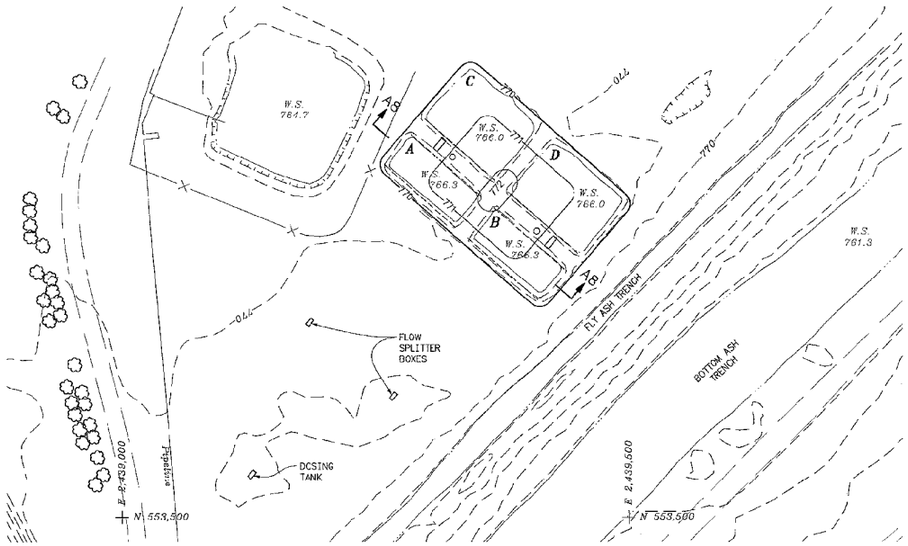
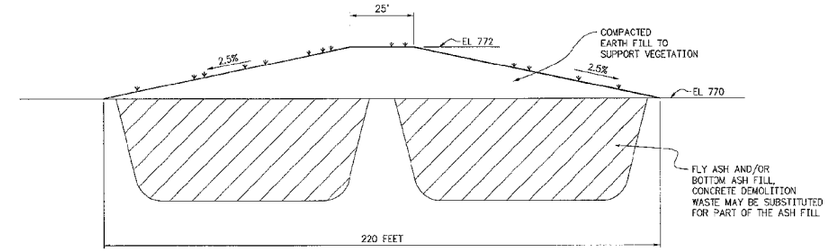


PLAN
1" = 50'



A8 – A8
NTS

KINGSTON FOSSIL PLANT
SEWAGE SYSTEM AND WETLANDS CLOSURE

As a result of recently available access to the Roane County sewage system, Kingston Fossil Plant has elected to tie into the Roane County system and remove its septic tank and treatment wetlands system from service. The NEPA Review for this action is documented in CEC 1465. The wetlands will be closed and filled and the above ground parts of the system will be removed, except for the back-up pumphouse. All underground parts and piping will be abandoned in place except for some PVC piping in the wetlands.

The sewage treatment system consists of a septic tank, an air-powered ejector, two back-up electric pumps in a sump, a four chambered treatment wetlands with field disposal lines and interconnecting piping. The sump for the electric back-up pumps is covered with a small building that also houses the pump controls. The majority of the air ejector is housed in an above ground metal housing.

After connection to the Roane county sewer system, the wetlands treatment system will be dismantled and closed. In particular, the septic tank will be pumped by a licensed septic tank service and the tank will be filled with flowable fill (a lear portland cement grout). The pumps, controls and all electrical service will be removed from the pump house for the electric back-up pumps. Any sewage in the pump house sump will be removed by the licensed septic service and the sump will also be filled with flowable fill. The above ground parts of the air ejector will be removed and disposed as scrap metal or placed in a permitted landfill. The underground piping in this area and the line to the wetlands will be capped and abandoned in place.

Finally, the wetlands will be closed. To effect closure, the liner in the southern cells, a and b on 10W418-9, will be punctured in at least 5 places in each cell with a backhoe or similar piece of equipment. This will prevent the cells from holding water. The PVC distribution pipes in all 4 cells will be removed along with the connecting piping and manholes between the cells. The concrete manholes will be buried in the filled cells and the PVC piping will be sent to a permitted landfill. The soft vegetation inside the cells, such as bull rush and cattails will be pushed down and buried in the cells. The larger woody vegetation and trees will be removed and burned or chipped and disposed around the plant site or other permitted site. Then, the wetland cells will be filled with concrete demolition waste, fly ash, bottom ash, or a mixture of the three up to the surrounding ground elevation. The fill will be compacted with heavy equipment to at least 80% of maximum dry density. The final cover over the wetlands will be soil suitable for vegetative cover. The soil cap will be up to two feet thick and sloped to encourage storm drainage, as shown on drawing 10W418-9. The soil cap will also be compacted to at least 80% of the maximum dry density. No field testing for compaction will be required. The soil cap will be seeded and mulched according to TVA's T-1 Construction Specs, sections 580 and 582. Section 580 describes the seed mixtures to be used during different parts of the year. For this project a fall seed mixture, type 8(1), is expected consisting of Kentucky 31 Fescue and white clover. In any case, the least expensive seed mixture specified in T-1 for the time of year seeding is done will be used. Section 582 describes how mulching is to be done. Straw mulch 1" thick will be used.

The dosing tank, splitter boxes, field disposal lines and dewatering well associated with the wetlands will be abandoned in place, unmodified. The integrator will be removed from it's vault and the integrator vault will be filled with soil, sand or flowable fill, as desired by the field.

NOTES:
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH T-1 SPECIFICATIONS. UNLESS OTHERWISE NOTED.
2. THE SOLID CONTOURS REPRESENT FINISHED GRADE; DASHED CONTOURS INDICATE EXISTING GROUND.
3. EARTH FILL SHALL BE OBTAINED FROM AN APPROVE SOURCE AND BE CAPABLE OF SUPPORTING VEGETATION.
4. ALL EARTH FILL, FLY ASH AND/OR BOTTOM ASH SHALL BE PLACED IN 12 INCH LAYERS AND COMPACTED WITH RUBBER-TIRED WHEEL TRACTOR (CATERPILLAR 800 SERIES OR EQUIVALENT) TO AT LEAST 80% OF STANDARD MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO SPECIFICATIONS. CARE SHALL BE GIVEN TO MAINTAIN ADEQUATE SURFACE DRAINAGE WITH PROPER EROSION CONTROL AT ALL TIMES.
5. AFTER PLACEMENT OF EARTH FILL, SEED AND MULCH IN ACCORDANCE WITH SECTION 580 TYPE 7 (1) AND 582 RESPECTIVELY. STRAW MULCH SHALL BE USED.

REV NO.	DATE	DRAWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R 0	DEC 19 2002	JGA	MGH	JGA	HLP	REP		JGA	K3F414	0

INITIAL ISSUE FOR DCN KIF-02-151

SCALE: 1" = 50' EXCEPT AS NOTED

YARD

WETLANDS CLOSURE PLAN

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
J.G. ALBRIGHT	M.G. HRANEK	J.G. ALBRIGHT	H.L. FETTY	R.E. PURKEY		J.G. ADAIR

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R14 | DATE DEC 19 2002 | 36 | C | 10W418-9 | R 0

TASK COMPLETED BY: | REV NO.

PLOT FACTOR:50
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY