

OCTOBER 2, 2002
Revision 3
108020300-PN0001-R03

CONSTRUCTION SITE STORMWATER CONTROL AND POLLUTION PREVENTION PLAN

For The



***Comprehensive Plan for All Site, Land
Improvements and Utilities Construction
Activities***

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Oak Ridge, Tennessee BWSC 25213-10

Table of Contents

Introduction.....	1
Responsibilities of Operators.....	2
1.0 Site Description	2
1.1 Nature of Construction Activity and General Project Sequence	2
1.2 Disturbed Area	6
1.3 Runoff Coefficients.....	6
1.4 Site Drawings and Discharge Information	7
2.0 Storm Water Runoff Controls	8
2.1 Erosion and Sediment Controls General Criteria and Requirements	8
2.2 Stabilization Practices	9
2.2.1 Permanent Vegetative Cover	9
2.2.2 Temporary Vegetative Cover.....	10
2.2.3 Construction Scheduling and Sequencing.....	10
2.3 Structural Practices	10
2.4 Storm Water Management	11
2.5 Other Items Needing Control.....	11
2.6 Local Government Requirements.....	12
3.0 Maintenance.....	12
4.0 Inspections	13
4.1 Pollutants.....	13
4.2 Plan Revisions.....	14
4.3 Reports.....	14
4.4 Right of Entry.....	15
5.0 Non-Storm Water Discharges	15
6.0 Record Keeping and Reporting	15
7.0 Compliance With Permit Provisions	16
8.0 Summary and Termination of Coverage.....	17

Appendix 1: Construction Site Erosion Control Measures Inspection Form

Appendix 2: Construction Schedule

Appendix 3: NOI and NOT Forms

Appendix 4: Certification and Approval

Introduction

This Construction Site Storm Water Pollution Prevention Plan (SWPPP) was prepared in accordance with Tennessee Department of Environment and Conservation (TDEC) General Permit No. TNR10-0000, Storm Water Discharges from Construction Activities, the Tennessee Erosion and Sediment Control Handbook, and good engineering practice. All the applicable requirements of the general permit apply to construction activities on the Spallation Neutron Source (SNS) site. The plan describes and ensures implementation of practices which will be used to reduce pollutants in storm water discharges associated with construction activity related to the construction of the SNS. The SNS project site encompasses a total of 125 acres including access roads and will be constructed in phases over a period of approximately 5 years.

This revision of the plan was necessary due to a change in permit coverage to the new TNR10-0000 General Permit. In addition, this revision removes a significant area of the site from the plan because construction is complete in those areas and final stabilization has taken place. The areas removed include most of the Bethel Valley Access Road, the Bear Creek Access Road and the outfall line below the storm water detention/retention basin.

The purpose of this plan is to ensure the erosion of soil and the discharge of other pollutants into waters of the State are minimized. Storm water management and sediment control measures will be utilized in the construction to minimize off-site sediment migration beyond the limits of disturbance. The construction activity shall be carried out to prevent discharges of storm water that causes a condition in which visible solids, bottom deposits or turbidity impairs the usefulness of waters of the State for any uses of that water body by Rule 1200-4-4. The following are the overall goals of this plan:

- ☞ Where necessary, structural features will be installed to remove sediment from runoff prior to the runoff physically leaving the disturbed area.
- ☞ There shall be no distinctly visible floating scum, oil or other matter contained in the storm water discharge.
- ☞ The storm water discharge must result in no materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.
- ☞ Storm water discharge should not cause an objectionable color contrast in the receiving stream. However, the physical properties of the soils on this site are such that, despite best efforts, it is expected there will be temporary discoloration of the receiving stream.

- ☞ Spills will be contained on-site and not allowed to enter the storm drainage system or any receiving stream.
- ☞ The amount of material eroding from the site should be reduced to the maximum extent possible.

Responsibilities of Operators

UT-Battelle, LLC, as the Department of Energy's operating contractor for the Oak Ridge National Laboratory (ORNL), has operational control over construction plans and specifications for the projects under this plan. The party with day-to-day operational control of the construction site, Knight Jacobs/Joint Venture (KJ/JV), will have the following responsibilities:

1. Ensure that the SWPPP construction activity meets the minimum requirements of this plan and the Tennessee General NPDES Permit No. TNR10-0000 and to identify the parties responsible for implementation of control measures identified in this plan and shown and described in the engineering drawings and specifications.
2. Ensure that the SWPPP indicates areas of the projects where they have operational control over day-to-day activities.

The KJ/JV Deputy Project Manager for Construction has responsibility for implementation and installation of the erosion control measures described in this plan and shown on the drawings and in the project specifications.

1.0 Site Description

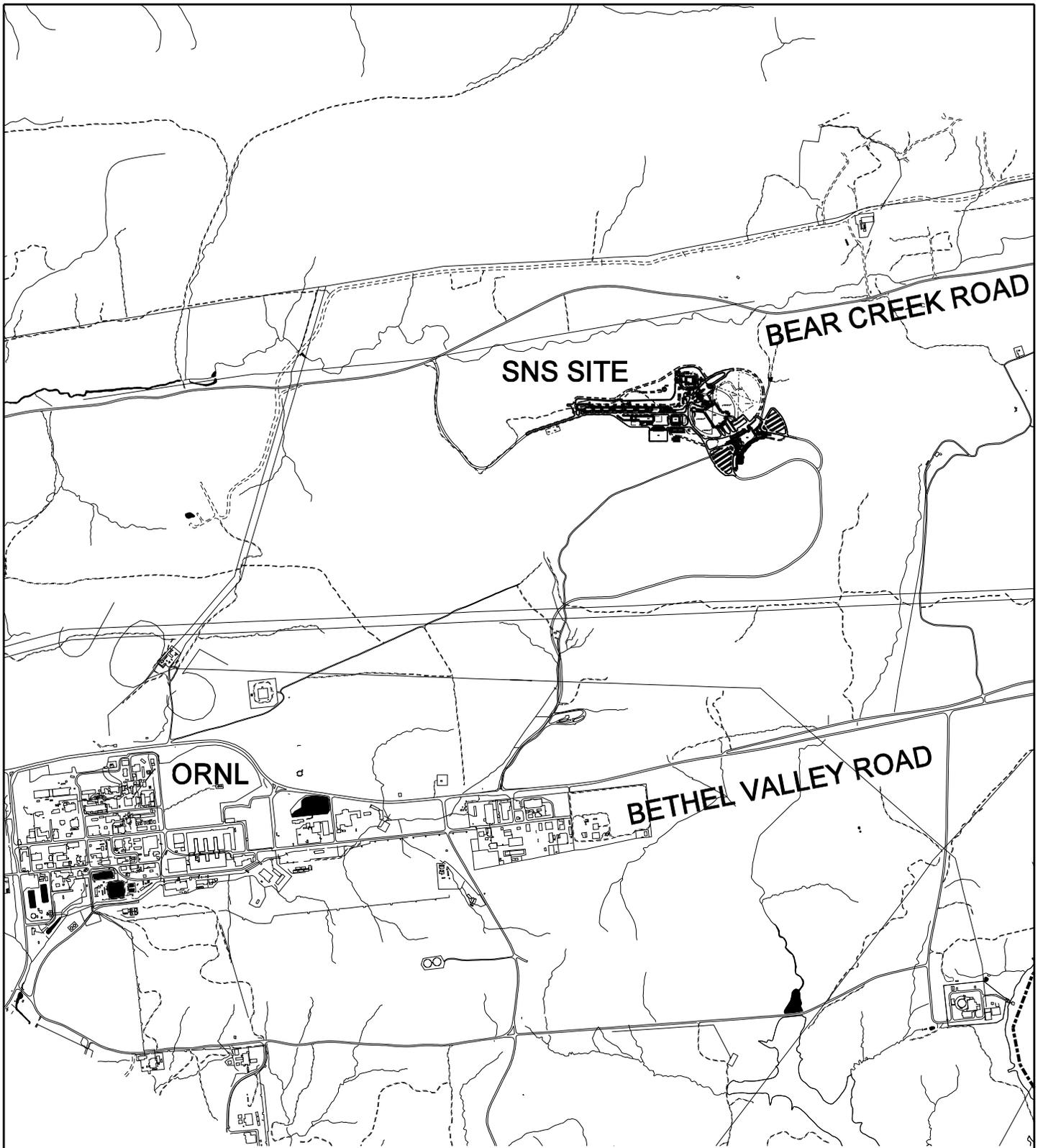
1.1 Nature of Construction Activity and General Project Sequence

The SNS will be a state-of-the-art facility for the production of neutrons for use in scientific research. The facility will consist of four main components: a proton source (the front end), a linear accelerator (linac), a beam transport and ring system, and an experiment building which will house a mercury target. Additional support facilities will be constructed.

The facility is under construction on Department of Energy property north of Bethel Valley Road and south of Bear Creek Road near Oak Ridge National Laboratory (Figure 1), approximately 2.5 miles east of Hwy 95. The site is located on Chestnut Ridge near the boundary between Roane and Anderson counties. Most of the facility will be in Roane County, but a small portion of the project area is in Anderson County. The project area is situated between 35° 56' and 35° 58' north latitude and 84° 16' and 84° 20' west longitude.

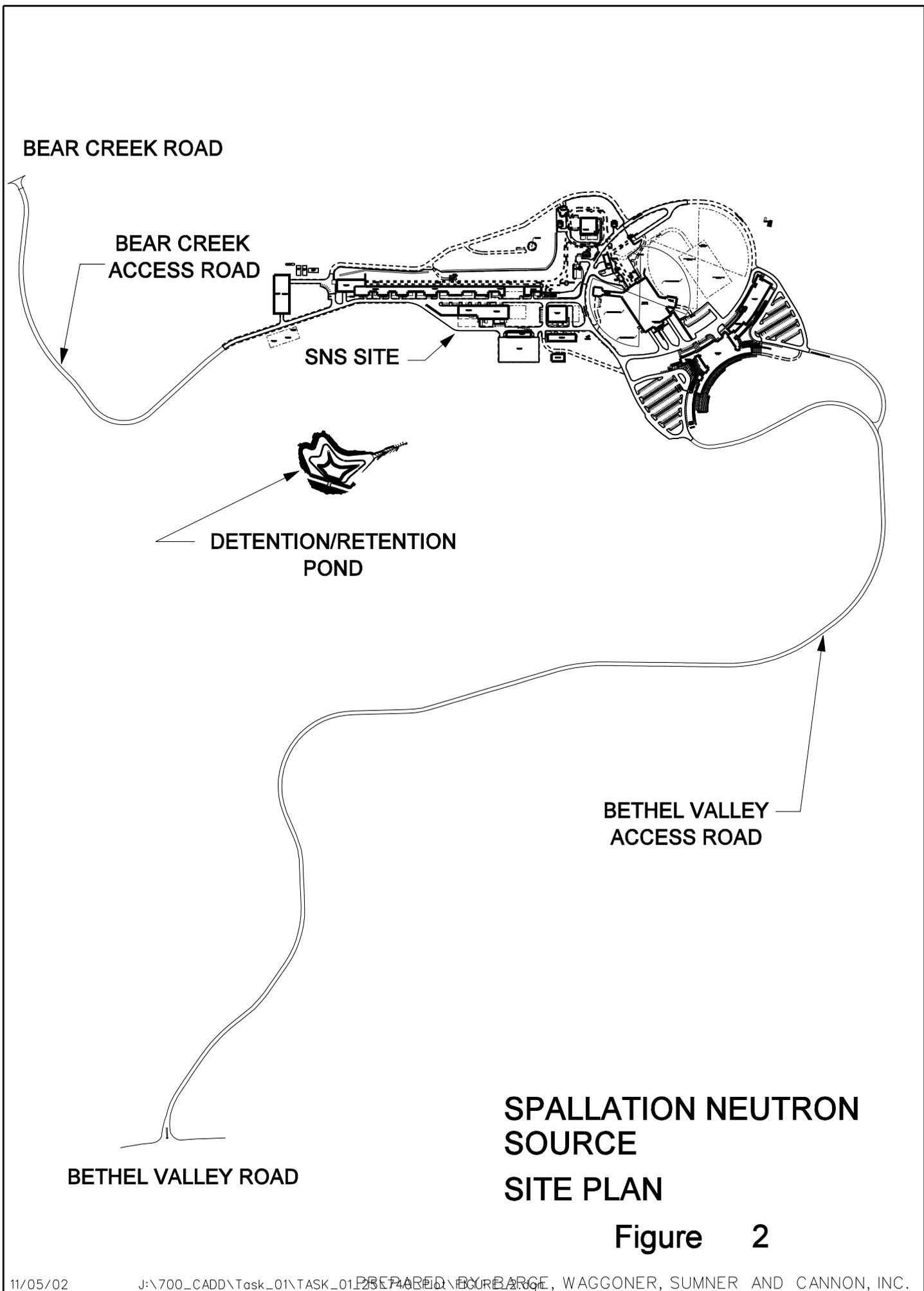
Figure 2 depicts the overall site plan, including the two access roads and the storm water detention ponds. Construction of the two access roads has been completed and

permanent vegetation established on all disturbed areas and therefore will be inspected as required to assure no erosion problems develop. The purpose of this plan is to ensure that construction activities on the SNS site are compliant with Tennessee General NPDES Permit No. TNR10-0000.



SPALLATION NEUTRON SOURCE LOCATION MAP

Figure 1



**SPALLATION NEUTRON
SOURCE
SITE PLAN**

Figure 2

This is a relatively long duration construction project; the projected completion date is December 2005. During this 5-year period there will be many phases of construction. Most phases will be conducted under the control of KJ/JV.

Knight Jacobs is contractually responsible for preparing a SWPPP for their activities on the site. This plan, prepared by Barge, Waggoner, Sumner and Cannon, Inc., meets that requirement.

With regard to project sequencing, the Bear Creek Access Road, the Bethel Valley Access Road and 24" Water Line, the Initial Site Preparation, and the Storm Water Detention Pond construction packages have been completed. Therefore, the limits of construction activities are within the core SNS site. Current and future construction packages will include those for site utilities, buildings and for the final land improvements package which will complete the site related construction and provide for final stabilization of the site.

1.2 Disturbed Area

The table below provides the originally disturbed area and area that remains disturbed on the site.

Description	Originally Disturbed Acreage	Less Stabilized Acreage	Remaining Disturbed Acreage
Core SNS site	90	24	66
Bear Creek Access	5.3	5.3	0
Bethel Valley Access	21.5	21.5	0
24" Water Line	1.8	1.8	0
Detention Pond	4	4	0
Totals	122.6	56.6	66

Approximately 11.5 acres that has been stabilized is either in gravel parking areas or slopes that have been temporarily stabilized.

Soils in the project site consist of a thin layer of topsoil overlaying red-brown and tan brown silty clays. The soils are very fine grained with the minus 200 sieve fraction (silt and clay) ranging from 28 to 98.8 percent. Soils of this type very easily go into solution.

1.3 Runoff Coefficients

The runoff coefficient was estimated using rational method coefficients for a 2-year storm event for the post development condition. The coefficient is 0.65.

1.4 Site Drawings and Discharge Information

Engineering drawings and specifications necessary to construct each of the various construction packages have been prepared. In addition to the details needed for construction, these drawings will include the following information:

- Existing and proposed drainage patterns and slopes;
- Areas of soil disturbance and areas not to be disturbed;
- Location of structural and non-structural erosion controls;
- Location of areas where stabilization practices will occur;
- Where such features exist at an individual project site, existing surface waters including wetlands, sinkholes and locations where storm water is discharged to a surface water; and
- Identification of outfall points for storm water discharge from the site and locations of outfall points intended for coverage under the general permit.

These drawings and specifications, prepared by an engineer licensed to practice in Tennessee, will be issued to each construction subcontractor, will be kept at the project site at all times, and by reference the latest revision of such become a part of this plan. Minor revisions and/or alterations of the drawings and specifications that do not significantly alter the scope of work and/or the erosion control measures will not constitute a need for a formal revision to this plan, especially since the drawings and specifications are incorporated into this plan by reference.

In addition to the construction plans for each package, a series of sketches have been developed that address in detail various components of the erosion control effort. The sketches are as follows:

Sketch Number	Title
C.SK.004	Erosion Control Measures - Existing Conditions
C.SK.005	Erosion Control Measures – Proposed Modifications and Additions
C.SK.006	Erosion Control Sediment Ponds

These sketches may be found in Appendix 5 of this report.

Certain important areas have been assigned an identifying number. These features such as sediment basins, discharge points, check dams, etc. have been marked in the field with the number placed on a carsonite marker, making it much easier to inspect and maintain these features.

Materials used for erosion and sediment control will conform to specifications provided in the following subsections and those shown on the drawings and in the technical specifications.

The soil-disturbing activity will consist of clearing and grubbing for the installation of the erosion and sediment control features, grade work, and excavating for stormwater utilities. The erosion and sediment controls being utilized include check dams, diversion swales, hay bales, regular and heavy duty silt fencing, temporary sediment traps, temporary and permanent vegetative cover, and routine inspections of erosion control measures.

2.0 Storm Water Runoff Controls

This section contains general criteria applicable to erosion controls and measures that will be implemented at each project site. The specific erosion control measures for each site are detailed on the engineering drawings and specifications.

2.1 Erosion and Sediment Controls General Criteria and Requirements

This section contains the general criteria and requirements upon which this plan and the design of controls in the engineering drawings and specifications were based.

1. The erosion and sediment controls are designed to retain sediment on site.
2. All control measures will be selected, installed and maintained in accordance with manufacturer's specifications and good engineering practice. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the control will be replaced or modified for site situations.
3. Clearing and grubbing shall be held to the minimum necessary for grading and equipment operation.
4. If sediment escapes the site, off-site accumulations of sediment that have not reached a stream will be removed at a frequency sufficient to minimize off-site impacts. Remediation/restoration of a stream will not take place without first consulting the TDEC Division of Water Pollution Control.
5. Sediment shall be removed from sediment traps, silt fences, sedimentation ponds (if such are shown on the engineering drawings) and other sediment controls as necessary but will be removed when the design capacity of the controls has been reduced by 50%.
6. Litter, construction debris, and construction chemicals that may be exposed to storm water shall be picked up prior to anticipated storm events (e. g., forecast by local weather reports) or otherwise prevented from becoming a pollutant source for storm water discharges. After use and final stabilization, silt fences and hay bales will be removed. Areas disturbed by removal of these measures will be permanently stabilized.

7. Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than 20 calendar days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed.
8. Construction will be sequenced to minimize the exposure time of graded or denuded areas.
9. Erosion and sediment control measures must be in place and functional before earth moving operations and concurrent with site clearing if not possible to do in advance (i.e. only clearing necessary to install erosion control measures should take place prior to installation of those measures, and the installation of those measures should take place as soon as possible to minimize the risk of sediment transport to receiving waters.) Temporary measures may be removed at the beginning of each workday, but must be replaced at the end of each workday.
10. The following records will be kept on site: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; and the dates when stabilization measures are initiated.

2.2 Stabilization Practices

This section contains a description of the interim and permanent stabilization practices, including a schedule for the various projects included under this plan.

Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven days after the construction activity in that portion of the site has temporarily or permanently ceased except in the following two situations:

- Where initiation of stabilization measures by the seventh day is precluded by snow cover or frozen ground conditions stabilization measures shall be initiated as soon as practicable, or
- Where construction activity on a portion of the site is temporarily ceased, and earth-moving activities will be resumed within 15 days, temporary stabilization measures do not have to be initiated on that part of the site.

2.2.1 Permanent Vegetative Cover

Temporary or permanent soil stabilization shall be accomplished within 15 days after final grading or other earthwork. Permanent stabilization with perennial vegetation (using native herbaceous and woody plants where practicable) or other permanently stable, non-eroding surface will replace any temporary measure as soon as practicable.

For the projects covered under this plan, establishing permanent vegetative cover will be accomplished by seeding with Kentucky 31 Fescue, wildflowers or warm season native grasses or equivalent at an appropriate rate.

2.2.2 Temporary Vegetative Cover

Establishing temporary vegetative cover will be accomplished by seeding with Annual Ryegrass or equivalent at an appropriate rate.

2.2.3 Construction Scheduling and Sequencing

Appendix 2 contains the current construction schedule for the various construction packages covered under this plan. All dates are subject to change based on a variety of conditions, including but not limited to weather and funding limitations. Minor alterations to the schedule will not constitute a need to make a formal revision to this plan.

No grading or other earth disturbing activities will take place between the start date and the date erosion control measures are in place. Only site layout, equipment and material delivery and installation of erosion control measures and other non-disturbing activities will take place prior to installation of the measures.

Construction will be sequenced such that all erosion control measures shown on the engineering plans will be installed prior to disturbance of the particular area that they are intended to serve. KJ/JV shall have the responsibility to ensure that construction sequencing is done in such a manner to maximize the effectiveness of the erosion control measures and to remain in compliance with the provisions of the General Permit.

2.3 Structural Practices

This section describes the structural features that will be installed to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable.

Engineering drawings and specifications packages for each project and the sketches called out in Section 1.4 show the locations, describe, and provide details for the structural measures for each project. Structural controls shall not be placed in streams or wetlands.

The general design criteria that were used in the design of structural measures are as follows:

1. Erosion and sediment control measures were designed according to the size and slope of disturbed or drainage areas to detain runoff and trap sediment. The controls were designed to control the rainfall and runoff from a 2-year, 24-hour storm with a value of 3.4 inches in 24 hours. A rain gauge is located on the east end of the ORNL campus near the 7000 area. This gauge is close enough to each project site to meet the requirement that a gauge be kept on site.
2. For common drainage locations that serve an area of 10 acres or more disturbed at one time, a temporary (or permanent) sediment basin that provides storage for

a calculated volume of runoff from the 2-year, 24-hour storm must be installed. At the time of this writing, a total of 13 sediment basins or traps are in place including those identified on as features on Sketch C.SK.065 as Ponds 1 and 2 as well as sediment traps 4000A through 4011A.

3. Discharges from sediment basins and traps must be through a pipe or lined or well grassed channel so that the discharge does not cause erosion.
4. Muddy water to be pumped from excavation and work areas must be held in settling basins, filtered or directed to Ponds 1 or 2 prior to its discharge into surface waters. Such water must be discharged through a pipe or lined or well grassed channel or other equivalent means so that the discharge does not cause erosion and sedimentation.

2.4 Storm Water Management

The SNS site is located on the DOE owned Oak Ridge Reservation and therefore is not subject to local storm water management ordinances that require storm water detention. However, two permanent erosion and sediment control and storm water detention basins have been constructed (Ponds 1 and 2). Virtually all post-development flows from impervious surfaces will flow into these basins. The basins are sized to contain sediment from the site during construction and to detain storm water based upon a 10-year pre-development storm and a 25-year post-development storm. The outfall from Pond 1 has been piped to enter White Oak Creek at a point just downstream of the White Oak Creek headwaters monitoring station according to the requirements contained in the Final Environmental Impact Statement for the SNS project. Discharge from Pond 2 enters an unnamed tributary of White Oak Creek. Other permanent measures include underground storm drainage piping, grassed, and rip-rapped swales and permanent stabilization of disturbed areas.

Velocity dissipation devices have been placed at point source storm water discharge locations and along outfall channels as appropriate to provide non-erosive velocity flow from the discharge structure to any stream so that the natural, physical and biological characteristics and functions are maintained and protected. The locations and details of these measures are shown on the engineering drawings for each project and in the sketches called out in Section 1.4.

2.5 Other Items Needing Control

No solid materials, including building materials, shall be discharged to waters of the State under the projects covered by this plan.

Off-site tracking of sediments and the generation of dust shall be minimized. Each contractor for each project under this plan shall inspect trucks and other equipment leaving the site and remove mud and other debris from the vehicles or equipment prior to leaving the project site such that mud is not tracked on off-site roads, parking areas and other

surfaces. If such tracking does inadvertently take place, the contractor will take immediate action to clean and remove the tracked materials. Dust during earth moving operations or movement of equipment across the site or on any project site area not yet paved will be minimized by watering. Each contractor will maintain access to a watering truck or other water source for this purpose.

The construction materials for projects expected to be stored on-site will be limited to the extent possible. Earthwork operations will generally balance on each site and there will generally be no off-site storage of earth. All bulk materials (base stone, asphalt, sand, etc.) will be placed or used as soon as practical after delivery. Bagged material that can go into solution or be carried by water, such as mortar mix, will be kept in unopened bags until used, and stacks of unused mortar and other materials will be covered with plastic. Liquids such as curing compounds, etc., will be stored in closed containers (where possible under cover) and will be dispensed in specialized areas with spill containment measures in place.

All construction debris and waste materials will be removed from the site in an expeditious manner and disposed of in the appropriate Oak Ridge Reservation landfill.

All bulk materials will be kept within the perimeter of the erosion control measures. Sand and other loose fine-grained material will be stored at a safe distance from surface water features, including wet weather conveyances. If necessary, erosion and transport of these materials will be controlled by installation of filter barriers (silt fence, hay bales, etc.) down slope of the materials, or by covering with tarps, plastic sheeting, etc.

Additional requirements for storage of materials and spill prevention and response for projects under this plan are set forth in the individual subcontract documents (Section H, Environmental, Safety, and Health Plan).

Given its location on the crest of Chestnut Ridge, storm water sources from areas outside the site covered under this plan do not present hazards to the SNS site.

2.6 Local Government Requirements

The DOE owned Oak Ridge Reservation where the SNS site is located is not subject to local government sediment and erosion control requirements due to Federal ownership of the property.

3.0 Maintenance

Inspections of all erosion control measures shall take place as set forth in Section 4.

Sediment shall be removed from sediment traps, silt fences, sedimentation ponds if inspections reveal that the design capacity of the controls has been reduced by 50%. For

example, if sediment has been deposited to ½ the height of a silt fence, the sediment must be removed or the fence replaced.

Based on the results of the inspections, any inadequate control measure or control measures in disrepair shall be replaced or modified and/ or repaired such that they function as originally designed and installed before the next rain event if possible, but in no case more than seven days after the need is identified. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable.

4.0 Inspections

Qualified personnel shall be identified by KJ/JV to inspect disturbed areas of the construction site, areas used for storage of materials that are exposed to precipitation that have not been finally stabilized, structural control measures, storm water outfalls, and locations where vehicles enter or exit the site at least once every 7 calendar days, before anticipated storm events (or series of storm events such as intermittent showers over one or more days) and within 24 hours of the end of a storm that is 0.5 inch or greater of total precipitation within a 24-hour period.

Inspections and associated necessary maintenance and repairs done 60 hours before a rain event constitute compliance with “before anticipated storm events” and inspections and repairs on Friday meet the requirement for rain events over the weekend. When the project site has been finally or temporarily stabilized, prior to the submission of a Notice of Termination of coverage, or runoff is unlikely due to winter conditions (snow cover, ice, or frozen ground), such inspections have to be conducted once per month.

Each inspection shall be documented using the form found in Appendix 1 or its successors if the form is updated.

4.1 Pollutants

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 drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure they are operating correctly. Discharge locations or points shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected if possible. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.

4.2 Plan Revisions

This SWPPP shall be amended as follows:

1. Whenever there is a change in the scope of the project, which would be expected to have a significant effect on the discharge of pollutants to the waters of the State and which has not otherwise been addressed by the plan;
2. Whenever inspections or investigations by site operators, local, State or Federal officials indicate the plan is proving ineffective in eliminating or significantly minimizing pollutants or is otherwise not achieving the general objectives of controlling pollutants in storm water discharges associated with construction activities;
3. To identify a new contractor and /or subcontractor that will implement a measure of the SWPPP; and
4. To include measures necessary to prevent a negative impact to legally protected state or federally listed or proposed threatened or endangered aquatic fauna.

This plan and/or the engineering drawings and specifications shall be revised or amended no later than 14 calendar days following inspections that show that the planned measures are not effectively preventing pollution. Such modifications shall provide for timely implementation of any changes to the plan in no case later than 21 calendar days following the inspection.

4.3 Reports

A specific individual experienced with the installation and maintenance of erosion control measures and familiar with the provisions of this plan and the engineering drawings and specifications shall be designated to be responsible for erosion and sediment controls on the site. The inspection report to be used in summarizing the scope of an inspection is provided in Appendix 1. Each inspection performed shall be made and retained as part of the storm water plan for at least three years from the date that the site is finally stabilized. At a minimum the inspection report shall include the scope of the inspection, name(s) and title of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with Section 3. Such reports shall identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report shall contain evidence that the facility is in compliance with the storm water plan. The report shall be signed by the individual responsible for erosion and sediment controls and the person who conducted the inspection.

4.4 Right of Entry

The permittee shall allow authorized representatives of the U. S. EPA, the Director or an authorized representative of the Director of the Division of Water Pollution Control upon presentation of credentials and other documents as may be required by law:

1. To enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. To have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
3. To inspect any facilities or equipment (including monitoring and control equipment).

5.0 Non-Storm Water Discharges

Non-storm water discharges that may be included in one or more of the projects in this plan include minor dewatering of work areas of collected storm water and water used to control dust.

Dewatering of work areas shall be accomplished in accordance with Section 2.3, Item 4 of this plan. Water used to control dust will be applied in such quantities and in such a manner as to not cause runoff.

6.0 Record Keeping and Reporting

Records of checks and repairs will be maintained on site.

Records and information resulting from the monitoring activities and this plan (including any revisions or amendments) will be retained for a minimum of 3 years from the date the Notice of Termination (NOT) is filed, or longer if requested by TDEC Division of Water Pollution Control.

The discharge of hazardous substances or oil in the storm water discharges from any of the project sites shall be prevented or minimized in accordance with subcontract documents (Section H - Environment, Safety, and Health Plan). Coverage under this permit does not relieve the permittee or the contractor of the reporting requirements of 40 CFR 117 and 40 CFR 302. The following actions will take place where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period:

1. KJ/JV will immediately report releases to UT-Battelle.
2. The ORNL Lab Shift Supervisor (LSS) is required to notify the National Response Center (NRC) (800-424-8802) and the Tennessee Emergency Management Agency (emergencies 800-262-3300, non-emergencies 800-262-3400) in accordance with

the requirements of 40 CFR 117 and 40 CFR 302 as soon as he or she has knowledge of the discharge.

3. KJ/JV shall submit within 14 calendar days of knowledge of the release a written description of the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, what actions were taken to mitigate effects of the release, and steps to be taken to minimize the chance of future occurrences, to the appropriate Environmental Assistance Center at the following address

TN Department of Environment and Conservation
Division of Water Pollution Control
2700 Middlebrook Pike
Knoxville, TN 37921

4. This plan will be modified within 14 calendar days of knowledge of the release to provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan will be reviewed to identify measures to prevent reoccurrence of such releases and to respond to releases, and the plan will be modified where appropriate.

7.0 Compliance With Permit Provisions

All construction activities shall be carried out in conformance with this plan, the engineering drawings and specifications and in accordance with the provisions of the TDEC permits.

The operator shall take all reasonable steps to minimize any adverse impact to the waters of the State, including such accelerated or additional monitoring as necessary to determine the nature and impact of the discharge. It shall not be a defense for the operator in an enforcement action that it would have been necessary to halt or reduce the construction activity in order to maintain compliance.

KJ/JV shall post a notice near the main entrance of the project site with the following information:

1. A copy of the Notice of Coverage (NOC) with the NPDES permit number for the project;
2. The name and telephone number of a local contract person representing KJ/JV that is responsible for implementing the provisions of this plan;
3. A brief description of the project; and
4. The location of the SWPPP if the site is inactive or does not have an on-site location to store the plan.

8.0 Summary and Termination of Coverage

This plan recognizes the importance of sediment migration and control. Stormwater runoff and sedimentation control will be accomplished through the following:

- ☞ Minimizing the size of the disturbed areas;
- ☞ Filtering the runoff from the disturbed areas through silt fence, temporary sediment traps and check bales;
- ☞ Enhanced inspection and reporting tools; and
- ☞ Stabilizing all disturbed areas.

Storm water management and erosion control structures will be maintained during construction activities and for the entire project duration. The structures are specifically designed to minimize the amount of soil, which may migrate from the site. It is concluded that the plan, as developed, revised, and amended will be an effective means of controlling erosion.

Operators wishing to terminate coverage under the General Permit TNR10-0000 must submit a NOT in accordance with Part VIII of the General Permit. The NOT form can be found in Appendix 2. KJ/JV and/or UT-Battelle will initiate submission of the NOT after completion of construction activities and final stabilization of the.

Appendix 1 – Inspection Form

Construction Site Erosion Controls Measures Inspection Form

Project: Spallation Neutron Source

INSPECTED BY: _____ Inspection Date: ___/___/___

All sediment and erosion control measures shall be inspected before anticipated storm events (or serious of storm events such as intermittent showers over one or more days), and within 24 hours after the end of a storm event of 0.5 inches or greater, and at least once every fourteen calendar days. Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event if possible, but in no case more than seven days after the need is identified.

Questions	Yes	No	NA	COMMENTS
1. Are silt fencing and hay bales in good condition (remaining sediment-trapping capacity of "at least" 50%; no signs of undercutting or bypassing materials, bale materials and bindings in good shape)?				
2. Are previously planted and mulched areas in good condition (i.e., no replanting or re-mulching is necessary)?				
3. If stored materials that can contaminate stormwater (oil, hazardous materials, bulk solids, etc.) are on site, are those materials stored properly?				
4. Are spill kits complete and locations appropriate and accessible (for stored materials, vehicles, etc.)?				
5. Are streams and wetlands free of significant deposits of "newly deposited or previously unnoticed" construction-derived sediment and debris?				
6. Are construction site run-on controls (berms, channels, etc.) in good condition and effective?				
7. Are sediment basins and traps in good condition (adequate remaining capacity of "at least" 50%; inlets and discharges are free of debris, no erosion of dams or at points of discharge, etc.)?				
8. Are culverts and stormwater inlets free of debris?				
9. Have stabilization measures been initiated as soon as practicable, but in no case more than seven days after the construction activity has temporarily or permanently ceased, unless construction activities will resume within 15 days?				
10. Are there any anticipated storm events forecasted for the area, (inspections within 60 hours constitute compliance) where inspections must be completed?				
11. Do outfall points (where discharges from the site enter streams or unprotected wet weather conveyances) look acceptable (e.g., are erosion control measures effective at preventing significant impacts to receiving waters)?				
12. Have inadequate or erosion control measures in disrepair been replaced, modified or repaired before the next rain event if possible, but in no case more than 7 days after the need is identified by the results of the inspection?				
13. Are ingress and egress points to the site in good condition (significant amounts of sediment are not being tracked off site)?				
14. If stormwater discharges are present during the inspection, are they free of distinctly visible floating scum, oil or other matter?				

Appendix 2
Construction Scheduling

ITEM	Forecasted Start	Forecasted Finish						
			FY02	FY03	FY04	FY05	FY06	FY07
SIT			Site Work					
ST	01OCT02*	31MAR03		Final Site Grading				
ST	20MAR03*	30JUN05		Final Paved Roads, Parking & Landscaping				
SITU			Site Utilities					
ST	22OCT01A	17FEB03		TVA SNS Substation Construction				
ST	14JAN02	09OCT02		S1038 - Yard Piping & Electrical				
ST	29APR02*	22JAN03		Central Exhaust Fac. & PW System Construction				
FELK			FELK - FE Bldg, Linac Tunnel, Klystron Bldg					
ST	28SEP01A	14JAN03		FEB, Linac, Klystron General Construction				
RING			Ring & Beam Transfer Facilities					
ST	10DEC01	19AUG02		HEBT, Ring & RTBT Tunnel Substructure				
ST	01JAN02	29AUG03		HEBT, Ring & RTBT Tunnel General Const				
DUMPS			Linac, Ring Injection & Ring Extraction Dumps					
ST	01JAN02	02DEC03		RID, RED, Linac Dump Construction				
Start Date 25FEB97 Finish Date 30JUN05 Data Date 01DEC01 Run Date 25JAN02 16:30 © Primavera Systems, Inc.				Conventional Facilities Summary of Project Schedule				

ITEM	Forecasted Start	Forecasted Finish							
			FY02	FY03	FY04	FY05	FY06	FY07	
TGT			Target Bldg & Instrument Hall						
ST	08SEP00A	02DEC02	Target Bldg Substructures Construction						
ST	29JUL02	06AUG04	Target Fac. - General Construction						
CUB			Central Utility Bldg.						
ST	10DEC01	06NOV02	CUB - General Construction						
CHLRF			CHL / RF Facility						
ST	06DEC01	24SEP02	CHL / RF - General Construction						
CLO			Central Lab & Office Bldg.						
ST	15JUL02	30JUN04	CLO - General Construction						

Appendix 3 – NOI and NOT Forms



**CONSTRUCTION ACTIVITY – STORM WATER DISCHARGES
NOTICE OF INTENT (NOI)**

Name of the construction project (site)		County/(ies)	Existing NPDES Permit No. (if site is already permitted) TNR
Street address (or description of location) and nearest city <input type="checkbox"/> Map attached (required)		Latitude	Longitude
Construction project (site) description		Start date	Estimated end date
Area to be disturbed (acres)			
Construction site owner/developer: legal name and mailing address, including zip code		Contact person, phone number and e-mail address	
Name(s) of stream(s), wetland(s), lake(s) or other waters of the state receiving storm water runoff from the construction site			
Do there appear to be streams <input type="checkbox"/> and/or wetlands <input type="checkbox"/> on the construction site? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If an Aquatic Resource Alteration Permit (ARAP) has been obtained for this site, provide the permit number.			
Has the Storm Water Pollution Prevention Plan (SWPPP) been developed? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Note that the NOI will be considered incomplete if you answered "No" to the above question. Submit the NOI when the SWPPP is developed.			
Permit Application Certification and Signature (must be signed by President, Vice-President or equivalent, or ranking elected official)			
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 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.			
Representative of owner/developer; print or type	Signature		Date

Certification for Contractor(s) (must be signed by President, Vice President or equivalent, or ranking elected official)

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 Notice of Intent, 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. 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 permit requirements.		
1. Company name of primary contractor; print or type	Signature by representative of primary contractor	Date
2. Company name of other contractor; print or type	Signature by representative of other contractor	Date
3. Company name of other contractor; print or type	Signature by representative of other contractor	Date

OFFICIAL STATE USE ONLY

Received Date	EAC	Permit Number TNR	Reviewer	Notice of Coverage Date
303d Receiving Stream	High Quality Water	Threatened and Endangered Aquatic Fauna		

CONSTRUCTION ACTIVITY – STORM WATER DISCHARGES NOTICE OF INTENT (NOI) - INSTRUCTIONS

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. This permit is required for storm water discharge(s) from construction sites that involve grubbing, clearing, grading or excavation of five or more acres of land. This form should be submitted at least 30 days prior to the start date of any land disturbing activities such as grubbing, clearing, grading or excavation.

Notice of Coverage. The Division will process your application and return to you a Notice of Coverage (NOC). Runoff from the construction site will not be permitted until the Division has prepared this NOC.

Completing 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.

Who must submit the NOI form? The NOI form must be signed by the “operator(s)” of the construction site. Operators will most likely include the developer of the site, and the primary contractor(s). “Operator” means any party associated with the construction project that meets either of the following two criteria: (1) the party has operational control over project specifications (including the ability to make modifications in specifications); or (2) the party has day-to-day operational control of those activities at a project site which are necessary to ensure compliance with the storm water pollution prevention plan or other permit conditions (e.g., they are authorized to direct workers at the site to carry out activities identified in the storm water pollution prevention plan or comply with other permit conditions). If a contractor has not been identified at the time the NOI is submitted by the developer, the contractor(s) must submit a separate NOI in order to obtain authorization under this permit. The contractor must include the NPDES permit number that is already assigned to the site, along with the name of the construction project and its location.

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 of the center of the site can be located on USGS quadrangle maps. The quadrangle maps can be obtained at 1-800-USA-MAPS, or at the Census Bureau Internet site: <http://www.census.gov/cgi-bin/gazetteer>. 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 and stockpiles.

Give name of the receiving stream. 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 storm water runoff drains. Note that the receiving water course may or 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 which 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 Assistance Center.

You must prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to submitting the NOI.

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 more information, contact your local Environmental Assistance Center at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form to the appropriate EAC below (call the toll-free number to determine), addressed with **Attention: Storm Water NOI Processing**.

Environmental Assistance Centers(EACs) - Division of Water Pollution Control - Addresses

EAC Office	Street Address	Zip Code	EAC Office	Street Address	Zip Code
Memphis	2510 Mt. Moriah Road STE E-645	38115-1520	Cookeville	1221 South Willow Ave.	38506
Jackson	362 Carriage House Drive	38305-2222	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	711 R S Gass Boulevard	37206	Knoxville	2700 Middlebrook Pike STE 220	37921
Columbia	2484 Park Plus Drive	38401	Johnson City	2305 Silverdale Road	37601



**NOTICE OF TERMINATION (NOT) – STORM WATER DISCHARGES
CONSTRUCTION ACTIVITY**

The purpose of this form is to notify the Tennessee Department of Environment and Conservation that you, as a permitted operator of storm water discharges from a construction activity, no longer have responsibilities related to erosion and sediment controls at the construction site. Type or print clearly, using ink and not markers or pencil.

NPDES Permit Number TNR _____ (Include the NPDES permit number for the site.)	
Name of the construction project (site)	
Street address (or description of location)	
Legal name of the construction site operator	
Mailing address	Telephone number and/or e-mail address ()
Have the storm water discharges associated with construction activity been eliminated? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If YES, provide the date at which the construction site was finally stabilized.	
Construction activities at the site continue, but my responsibilities with respect to the construction activities have ceased. <input type="checkbox"/> Yes <input type="checkbox"/> No	
If YES, provide the name, mailing address and telephone number of any new operators (for instance, an operator who has taken over your responsibilities) involved with soil disturbance at the construction site.	

Certification and Signature (must be signed by President, Vice President or equivalent, or 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 and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time to insure final stabilization is maintained, 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.

Printed name (construction site operator)	Signature	Date
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Permittees who are presently covered under the Tennessee General NPDES Permit to Discharge Storm Water Associated with Construction Activity must submit a Notice of Termination after completion of their construction activities and final stabilization of their portion of the site, or within 30 days after another operator has taken over all of their responsibilities at the site. A permittee cannot submit a NOT without final stabilization unless another party has agreed to assume responsibility for final stabilization of the site. A completed NOT form should be submitted to the local Division of Water Pollution Control Office address (see table below), and marked “**Storm Water Notice of Termination.**”

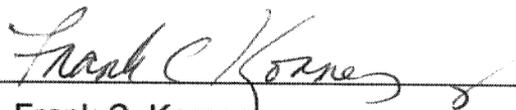
Environmental Assistance Centers (EACs) - Division of Water Pollution Control - Addresses
EAC Offices may be reached by dialing toll-free 1-888-891-TDEC.

EAC Office	Street Address	Zip Code	EAC Office	Street Address	Zip Code
Memphis	2510 Mt. Moriah Road STE E-645	38115-1520	Cookeville	1221 South Willow Ave.	38506
Jackson	362 Carriage House Drive	38305-2222	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	537 Brick Church Park Drive	37243-1550	Knoxville	2700 Middlebrook Pike STE 220	37921
Columbia	2484 Park Plus Drive	38401	Johnson City	2305 Silverdale Road	37601

**APPENDIX 4
CERTIFICATION AND APPROVAL**

We the undersigned operators for the referenced project certify that we have reviewed and hereby approve this plan and acknowledge that it is workable within the parameters of the NPDES General Permit No. TNR100000.

For UT Battelle:

By: 
Printed Name: Frank C. Kornegay
Title: SNS ES&H Manager
Date: 10-10-02

For DOE:

By: 
Printed Name: Les Price
Title: DOE Project Manager, SNS
Date: 10/15/02

For Knight Jacobs/Joint Venture

By: 
Printed Name: R. A. Davis
Title: SNS AE/CM Project Manager
Date: 10-10-02

APPENDIX 5 - SKETCHES