



Tennessee Valley Authority, 1101 Market Street, BR4A, Chattanooga, Tennessee 37402

May 18, 2016

Mr. Jim McAdoo
Division of Water Resources
Tennessee Department of Environment
and Conservation
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243

TN DEPT OF ENVIRONMENT
AND CONSERVATION

MAY 19 2016

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Dear Mr. McAdoo:

TENNESSEE VALLEY AUTHORITY (TVA) – KINGSTON FOSSIL PLANT (KIF) – BALLFIELD
CLOSURE AND FLOW MANAGEMENT PROJECTS – NOTICE OF INTENT (NOI) FOR
COVERAGE UNDER CONSTRUCTION GENERAL PERMIT

Please find enclosed a NOI, project site map, storm water pollution prevention plan, and a check in the amount of \$6,000 to cover processing of this application for coverage under the storm water construction general permit. This NOI is being submitted so TVA can perform closure of the interim ash storage area, also known as the ball field, and construction of a new polishing pond for plant process flows. TVA has yet to select a contractor for the project and will submit an updated NOI with contractor information at a later date.

If you have any questions or need additional information, please contact Brad Love by e-mail at bmlove@tva.gov, or by phone in Chattanooga at (423) 751-8518.

Sincerely,

Terry E. Cheek
Senior Manager
Water Permits, Compliance, and Monitoring

Enclosures

cc: Mr. Michael Atchley
Division of Water Resources
Knoxville Environmental Field Office
Tennessee Department of Environment
and Conservation
3711 Middlebrook Pike
Knoxville, Tennessee 37921

 United States Treasury Pay to the order of	15-51 000 05/13/16	TENNESSEE VALLEY AUTHORITY KNOXVILLE, TN \$6000AND00/100 TREASURER STATE OF TN KNOXVILLE TN 37901	4912-80295020 Check No. *****6000*00 VOID AFTER ONE YEAR TENNESSEE VALLEY AUTHORITY T <i>James W. Wilson</i> T V V A DISBURSING OFFICER A
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INQUIRY SHOULD INCLUDE COPY OF THIS FORM

TVA 8262 (FD-5-82) DATE 05/13/16

REMITTANCE INFORMATION FROM TVA VENDOR NO. 000403578 05
 TENNESSEE VALLEY AUTHORITY TO:
 TREASURER STATE OF TN

VENDOR: TVA CHECK NO. 80295020
 KNOXVILLE TN 37901 AMOUNT REMITTED 6000.00

INVOICE			DISCOUNT	REFERENCE	ADJUSTMENT
NUMBER	DATE	AMOUNT			
PO/CNTR#: 051116A KINGSTON BALL FIELD CLOSURE AND FLOW MANAGEMENT PROJECTS CONSTRUCTION GENERAL PERMIT APPLICATION FEE		6000.00	0.00	IN DEPT OF ENVIRONMENT AND CONSERVATION MAY 13 2016 DIV OF WATER RESOURCES RECEIVED	

* Discount Taken

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION**

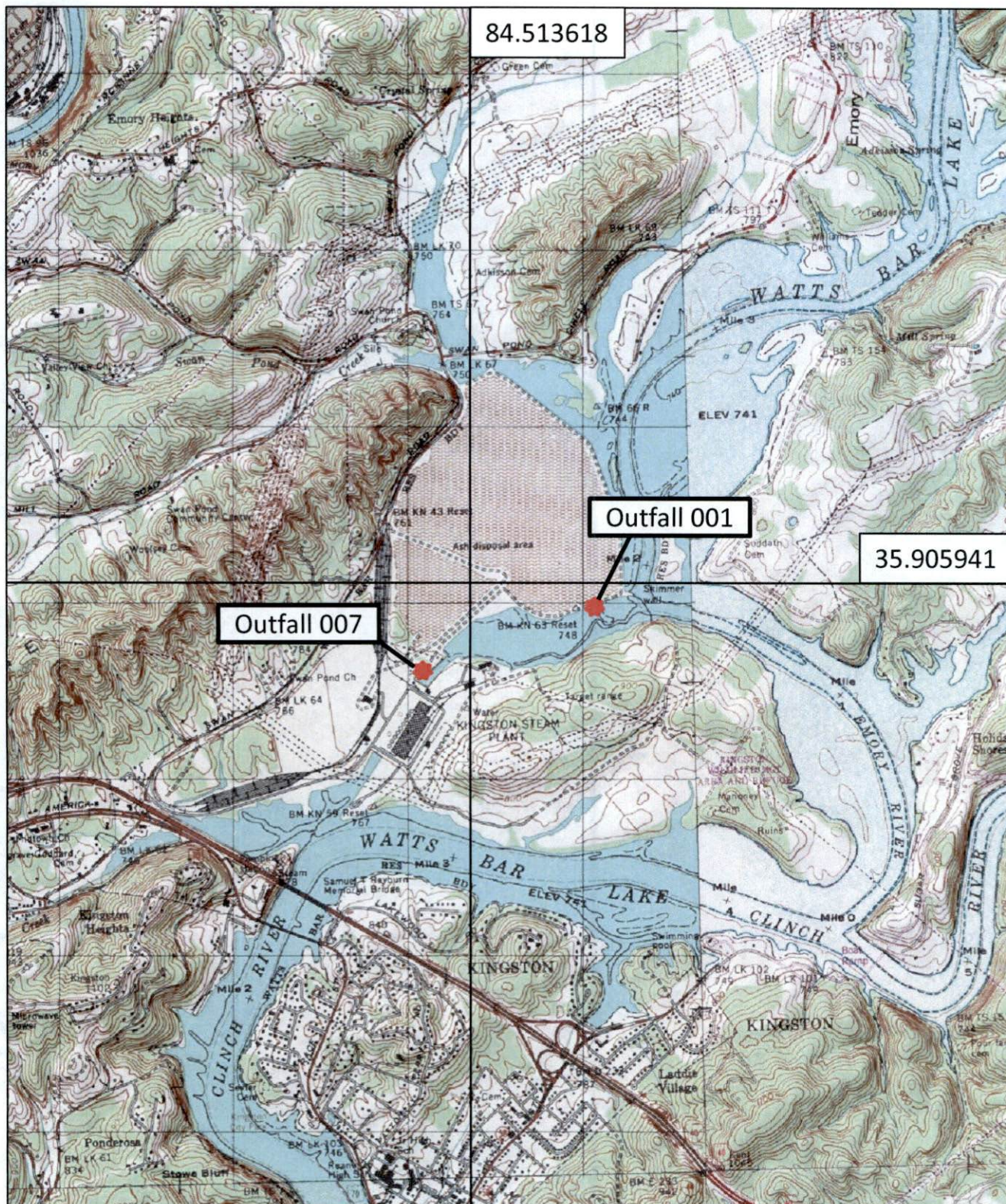
Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, TN 37243

1-888-891-8332 (TDEC)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: TVA - Kingston Fossil Plant		Existing NPDES Tracking Number: TNR	
Street Address or Location: 714 Swan Pond Road, Harriman, TN, 37748		Start date: June 2016	
Site Activity Description: Ball Field Closure and Flow Management Projects		Estimated end date: March 2017	
County(ies): Roane		Latitude (dd.dddd): 35.905941	
MS4 Jurisdiction: N/A		Longitude (dd.dddd): -84.513618	
		Acres Disturbed: 77.5	
		Total Acres: 800	
Does a topographic map show dotted or solid blue lines ☒ and/or wetlands ☐ on or adjacent to the construction site?			
If wetlands are located on-site and may be impacted, attach wetlands delineation report.			
If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number? ARAP permit No.: Permit Applied For			
Receiving waters: Emory River (Kingston Intake Channel)			
Attach the SWPPP with the NOI ☒ SWPPP Attached		Attach a site location map ☒ Map Attached	
Site Owner/Developer Entity (Primary Permittee): (person, company, or legal entity that has operational or design control over construction plans and specifications): Tennessee Valley Authority			
Site Owner/Developer Signatory (V.P. level/higher - signs certification below): (individual responsible for site): John C. Kammeyer		Signatory's Title or Position (V.P. level/higher - signs certification below): Vice President, Civil Projects	
Mailing Address: 1101 Market Street, LP 3D-C		City: Chattanooga	State: TN Zip: 37402
Phone: (423) 751-8246	Fax: (865)	E-mail: jckammey@tva.gov	
Optional Contact: Adele Dennison		Title or Position: Environmental Scientist	
Mailing Address: 714 Swan Pond Road		City: Harriman	State: TN Zip: 37748
Phone: (865) 717-2157	Fax: (865)	E-mail: amdennison@tva.gov	
Owner or Developer Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)			
I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.			
Owner or Developer Name; (print or type)		Signature:	Date: 5/13/2016
Contractor(s) Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)			
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated.			
Contractor company name (print or type):			
Contractor signatory (print/type): (V.P. level or higher)		Signature:	Date:
Mailing Address:		City:	State: Zip:
Phone: (865)	Fax: (865)	E-mail:	
Other Contractor company name (print or type):			
Other Contractor signatory (print/type): (V.P. level or higher)		Signature:	Date:
Mailing Address:		City:	State: Zip:
Phone: (865)	Fax: (865)	E-mail:	
OFFICIAL STATE USE ONLY			
Received Date:	Reviewer:	Field Office:	Permit Number TNR
Fee(s):	T & E Aquatic Flora and Fauna:	Impaired Receiving Stream:	Exceptional TN Water:
			Notice of Coverage Date:



Tennessee Valley Authority
Kingston Fossil Plant
Ball Field Closure and Flow Management Projects
NOI Location Map

TN DEPT OF ENVIRONMENT
AND CONSERVATION
MAY 13 2016
DIV OF WATER RESOURCES
PERMIT

TENNESSEE VALLEY AUTHORITY

STORM WATER POLLUTION PREVENTION PLAN

FLOW MANAGEMENT and BALL FIELD INTERIM ASH STAGING AREA CLOSURE PROJECT

**Kingston Fossil Plant
714 Swan Pond Road
Harriman, Tennessee**

Prepared by:

AECOM

**1000 Corporate Centre Drive, Suite 250
Franklin, TN 37067-6209
615-771-2480**

May 05, 2016

Rev. 0

**TN DEPT OF ENVIRONMENT
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List of Attachments

Attachment 1	SWPPP Information and Certification Statements
Attachment 2	Storm Water Pollution Prevention Plan Contacts
Attachment 3	Site Map and Construction Drawings
Attachment 4	BMP Details
Attachment 5	Major Activities Log
Attachment 6	Sequence of Control Measure Implementation, Maintenance and Removal Log
Attachment 7	Daily Rainfall Gage Record
Attachment 8	Twice Weekly Inspection Form
Attachment 9	General Information Notice
Attachment 10	Notice of Intent
Attachment 11	Notice of Termination

1.0 Purpose of the Construction Storm Water Pollution Prevention Plan (SWPPP)

This Storm Water Pollution Prevention Plan (SWPPP) 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 Permit No. TNR100000.

Compliance with the SWPPP is mandatory for the following reasons:

- Protection of water quality, which may be adversely impacted by sediment reaching receiving streams;
- Prevention of 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; and
- Prevention of Notices of Violation (NOVs).

Minimizing sediment runoff from the project site is paramount for compliance. The SWPPP contains project-specific guidance on controls being selected as well as design and installation requirements. A copy of the plan along with the inspection records must be kept on-site and provided to the site Program Administrator (Environmental) (PAE). The PAE at Kingston Fossil Plant is Adele Dennison at 865-717-2157. The NPDES Specialist in Environmental Affairs for this construction activity is Brad Love at 423-751-8518. The IPP Specialist is Brandi Ruth at 865-673-2358. Attachment 2 includes a list of SWPPP contacts.

2.0 Construction Site Description

2.1 Description of Construction Activity

The Tennessee Valley Authority (TVA) has committed to closing the Stilling Pond at the Kingston Fossil Plant (KIF) in Roane County, Tennessee. The Stilling Pond currently receives KIF process flow prior to discharge into the Emory River through the National Pollutant Discharge Elimination System (NPDES) Outfall 001. Additionally, storm water runoff, mostly from the Closed Recovery Area, drains to the Stilling Pond by Ditch 11. Closure of the Stilling Pond will require rerouting KIF process flow and redirecting storm water away from the Stilling Pond so closure construction may be performed. Major elements of the project include the following:

- Geomembrane-lined Polishing Pond
- HDPE conveyance piping at the downstream end of the Polishing Pond
- Scouring Basin on the southwest side of the existing Stilling Pond
- Storm water diversion berm along the northeast extents of the Stilling Pond

In addition, TVA proposes to close the interim ash staging area referred to as the "Ball Field." Ball Field ash above elevation 768.0 will be removed, and additional ash excavation will be conducted to establish interim grades. The Ball Field will be re-graded, stabilized with permanent vegetation, and have drainage improvements made to ensure proper drainage of the closed area.

2.2 Construction Schedule

Construction activity is anticipated to commence in 2016. The expected timeframe for construction is approximately 12 to 18 months depending on weather.

2.3 Construction Sequence

The major activities involved for construction at this facility are as follows:

1. Install Best Management Practices (BMPs) prior to construction activities. Attachment 3 shows the locations of proposed BMPs. See also Attachment 4, BMP Details.
2. Begin clearing and grubbing.
3. Install temporary cofferdams to divert KIF process flow away from construction areas.
4. Begin constructing existing sluice trench closure cap, proposed junction chambers, and associated piping.
5. Begin excavation, grading activities and construction of the polishing pond and polishing pond spillway.
6. Bypass the existing water quality channel and construct the polishing pond inflow channel.
7. Construct the divider dike diversion berm and activate the existing outlet siphons within the KIF Stilling Pond to bypass process flow from Outfall 001.
8. Monitor and maintain continuous operation of the siphons to ensure the Stilling Pond water level does not exceed the invert elevation of the existing morning glory spillways at Outfall 001.
9. Install proposed piping, joints and fittings to connect proposed junction chamber 03 to the existing diffuser pipes at Outfall 001.
10. Place the polishing pond and conveyance piping in-service to divert process flow from the Stilling Pond.
11. Begin excavation and grading activities for the Ditch 11 extension and scour basin. Install geomembrane liner and the new storm water outfall piping.
12. The site shall not be considered sufficiently stable until final seeding or aggregate surface is established. Permanent seeding shall start within 14 days of reaching final grade.
13. At the completion of work, the Contractor shall remove from the site and dispose of debris and waste materials resulting from the Contractor's construction activities.

The following represents the general sequence of construction necessary for successful completion of the Ball Field Closure:

1. Install new temporary sedimentation and erosion control items required for the Ball Field Closure project. Maintain those items previously installed during the Flow Management project as required by the Storm Water Pollution Prevention Plan (SWPPP) created for this project. The Contractor is responsible for all dust control and shall supply water trucks, or other means as necessary to control dust generated by construction activities.
2. Construct the subgrade for the Ball Field Closure. Regrade the footprint to subgrade elevations and grades. Excavate perimeter ditches and install culverts to maintain storm water drainage.
3. Obtain re-compacted soil liner material from an approved borrow source. Spread and compact the liner to the minimum specified thickness at an in-place density determined by prequalification testing.
4. Restore the access road across the north side of the Ball Field. Install operational culverts where required beneath the road.
5. Spread topsoil over the Ball Field, install erosion control matting and turf reinforcement matting where required, and revegetate. As a non-structural control, final cover construction will be phased in two-acre increments to insure that no more than a maximum of 10 acres of un-stabilized cover soil will be permitted to drain to Outfall 007 prior to hydroseeding and stabilizing with the specified Flexterra erosion control medium.
6. Clear and grub the bank of the Emory River that is scheduled to receive a seep protection reverse-grade aggregate filter.
7. Place and spread lifts of aggregate on the Emory River bank to construct the aggregate filter.
8. Construct the new storm water pipe at Outfall 007 and install pipe back towards the Lower Ditch.
9. Construct the storm water pipe crossing beneath the existing KIF process flow pipe trench.
10. Install the seepage collection sump and force main within the Lower Ditch.
11. Grub vegetation within the Lower Ditch.
12. Excavate within the Lower Ditch to install underdrains and aggregate drainage layer.
13. Place the seepage collection sump pump in-service and manage seepage by pumping to the Water Quality Channel.
14. Install HDPE storm water piping within the Lower Ditch; install manholes, and tie into existing storm water piping on the south side of the ditch.
15. Fill and grade the Lower Ditch.

16. Abandon existing culverts in-place.
17. Revegetate the Lower Ditch.
18. At the completion of work, the Contractor shall remove from the site and dispose of debris and waste materials resulting from the Contractor's construction activities.
19. Final acceptance of the work is subject to the work meeting the requirements of the Construction Quality Assurance Plan and shall follow the CQA Consultant's and Owner's final site inspection.
20. Removal of all BMPs when construction areas have achieved final stabilization.

3.0 Facility Area and Disturbed Area

Estimated total area of the site and estimated total area of the site that is expected to be disturbed by excavation, grading, or other activities.

The estimated area of the TVA KIF Reservation is approximately 800 acres. The total area disturbed by project activities is approximately 77.5 acres. Approximately 136,000 cubic yards of ash material will be excavated and reused as fill or disposed at an on-site location determined by the Owner. An estimated 140,000 cubic yards of off-site soil borrow will be imported from an approved borrow source for use as fill. The Construction Manager will determine the exact construction sequence; however, construction will be staged so that only minimum disturbance occurs at any given time. At no time will more than 50 acres be disturbed at once. The Major Activities Log will maintain records of stabilization activities. The Construction Manager will track construction activities using this log to ensure that only minimum disturbance occurs. All disturbed areas will be permanently stabilized to the extent practicable.

4.0 Site Topography

Describe the site topography including an estimate of the percent slope, and the variation in percent slope for each outfall.

Site topography in the project area varies. The ash storage area ("Ball Field") will be lowered to an elevation consistent with surrounding areas and graded to drain. The flow management portion of the project is in an area near the intake channel of the Emory River and as such the topography consists of berms, ditches and various piping outfalls. KIF process flow will continue to discharge to the Emory River through NPDES-permitted Outfall 001. For the final site configuration, storm water runoff currently conveyed to the stilling pond by Ditch 11 will be rerouted to the proposed scour basin and will discharge through a new storm water outfall to the Emory River. The northern portion of the Ball Field will drain north toward Ditch 11 and discharge through Outfall 001. The south and west portions of the Ball Field will drain to the south side of the area and will be discharged through Outfall 007. The KIF site SWPPP will be updated to address the new storm water discharge, and coverage for the discharge will be maintained through Tennessee Multi-Sector General Storm Water Permit TNR051787.

5.0 Soil Description

Any data describing the soil (including any fill material) and how soil type will dictate control measures. Describe expected storm water or combined discharge quality.

The USGS soil map for the project area indicates that it is an ash disposal area and not classified as a specific soil group. Soil types in the vicinity of the project area are classified as silty loams at relatively flat slopes. As such, no extraordinary measures to control erosion and sediment control are anticipated. The Ball Field will be closed by removing the existing ash stockpile and re-grading the resulting surface. Topsoil will be placed following finished grading to provide a suitable medium for establishing permanent vegetative cover.

The final surface will be hydroseeded to achieve permanent vegetation over the closed Ball Field. Flexterra, a hydraulically placed erosion control medium, will be used in conjunction with the hydroseed to prevent erosion of the cover soil while vegetation is established.

6.0 Site Runoff

An estimate of the runoff coefficient of the site after construction activities is complete. A description of how runoff will be handled to prevent erosion at the permanent outfall & receiving stream.

The construction activities associated with the project are anticipated to have a positive effect on runoff coefficients, primarily via establishing permanent vegetative cover over a large portion of the project area. Process and storm water from the area will no longer flow to the Stilling Pond and then to the permitted NPDES Outfall 001. Process water will be directed to the new Polishing Pond for additional treatment prior to discharge. Proposed conveyance piping will transport process flow from the Polishing Pond where it will continue to be monitored and released to the Emory River at Outfall 001.

Storm water which currently drains to Outfall 001, mainly from the existing Closed Recovery Area, will be intercepted by the proposed Scouring Basin, where, in the event of a large storm event, overflow weirs will allow a controlled release of excess storm water. After regrading and constructing final cover, the north side of the Ball Field will also drain to the proposed Scouring Basin. The south and west sides of the Ball Field, including the existing sluice trench after it receives final cover, will drain south towards existing NPDES Outfall 007 in the KIF Intake Channel. An up-sized storm sewer pipe will be installed and aligned to discharge at the existing Outfall 007 to compensate for hydraulic inadequacy of existing piping. Little to no erosion is expected as a result of closure activities.

7.0 Site Map and Drawings

Erosion prevention & sediment control map w/proposed construction area clearly outlined, boundaries of the project, streams, wetlands, sinkholes, drainage patterns, approximate slopes after grading, and location of major structural and nonstructural controls. Include all outfalls/locations where runoff leaves the site (not just the NPDES permitted outfalls).

Erosion and sediment control plan drawings SWPPP-01 through 04 (see Attachment 3) depict the construction area and BMP locations. Work is expected to be performed in two general phases reflecting the two projects being constructed. The initial phase will consist of the Flow Management project (Drawing SWPPP-02). The second phase will consist of the Ball Field Closure (Drawing SWPPP-03).

The Flow Management project will include construction of the proposed Polishing Pond, Scouring Basin, conveyance piping bench, and a storm water diversion berm on the west side of the existing Stilling Pond. The purpose of this project is to divert KIF process flow and storm water runoff away from the existing Stilling Pond to allow the Stilling Pond to be drained and closed as part of a future project. The Stilling Pond will remain in-service during construction of the Flow Management project, and will serve as the major structural sedimentation control by receiving and treating storm water runoff. Discharge from the Stilling Pond will continue to be monitored at Outfall 001 during construction activities. Minor structural controls during this phase will include wattle placed downstream of disturbed earth and the use of turf reinforcement matting in open channel conveyances. Non-structural controls will include a limit-of-disturbance defined around the proposed conveyance piping riprap and aggregate bench to limit disturbance near the Emory River.

The second work phase will include construction of the Ball Field Closure final cover which is expected to begin after the Flow Management project is substantially complete. This project will involve importing soil from an off-site borrow source to construct a cap above the Ball Field Interim Ash Staging Area and the existing inactive sluice trench. At this time, KIF process flow will have been diverted from the Stilling Pond. The Stilling Pond will remain in-service as a structural control to manage sediment from the north side of the Ball Field while constructing the final cover. Construction of a temporary sediment pond to treat sediment from the south side of the Ball Field is not feasible due to site space constraints, drainage improvements being constructed in the existing ditch which currently drains to Outfall 007, and the presence and phasing of other projects adjoining the work areas. Erosion and sediment controls will be managed on the south side of the Ball Field with multiple redundant BMPs and phased construction to minimize the area of unstabilized disturbed soil in the southern drainage area.

Wattles will be installed at intervals along the 3% slope of the Ball Field final cover to limit flow length. Check dams will be installed within Ditch 11 and the Ball Field perimeter ditch where concentrated flow will be collected. Storm water swales on the top of the Ball Field will be protected with erosion control matting, while Ditch 11 and the Ball Field perimeter ditch will receive turf reinforcement matting protection. Filter rings will be installed at the existing and

proposed culvert entrances which drain to Outfall 007 and will receive runoff from the west and south sides of the Ball Field. Additionally, standard inlet protection measures will be employed at proposed catch basin inlets which will drain to Outfall 007.

As a non-structural control, final cover construction will be phased in two-acre increments to Outfall 007 to ensure that no more than a maximum of 10 acres of unstabilized cover soil will be permitted within the drainage area of the outfall prior to hydroseeding and stabilizing with the specified Flexterra erosion control medium.

8.0 Non-Construction Industrial Discharges

Description of any discharge associated with industrial activity other than construction storm water that originates onsite and the location of that activity. Include NPDES and TMSP numbers.

There is no additional source of storm water (other than construction storm water) or process wastewater on the plant site that is not under the control of the operator. Process flow discharge to the Emory River is currently permitted by NPDES Permit No. TN0005452. KIF will continue to operate under this permit during and following construction of the proposed improvements. No new process water outfalls will be constructed as part of this project; KIF process flow will continue to be discharged to Outfall 001.

9.0 Receiving Waters

Identify name of receiving water & approximate size and location of any affected wetland(s). Describe proposed alterations to these waters and list ARAP tracking numbers. Identify buffer zones if applicable and 303(d) listed streams or high quality streams.

Storm water from the construction-related activity at this site will discharge to the Emory River. There are no wetlands affected, and these waters are not 303(d) impaired for sediment nor are they high quality streams. TVA will apply for ARAP coverage for project elements which involve disturbance or filling within the buffer zone or beneath the ordinary high water elevation of the Emory River. Coverage will be required for the seep protection reverse-grade aggregate filter on the bank of the Emory River, riprap protection for the new storm water pipe at existing Outfall 007, and for placing riprap and aggregate fill materials to construct portions of the conveyance pipe bench which will reroute process flow to Outfall 001.

10.0 Erosion Control Plan

10.1 Erosion Prevention Controls during Construction

General Erosion & Sediment Control Measures

All construction activities will conform to the following general practices with regard to erosion

and sediment control. Specific BMPs for this project are also described and shown in detail in the erosion and sediment control drawings in Attachment 3, on the Site BMP Details in Attachment 4, and are described in the Tennessee Erosion and Sediment Control Handbook (the Handbook) Fourth Edition, August 2012.

- Erosion Prevention Controls will be designed to prevent sediment from traveling to other areas downstream of the project. Control measures must be properly selected, installed, and maintained. If a measure proves to be ineffective, it must be replaced or modified. See Attachment 4 for specific erosion and sedimentation control information and details.
- Construction Phase Erosion Prevention Controls must be in place and functional before any earth-disturbing activities begin, 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. Pre-construction vegetative ground cover will not be destroyed, removed or disturbed more than 14 days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed. These activities must be logged in the Major Activities Log included in Attachment 5.
- Clearing existing vegetation must be held to the minimum necessary for equipment operation.
- Upland storm water diversion measures to control run-on will not be necessary for this project.
- In lieu of a sedimentation basin, the following equivalent measures will be applied. A temporary sump or sump(s) will be constructed to receive runoff from the southern portion of the Ballfield site (approximately 18 acres). The runoff will be pumped from the sump(s) to a sediment filter bag and discharged to Outfall 007. Alternately, the runoff may be pumped to the proposed Polishing Pond for treatment prior to discharge to Outfall 001. Final grading and permanent stabilization will be carried out as described in Section 7 until the area draining to Outfall 007 is reduced to less than ten acres, at which time the temporary sump and sediment filter bag will be phased out and removed.

Roads and Access Areas

- Existing roads will be used for site access, and may be improved with crushed stone or pavement as needed. The Handbook shall be followed for guidelines on construction exits (CE).
- If sediment tracking onto public roads is determined to be an issue, it will be minimized by the use of construction exits. If sediment escapes the construction site, it must be removed prior to posing a safety or environmental concern. 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 by the end of that workday.

Inspections and Maintenance

- Inspectors performing the required twice weekly inspections must have an active certification by completing the "Fundamentals of Erosion Prevention and Sediment Control Level I" course. A copy of the certification or training record for inspector certification should be kept on site. A certified TN EPSC Level 1 inspector appointed by TVA will be responsible for the inspections.
- Visual observations of active construction areas shall be made and documented a minimum of two days per calendar week. Inspections shall be performed at least 72 hours apart. The results of these inspections and necessary repairs will be logged on an inspection sheet(s). Copies of the inspection reports will be provided to the TVA Construction Manager on a weekly basis, when the sheet has been filled out, and/or when construction is complete. An example daily inspection sheet is contained in Attachment 8. Any deficiencies shall be reported to the TVA Construction Manager or designee immediately.
- Areas to be inspected include siltation controls, material storage areas, disturbed areas not finally stabilized, etc. Photo documentation of inspections is encouraged as a backup to the written record but not as a substitute. Use a separate sheet for each area or control being inspected. Inspection sheets will be maintained in a log by the TVA Construction Manager.
- Repairs to any controls will be made as soon as practicable before the next rain event, but no later than seven (7) days after any deficiency is noted. If a device appears to be inadequate for the job, the TVA Construction Manager shall be notified.
- During prolonged rainfall, daily inspections are suggested and repairs will be made as needed. The construction inspector or designee will ensure that inspections are made on non-work days (weekends and holidays) if necessary. The official rainfall amount will be the rainfall as recorded at an on-site gage to be installed and maintained for the life of the construction project. Records of rainfall gage readings will be maintained in a log by the Project Manager (see example sheet in Attachment 7).
- Once definable areas are permanently stabilized, they may be marked on the SWPPP and no further inspections will be required.
- Copies of rainfall logs and inspection records will be provided to the KIF Project PAE at the end of each month for the life of the project. A copy of the major activity log will be provided to the Project PAE on a monthly basis. These records will be maintained on-site with the environmental records.

- TVA's Construction Manager and the NPDES specialist in Environmental Compliance will address any unforeseen situation that is not specifically mentioned in the SWPPP. At a minimum, industry standard BMPs shall be used when addressing any new concerns.
- Any modifications to this SWPPP that are required in response to inspections shall be implemented within 14 days following the inspection.
- Erosion control devices shall be cleaned out when they reach 50% of their design capacity.

Stabilization Requirements

- Stabilization measures (either permanent or temporary) shall be completed as soon as possible but no later than 14 days in portions of the site where construction activities have temporarily or permanently ceased. Stabilization shall be carried out in accordance with the Handbook, Vegetative Practice TS – Disturbed Area Stabilization with Temporary Vegetation, or PS – Disturbed Area Stabilization with Permanent Vegetation.

Soil and Sediment Control/Sediment Migration

- Sediments that leave the site but do not reach the receiving stream must be removed so that they are not washed into any receiving stream.
- Available topsoil will be stockpiled at the site for use in final grading. The soil stockpile will be stabilized as soon as practicable with TS – Soil Stabilization with Temporary Vegetation (see Attachment 4).

Dewatering of Work Areas/Vehicle Washing & Maintenance/Dust Suppression

- Dewatering of work areas, including management of ground water and surface water runoff, will be performed as needed by the Contractor. All dewatering activities are required to be discharged to the existing Stilling Pond for treatment, or in later project phases the proposed Polishing Pond, prior to being discharged through Outfall 001.
- Vehicle washing is not anticipated to be needed for this project since existing roads will be used to haul materials.
- Dust will be controlled by the application of water, or other approved dust control measures as described in the Tennessee Erosion and Sediment Control Handbook (as determined by the on-site Construction Manager).

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 an inspection log sheet and reported to the Erosion and Sedimentation Control representative.

General Water Quality Requirements/Other Situations

- Storm water discharges shall 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 on-site Project Manager should be notified immediately. If repairs or changes are made, they will be recorded on the Major Activities Log (see Attachment 5).
- Any situation that arises and has not specifically been mentioned above will be addressed by the Construction Manager in consultation with on-site Project PAE as described in this SWPPP, and the Environmental Compliance group. At a minimum, industry standard BMPs will be used when addressing any new concerns.

10.2. Post-Construction Erosion Controls

- Erosion control measures will be inspected and maintained until the site is stabilized.
- All debris and temporary erosion control devices will be removed when stabilization measures are complete and surface stabilization is achieved.

11.0 Specific Best Management Practices and Spill Prevention

Materials and Wastes

Waste Materials: All trash and construction debris from the site shall be hauled to an approved landfill. No construction waste material shall be buried on the site. Employee waste and other loose materials shall be collected and properly disposed to prevent the release of floatable material during runoff events. Clearing debris (brush and timber) may be chipped and used as mulch on-site in accordance with state and local regulations. Contact the Project PAE for approved method of disposing of clearing debris and/or minor amounts of soil if any is generated.

Hazardous Waste: In the event that hazardous waste is generated, all hazardous waste shall be disposed of according to EPA regulations, state and/or local regulations. Contact the Project PAE for approved method of disposing of such materials.

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

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

Petroleum and other liquid products must have secondary containment if the aggregate quantity stored in one spot is 55 gallons or greater. The KIF Integrated Pollution Prevention (IPP) Plan provides requirements for storage of liquid products.

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

Releases to secondary containment must be cleaned up when discovered and the source of the release repaired as soon as possible. Secondary containment may be earth, but all spills to earth must be completely cleaned up within two hours of discovery. The on-site Project Manager must be notified immediately, who will in turn contact the Project PAE 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 shall 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.

Product-Specific Practices (as applicable)

Ready-mix concrete will be delivered to the site for use in construction. Concrete washout facilities will be constructed by the Contractor in an area designated by the Construction Manager to manage waste concrete. Concrete wash water will not be discharged from the site.

Fuel storage is expected to be required for construction equipment. The Construction Manager will designate a fuel storage area for the Contractor's use within the footprint of the Ball Field Closure area. The Contractor will be responsible for providing fuel, fuel storage tanks, and secondary containment for the storage facilities. The Contractor will remove the storage tanks and secondary containment at project completion.

There will be no other products (e.g., paints, pipe coating, etc.) anticipated to be used or stored at the project site. In the event that any products are present that present a spill hazard, the provisions of the next two sections will be followed.

Spill Control and Response Practices

Equipment: TVA and the Contractor shall ensure that materials and equipment necessary for spill cleanup for their respective materials shall be present on the site at all times. Equipment and materials shall 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 shall be dependent upon the nature and quantity of the material stored on-site. A signed inventory sheet shall be provided to the Project PAE on a monthly basis.

Response: All spills shall be cleaned up immediately upon discovery. The Contractor shall report all spills to the Construction Manager. The Construction Manager shall contact the Project PAE as soon as possible. See below for reporting and record keeping requirements.

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

Reporting and Record Keeping

In the event of a spill of oil, hazardous substances, or other pollutants, the TVA Construction Manager shall notify the Project PAE and the Operations Duty Specialist. These individuals will ensure that the National Response Center and Tennessee Emergency Management Agency are notified. The Project PAE must contact the local Environmental Assistance Center (Division of Water Pollution Control (DWPC)) within 14 days of the release to storm water or to the receiving stream.

The Project Manager shall place a write-up of the spill in the SWPPP within 14 days of the event and will coordinate with the NPDES specialist regarding any needed plan modifications to include additional measures as necessary. The write-up shall 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 SWPPP shall be modified within seven days. If state inspectors require a modification, it shall be accomplished in a timely manner. If any routine inspection warrants a plan modification, the SWPPP shall be modified within seven days, and the revision shall be implemented within 14 days.

Records: The required records shall be kept on file in the construction office and the final, complete set of records shall be transferred to the Plant PAE at the end of construction. TVA is required by the permit to keep records of all spills and inspections for a minimum of three years after the Notice of Termination is filed, or longer if requested by the Tennessee DWPC.

12.0 Posting Information at the Construction Site

A copy of the Notice of Coverage (NOC) provided by the TDEC shall be posted at the entrance to the construction site. In addition, a notice containing the location of the SWPPP and the name and phone number of a local contact must be posted. An example of the contact notice to be posted is included in Attachment 9. Notices will be laminated or otherwise protected from weather.

The Tennessee Construction General Permit for coverage of storm water discharges associated with construction activity contains more details necessary for compliance.

ATTACHMENTS

SWPPP INFORMATION & CERTIFICATION STATEMENTS

Project Name:

KINGSTON FOSSIL PLANT
FLOW MANAGEMENT AND BALL FIELD INTERIM ASH STAGING AREA
CLOSURE PROJECT
ROANE COUNTY, TN

Mailing Address:

John Kammeyer
Tennessee Valley Authority
1101 Market Street
LP 5G
Chattanooga, TN 37402
Phone: 423-751-8246

Project Location:

See site map for project location

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Signature of Principal Executive Officer or Authorized Agent

5/13/2016

Date Signed

I, Michael Meulemans, P.E., certify that this Plan was prepared under my responsible charge.



Signature

Engineer

Profession

16952

TN License No.

5-5-16

Date

SWPPP CONTRACTOR'S CERTIFICATION STATEMENT

Project Name:

KINGSTON FOSSIL PLANT
FLOW MANAGEMENT AND BALL FIELD INTERIM ASH STAGING AREA
CLOSURE PROJECT
ROANE COUNTY, TN

Contractor Mailing Address:

Project Location:

See site map for project location

I certify under penalty of law that I have reviewed this document, any attachments, and the Storm Water Pollution Prevention Plan (SWPPP) referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this Notice of Intent (NOI) and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to National Pollutant Discharge Elimination System (NPDES) permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment, for knowing violations and for failure to comply with these permit requirements.

General Contractor:

Signed:

Date:

General Contractor:

Signed:

Date:

General Contractor:

Signed:

Date:

Attachment 2
Storm Water Pollution Prevention Plan Contacts

Storm Water Pollution Prevention Plan Contacts

Kingston Fossil Plant
Flow Management and Ball Field and Interim Ash Staging Area Closure Project
714 Swan Pond Road
Harriman, TN 37748
Phone (865) 717-2157

Operator(s):
Tennessee Valley Authority
Kingston Fossil Plant
Gary Wilford, Construction Manager
714 Swan Pond Road
Harriman, TN 37748
Phone:(423) 443-6561
gwilford@tva.gov

Project Manager:
Tennessee Valley Authority
Megan Hayward, Project Manager
1101 Market Street
Chattanooga, TN 37402
Phone:(423) 751- 2158
mhayward@tva.gov

This SWPPP was Prepared by:
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Michael Meulemans, P.E.
1000 Corporate Centre Drive, Suite 250
Franklin, Tennessee 37067
Phone: (615) 224-2108
michael.meulemans@aecom.com

Plant Program Administrator (Environmental), PAE
Tennessee Valley Authority
Kingston Fossil Plant
Adele Dennison, Program Administrator (Environmental)
714 Swan Pond Road
Harriman, TN 37748
Phone:(865) 717-2157
amdennison@tva.gov:

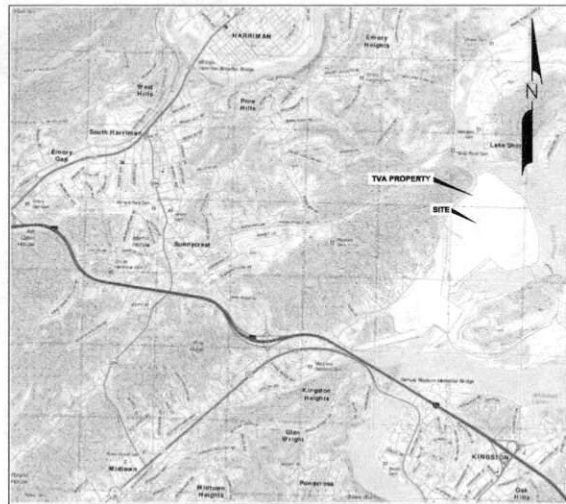
Integrated Pollution Prevention (IPP) Plan Specialist
Tennessee Valley Authority
Brandi Ruth, SPCC/IPP Specialist
4200 Greenway Drive
Knoxville, TN
(865) 673-2358
blruth@tva.gov

NPDES Specialist
Tennessee Valley Authority
Brad Love
1101 Market Street, BR 4A
Chattanooga, TN 37402
(423) 751-8518
bmllove@tva.gov

Emergency 24-Hour Contact
Tennessee Valley Authority
Operations Duty Specialist:
(423) 751-1700

Attachment 3
Site Map and Construction Details

HARRIMAN, ROANE COUNTY, TENNESSEE
APRIL 18, 2016

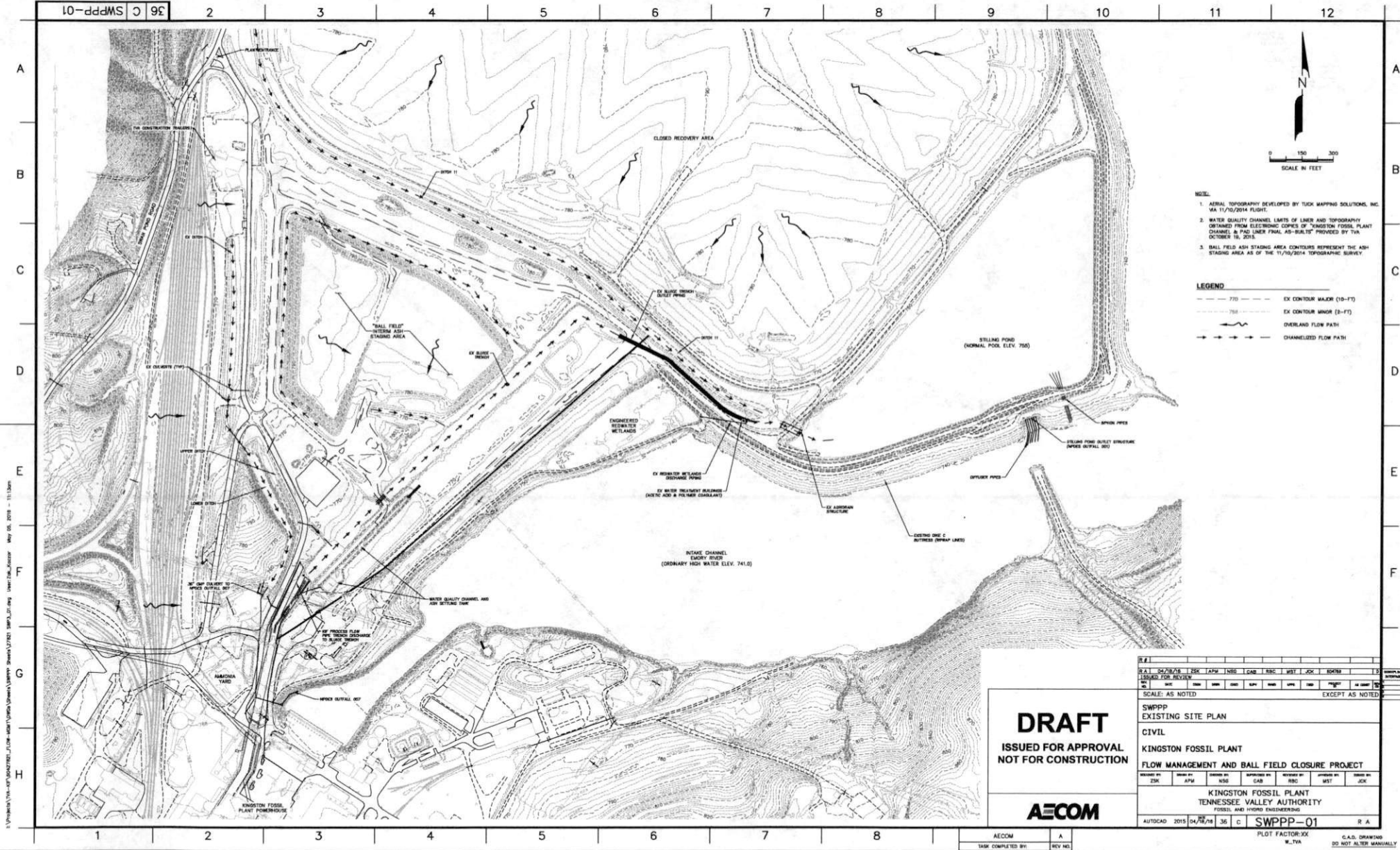


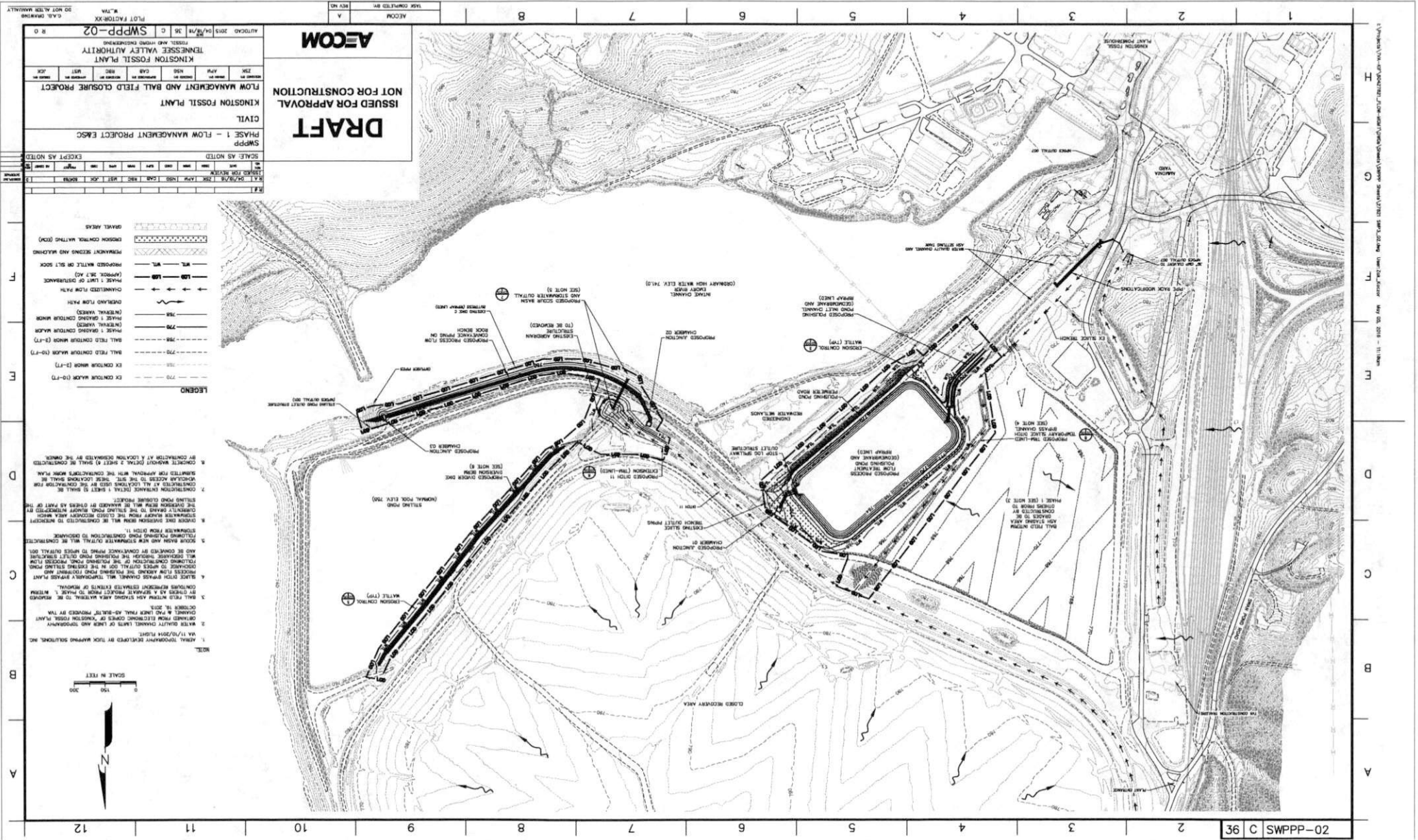
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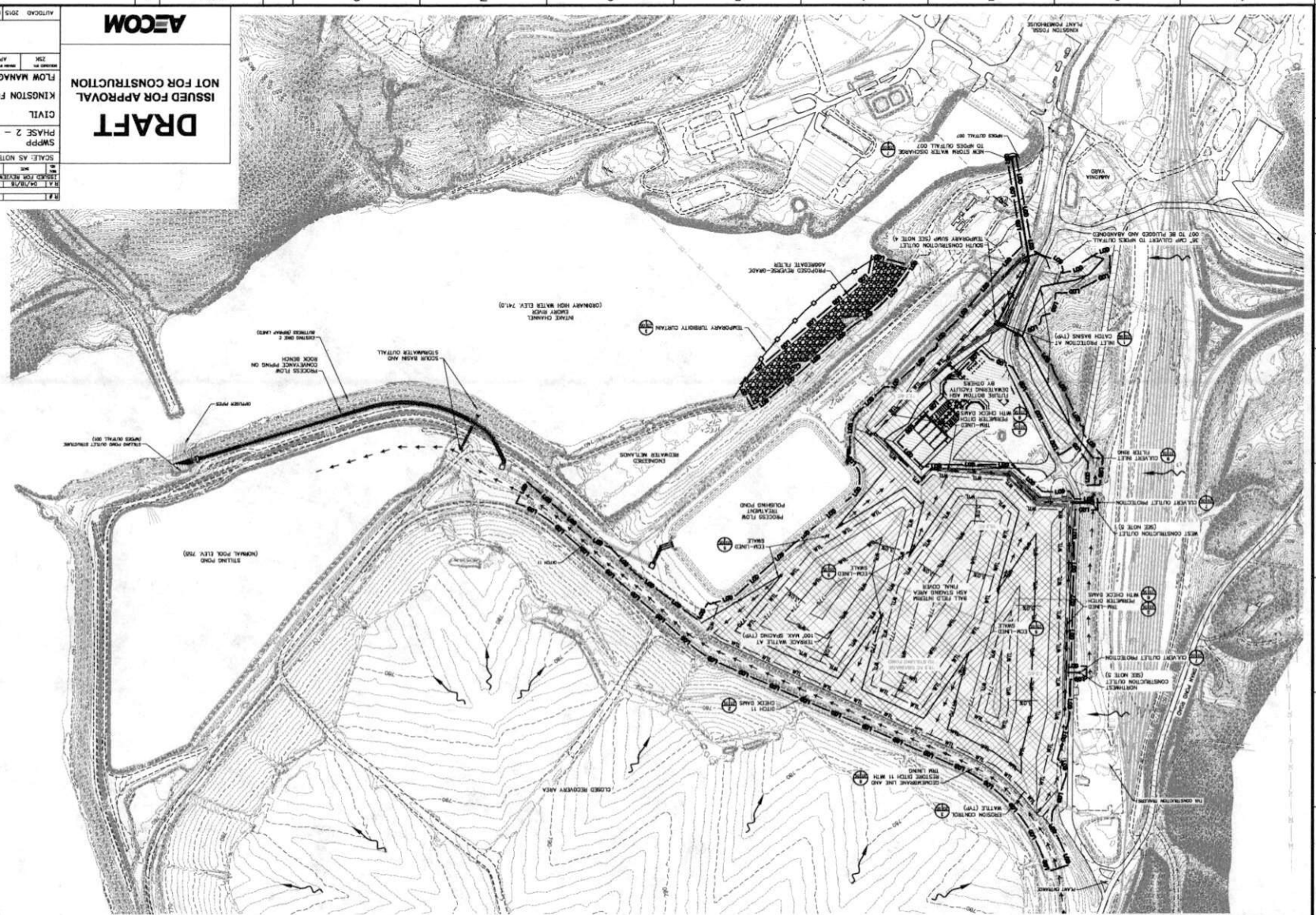
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FOSSIL AND HYDRO ENGINEERING															
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FLORIDA EVERGLADES NATIONAL PARK

STUDY AREA

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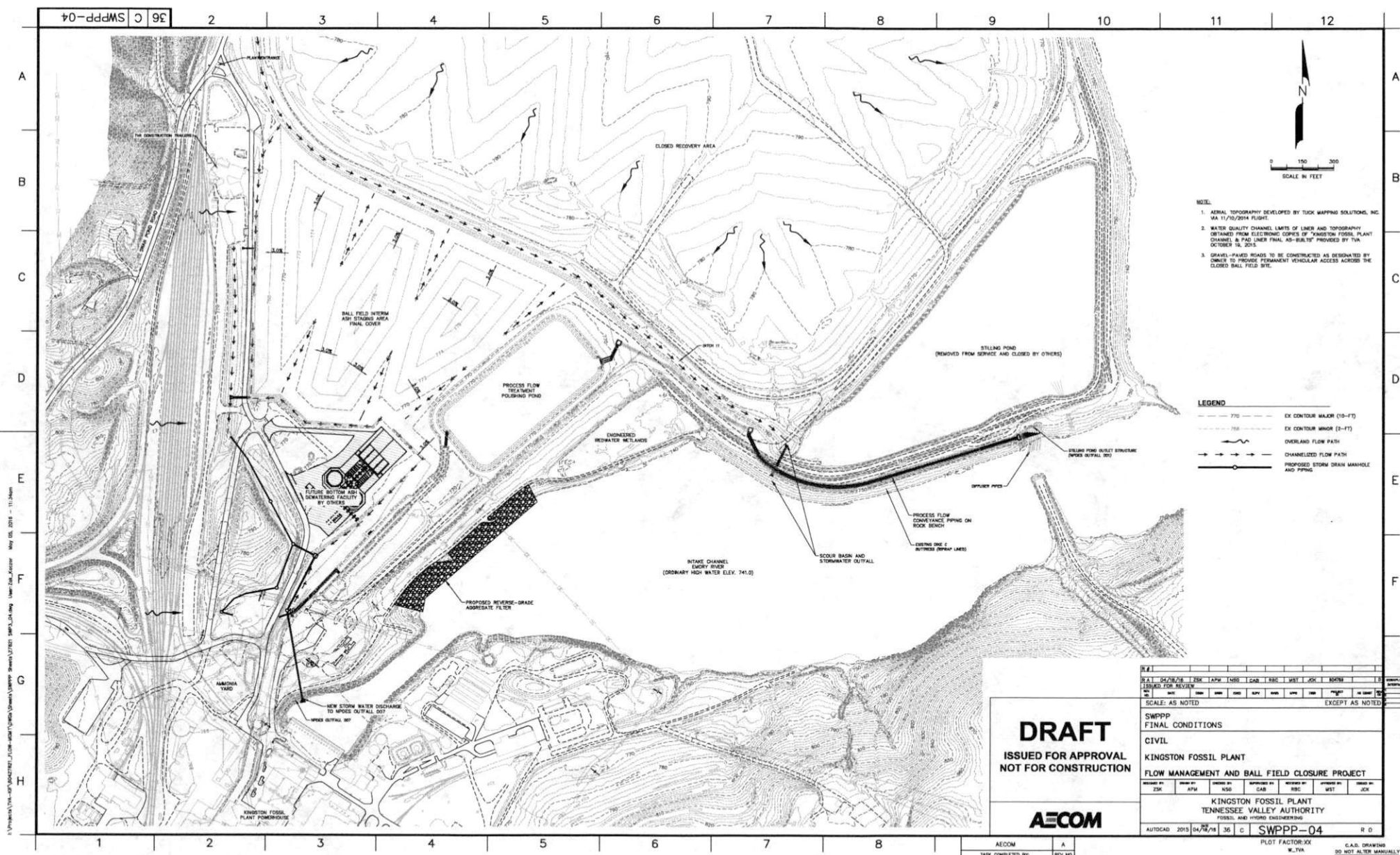
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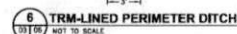
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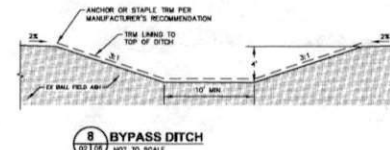




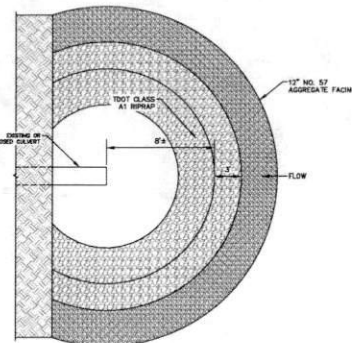
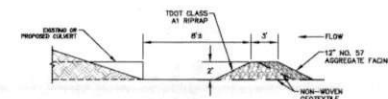
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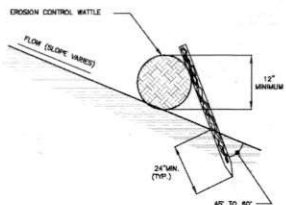
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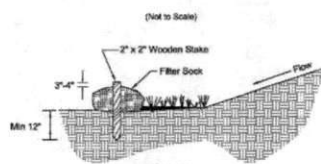
8 BYPASS DITCH



8 CULVERT INLET FILTER RING
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3 EROSION CONTROL WATTLE



4 SILT SOCK

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Attachment 4
BMP Details

STABILIZATION PRACTICES

STABILIZATION WITH STRAW MULCH



MU

STABILIZATION WITH STRAW MULCH

Definition Application of a temporary protective blanket of straw to the soil surface.

Purpose To protect the soil surface from the forces of raindrop impact and overland flow. Mulch reduces runoff and erosion, conserves soil moisture, promotes seed germination, insulates soil, suppresses weed growth, and prevents surface crusting.

Conditions Mulch seeded areas immediately. Areas that cannot be seeded because of the season
Where Practice Applies should be mulched to provide temporary protection of the soil surface.

Planning Considerations A surface mulch is considered the most effective, practical means of controlling runoff and erosion on disturbed land prior to vegetative establishment. Mulch reduces soil moisture loss by evaporation, prevents crusting and sealing of the soil surface, moderates soil temperatures, provides a suitable microclimate for seed germination, and may increase the infiltration rate of soil.

Straw mulch is the most common type of mulch used in conjunction with seeding or providing a temporary groundcover. The straw should come from wheat or oats ("small grains"), and may be spread by hand or with a mulch blower. Note that straw may be lost to wind and must be tacked down. The recommended application rate for straw mulch is 2 tons per acre, dry unchopped, unweathered.

Note that the goal is 70% uniform coverage over 100% of the site. Straw mulch is often used in conjunction with some channel liners.

Design Criteria No formal design is required.

Construction Specifications

Before applying mulch, complete the required grading, install sediment control practices, and, if applying seed, prepare the seed bed. When applying seed in combination with mulch, apply the seed before mulch except in the following cases:

Seed is applied as a part of a hydroseeder slurry containing mulch.
A hydroseeder slurry is applied over straw.

Application:

Spread mulch uniformly by hand or with a mulch blower. When spreading mulch by hand, divide the area to be mulched into sections of approximately 1000 ft² and place 70-90 lbs of straw (1.5 to 2 bales) in each section to facilitate uniform distribution. After spreading mulch, no more than 25% of the soil surface should be visible. In hydroseeding applications a green dye added to the slurry assures a uniform application.

Anchoring:

Straw mulch must be anchored immediately after spreading. The following methods may be used.

Mulch Anchoring Tool: Straw mulch may be pressed into the soil immediately after the mulch is spread. A special crimper or disk harrow with the discs set straight may be used. Serrated discs are preferred and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the discs shall be dull enough to press the mulch into the ground without cutting it. Mulch should not be plowed into the soil. This method is limited on slopes no steeper than 3:1, where equipment can operate safely. Operate machinery on the contour.

Liquid Mulch Binders: Application of liquid mulch binders and tackifiers should be heaviest at the edges, crests of ridges, and banks to resist wind. Binders should be applied uniformly to the remaining area. Binders must be applied after the mulch is spread, or may be sprayed into the mulch as it is being applied. Applying the straw and binder together is the most effective method. Liquid binders include emulsified asphalt and an array of commercially available synthetic binders.

Emulsified asphalt is the most commonly used mulch binder. Any type thin enough to be blown from spray equipment is satisfactory. Asphalt is classified according to the time it takes to cure. Rapid setting (RS or CRS designation) is formulated for curing in less than 24 hours, even during periods of high humidity. It is best used in fall and spring. Medium setting (MS or CMS) is formulated for curing in 24 to 48 hours, and slow setting (SS or CSS) is formulated for use during hot, dry weather, requiring 48 hours or more curing time.

Apply asphalt at 0.10 gallons per square yard (11 gal/1000 ft²). Heavier applications cause straw to "perch" over rills.

In traffic areas, uncured asphalt can be picked up on shoes and cause damage to rugs, clothing, etc. Use types RS or CRS to minimize such problems. Synthetic binders may be used to anchor mulch. Follow the manufacturer's recommended application method and rate. Most synthetic binders are expensive and are therefore used mostly in small areas or in residential areas where asphalt may be a problem.

Mulch Nettings: Lightweight plastic, cotton, jute, wire, or paper nets may be stapled over the mulch according to manufacturer's recommendations. Note that single net RECPs with integrated mulch may be used instead of separate mulch with netting.

**Maintenance
and Inspection
Points**

Inspect all mulches periodically, and after rainstorms to check for rill erosion, dislocation or failure. Where erosion is observed, apply additional mulch. If washout occurs, repair the slope grade, reseed and reinstall mulch. Continue inspecting mulched areas until vegetation has firmly established or until construction activities resume in the area.

References *North Carolina Erosion and Sediment Control Planning and Design Manual*

STABILIZATION PRACTICES

STABILIZATION WITH OTHER MULCH MATERIALS



MO STABILIZATION WITH OTHER MULCHES

Ground trees were used to stabilize the flat portion of the site above.

Definition Application of a protective blanket of plant residues, wood chips, or other organic material, produced on the site if possible, to the soil surface.

Purpose To protect the soil surface from the forces of raindrop impact and overland flow. Mulch reduces runoff and erosion, conserves soil moisture, promotes seed germination, insulates soil, suppresses weed growth, and prevents surface crusting.

Conditions Where Practice Applies This practice is applicable for areas that require temporary stabilization until permanent vegetation can establish. These mulches should be applied on areas that are not to be mowed. In addition, do not use in drainages or areas of concentrated flow. Specific applications include:

- Exposed areas that cannot be seeded due to seasonal conditions.
- On areas that are not to be mowed, such as trees, shrubs, or ground covers to stabilize the soil between plants.

Planning Considerations Woody plant residue, wood chips and mulches that cannot be anchored down are susceptible to floating and movement by water. These materials should not be used in areas of concentrated flow or high sheet flow.

Design Criteria The choice of materials for mulching should be based on soil conditions, season, type of vegetation, and size of the area.

Wood Chips:

Wood chips are suitable for areas that will not be closely mowed, and around ornamental plantings. Chips do not require tacking. Because they decompose slowly they must be treated with 12 lbs of nitrogen per ton to prevent nutrient deficiency in plants. This can be an inexpensive mulch if chips are obtained from trees cleared on the site.

Bark Chips and Shredded Bark:

Bark chips and shredded bark are byproducts of timber processing that are often used in landscape plantings. Bark is also suitable mulch for areas planted to grasses and not closely mowed. It may be applied by hand or with a mulch blower; do not use a tackifier. Unlike the use of wood chips, bark does not require additional nitrogen fertilizer.

Wood Fiber:

Wood fiber refers to short cellulose fibers applied as a slurry in hydroseeding operations. Wood fiber does not require tacking, although tacking agents or soil binders could be easily added to the slurry. Wood fiber hydroseeder slurries may be used to tack straw mulch on steep slopes, critical areas, and where harsh climatic conditions exist. Wood fiber does not provide sufficient erosion protection to be used alone.

**Construction
Specifications**

Before applying mulch, complete the required grading and install sediment control practices. Woody plant residue mulch should not be used where seed is being or has been applied.

Materials: Organic mulch such as wood chips or bark shall be applied at a rate that provides 70% or greater soil coverage. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching greatly reduces erosion control costs. This method however, should not be used in conjunction with seeding due to soil acidification and nitrogen reduction problems that the decomposition of the "green" material will produce.

**Maintenance
and Inspection
Points**

Inspect all mulches periodically, and after rainstorms to check for rill erosion, dislocation or failure. Where erosion is observed, apply additional mulch. If washout occurs, repair the slope grade, reseed and reinstall mulch. Continue inspections until vegetation has firmly established.

References

North Carolina Erosion and Sediment Control Planning and Design Manual
CALTRANS Roadside Management Toolbox

STABILIZATION PRACTICES

TEMPORARY VEGETATION



TS

STABILIZATION WITH TEMPORARY
VEGETATION

Definition The establishment of temporary vegetative cover with fast-growing species for seasonal protection on disturbed or denuded areas.

Purpose To temporarily stabilize denuded areas that will not be brought to final grade for a period of more than 14 days.

Temporary seeding controls runoff and erosion until permanent vegetation or other erosion control measures can be established. Seeding with a temporary groundcover provides temporary stabilization until permanent stabilization can be achieved. In addition, it provides residue for soil protection and seedbed preparation, and reduces problems of mud and dust production from bare soil surfaces during construction.

Conditions Where Practice Applies On any cleared, unvegetated, or sparsely vegetated soil surface where vegetative cover is needed for less than 1 year.

Planning Considerations Annual plants that sprout and grow rapidly and survive for only one season are suitable for establishing initial or temporary vegetative cover. Temporary seeding preserves the integrity of earthen sediment control structures such as dikes, diversions, and the banks of dams and sediment basins. It can also reduce the amount of maintenance associated with these devices. For example, the frequency of sediment basin cleanouts will be reduced if the watershed areas outside the active construction zone are stabilized.

Proper seedbed preparation, selection of appropriate species, and the use of quality seed are important. Failure to follow established guidelines and recommendations carefully may result in an inadequate or short-lived stand of vegetation that will not control erosion. Temporary seeding provides protection for no more than 1 year, during which time permanent stabilization should be initiated.

Design Criteria Complete grading before preparing seedbeds, and install all necessary erosion control practices such as dikes, waterways, and basins. Minimize steep slopes because they make seedbed preparation difficult and increase the erosion potential. If soils become compacted during grading, loosen them to a depth of 6-8 inches using a ripper, harrow, or chisel plow.

Construction Specifications **Grading and Shaping:** Excessive water runoff shall be reduced by properly designed and installed erosion control practices such as ditches, dikes, diversions, and sediment basins. No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation: Good seedbed preparation is essential to successful plant establishment. A good seedbed is well pulverized, loose and uniform. Where hydroseeding methods are used, the surface may be left with a more irregular surface of large clods and stones.

Liming: Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1 to 1-1/2 tons/acre on coarse textured soils and 2-3 tons/acre on fine textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher do not need to be limed.

Fertilizer: Base application rates on soil tests. When soil tests are not possible, apply a 10-10-10 grade fertilizer at 700-1000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before the application.

Surface Roughening: If recent tillage operations have resulted in a loose surface, additional roughening may not be necessary, except to break up large clods. If rainfall caused the surface to become sealed or crusted, loosen it just prior to seeding by disking, raking, harrowing, or other suitable methods. Groove or furrow slopes steeper than 3:1 on the contour before seeding.

Seeding: Select a non-invasive grass or grass-legume mixture suitable to the area and season of the year. See Figures 7.8-1 to 7.8-3 for suggestions of temporary seeding species. Although native plants are preferred, there are currently no available native species that are not cost-prohibitive. Non-invasive annual plants are preferred. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker seeder, or hydraulic seeder. Drill or cultipacker seeders should normally place seed 1/4 to 1/2 inches deep. Appropriate depth of planting is 10 times the seed diameter. Soil should be raked lightly to cover seed with soil if seeded by hand.

Mulching: The use of mulch will help ensure establishment under normal conditions, and is essential to seeding success under harsh site conditions. Harsh site conditions include:

- Seeding in fall for winter cover
- Slopes steeper than 3:1
- Excessively hot or dry weather
- Adverse soils (shallow, rocky, or high in clay or sand), and
- Areas receiving concentrated flow.

Irrigation: During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will ensure germination of the seed. Subsequent applications should be made as needed. Newly seeded areas require more water than more mature plants.

Species	Rate (lb/acre)
Rye	120
Seeding dates	
East	Above 2500 feet: Feb. 15- May 15
	Below 2500 feet: Feb. 1- May 1
Middle	Jan. 1 - May 1
West	Dec. 1 -Apr. 15
Soil amendments	
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	
Mulch	
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.	
Maintenance	
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.	

Figure 7.8-1 Temporary Seeding Recommendation for Late Winter and Early Spring

Species	Rate (lb/acre)
Oats	60
Brown top millet	30
Seeding dates	
East	May 15- Aug. 15
Middle	May 1 - Aug. 15
West	Apr. 15- Aug. 15
Soil amendments	
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	
Mulch	
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.	
Maintenance	
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.	

Figure 7.8-2 Temporary Seeding Recommendation for Summer

Species	Rate (lb/acre)
Oats	30
Winter wheat	30
Seeding dates	
East	Aug 15- Dec 15
Middle	Aug. 15- Dec 30
West	Aug. 15- Dec 30
Soil amendments	
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	
Mulch	
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.	
Maintenance	
Re-fertilize if growth is not fully adequate. Reseed, re-fertilize and mulch immediately following erosion or other damage. If necessary to extend temporary cover beyond June 15, overseed with 50 lb/ac crimson clover in late February or early March.	

Figure 7.8-3 Temporary Seeding Recommendations for Fall

Maintenance and Inspection Points Reseed and mulch areas where seedling emergence is poor or where erosion occurs as soon as possible. Do not mow.

References *North Carolina Erosion and Sediment Control Planning and Design Manual*

STABILIZATION PRACTICES

PERMANENT VEGETATION



PS

STABILIZATION WITH PERMANENT
VEGETATION

Definition The planting of native perennial vegetation such as ground covers, shrubs, vines, trees, and/or flowering plants (forbs) on exposed areas for erosion control and final stabilization. Permanent perennial vegetation is required to achieve final stabilization. Native perennial plants are preferred for erosion control because of the following reasons:

- In appropriate habitats, native plants are better adapted to environmental and site conditions, resulting in lower maintenance costs
- Natives are not typically aggressive and do not allow the site to become a source of exotic invasive plants that can spread to other locations and become costly to remove
- Unlike most non-natives, native plants support native insect, bird, and other wildlife for pollinations, food sources, and nesting
- Using native plants provides opportunities to educate and demonstrate various sustainable approaches for the public
- The Tennessee Exotic Pest Plant Council (TNEPPC) has ranked non-native plants in Tennessee based on their invasiveness and threats to the natural environment. The following plants that have been used for erosion control by TDEC and TDOT are listed in TNEPPC's publication, "Invasive Exotic Pest Plants in Tennessee - 2009:"

Korean (and Kobe) lespedeza - "Severe Threat" Category (Kobe is not ranked but has same invasive characteristics as Korean)

Tall fescue - "Significant Threat" Category

Foxtail millet - "Significant Threat" Category
Crown vetch - "Alert" Category

This manual provides native and non-invasive alternative species as the preferred choice for erosion control and soil stabilization for TDEC projects (Table 7.9-1).

Purpose To reduce stormwater runoff velocity, maintain sheet flow, protect the soil surface from erosion, promote infiltration of runoff into the soil, and improve aesthetics and provide diversity. Many native grasses have very deep and fibrous roots, a minimum of one foot and up to fifteen feet, and provide long-term erosion control.

Conditions Where Practice Applies Apply to fine-graded areas on which permanent, long-lived vegetative cover is the most practical or most effective method of stabilizing the soil. Permanent seeding may also be used on rough-graded areas that will not be brought to final grade for a year or more. Areas to be seeded with permanent vegetation must be seeded or planted within 14 days after the construction activity in that portion of the site has permanently ceased.

Planning Considerations The most common and economical means of stabilizing disturbed soils is by seeding a mixture of grasses and forbs. The advantages of seeding over other means of establishing plants include the smaller initial cost, lower labor input, and greater flexibility of method. The disadvantages of seeding include the potential for erosion during the establishment stage, the need to reseed areas that fail to establish, seasonal limitations on suitable seeding dates, and a need for water and appropriate temperatures during germination and early growth. The probability of successful plant establishment can be maximized through good planning, knowledge of the soil characteristics, selection of suitable plant materials for the site, good seedbed preparation, adequate liming and fertilization, and timely planting and maintenance.

Native grasses can be planted by drilling or seeding. The ground should be prepared by disking or rotovating prior to seeding in the spring or summer. Annual grains such as rye or oats can be planted prior to sowing the grass seed for erosion control. Grass seed can be planted in the dormant season as well.

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fill, and other denuded areas that will not be regraded. Permanent stabilization should be applied where topsoil was never stripped, or has been returned and incorporated into the soil surface.

- When stripping a site, topsoil should be stockpiled for later use.
- Stockpiled topsoil should be stabilized using temporary vegetation.
- Where a suitable planting medium is not present, topsoil shall be imported and incorporated into the site.
- Block sod provides immediate cover; it is especially effective in controlling erosion adjacent to concrete flumes and other structures.
- When mixed plantings are done during marginal planting periods, companion crops shall be used.
- No-till planting can be effective when planting is done following a summer or winter annual cover crop.
- Irrigation should be used when the soil is dry or when summer plantings are done.
-

- Native species are low maintenance-plants and are preferred to ensure long-lasting erosion control.
- Wildlife plantings of native species should be included when applicable.

Wildlife Plantings: Commercially available plants beneficial to wildlife species include the following:

- Mast Bearing Trees: Beech, Black Cherry, Blackgum, Chestnut, Oak, Hackberry, Hickory, Honey Locust, Black Locust, and Persimmon.
- Shrubs and Small Trees: Serviceberry, Crabapple, Pawpaw, Spicebush, Hazelnut, Dogwood, Highbush and Lowbush Blueberries, native Holly, Red Cedar, Red Mulberry, Sumac, Wild Plum, Blackhaw and Blackberry. Plant shrubs in patches without tall trees to develop stable shrub communities. All produce fruit used by many kinds of wildlife.

Design Criteria The state is divided into three planting regions designated I, II and III as shown in the figure below. Native seed mixes are preferred and the recommendations are shown in Table 7-9.1. Note that the rates are based upon Pure Live Seed (PLS).

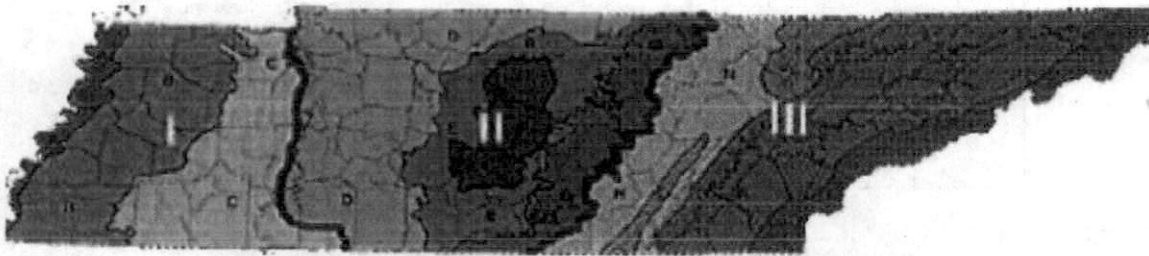


Figure 7.9-1: TN Planting Regions

Table 7.9-1 Preferred seed mixes using natives or naturalized plants and planting dates.

**non-native but do not spread.*

Zone		Best	Marginal	Preferred Rate/Mix (lb/ac PLS)
Region I	Poorly drained soils	Feb 1 - Mar20 Sept 1 - Sept 30	Mar 20 - Apr 30 Sept 30 - Oct 31	15 Browntop millet* (nurse crop) 2 switch grass 4 little bluestem 4 Virginia wild rye 4 purpletop 2 partridge pea 2 black-eyed susan
	Well-drained soils	Apr 1 - July 15		15 Browntop millet* (nurse crop) 4 little blue stem 4 purpletop 2 sideoats gramma 2 partridge pea 2 black-eyed susan
	High maintenance	Apr 1 - July 15		15 Browntop millet* (nurse crop) 2 partridge pea 45 Red fescue* 45 hard fescue* 25 chewing fescue*
Region II	Low maintenance; Slopes and Poor, shallow soils	Aug 25 - Sept 15 Feb 15 - May 30	Sept 15 - Oct 25 Mar 21 - May 30	15 Browntop millet* (nurse crop) 5 little bluestem 2 switch grass 2 tall dropseed 5 sideoats gramma 2 black-eyed susan 2 partridge pea 1 greyheaded coneflower
	Low maintenance; Moderate slopes; soils >6 in. depth	Aug 25 - Sept 15 Feb 15 - May 30	Sept 15 - Oct 25 Mar 21 - Apr 15	15 Browntop millet* (nurse crop) 5 purpletop 5 little bluestem 5 Virginia wild rye 2 black-eyed susan 2 partridge pea 1 greyheaded coneflower
	High maintenance	Aug 30 - Oct 15	Feb 15 - Apr 15	15 Browntop millet* (nurse crop) 2 partridge pea 45 Red fescue* 45 hard fescue* 25 chewing fescue*
Region III	>2500 ft elevation; steep slopes	Mar 20 - Apr 30	Aug 15 - Aug 30 Mar 1 - Mar 20 Apr 20 - June 15	15 Browntop millet* (nurse crop) 5 purpletop 10 little bluestem 10 Indian grass
	<2500 ft elevation; steep slopes	Aug 15 - Sept 1 Mar 1 - Apr 1	Sept 1 - Sept 15 Apr 1 - June 10	2 black-eyed susan 0.5 monarda (bergamot) 4 Maryland senna

Region III <i>cont'd</i>	>2500 ft elev.; Shallow soils	Mar 20 - Apr 20	Aug 15 - Aug 30 Mar 5 - Mar 20 April 20 - June 15	15 Browntop millet* (nurse crop) 4 purpletop 10 little bluestem 10 broomsedge 2 partridge pea 2 black-eyed susan 0.5 monarda (bergamot)
	<2500 ft elev.; Shallow soils	Aug 15 - Sept 1 Mar 1 - Apr 1	Sept 1 - Sept 15 Apr 1 - June 10	
	>2500 ft. elev.; Moderate slopes	Mar 20 - Apr 20	Aug 15 - Aug 30 Mar 5 - Mar 20 Apr 20 - June 15	15 Browntop millet* (nurse crop) 4 purpletop 10 little bluestem 10 Indian grass 2 black-eyed susan 0.5 monarda (bergamot) 4 Maryland senna
	<2500 ft. elev.; Moderate slopes	Aug 15 - Sept 1 Mar 1 - Apr 1	Sept 1 - Sept 15 Apr 1 - June 10	
	>2500 ft elev.; High maintenance	Mar 20 - Apr 20	Aug 15 - Aug 30 Mar 5 - Mar 20 Apr 20 - June 15	15 Browntop millet* (nurse crop) 45 Red fescue* 45 hard fescue* 25 chewing fescue*
	<2500 ft elev.; High maintenance	Aug 15 - Sept 1 Mar 1 - Apr 1	Sept 1 - Sept 15 Apr 1 - June 10	

In Table 7.9-1, the bold dates are the preferred dates for seeding. Also, high-maintenance areas include lawns and other grassed areas that will be maintained for aesthetics.

Table 7.9-2 Allowable seed mixes and planting dates.

	Zone	Best	Marginal	Rate/Mix (lb/ac PLS)
Region I	Poorly drained soils	Feb 1 - Mar 20 Sept 1 - Sept 30	Mar 20 - Apr 30 Sept 30 - Oct 31	80 Pensacola bahiagrass 30 Bermudagrass (hulled) 20 Korean lespedeza** 10 Kobe lespedeza**
	Well-drained soils	Apr 1 - July 15		50 Pensacola bahiagrass 15 Bennudagrass (hulled) 30 Korean lespedeza** 15 Foxtail millet**
	High maintenance	Apr 1 - July 15		40 Bermudagrass (hulled)
Region II	Low maintenance; Slopes and poor, shallow soils	Aug 25 - Sept 15 Feb 15 - Mar 21	Sept 15 - Oct 25 Mar 21 - Apr 15	100 Pensacola bahiagrass 40 Bermudagrass (hulled) 20 Korean lespedeza** 10 Kobe lespedeza**
	Low maintenance; Moderate slopes; soils >6 in. depth	Aug 25 - Sept 15 Feb 15 - Mar 21	Sept 15 - Oct 25 Mar 21 - Apr 15	80 Pensacola bahiagrass 30 Bermudagrass (hulled) 20 Korean lespedeza** 10 Kobe lespedeza**
	High maintenance	Aug 15 - Oct 15	Feb 15 - Apr 15	200 KY 31 fescue**

Region III	>2500 ft elevation; steep slopes	July 25- Aug 15 Mar 20 - Apr 20	July 15 - July 25 Aug 15 - Aug 30 Mar 1 - Mar 20 Apr 20 - May 15	100 KY31 fescue** 20Kobelespedeza** 10 Korean lespedeza** 5 Redtop
	<2500 ft elevation; steep slopes	Aug 15 - Sept 1 Mar 1 - Apr 1	July 25 - Aug 15 Sept 1 - Sept 15	
	>2500 ft elev.; Shallow soils	July 25 - Aug 15 Mar 20 - Apr 20	July 15 - July 25 Aug 15 - Aug 30 Mar 5 - Mar 20 Apr 20 - May 15	40 KY 31 Fescue** 10 Korean lespedeza** 10 Redtop 10 Crown vetch**
	<2500 ft elev.; Shallow soils	Aug 15 - Sept 1 Mar 1 - Apr 1	July 25 - Aug 15 Sept 1 - Sept 15 Apr 1 - May 10	
	>2500 ft. elev.; Moderate slopes	July 25 - Aug 15 Mar 20 - Apr 20	July 15 - July 25 Aug 15 - Aug 30 Mar 5 - Mar 20 Apr 20 - May 15	60 KY 31 fescue** 15 Korean lespedeza** 15 Kobe lespedeza**
	<2500 ft. elev.; Moderate slopes	Aug 15 - Sept 1 Mar 1 - Apr 1	July 25 - Aug 15 Sept 1 - Sept 15 Apr 1 - May 10	
	>2500 ft elev.; High maintenance	July 25 - Aug 15 Mar 20 - Apr 20	July 15 - July 25 Aug 15 - Aug 30 Mar 5 - Mar 20 Apr 20 - May 15	200 KY 31 fescue**
	<2500 ft elev.; High maintenance	Aug 15 - Sept 1 Mar 1 - Apr 1	July 25 - Aug 15 Sept 1 - Sept 15 Apr 1 - May 10	



Figure 7.9-2 Typical Seed

Roundstone Native Seed, LLC
9764 Raider Hollow Road, Upton, KY 42784

Kind: Switchgrass		Lot No: 11074	
Variety:	Cave-in-Rock	Inert Matter:	1.78
Origin: Test	KY	Weed Seeds:	0.00
Date: Pure	02/12	Crop Seeds:	0.00
Seed: Total	98.22	Hard Seed:	0.00
Germ:	95.32	Germ:	95.32
Pure Live Seed:	93.62	Noxious:	0.00

Seeding rates: Seed rates in Table 7.9-1 are based upon Pure Live Seed (PLS), which is the product of the purity shown on the seed tag multiplied by the germination. The PLS for the seed tag shown in Figure 7.9-2 would be $0.9362 \times 0.95 = 0.89$. Thus, only 89% of the seed are considered live. If the plan calls for a seed rate of 2 lb/acre of switchgrass, find the actual seed rate for the conditions shown on the tag. Actual seed rate required is $2 \text{ lb/ac} / 0.95 \text{ PLS} = 2.15 \text{ lb/acre}$. In other words, to get an actual rate of 2 lb. per acre will require 2.15 lb. of seed.

Temporary seed may be required when seeding outside of the preferred seeding dates. See Section 7.8 for more information on temporary seeding.

Construction Specifications

Grading and Shaping: Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape the slope, where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching, and maintenance of vegetation.

Concentrations of water that could cause excessive soil erosion should be diverted to a safe outlet. Diversions and other treatment practices must conform to the appropriate standards and specifications.

Plant Selection: Only certified seed shall be used. Refer to Table 7.9-1 for suggested species. Grass type should be selected on the basis of species characteristics; site and soil conditions; planned use and maintenance of the area; time of year of planting, method of planting; and the needs and desires of the land user.

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing permanent, perennial species due to its ability to out-compete desired species chosen for permanent perennial cover. However, crimson, clover, oats and winter wheat can be planted any time of the year and are recommended as a cover crop with native perennial species.

Topsoil: Topsoil should be replaced on all areas to be seeded. See Practice 7.3 for more information on the removal, storage and reapplication of topsoil.

Seedbed Preparation: When conventional seeding is to be used, topsoil should be applied to any area where the disturbance results in subsoil at the final grade surface. Figure 7.9-3 provides guidance on the volume of topsoil required to provide specific topsoil depths. Soil pH should be above 5 – preferably between 6.0 and 6.5. Soil on the site should be tested to determine lime and fertilizer rates. Soil should be submitted to a soils specialist or County Agricultural Extension agent for testing and soil amendment recommendations. In the absence of soil test results, the following application rates can be used:

- **Ground agricultural limestone:**

- Light-textured, sandy soils: 1 - 1½ tons/acre

- Heavy-textured, clayey soils: 2 - 3 tons/acre

- **Fertilizer:**

- Grasses: 800-1200 lb/acre of 10-10-10 (or the equivalent)

- Grass-legume mixtures: 800-1200 lb/acre of 5-10-10 (or the equivalent)

Broadcast Seeding:

- Seedbed preparation may not be required where hydraulic seeding equipment is to be used.
- Tillage, at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate topsoil, lime, and fertilizer; smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a crimper is to be used.
- Tillage may be done with any suitable equipment.
- Tillage should be done parallel to the contour where feasible.
- On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide consecutive beds, 6 to 8 inches apart, in which seed may lodge and germinate. Hydraulic seeding may also be used.

Depth (Inches)	Per 1,000 sq. ft.	Per Acre
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806

7.9-3 Cubic yards of topsoil required to attain various soil depths

Inoculants: Native legume seeds do not need to be inoculated. All non-native legume seed shall be inoculated with appropriate nitrogen-fixing bacteria. The inoculants shall be pure culture prepared specifically for the seed species and used within the dates on the container. A mixing medium recommended by the manufacturer shall be used to bond the inoculants to the seed. For conventional seeding, use twice the amount of inoculants recommended by the manufacturer.

No-Till Seeding: No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth. Native grasses respond very well to drill seeding at a depth of one-fourth inch.

Mulch: Straw mulch is required for all permanent vegetation applications and must be applied immediately after the application of seed. The application rate for mulch is 2 tons per acre with overall uniform soil coverage of 70%. All mulch must be anchored. See Practice 7.6 for more information on straw mulch.

**Maintenance
and Inspection
Points**

Any areas that have washed out due to high stormwater flows, areas that have been disturbed by blowing wind, and areas that do not show good germination should be re-treated.

Inspect seeded areas for failure and make necessary repairs and reseedings within the same season, if possible.

Reseeding: If a stand has inadequate cover, re-evaluate choice of plant materials and quantities of lime and fertilizer. Re-establish the stand after seedbed preparation or over-seed the stand. Consider seeding temporary, annual species if the time of year is not appropriate for permanent seeding.

References

North Carolina Erosion and Sediment Control Planning and Design Manual

Attachment 5
Major Activities Log

KINGSTON FOSSIL PLANT
Flow Management and Ball Field Interim Ash Staging Area Closure Project

MAJOR ACTIVITIES LOG

At a minimum the construction manager or designee shall record dates below for beginning of major grading, dates temporarily cease construction, dates re-commence construction, dates permanently cease construction and dates seeding and or stabilization begins. Include name of person recording activity. It is recommended that activity descriptions be recorded each day. Provide a copy of the form to the site PAE when sheet is filled out or on a monthly basis.

Description of Major Activity	Date	Name

Provide to Plant Program Administrator (Environmental) as completed.

Attachment 6
Sequence of Control Measure Implementation, Maintenance, Removal Log

Sequence of Control Measure Implementation, Maintenance, and Removal Log Form

Contractor: _____ Contract No.: _____ Page _____ of _____

[illegible]

Attachment 7
Daily Rainfall Gage Record

DAILY RAINFALL GAGE RECORD

[illegible]

Attachment 8
Tennessee Valley Authority
Twice Weekly Inspection Worksheet

Tennessee Valley Authority

Tennessee Construction Stormwater Inspection Certification

Twice-Weekly Inspections, 72 hours apart

(With written notification to the state, inspection performed monthly on areas with temporary stabilization. No inspection requirements apply to definable areas that are identified on the SWPPP as having final stabilization).

Site or Project Name:		NPDES Tracking Number: TNR	
Primary Permittee Name: Tennessee Valley Authority		Date of Inspection:	
Current approximate disturbed acreage:		Has rainfall been checked/documentated daily? ☐ Yes ☐ No	Name of Inspector:
Current weather conditions:		Inspector's TNEPSC Certification Number:	

Please check the box if the following items are on-site:

- | | | |
|---|---|---|
| ☐ Notice of Coverage (NOC) | ☐ Stormwater Pollution Prevention Plan (SWPPP) | ☐ Twice-weekly inspection documentation |
| ☐ Site contact information | ☐ Rain Gage | ☐ Off-site Reference Rain Gage Location: _____ |

Best Management Practices (BMPs):

Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly: If "No", describe below in Comment Section

1. Are all applicable EPSCs installed and maintained per the SWPPP?	☐ Yes ☐ No
2. Are EPSCs functioning correctly at all disturbed areas/material storage areas per section 4.1.5?	☐ Yes ☐ No
3. Are EPSCs functioning correctly at outfall/discharge points such that there is no objectionable color contrast in the receiving stream, and no other water quality impacts per section 5.3.2?	☐ Yes ☐ No
4. Are EPSCs functioning correctly at ingress/egress points such that there is no evidence of track out?	☐ Yes ☐ No
5. If applicable, have discharges from dewatering activities been managed by appropriate controls per section 4.1.4? If "No", describe below the measures to be implemented to address deficiencies.	☐ N/A ☐ Yes ☐ No
6. If construction activity at any location on-site has temporarily/permanently ceased, was the area stabilized within 14 days per section 3.5.3.2? If "No", describe below each location and measures taken to stabilize the area(s).	☐ N/A ☐ Yes ☐ No
7. Have pollution prevention measures been installed, implemented, and maintained to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters per section 4.1.5? If "No", describe below the measures to be implemented to address deficiencies.	☐ N/A ☐ Yes ☐ No
8. If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No", describe below the measures to be implemented to address deficiencies.	☐ N/A ☐ Yes ☐ No
9. Have all previous deficiencies been addressed? If not, describe the remaining deficiencies in the Comments section. ☐ Check if deficiencies/corrective measures have been reported on a previous form.	☐ N/A ☐ Yes ☐ No

Comment Section. If the answer is "No" for any of the above, please describe the problem and corrective actions to be taken. Otherwise, describe any pertinent observations:

Certification and Signature (must be signed by the certified inspector and the permittee per Sections 3.5.8.2 (g) and 7.7.2 of the CGP)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Inspector Name and Title:	Signature:	Date:
Permittee Name and Title:	Signature:	Date:

Construction Stormwater Inspection Certification Form (Twice-Weekly Inspections)

Purpose of this form/ Instructions

An inspection, as described in section 3.5.8.2. of the General Permit for Stormwater Discharges from Construction Activities ("Permit"), shall be performed at least twice every calendar week and documented on this form. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice), such inspection only has to be conducted once per month until thawing results in runoff or construction activity resumes.

Inspectors performing the required twice weekly inspections must have an active certification by completing the "Fundamentals of Erosion Prevention and Sediment Control Level I" course. (<http://www.tneps.org/>). A copy of the certification or training record for inspector certification should be kept on site.

Qualified personnel, as defined in section 3.5.8.1 of the Permit (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.

Outfall points (where discharges leave the site and/or enter waters of the state) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible, but in no case more than 7 days after the need is identified.

Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 3.5.1 of the Permit and pollution prevention measures identified in the SWPPP in accordance with section 3.5.2 of the Permit, shall be revised as appropriate, but in no case later than 7 days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 days following the inspection.

All inspections shall be documented on this Construction Stormwater Inspection Certification form. Alternative inspection forms may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division's form and the permittee has obtained a written approval from the division to use the alternative form. Inspection documentation will be maintained on site and made available to the division upon request. Inspection reports must be submitted to the division within 10 days of the request.

Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records or other documentation or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.

Attachment 9
General Information Notice

TVA – KINGSTON PLANT

FLOW MANAGEMENT AND BALL FIELD INTERIM ASH STAGING AREA CLOSURE PROJECT

Description: Construction activities associated with flow management and closure of the former interim ash storage facility (“Ball Field”).

CONTACT: Adele Dennison
For Storm Water Pollution
Prevention Plan located at
Kingston Fossil Plant
PHONE: (865) 717-2157

Attachment 10
Notice of Intent

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)**

Division of Water Pollution Control (WPC)

6th Floor Annex, L&C Tower, 401 Church Street, Nashville, Tennessee 37243

1-888-891-TDEC (8332)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: TVA - Kingston Fossil Plant – Flow Management and Ball Field Interim Ash Staging Area Closure Project		NPDES Tracking Number: TNR	
Street Address or Location: 714 Swan Pond Road Harriman, TN 37748		Construction Start Date: March 2016	
		Estimated End Date: March 2017	
Site Description: Proposed project is approximately 77.5 acres within the Kingston Fossil Plant site's 800 acres.		Latitude (dd.ddd): 35.905941	
		Longitude (-dd.ddd): -84.513618	
County(ies): Roane County	MS4 Jurisdiction: N/A	Acres Disturbed: 77.5	
		Total Acres: 800	
Does a topographic map show dotted or solid blue lines ☐ and/or wetlands ☐ on or adjacent to the construction site? N/A			
If wetlands are located on-site and may be impacted, attach wetlands delineation report. N/A			
If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number?		ARAP Number: Permit Applied For	
Receiving waters: Emory River Intake Channel (west off of Emory River at Mile 1.8±)			
Attach the SWPPP with the NOI ☒ SWPPP Attached		Attach a site location map ☒ Map Attached	

Name of Site Owner or Developer (Site-Wide Permittee): (person, company, or legal entity that has operational or design control over construction plans and specifications) TVA - Kingston Fossil Plant			
Site Owner or Developer Contact Name: (individual responsible for site) John Kammeyer		Title or Position: (the party who signs the certification below): Principal Executive Officer	
Mailing Address: TVA, 1101 Market Street, LP 5G		City: Chattanooga	State: TN Zip: 37402
Phone: (423) 751-8246	FAX:	E-mail: jckammeyer@tva.gov	
Optional Contact: Adele Dennison		Title or Position: (the party who signs the certification below): Program Administrator (Environmental)	
Mailing Address: TVA, Kingston Fossil Plant, 714 Swan Pond Road		City: Harriman	State: TN Zip: 37748
Phone: (865) 717-2157	FAX:	E-mail: amdennison@tva.gov	
Owner or Developer Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)			
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.			
Owner or Developer Name: (print or type) John Kammeyer		Signature:	Date:
Contractor(s) Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)			
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities onsite are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations and for failure to comply with these permits requirements.			
Primary contractor name and address: (print or type)		Signature:	Date:
Other contractor name and address: (print or type)		Signature:	Date:
Other contractor name and address: (print or type)		Signature:	Date:

OFFICIAL STATE USE ONLY

Received Date:	Reviewer:	Field Office:	Permit Number TNR	Exceptional TN Water:
Fee(s):	T&E Aquatic Flora and Fauna:	Impaired Receiving Stream:	Notice of Coverage Date:	

APPENDIX A

CONSTRUCTION ACTIVITY - STORMWATER DISCHARGES NOTICE OF INTENT (NOI) - INSTRUCTIONS

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Purpose of this form A completed notice of intent (NOI) must be submitted to obtain coverage under the Tennessee General NPDES Permit for Discharges of Storm Water Associated with Construction Activity (permit). **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's claim of ability to be in compliance with permit terms and conditions.** This permit is required for Storm Water discharge(s) from construction activities including clearing, grading, filling and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

Permit fee (see table below) must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g. equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites). There is no fee for sites less than 1 acre.

Acre Disturbed	= or > 150 acres	= or > 50 < 150 acres	= or > 5 < 50 acres	= or > 1 < 5 acres
Fee	\$7,500	\$4,000	\$1,000	\$250

Who must submit the NOI form? Per Section 2 of the permit, all site operators must submit an NOI form. "Operator" for the purpose of this permit and in the context of Storm Water associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current land owner of the construction site. This person is considered the primary permittee; or (2) the person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

Owners, developers and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The comprehensive site-specific SWPPP shall be prepared in accordance with the requirements of part 3 of the permit and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage.

Notice of Coverage The division will review the NOI for completeness and accuracy and prepare a notice of coverage (NOC). Storm Water discharge from the construction site is authorized as of the effective date of the NOC.

Complete the form Type or print clearly, using ink and not markers or pencil. Answer each item or enter --NA," for not applicable, if a particular item does not fit the circumstances or characteristics of your construction site or activity. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee, a map, and the SWPPP.**

Describe and locate the project Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate geographic information available to describe the location (reference to adjacent highways, roads and structures; e.g. intersection of state highways 70 and 100). Latitude and longitude (expressed in decimal degrees) of the center of the site can be located on USGS quadrangle maps. The quadrangle maps can be obtained at the USGS World Wide Web site: <http://www.usgs.gov/>; latitude and longitude information can be found at numerous other web sites. Attach a copy of a portion of a 7.5 minute quad map, showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

Give name of the receiving waters Trace the route of Storm Water runoff from the construction site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the stormwater runoff drains. Note that the receiving water course mayor may not be located on the construction site. If the first water body receiving construction site runoff is unnamed ("unnamed tributary"), determine the name of the water body that the unnamed tributary enters.

ARAP permit may be required If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP). If you have a question about the ARAP program or permits, contact your local Environmental Field Office (EFO).

Submitting the form and obtaining more information Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the appropriate EFO for the county(ies) where the construction activity is located, addressed to **Attention: Storm Water NOI Processing.**

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett, TN	38133	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305	Chattanooga	540 McCallie Avenue STE 550	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)**

Division of Water Pollution Control (WPC)

6th Floor Annex, L&C Tower, 401 Church Street, Nashville, Tennessee 37243

1-888-891-TDEC (8332)

Notice of Termination (NOT) for General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all storm water discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the local WPC Environmental Field Office (EFO) address (see table below). For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Type or print clearly, using ink and not markers or pencil.

Site or Project Name: TVA - Kingston Fossil Plant - Flow Management and Ball Field Interim Ash Staging Area Closure Project	NPDES Tracking Number: TNR
Street Address or Location: 714 Swan Pond Road, Harriman, TN 37748	County (ies): Roane

Name of Permittee Requesting Termination of Coverage:			
Permittee Contact Name: John Kammeyer		Title or Position: Principal Executive Officer	
Mailing Address: 1100 Market Street, LP 5G		City: Chattanooga	State: TN Zip: 37402
Phone: (423) 751-8246		E-mail: jckammeyer@tva.gov	

Check the reason(s) for termination of permit coverage:

☐	Stormwater discharge associated with construction activity is no longer occurring and the permitted area has a uniform 70% permanent vegetative cover OR has equivalent measures such as rip rap or geotextiles, in areas not covered with impervious surfaces.
☐	You are no longer the operator at the construction site (i.e., termination of site-wide, primary or secondary permittee coverage).

Certification and Signature: (must be signed by president, vice-president or equivalent ranking elected official)

I certify under penalty of law that either: (a) all storm water discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge storm water associated with construction activity under this general permit, and that discharging pollutants in storm water associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

For the purposes of this certification, elimination of storm water discharges associated with construction activity means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized, the temporary erosion and sediment control measures have been removed, and/or the site or portions of the site have obtained permit coverage by subsequent operators or that all storm water discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have otherwise been eliminated from the portion of the construction site where the operator had control.

Permittee name (print or type): John Kammeyer			Signature:		Date:
EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett, TN	38133	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305	Chattanooga	540 McCallie Avenue STE 550	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

RDAs 2399 and 2400

APPENDIX B