical means will be stockpiled onsite until it is dry enough to haul to the Ball Field and/or ash stacking areas.

The existing Gabion Basket check dams constructed in the “dirty” water ditch will be cleaned out per the schedule in the SWMP which states that when sediment accumulates half way to the top of the structure it shall be cleaned out.

### **10.1.12 North Embayment Settling Area Maintenance and Clean Out Plan**

#### **10.1.12.1 Inspection and Maintenance**

The settling area will be monitored once per month to insure proper working order.

The system is observed during the SWMP inspections that occur twice weekly and if needed will be cleaned prior to the scheduled cleaning.

All areas will be monitored during the SWMP inspections.

#### **10.1.12.2 Clean Out**

The North Embayment Settling Area will be cleaned out (ash removed) when the clean out elevation is reached or it is deemed that an average of the ash elevation yields the clean out elevation. The clean out elevation is 744.0 These elevations will be determined once a month by visual observation. Once the ash elevation is determined the SWMP Manager will decide if clean out is required. Additional clean out may be required if large storm events or other events warrant it, as determined by the SWMP Manager.

The North Embayment Settling Area is proposed to be cleaned out using mechanical equipment (trackhoe and truck)

## **10.2 POST-CONSTRUCTION EROSION CONTROLS**

Erosion control measures will be inspected and maintained until vegetation in the disturbed areas has returned to the pre-construction conditions or the site is stabilized.

All debris and temporary erosion control devices will be removed when stabilization measures are complete and persistent vegetative cover or surface stabilization is achieved.

## **11 SPECIFIC BEST MANAGEMENT PRACTICES AND SPILL PREVENTION**

### **11.1 MATERIALS AND WASTES**

#### **11.1.1 Waste Materials**

Trash and construction debris from the site that has not come into contact with ash materials will be hauled to an approved landfill. No construction waste material will be buried onsite.

Clearing debris (brush and timber) may be chipped and used as mulch onsite in accordance with state and local regulations. The onsite PA-E will be contacted for approved method of disposing of clearing debris if any is generated.

### **11.1.2 Hazardous Waste**

In the event that hazardous waste is generated, hazardous waste will be disposed of according to EPA regulations, state, and/or local regulations. The onsite PA-E will be contacted for approved method of disposing of such materials.

### **11.1.3 Sanitary Waste**

Portable sanitary units will be provided for use by workers as needed throughout the life of the project. Sanitary waste will be regularly collected from the portable units by a licensed sanitary waste management contractor.

### **11.1.4 Material Storage**

Stored materials that cannot contaminate storm water may be stored in the open. However, the lay down area for these items will be prepared so that no sediment leaves the site.

Stored petroleum and other liquid products will have secondary containment if the aggregate quantity in one spot is 55 gallons or greater. The KIF Integrated Pollution Prevention Plan provides requirements for storage of liquid products.

Other products that may contaminate storm water. For example, dry fertilizer, will be covered or stored inside to prevent contact with storm water.

Hazardous wastes and materials will have secondary containment and will be covered or stored inside to prevent contact with storm water. The secondary containment will have a manually operated drain valve that can be locked. If stored inside, the secondary containment needs no drain.

Releases to secondary containment will be cleaned up when discovered and the source of the release repaired as soon as possible. Secondary containment may be earth, but spills to earth will be completely cleaned up within 2 hours of discovery. The onsite Project Manager will be notified immediately, who in turn will contact the onsite PA-E as soon as possible. See reporting and record keeping requirements below.

Material storage areas will be as small as practicable and as few in number as practicable. They will be established only in designated areas that minimize the disturbance of soil during use and the chance of storm water runoff contaminated with sediment or other pollutants.

## **11.2 PRODUCT-SPECIFIC PRACTICES (AS APPLICABLE)**

### **11.2.1 Concrete**

Unused concrete and wash water will be disposed of at the direction of TVA. Concrete and water from the washout or fill will not reach waters of the state, either surface or ground waters. Disposal pits or wash pits will not be located within 200 ft of any stream or wet weather conveyance.

### **11.2.2 Petroleum Products**

All onsite vehicles will be monitored for leaks and will receive regular preventive maintenance to reduce the chance of leakage. If petroleum products will be present at the site, they are stored in tightly sealed containers that are clearly labeled. If the aggregate quantity of petroleum products in one spot is 55 gallons or greater, secondary containment will be provided per the KIF Integrated Pollution Prevention Plan.

## **11.3 SPILL CONTROL AND RESPONSE PRACTICES**

### **11.3.1 Equipment**

TVA and the constructor will maintain stockpiles of materials and equipment necessary for spill cleanup on the site at all times. Equipment and materials will include but not be limited to brooms, shovels, rags, absorbent materials, and plastic or metal trash containers specifically designed for this purpose. The materials and equipment necessary for spill cleanup will be dependent upon the nature and quantity of the material stored onsite. A signed inventory sheet will be provided to the onsite PA-E on a monthly basis.

### **11.3.2 Response**

All spills will be cleaned up immediately upon discovery. The constructor will report spills to the Construction Manager. The Construction Manager will contact the onsite PA-E as soon as possible. See Section 13 for reporting and record keeping requirements.

### **11.3.3 Safety**

All spill areas will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substances.

## **12 HEALTH AND SAFETY**

Activities conducted under this SWMP will be in accordance with requirements of the Site Wide Safety and Health Plan. In particular, care will be taken during inspection activities for safe footing. Work immediately adjacent to ponds or the river will be done using a personal floatation device.

## **13 REPORTING AND RECORD KEEPING**

In the event of a spill of oil, hazardous substances, or other pollutants, the onsite Construction Manager will notify the onsite PA-E and the Operations Duty Specialist. These individuals will notify the National Response Center, Tennessee Emergency Management Agency, and the Spill Prevention Control and Countermeasure Environmental Compliance. The onsite PA-E will contact the local Environmental Assistance Center (Division of Water Pollution Control) within 14 days of the release to storm water or the receiving stream.

The Project Manager will place a write-up of the spill in the SWMP file within 14 days of the event and will coordinate with the NPDES specialist any needed plan modifications to include additional measures as necessary. The write-up will include description of the release (i.e., quantity and type of material), date of the release, circumstances leading to the release, and steps taken to respond and/or address the release.

If a change in project scope occurs, the SWMP will be modified. If state inspectors require a modification, it will be accomplished in a timely manner. If any routine inspection warrants a plan modification, the SWMP will be modified within 7 days and the revision will be implemented within 14 days.

The required records will be kept on file in the construction office and the final, complete set of records will be transferred to the plant PA-E at the end of construction. TVA is required by the permit to keep records of all spills and inspections for a minimum of 3 years after the Notice of Termination is filed, or longer if requested by the Tennessee Division of Water Pollution Control; however, the TVA EMS system requires 10 years record maintenance.

**Attachment 1**  
**Major Activities Log (Form 006A)**



**Attachment 2**  
**Runoff Coefficient Calculation**

**PHASE A AND B - RUNOFF COEFFICIENT CALCULATIONS**

	Area (Acres) (a)	Pre-Project Runoff Coefficient (b)	Pre-Project (a)*(b)	Post-Project Runoff Coefficient (d)	Post-Project (a)*(d)
Western Embayment	1,500.00	0.50	750.00	0.55	825.00
North Embayment	1,100.00	0.50	550.00	0.55	605.00
Eastern Embayment	400.00	0.50	200.00	0.55	220.00
Failed Cell Area	175.00	0.65	113.75	0.20	35.00
<b>Total</b>	<b>3,175.00</b>		<b>1,613.75</b>		<b>1,685.00</b>

$$\text{Cumulative Runoff Coefficient} = \frac{\sum((a)*(b))}{\sum \text{ areas}}$$

Cumulative Pre-Incident Runoff Coefficient (Total (a)\*(b))/(a) = 0.51  
 Cumulative Post-Incident Runoff Coefficient (Total (a)\*(d))/(a) = 0.53

**ASH PROCESSING AREA 1 - RUNOFF COEFFICIENT CALCULATIONS**

	Area (Acres) (a)	Pre-Project Runoff Coefficient (b)	Pre-Project (a)*(b)	Post-Project Runoff Coefficient (d)	Post-Project (a)*(d)
Ash Processing Area 1	68.00	0.50	34.00	0.50	34.00
<b>Total</b>	<b>68.00</b>		<b>34.00</b>		<b>34.00</b>

$$\text{Cumulative Runoff Coefficient} = \frac{\sum((a)*(b))}{\sum \text{ areas}}$$

Cumulative Pre-Incident Runoff Coefficient (Total (a)\*(b))/(a) = 0.50  
 Cumulative Post-Incident Runoff Coefficient (Total (a)\*(d))/(a) = 0.50

**ASH PROCESSING AREA 2 - RUNOFF COEFFICIENT CALCULATIONS**

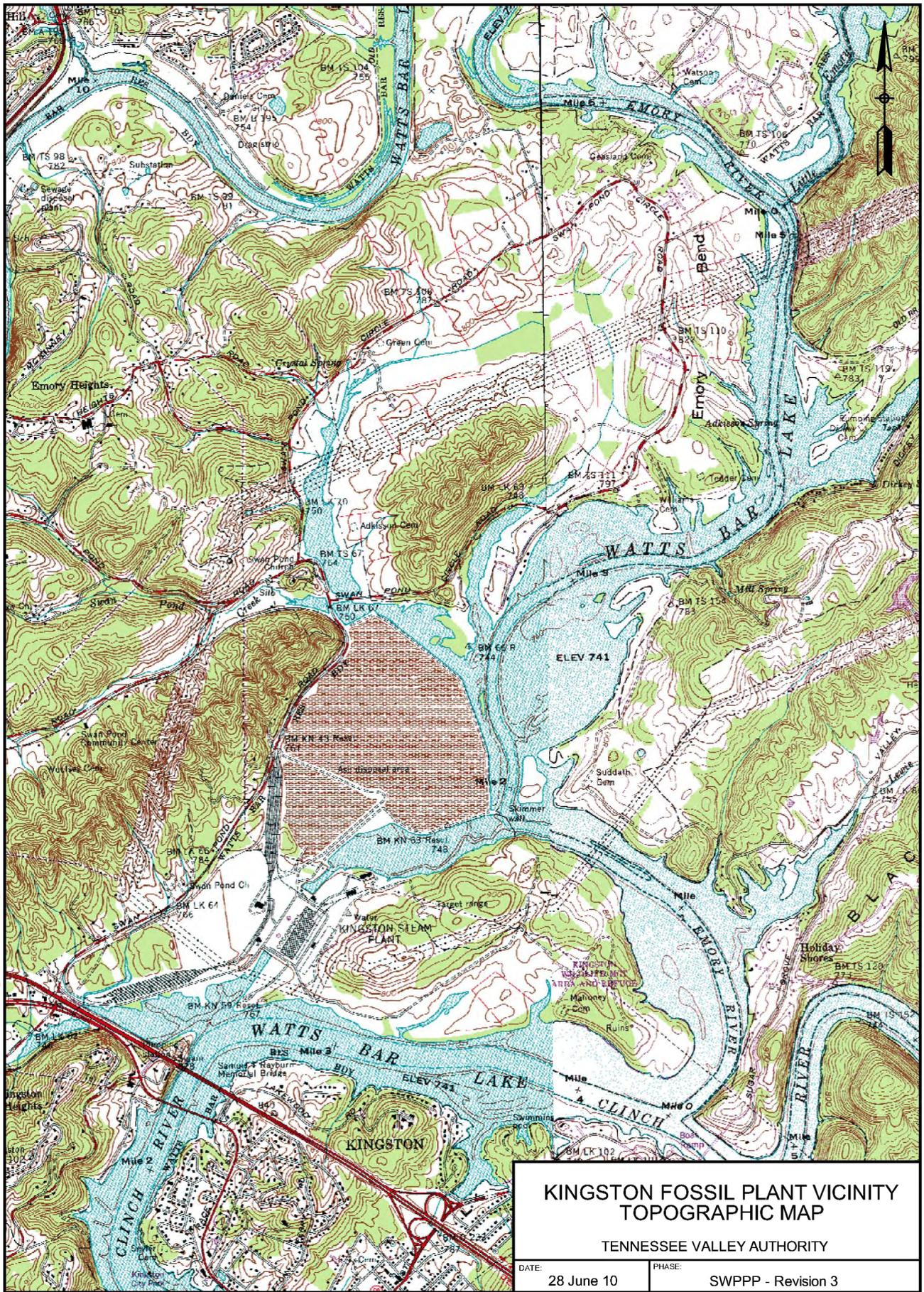
	Area (Acres) (a)	Pre-Project Runoff Coefficient (b)	Pre-Project (a)*(b)	Post-Project Runoff Coefficient (d)	Post-Project (a)*(d)
Ash Recovery Area: Timber	1.00	0.18	0.18	0.50	0.50
Ash Recovery Area: Grass Land	14.00	0.35	4.90	0.50	7.00
Operational Ash Area: Timber	4.00	0.18	0.72	0.50	2.00
Operational Ash Area: Grass Land	30.00	0.35	10.50	0.50	15.00
North Stockpile Area	3.00	0.35	1.05	0.50	1.50
South Stockpile Area	17.00	0.35	5.95	0.50	8.50
Access Roads	10.00	0.27	2.70	0.50	5.00
12' Gravel Roadway with 22" Diameter Pipe	2.00	0.40	0.80	0.50	1.00
<b>Total</b>	<b>81.00</b>		<b>26.80</b>		<b>40.50</b>

$$\text{Cumulative Runoff Coefficient} = \frac{\sum((a)*(b))}{\sum \text{ areas}}$$

Cumulative Pre-Incident Runoff Coefficient (Total (a)\*(b))/(a) = 0.33  
 Cumulative Post-Incident Runoff Coefficient (Total (a)\*(d))/(a) = 0.50

**Attachment 3**  
**Kingston Fossil Plant Vicinity Topographic Map, Kingston Ash Recovery Project Site**  
**Map, and Storm Water Management Plan Drawings**

T:\0002 ENGINEERING\01 DRAWINGS AND SPECS\Report Graphics\1\0\_USGS Topo Map.dwg Jun 29 2010 bperatro



**KINGSTON FOSSIL PLANT VICINITY  
TOPOGRAPHIC MAP**  
TENNESSEE VALLEY AUTHORITY  
DATE: 28 June 10      PHASE: SWPPP - Revision 3

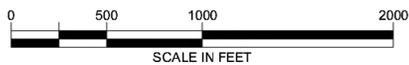
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DATE OF PHOTO: AUG. 2009

**LEGEND**

- EMBAYMENT RESTORATION
- FAILED DREDGE CELL
- LATERAL EXPANSION / ASH POND



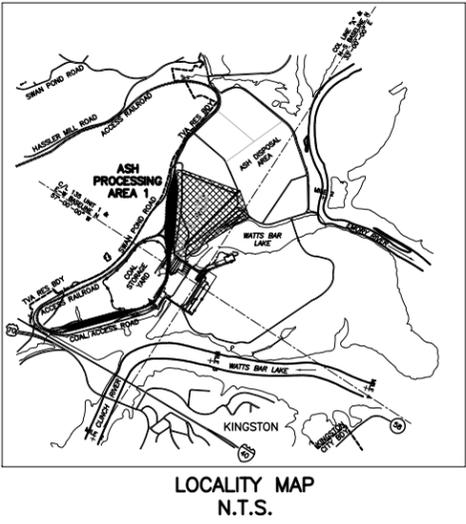
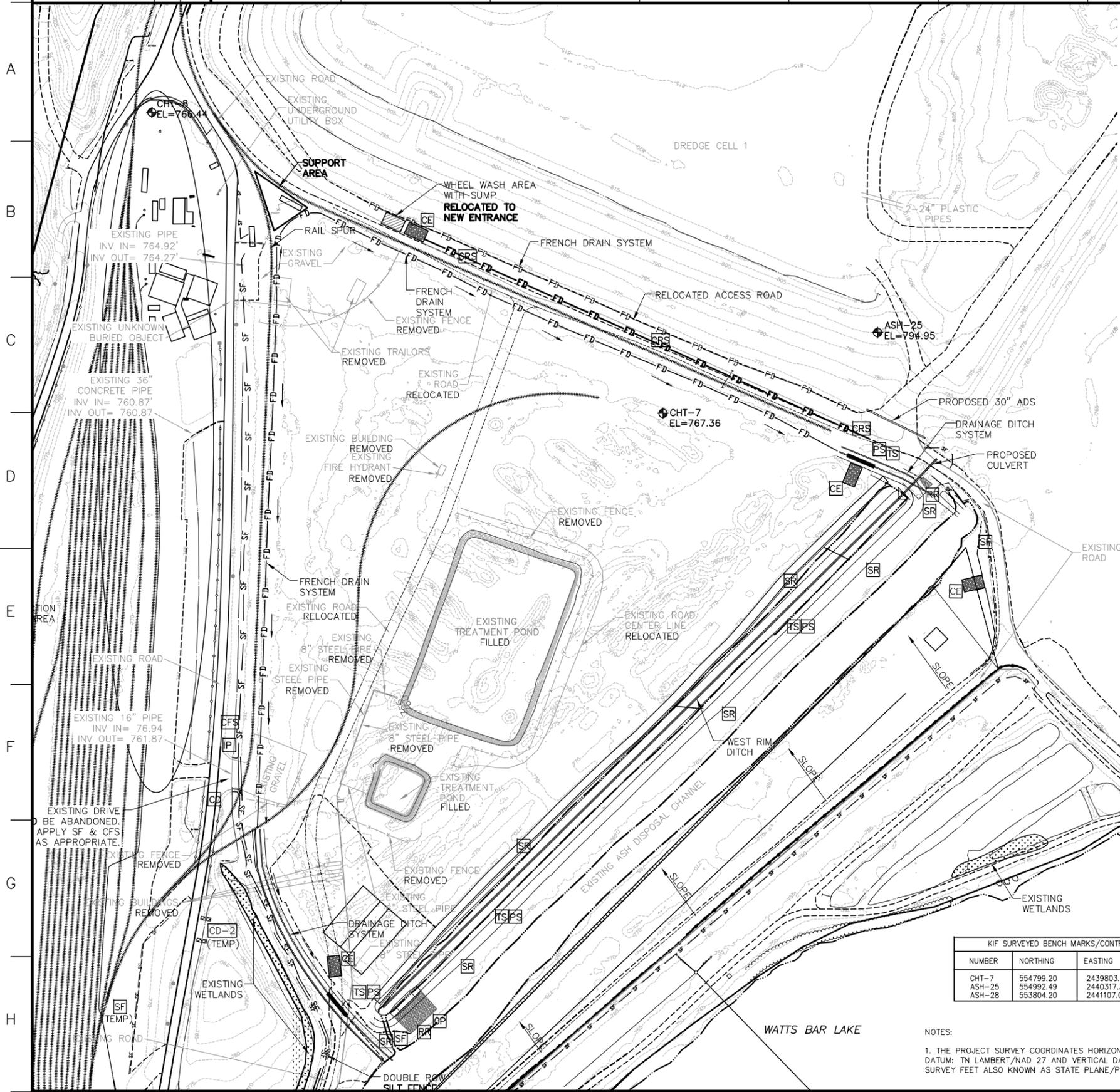
**KINGSTON ASH RECOVERY PROJECT  
SITE MAP**

TENNESSEE VALLEY AUTHORITY

DATE: 28 June 10

PHASE: SWPPP - Revision 3





**TDEC BEST MANAGEMENT PRACTICES MANUAL (BMP) CHART**

CODE	PRACTICE	DETAIL	DESCRIPTION
CD-1	CHECK DAM		A SMALL TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A SWALE, DRAINAGE DITCH OR AREA OF CONCENTRATED FLOW, MADE FROM STONE OR ROCK.
CD-2	CHECK DAM		SAME AS ABOVE EXCEPT MADE FROM STRAW BALES OR ERSION SOCKS.
CE	CONSTRUCTION ENTRANCE		A CRUSHED STONE PAD LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
DB	DIVERSION BERM		AN EARTH CHANNEL OR BERM LOCATED ABOVE A SLOPE TO DIVERT RUNOFF. THIS MAY BE A TEMP-ORARY OR PERMANENT STRUCTURE.
SF	SEDIMENT BARRIER		A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE SANDBAGS, BALES OR STRAW OR HAY, BRUSH, LOGS & POLES, GRAVEL, OR A SEDIMENT FENCE. THE BARRIERS ARE USUALLY TEMPORARY & INEXPENSIVE.
OP	STORM DRAIN OUTLET PROTECTION		A PAVED OR SHORT SECTION OF RIP RAP CHANNEL AT THE OUTLET OF A STORM DRAIN SYSTEM PREVENTING EROSION FROM THE CONCENTRATED RUNOFF.
TS PS	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)		ESTABLISHING TEMPORARY & PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.
SR	SURFACE ROUGHENING		A ROUGH SOIL SURFACE WITH HORIZONTAL DEPRESSIONS ON A CONTOUR OR SLOPES LEFT IN A ROUGHENED CONDITION AFTER GRADING.
IP	INLET SEDIMENT TRAP		AN IMPOUNDING AREA CREATED BY EXCAVATING AROUND A STORM DRAIN INLET. THE EXCAVATED AREA WILL BE FILLED AND STABILIZED ON COMPLETION OF CONSTRUCTION ACTIVITIES.
RR	PERMANENT STABILIZATION (RIP-RAP)		A PERMANENT, EROSION-RESISTANT GROND COVER OF LARGE, LOOSE, ANGULAR STONE WITH A GEOTEXTILE OR GRANULAR UNDERLINING.
MA	EROSION CONTROL BLANKET/MATTING		A PROTECTIVE BLANKET OR SOIL STABILIZATION MAY USED TO ASSIST IN ESTABLISHMENT OF TEMPORARY OR PERMANENT VEGETATION ON STEEP SLOPES, CHANNELS, OR STREAM BANKS.
CFS	COMPOSITE FILTER SOCK		A TUBULAR SEDIMENT CONTROL AND STORM WATER RUNOFF FILTRATION DEVICE.
CRS	CONSTRUCTION ROAD STABILIZATION		TO PROVIDE A FIXED ROUTE FOR CONSTRUCTION TRAFFIC, AND TO REDUCE EROSION AND SUBSEQUENT RE-GRADING OF PERMANENT ROADBEDS BETWEEN THE TIME OF INITIAL GRADING AND FINAL STABILIZATION.

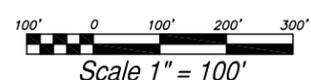
**DATA INFORMATION:**  
EAST AND WEST SIDE OF PROPERTY DRAINS INTO AN UNNAMED TRIBUTARY WHICH DISCHARGES INTO EMORY RIVER.

**SITE INFORMATION:**  
SITE AREA: 800 ACRES  
LAND DISTURBANCE AREA: 342 ACRES  
PROPERTY OWNER: TENNESSEE VALLEY AUTHORITY  
KINGSTON FOSSIL PLANT  
HARRIMAN, TENNESSEE  
PHONE NO.865-717-6520

**NOTE:**  
CONTRACTOR SHALL INSPECT OUTFALL POINTS AFTER ANY STORM EVENT & MAKE NECESSARY ADJUSTMENTS TO (BMP'S) TO ELIMINATE SEDIMENT FROM EXITING SITE.

**COMPANION DRAWINGS:**  
SK-SWPPP-001 THRU SK-SWPPP-013

- LEGEND**
- 389.65 SPOT ELEVATION
  - 390— PROPOSED CONTOURS
  - - - - EXISTING CONTOURS
  - SF - SILT FENCE
  - FD - FRENCH DRAIN SYSTEM
  - - - - TVA BOUNDARY
  - WETLANDS
  - WETLANDS
  - ☒ CHECK DAM - HAY BALE



**KIF SURVEYED BENCH MARKS/CONTROL POINTS**

NUMBER	NORTHING	EASTING	ELEVATIONS
CHT-7	554799.20	2439803.12	767.36
ASH-25	554992.49	2440317.38	794.95
ASH-28	553804.20	2441107.00	765.01

**NOTES:**  
1. THE PROJECT SURVEY COORDINATES HORIZONTAL PROJECTION/ DATUM: TN LAMBERT/NAD 27 AND VERTICAL DATUM: NGVD 29, US SURVEY FEET ALSO KNOWN AS STATE PLANE/PLANT COORDINATES.

**FOR SWPPP PURPOSE ONLY  
NOT FOR CONSTRUCTION**

REV. NO.	DATE	ISSN	DRWN	CHKD	SUPV	RWD	APPD	ISSD	PROJECT	AS CONST	REV
R 1	5/29/09								SK-SWPPP-003		
SCALE: 1" = 100' EXCEPT AS NOTED											
CIVIL YARD											
CIVIL ASH PROCESSING AREA 1 EROSION AND SEDIMENT CONTROL PLAN											
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:					
KINGSTON FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING											
AUTOCAD R 2004	DATE	36	SK-SWPPP-003 R 3								







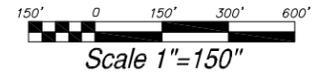
NOTES:

1. DITCH ALIGNMENT MAY BE ADJUSTED FOR IMPROVED CONSTRUCTABILITY BY HED.

COMPANION DRAWINGS: SK-SWPPP-001 THRU SK-SWPPP-013

SURVEY DATA NOTE:

THE TOPOGRAPHICAL DATA SHOWN IS BY TVA SURVEYING SERVICES DATED AUGUST 2009



FOR SWPPP PURPOSE ONLY  
NOT FOR CONSTRUCTION

R 3	07/07/10	UPDATED TO REFLECT CURRENT SITE CONDITIONS									
R 2	5/29/09	DISCIPLINE INTERFACE									
REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPR	ISSD	PROJECT	AS CONST	REV. NO.
SCALE: 1"=150' EXCEPT AS NOTED											

CIVIL YARD

NORTH EMBAYMENT

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
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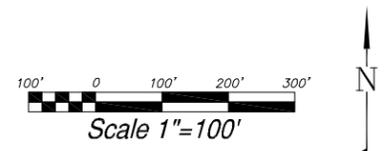
KINGSTON FOSSIL PLANT  
TENNESSEE VALLEY AUTHORITY  
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2004 DATE 05/29/09 36 C SK-SWPPP-007 R 3



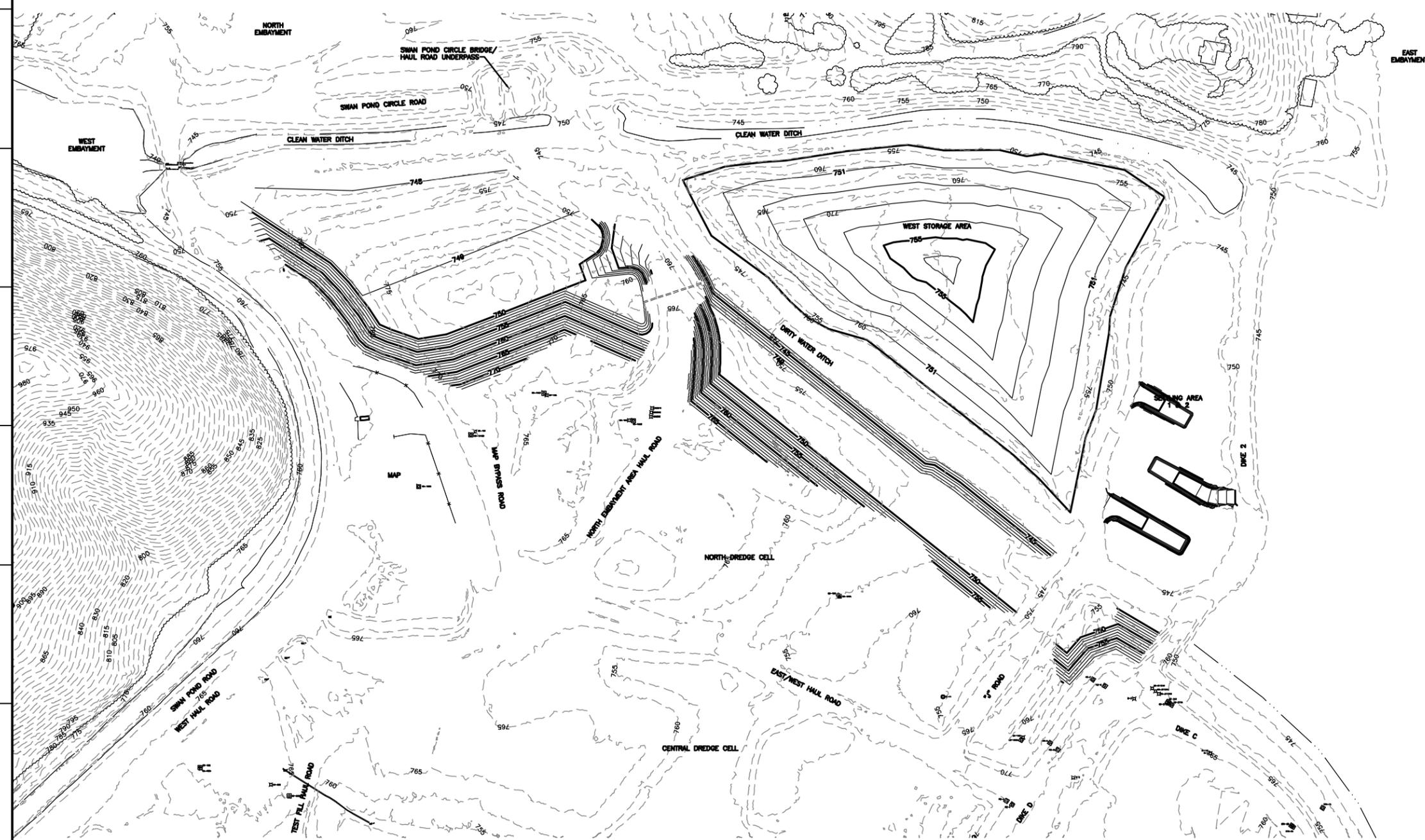
**NOTES:**  
 1. DITCH ALIGNMENT MAY BE ADJUSTED FOR IMPROVED CONSTRUCTABILITY BY HED.  
 COMPANION DRAWINGS:  
 SK-SWPPP-001 THRU SK-SWPPP-013

**SURVEY DATA NOTE:**  
 THE TOPOGRAPHICAL DATA SHOWN IS BY TVA SURVEYING SERVICES DATED AUGUST 2009

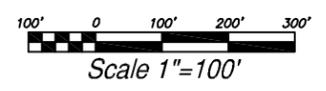


FOR SWPPP PURPOSE ONLY  
NOT FOR CONSTRUCTION

R 3 07/07/10										
UPDATED TO REFLECT CURRENT SITE CONDITIONS										
R 2 3/29/09										
REV. NO.	DATE	DSGN	DRN	CHKD	SUPV	RWNO	APPR	ISSD	PROJECT	AS CONST
SCALE: 1"=100' EXCEPT AS NOTED										
CIVIL YARD										
DREDGE CELL/MAIN EMBAYMENT										
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:				
KINGSTON FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING										
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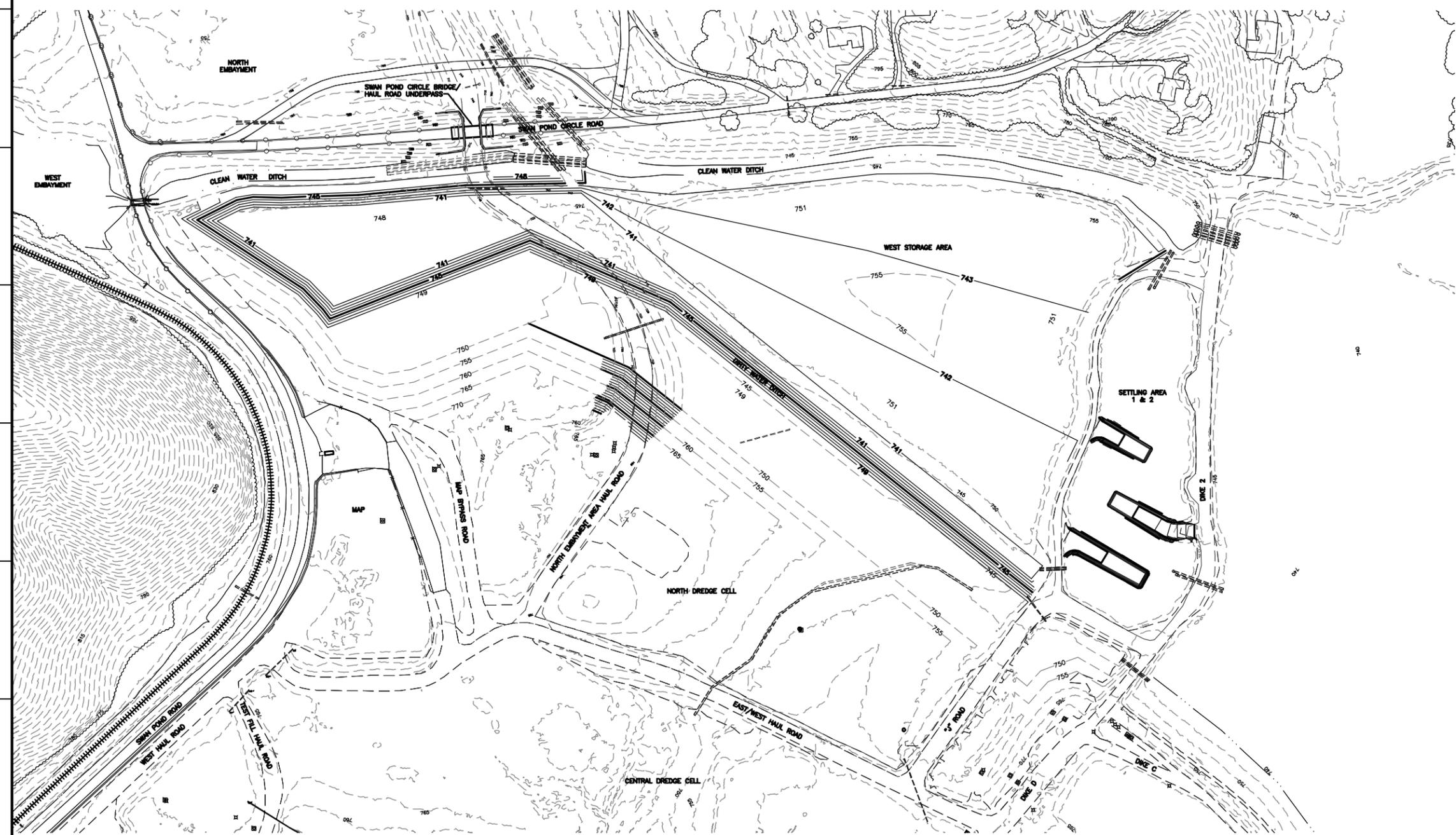


**SURVEY DATA NOTE:**  
 THE TOPOGRAPHICAL DATA SHOWN IS BY TVA SURVEYING SERVICES DATED AUGUST 2009

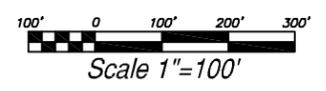


**FOR SWPPP PURPOSE ONLY  
 NOT FOR CONSTRUCTION**

R 3 07/07/10										REVISION	
ADDED PLANS										INTERFACE	
NO.	DATE	DSN	DRN	CHK	SLP	ENV	APP	ISS	PROJECT	AS CONST	
SCALE: 1"=100'										EXCEPT AS NOTED	
CIVIL YARD											
MIDDLE EMBAYMENT STAGE 1A											
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:					
KINGSTON FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING											
AUTOCAD R 2004	DATE 07/07/10	36	C	SK-SWPPP-014			R 3				



**SURVEY DATA NOTE:**  
 THE TOPOGRAPHICAL DATA SHOWN IS BY TVA SURVEYING SERVICES DATED AUGUST 2009



**FOR SWPPP PURPOSE ONLY  
 NOT FOR CONSTRUCTION**

R 3 07/07/10												
ADDED PLANS												
NO.	DATE	ISSN	ISSN	CHG	SUPP	RVSD	APPR	ISS	PROJECT	AS CONST	NO.	
SCALE: 1"=100'										EXCEPT AS NOTED		
CIVIL YARD												
MIDDLE EMBAYMENT STAGE 1B												
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	SEAL NO.:						
KINGSTON FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING												
AUTOCAD R 2004	DATE 07/07/10	36	c	SK-SWPPP-015				R 3				

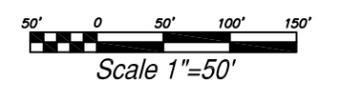
36 C SK-SWPPP-16 R 2 3 4 5 6 7 8 9 10 11 12

A  
B  
C  
D  
E  
F  
G  
H



SCALE: 1"=50'  
PLAN

**SURVEY DATA NOTE:**  
THE TOPOGRAPHICAL DATA SHOWN IS BY TVA SURVEYING SERVICES DATED AUGUST 2009



**FOR SWPPP PURPOSE ONLY  
NOT FOR CONSTRUCTION**

R 3 07/07/10												ORIGINATOR
ADDED PLANS												INTERVIEW
REV. NO.	DATE	DRN	DRN	CHD	SUPV	RWD	APPV	ISSD	PROJECT	AS CONST	BY	
SCALE: 1"=100'												EXCEPT AS NOTED
CIVIL YARD												
NORTH EMBAYMENT (NORTH END)												
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	PERMITTED BY:	APPROVED BY:	ISSUED BY:						
KINGSTON FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING												
AUTOCAD R 2004	DATE	BY	NO.	SK-SWPPP-016 R 3								

TASK COMPLETED BY: \_\_\_\_\_  
REV. NO. \_\_\_\_\_

PLOT FACTOR: \_\_\_\_\_  
W\_TVA C.A.D. DRAWING  
DO NOT ALTER MANUALLY

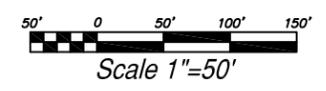
1 2 3 4 5 6 7 8

173 SK-SWPPP-173 2 3 4 5 6 7 8 9 10 11 12

A  
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H



**SURVEY DATA NOTE:**  
THE TOPOGRAPHICAL DATA SHOWN IS BY TVA SURVEYING SERVICES DATED AUGUST 2009



**FOR SWPPP PURPOSE ONLY  
NOT FOR CONSTRUCTION**

R 3 07/07/10										ORIGINATOR	
ADDED PLANS										INTERFACE	
REV. NO.	DATE	DRN	DRN	CHD	SRV	RWD	APP	ISS	PROJECT	AS CON	REV
SCALE: 1"=100'										EXCEPT AS NOTED	
CIVIL YARD											
NORTH EMBAYMENT (SOUTH END)											
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:					
KINGSTON FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING											
AUTOCAD R 2004	DATE	REV	SK-SWPPP-017 R 3								

TASK COMPLETED BY: \_\_\_\_\_  
REV. NO. \_\_\_\_\_

PLOT FACTOR: \_\_\_\_\_  
W\_TVA C.A.D. DRAWING  
DO NOT ALTER MANUALLY

1 2 3 4 5 6 7 8

**Attachment 4**  
**Storm Water Management Plan Contacts**

## STORM WATER MANAGEMENT PLAN CONTACTS

**Kingston Fossil Plant  
Kingston Ash Recovery Project**  
1134 Swan Pond Road  
Harriman, TN 37748

**Operator(s):**

Tennessee Valley Authority  
Steve McCracken, TVA General Manager  
Kingston Ash Recovery Project  
1134 Swan Pond Road  
Harriman, TN 37748  
Phone: (865) 717-1649  
shmccracken@tva.gov

**Project Manager:**

Tennessee Valley Authority  
Steve McCracken, TVA General Manager  
1134 Swan Pond Road  
Harriman, TN 37748  
Phone: (865) 717-1649  
shmccracken@tva.gov

**Onsite PA-E:**

Tennessee Valley Authority  
Michelle Cagley  
Kingston Ash Recovery Project  
1134 Swan Pond Road  
Harriman, TN 37748  
Phone: 865-717-1636  
amcagley@tva.gov

**Plant PA-E:**

Tennessee Valley Authority  
Cynthia McCowan  
Kingston Fossil Plant  
714 Swan Pond Road  
Harriman, TN 37748  
Phone: (865) 717-2180  
COWebb@tva.gov

**Erosion and Sedimentation Control Specialist  
and SWMP Preparer:**

Jacobs  
Franklin M. "Butch" Parton, Jr., PE  
Kingston Ash Recovery Project  
1134 Swan Pond Road  
Harriman, TN 37748  
Mobile: (865) 660-4459  
fmparton@tva.gov

**Emergency 24-Hour Contact:**

Tennessee Valley Authority  
Operations Duty Specialist  
Phone: (423) 751-1700

**Attachment 5**  
**Sequence of Control Measure Implementation, Maintenance, and Removal Log (Form 007A)**



**Attachment 6**  
**Daily Rainfall Gage Record (Form 005A)**



**Attachment 7**  
**Storm Water Management Inspection and Maintenance Report (Form 008A)**



## STORM WATER MANAGEMENT INSPECTION AND MAINTENANCE REPORT

Storm water inspections must be performed and documented a minimum of twice per week with the minimal time between inspections being at least 72 hours. Daily inspections are suggested during prolonged periods of rain. **Use a separate sheet for each area or control being inspected, such as vehicular access points, silt fences, material storage area, routine litter pickup, etc.** Record the date of inspection, the date and amount of rain recorded if inspection is after a storm event, include the inspector's name and the condition of the area, and device being inspected. Document the corrective actions taken or repairs made.

Present to the TVA Construction Manager once per month, when sheet has been filled and/or construction is complete. The TVA Construction Manager will need to provide a copy to the onsite Program Administrator-Environmental when complete or on a monthly basis.

<b>Area being inspected:</b>	
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Date of Inspection	Time Inspection Performed	Describe Condition	Repairs Needed	Date Repairs Done*	Inspector's Signature/Title

\*Repairs must be completed within 7 calendar days of before the next rainfall.

**Attachment 8**  
**Storm Water Management Compliance Condition Report (Form 009A) and**  
**Noncompliance Condition Report (Form 009B)**



## STORM WATER MANAGEMENT COMPLIANCE CONDITION REPORT

Site Name:	Date of Evaluation:	Page		
			of	

Completed by:	Weather Conditions:
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Best Management Plan / Housekeeping		Yes	No	N/A	Comments
1.	Are offsite flows entering the construction site?				If Yes, see attached Noncompliance Condition Report form
2.	Do installation, repair, and/or maintenance of erosion and sediment control BMPs need to occur?				If Yes, see attached Noncompliance Condition Report form
3.	Is there evidence of sediment discharging off the construction site onto downstream locations?				If Yes, see attached Noncompliance Condition Report form
4.	Are vehicles tracking sediment off the construction site?				If Yes, see attached Noncompliance Condition Report form
5.	Do locations exist where consideration of installing additional BMPs not found in the SWMP occur?				If Yes, see attached Noncompliance Condition Report form
6.	Do locations exist where consideration of remaining existing BMPs identified and shown in the SWMP can occur?				If Yes, see attached Noncompliance Condition Report form

**Notes:**

BMP = best management practice

SWMP = Storm Water Management Plan

