

CHEM-NUCLEAR SYSTEMS

INFORMATION
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DOCUMENT TITLE:

TRANSPORTATION AND EMERGENCY RESPONSE PLAN
FOR D.C. COOK UNIT 2 STEAM GENERATOR PROJECT
PROJECT NO. 46628

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1.0 SCOPE

1.1 Purpose

The purpose of this plan is to provide comprehensive coordination and control for the rail transportation of four steam generator lower assemblies (SGLAs) from the D.C. Cook Unit-2 Plant to the Chem-Nuclear System Consolidation Facility (CNCF), located in Barnwell, South Carolina and for the road transportation of the SGLAs from the CNCF to the Chem-Nuclear Barnwell Waste Management Facility (Barnwell Site) for ultimate disposal.

1.2 Applicability

This document is applicable to AEP, CNS, and CNS subcontractors who are involved in the rail and road transportation of the SGLAs. The transportation of the SGLAs will commence upon their departure from the rail load out area at D.C. Cook and conclude upon their arrival at the Barnwell Site.

2.0 REFERENCES

- 2.1 CNS Procedure, PL-CNSI-98-006, "Project Plan For The D.C. Cook Unit 2 Steam Generator Project, Project No. 46628"
- 2.2 CNS Procedure, CN-SF-020, "Minimum Industrial Safety Standards for Chem-Nuclear"
- 2.3 CNS Procedure, CN-AD-019, "Chem-Nuclear (CNSI) ALARA Policy"
- 2.4 CNS Procedure, CN-AD-020, "Chem-Nuclear (CNSI) Health Physics Policy Manual"
- 2.5 Title 49, Code of Federal Regulations
- 2.6 SC Department of Health and Environmental Control (DHEC) 61-83 Regulation
- 2.7 CNS Procedure, CN-EM-002, "CNSI Transportation Emergency Response Plan"
- 2.8 CNS Procedure, QP-32, "Quality Plan For The D.C. Cook Unit 2 Steam Generator Project, Project No. 46628"

- 2.9 CNS Procedure, WI-CNSI-98-025, "Work Instruction for the On-Site Preparation of the D.C. Cook Unit 2 Steam Generators, Project No. 46628"
- 2.10 AEP Radioactive Waste Shipping Procedures
- 2.11 CNS Procedure, WI-CNSI-98-027, "Work Instruction for the Shifting, Transfer, and Disposal of the D.C. Cook, Unit 2 Steam Generator, Project No. 46628"
- 2.12 CNS Procedure, S20-RP-036, "Chem-Nuclear Consolidation Facility Radioactive Material Receipt and Shipment Procedure"
- 2.13 CNS Procedure, CN-AD-005, "Notification and Incident Reporting Procedure"
- 2.14 CNS Procedure, S20-RP-003, "Health Physics Radwaste Receipt, Offload and Release Operations"
- 2.15 CNS Procedure, NS-AD-011, "Special Projects Quality Assurance Records"

3.0 RESPONSIBILITIES

Overall project responsibilities and staffing are set forth in Reference 2.1. Responsibilities relating to the transportation of the SGLAs are summarized below.

3.1 Chem-Nuclear Systems, L.L.C. (CNS)

- 3.1.1 The CNS Project Manager is responsible for the overall execution of the rail transportation of the SGLAs. The Project Manager will coordinate his actions with the AEP Project Manager, Rigging International Superintendent, Westinghouse Supervisor, and the CNCF Manager. The Project Manager shall also ensure adherence to the industrial safety and radiological standards of Reference 2.2, 2.3 and 2.4, shipper requirements of Reference 2.5 and Reference 2.6, and support emergency actions in Section 7.0 of this plan. The Project Manager may delegate certain responsibilities to the on-site CNS Project Engineer.
- 3.1.2 The CNS Radiological Controls Specialist (RCS) is responsible for providing health physics surveillance during

rail transportation of the SGLAs. The RCS will maintain the principles of ALARA per Reference 2.3 and radiological controls per Reference 2.4. This includes providing radiological training/indoctrination, maintaining the dosimetry program, and conducting radiation and contamination surveys.

The RCS is responsible for responding to actual or potential radiological emergencies which may occur during the shipment and for the implementation of the Emergency Response Plan per Section 7.0.

The RCS is also responsible for making periodic shipment status notifications, maintaining original and copies of shipping paperwork packages through out the shipment, and maintaining a daily log of events.

3.1.3 **CNS Barnwell Security** is responsible for serving as a central communication center during the shipment for routine and non-routine shipment status reports. In addition, Barnwell Security attends the 24-hour emergency response telephone number as required by part 172.600 of Reference 2.5 and Reference 2.7 prescribed Security's specific responsibilities in the event of an accident.

3.2 **Westinghouse Electric Company (Westinghouse)**. Westinghouse is responsible for providing rail transportation services including rail cars, rail saddles and tie-downs, idler/spacer cars, and passenger car. Westinghouse will also provide field supervision and labor to accompany the rail shipment and accomplish in-transit rotational shifting of the SGLAs to satisfy rail clearance requirements. Westinghouse will provide administrative support through route planning, shipment coordination with the railroad companies, and on-call engineering services. The Westinghouse Supervisor is responsible for making periodic shipment status notifications as may be directed to by the RCS.

3.3 **Lockwood Brothers (LBI)** LBI will provide rigging and heavy-haul services at the CNCF. This includes transfer of the SGLAs from the rail car to transporter, installation of transporter tie-downs and personnel barrier, transportation of the SGLAs from the CNCF to the Barnwell disposal facility, and off load of the SGLAs in the disposal trench. In addition to the transporter, LBI will provide a primer mover, portable crane, and hydraulic jacking equipment to support their scope of work.

- 3.4 Rail Carriers CSXT, Conrail, and Norfolk Southern will provide for the rail carriage of the shipment. This includes providing trained personnel, locomotives, and idler cars. During the shipment, the train crew has full responsibility for operating the train in accordance with established rail company procedures. Communications consistent with safe operation of the train shall be maintained with respect to Dispatch Control.

4.0 SPECIAL INSTRUCTIONS/REQUIREMENTS

4.1 General Requirements

- 4.1.1 The CNS Project Manager or CNS Project Engineer (or their designees) shall indicate completion of the requirements in Section 4.3 by initialing and dating in the spaces provided.
- 4.1.2 The shipment shall proceed only along the primary or alternate routes prescribed in Appendix B, except as provided in Section 5.0.
- 4.1.3 Communications capability between the shipment and CNS-Barnwell Security shall be maintained at all times. The Westinghouse Supervisor and the RCS accompanying the shipment shall each have a mobile phone, providing one level of redundancy. One of these individuals shall also be equipped with a mobile pager.
- 4.1.4 Communications between CNS and Westinghouse personnel accompanying the shipment in the passenger car and the engineers in the locomotive must be maintained at all times via portable radio or other means.
- 4.1.5 The Westinghouse Supervisor and RCS shall be cognizant of the approximate location of the shipment at all times in the event that emergency reporting is necessary.
- 4.1.6 CNS and subcontract personnel who accompany the shipment or who are involved in the in-transit shifting operations shall be trained by CNS. This training shall consist of radiation worker training, per Reference 2.4, as a prerequisite to issuance of thermoluminescent dosimetry (TLDs) by CNS. In addition, hazardous material training, per

Section 172 Subpart H of Reference 2.5, and familiarization training to this plan is also required.

- 4.1.7 Rail carrier personnel will not be issued TLDs unless radiation levels in normally occupied duty spaces exceed 2 mR/hr.
- 4.1.8 CNS's Quality Assurance Program will be implemented to assure items and activities meet or exceed established requirements. QA/QC requirements are contained in Reference 2.8.
- 4.1.9 Each rail shipment shall be consigned by the shipper as exclusive (sole) use as defined in Section 173.403 of Reference 2.5. No provisions for intermediate unloading are allowed. Once offered for transportation, each SGLA will remain secured to the bed of the rail car until arrival at the CNCF.
- 4.1.10 In transit rotational shifting of the SGLAs shall be conducted only by hazardous material trained personnel, under the direction of the Westinghouse Supervisor.
- 4.1.11 Applicable industrial safety requirements of Reference 2.2 shall be followed by all CNS employees and CNS subcontractors. Safety shoes shall be worn at all times, supplemented by hard hats and gloves during shifting operations. Eye protection shall be worn at anytime work is being done that could in any way cause an eye injury.
- 4.1.12 Due to the complexity of operations described in this plan, it may be necessary to perform steps in Sections 4.3 and 6.2 concurrently or out of sequence. Should this become necessary, the CNS Project Manager shall seek concurrence from the AEP Project Manager and Westinghouse Supervisor.

4.2 Special Instructions

- 4.2.1 Train speed is limited to a maximum of 30 mph.
- 4.2.2 No humping of train cars is permitted.
- 4.2.3 Special Train Service will be provided by the rail carriers for each shipment.

- 4.2.4 As a minimum, the train configuration for each shipment will consist of locomotive(s), empty idler car, SGLA rail car, empty idler car, SGLA rail car, and passenger car. Once the shipment arrives at Dunbarton, SC, the configuration may be changed under the direction of the train master to allow for its receipt at the CNCF.
- 4.2.5 As a minimum, a RCS, Westinghouse Supervisor and field technician will accompany each rail shipment while in transit.
- 4.2.6 During layover periods (i.e., overnight stops), security surveillance of the shipment shall be maintained. At rail yards, railroad security personnel will provide surveillance. During layovers at unsecured locations, privately contracted security surveillance will be provided by Westinghouse.
- 4.2.7 Passenger car personnel shall call Barnwell Site Security and notify them of status of the shipment as prescribed in Section 5.0.
- 4.2.8 The original copy of the completed shipping paperwork package shall be maintained by the RCS in the passenger car. A copy shall be maintained in the locomotive.

4.3 Prerequisites

Prior to each shipment leaving D.C. Cook, the following prerequisites shall be completed.

- 4.3.1 The SGLAs has been prepared for off site transportation per References 2.9. _____ /
- 4.3.2 Westinghouse has reviewed with each rail carrier the tie-down design and rotational shifting mechanisms. _____ /
- 4.3.3 Westinghouse and rail carriers have reviewed clearance data and confirmed field measurements where necessary. _____ /

4.3.4 Westinghouse rail cars have been inspected in accordance with Association of American Railroads (AAR) Interchange Field Manual and Federal Railroad Association (FRA) Manual Part 215.

_____ /

4.3.5 Train configuration meets the minimum requirements of 4.2.

_____ /

4.3.6 AEP's exemption request from US DOT has been approved and exemption certificate issued.

_____ /

4.3.7 AEP has received South Carolina Department of Health and Environmental Control (DHEC) approval for the transportation and disposal of the SGLAs.

_____ /

4.3.8 The RCS, equipped with dosimetry, radiation monitoring equipment, and spill kit is available to accompany the shipment.

_____ /

4.3.9 The Westinghouse Supervisor and field technician(s) are available to accompany the shipment.

_____ /

4.3.10 Communication equipment as prescribed in Section 4.1 is available and functional.

_____ /

4.3.11 AEP shipping documentation, surveys, inspections and notifications have been completed and distributed per Reference 2.10.

_____ /

4.3.12 AEP has completed the required marking, labeling and placarding of the shipment.

_____ /

4.3.13 CNS has completed the following training:

Radiation worker training as prescribed in Section 4.1 for personnel who will be issued CNS dosimetry, including review of CNS Radiation Work Permit.

_____ /

Hazardous material training as prescribed in Section 4.1 for all personnel accompanying the shipment.

_____ /

Pre-job briefing covering the requirements of this plan and Reference 2.11 for all personnel accompanying the shipment. In the case of the rail road personnel, the briefing will be conducted with the train master. Document briefings on Appendix A.

_____ /

4.3.14 CNS Licensing has completed courtesy notifications to the Office of Chief Radiological Health and Safety Officer (or equivalent) of the states along the primary and backup route (see Appendix B) at least 10 days prior to departure of the first shipment (3 days in advance for the subsequent shipment).

4.3.15 Pre-approval has been obtained for SC overweight and oversize permits.

_____ /

4.3.16 Inspection of the CNCF rail siding is completed.

_____ /

4.3.17 Photographs have been taken of the shipment to document the condition of DOT communication devices (labels, markings, and placards), and the installation of the rail saddles, tie-downs and personnel barrier.

_____ /

4.3.18 Quality Assurance surveillance by CNS has been completed.

_____ /

4.3.19 The Waybill has been completed.

_____ /

4.3.20 The following equipment/materials are available to accompany the shipment: shrink wrap repair kit (including

extension ladder), first aid kit, fire extinguishers, and hydraulic oil spill kit.

- 4.3.21 Shipment departure notifications have been made to the rail salvage companies Central Dispatcher (see Appendix D).

4.4 Dispatch of Shipment

- 4.4.1 Upon completion of all Section 4.3 pre-requisites, the CNS Project Manager will confirm readiness with the Westinghouse Supervisor.

- 4.4.2 Upon confirming readiness per 4.4.1 above, the CNS Project Manager will request the AEP Project Manager submit the Waybill to CSXT, thereby releasing the shipment for transport.

- 4.4.3 Upon release of the shipment, the Westinghouse Supervisor will review the schedule with CSXT for crew call, arrival at D.C. Cook, and estimated time of departure.

- 4.4.4 Upon the departure of the shipment from D.C. Cook, the CNS Project Manager shall make internal notifications to Barnwell Site Security, Barnwell Site Manager, and Licensing, and Vice President of Nuclear Services.

5.0 RAIL TRANSPORTATION

NOTE: IN THE EVENT OF AN EMERGENCY (TRAIN ACCIDENT, MEDICAL, RADIOLOGICAL), REFER TO SECTION 7.0.

NOTE: IN THE EVENT OF AN UNUSUAL EVENT (I.E., BAD WEATHER, TIE-DOWN EQUIPMENT FAILURE, TRAIN MECHANICAL BREAKDOWN, LOSS OF COMMUNICATIONS), REFER TO APPENDIX C.

- 5.1 The shipment shall proceed following the routing in Appendix B, observing the special instructions of Section 4.2. Passenger car

personnel must be cognizant of their approximate location in the event of an emergency.

5.2 Routine notifications of shipment status shall be made by the RCS or Westinghouse Supervisor to Barnwell Site Security at the following periodicity:

- Upon arrival at a scheduled layover location and upon departure from the same,
- At the completion of each shifting operation conducted per Reference 2.11,
- Upon change out of rail carrier,
- At a minimum, every 8 hours, and
- Approximately 4 hours prior to arrival at Dunbarton, SC.

The caller shall log shipment status calls on the daily log sheet.

5.3 Non-routine notifications of shipment status shall be made by the RCS or Westinghouse Supervisor to Barnwell Site Security in the event of the following:

- Train re-configuration (see Section 5.7),
- Train re-routing (see Section 5.8),
- Train delay (see Section 5.9), or
- Unusual event (see Appendix C).

5.4 Periodically during the shipment, the RCS or Westinghouse Supervisor shall perform a visual inspection of the DOT communication devices (i.e. placards, markings, and labels), tie-down mechanisms, personnel barrier, and shrink-wrap covering for evidence of change. This inspection should be while the train is stopped for other reasons such as crew turnover, rotational shifting operations, etc. so as not to interfere with or impede the progress of the shipment.

5.5 As required to obtain necessary clearances, shift the SGLAs per Reference 2.11.

5.6 When locomotive swap out occurs during the shipment, the RCS shall ensure that a copy of the shipping paperwork is in the cab of the on duty locomotive.

5.7 Should the railroad determine that the original configuration of train cars must be re-configured, the RCS shall re-survey the normally

occupied spaces of the passenger car and/or locomotive if such re-configuration positions a SGLA rail car(s) in closer proximity to these normally occupied spaces than the original configuration.

- 5.8 If due to unforeseen circumstances, the shipment requires re-routing while in transit, it shall be done so at the railroad's discretion and in accordance all other railroad procedures. Prior authorization from the Clearance Department may be required. Examples which may require re-routing include damaged rail, inoperable switches, accident involving different train, mud slides, etc.

NOTE: ANY RE-ROUTING SHOULD INCLUDE ONLY THOSE STATES WHICH HAVE RECEIVED PRIOR NOTIFICATION FROM CNS. THESE STATES ARE MICHIGAN, INDIANA, OHIO, KENTUCKY, ILLINOIS, TENNESSE, GEORGIA, NORTH CAROLINA, AND SOUTH CAROLINA.

- 5.9 If re-routing can not be accomplished within the states listed above, immediately notify Barwell Security.
- 5.10 In the event of any unplanned delay exceeding 2 hours in duration, notify Barnwell Site Security. If delayed for an indefinite period of time, a safe siding should be sought.
- 5.11 Upon arrival of the shipment at Dunbarton, SC, reconfigure the train, as necessary, to allow for receipt and transfer of the SGLAs at the CNCF.
- 5.12 Upon arrival of the shipment at the CNCF, transfer each SGLA to the heavy-haul transporter and install tie-downs per Reference 2.11.

6.0 ROAD TRANSPORTATION

6.1 Special Instructions

- 6.1.1 Escorts and traffic control will be provided along the haul route to isolate the shipment from commercial vehicle traffic and personnel not directly involved in the shipment and to allow the shipment to proceed without delay or interference.
- 6.1.2 Shipment escort from the CNCF to the Barnwell site will be provided by CNS Security and local law enforcement

agencies. CNS will provide personnel, equipment, and materials for traffic control. Traffic control personnel will be under the supervision of CNS Security.

- 6.1.3 Speed shall be limited to 5 mph or less.
- 6.1.4 Transportation shall occur only during daylight hours and shall be coordinated with Savannah River Site so as to avoid transportation during peak traffic periods.
- 6.1.5 Emergency response actions will be carried out in accordance with Reference 2.7.
- 6.1.6 The shipment will proceed over the most direct route; from the CNCF Main Gate, across SC Highway 64, over CNS's privately maintained gravel road, and across Osborne Rd to the Barnwell Site Main Gate.

6.2 Prerequisites

Prior to the shipment leaving the CNCF, the following prerequisites shall be completed.

- 6.2.1 Confirm with the Barnwell Site Manager that the site is prepared to receive the shipment. _____ /
- 6.2.2 Verify that traffic control personnel, equipment and supplies are ready to support the transportation. _____ /
- 6.2.3 Local law enforcement agencies and utility companies (as necessary) are available to support transportation. _____ /
- 6.2.4 A walkdown of the transportation route has been conducted to determine adequacy of clearances, condition of road surfaces, and absence of obstructions. _____ /
- 6.2.5 Shipping paperwork is stored in the cab of the prime mover, including CNCF outgoing radiological survey and SC DOT overweight/oversize permit(s). _____ /

6.2.6 Vehicle inspection of the transporter and prime mover has been conducted.

_____ /

6.2.7 RCS and personnel and equipment to recover inadvertent spills of hydraulic oil are available to accompany shipment.

_____ /

6.2.8 All DOT package and conveyance communications (marking, labeling, and placarding) have been verified.

_____ /

6.2.9 Transfer, tie-down, and inspection of the SGLA to the transporter has been completed (Step 5.11).

_____ /

6.3 Transport

6.3.1 Connect the prime mover to the transporter and with the required escorts and traffic controls in place, transport the SGLA from the CNCF to the Barnwell Site over the permitted transfer route.

6.3.2 Upon arrival at the Barnwell Site, perform site receipt inspections per Reference 2.14.

6.3.3 Complete off load and disposal operations per Reference 2.11.

7.0 EMERGENCY RESPONSE

The purpose of this section is to outline the actions to be taken by personnel accompanying the shipment in the event of :

- A Train Accident,
- A Medical Emergency, or
- A Radiological Emergency

In any event, all actions shall be made with the following priorities in mind:

- Public and Environmental Safety
- Personnel Safety
- Transport Protection

7.1 Train Accident

The accident may be the result of a collision or derailment of any portion of the train, which may also result in fire, personnel injury, and/or the release or potential release of hazardous or radioactive materials to the environment.

The RCS, or designee, will act as the on-site emergency coordinator and will be responsible for all assignments and follow-up actions until relieved by the local emergency response coordinator

7.1.1 Immediate Actions

The following immediate actions shall be taken to the extent possible. Personnel accompanying the shipment should not actively engage in combating the emergency. These actions should be left to Emergency Team First Responders who are properly trained and equipped.

NOTE: EMERGENCY RESPONSE PHONE NUMBERS ARE LISTED IN APPENDIX D.

Rescue Victims/Attend to the Injured:

First priority shall be given to assessing injuries to personnel and lending whatever medical treatment possible.

Extinguish Fires

Report the Emergency.

Railroad personnel shall notify the local rail dispatcher by radio of the accident and make other notifications as their emergency procedures prescribe.

CNS/Westinghouse personnel shall notify Barnwell Security of the accident.

NOTE: IN THE EVENT THAT RAIL ROAD PERSONNEL ARE INCAPACITATED, CNS/WESTINGHOUSE PERSONNEL SHALL MAKE NOTIFICATION TO THE RAIL DISPATCHER. CONVERSELY, IF CNS/WESTINGHOUSE PERSONNEL ARE

**INCAPACITATED, RAILROAD PERSONNEL SHALL
MAKE NOTIFICATION TO BARNWELL SECURITY.**

Secure the Scene:

Rail staff should shut down the train and evacuate cab to an upwind location.

Without entering the immediate hazard area, isolate the area and assure the safety of people and the environment. Keep general public away from the scene and outside the safety perimeter.

The RCS shall perform radiation and contamination surveys.

Assess the Situation:

Is there a fire, leak or spill?
What is the terrain like?
Who/what is at risk people, property or the environment?

7.1.2 Follow Up Actions

Make Follow-up Reports:

Report personnel injuries, equipment and property damage and general assessment of scene conditions.

The CNS Project Manager shall make notifications in accordance with Reference 2.13.

Lend Assistance to First Responders

Brief On-scene Commander of accident scene conditions,

Offer radiological technical assistance during immediate actions, and

- Offer recommendations on cleanup options.

The CNS Project Manager or designee, shall contact one or more of the salvage companies listed in Appendix D

should salvage of the SGLA be required as part of the follow-up actions

7.2 Medical Emergency

7.2.1 Immediate Actions:

Report the Emergency:

Notify the Rail Engineer, who in turn should notify rail dispatcher and/or local medical emergency response personnel.

Administer First Aid:

Transfer Victim to Emergency Medical Responders:

Coordinate with the rail Engineer regarding location for train to rendezvous with medical responders.

7.2.2 Follow Up Actions

Make Follow-Up Reports:

CNS/Westinghouse personnel shall notify Barnwell Security of the emergency.

The CNS Project Manager shall make notifications in accordance with Reference 2.13.

Assess Impact to Shipment:

AEP, CNS and Westinghouse management to assess the need to replace victim and if necessary make arrangements for the same.

The CNS Project Manager shall make notifications in accordance with Reference 2.13.

7.3 Radiological Emergency

If radiation or contamination surveys of the shipment indicate levels in excess of DOT limits or if levels increase significantly above pre-departure surveys (by a factor of 3 or more), perform the following under the direction of the RCS:

7.3.1 Immediate Actions

Report the Emergency

Notify the Rail Engineer and Barnwell Site Security.

Isolate the Area

Restrict access to railcar and maintain appropriate radiological controls to minimize personnel exposure.

Identify the source of contamination

From visual inspection and/or radiological survey, determine source of contamination. Determine if source is exterior to shell or has breach of shell occurred.

Isolate the Source

With whatever materials available, isolate/cover/seal the source to minimize further spread of contamination.

7.3.2 Follow-Up Actions

Take Supplemental Surveys:

Take additional surveys in vicinity of rail car to determine potential spread of contamination.

Make Follow-Up Reports

Update railroad, CNS and AEP management of on-scene conditions and make recommendations for clean up and recovery.

The CNS Project Manager shall make notifications in accordance with Reference 2.13.

Assess Impact to Shipment

Based on supplemental surveys and extent of repairs required, determine if shipment can continue or if a safe siding should be sought.

The CNS Project Manager shall make notifications in accordance with Reference 2.13.

8.0 RECORDS

Quality Assurance records generated as a result of this plan shall be maintained in accordance with Reference 2.15.

APPENDIX A
PRE-JOB BRIEFING SIGN-IN
(1 PAGE)

APPENDIX A

PRE-JOB BRIEF SIGN IN FORM

NAME	EMPLOYER	SIGNATURE	DATE

APPENDIX B
RAIL ROUTE
(2 PAGES)

APPENDIX B

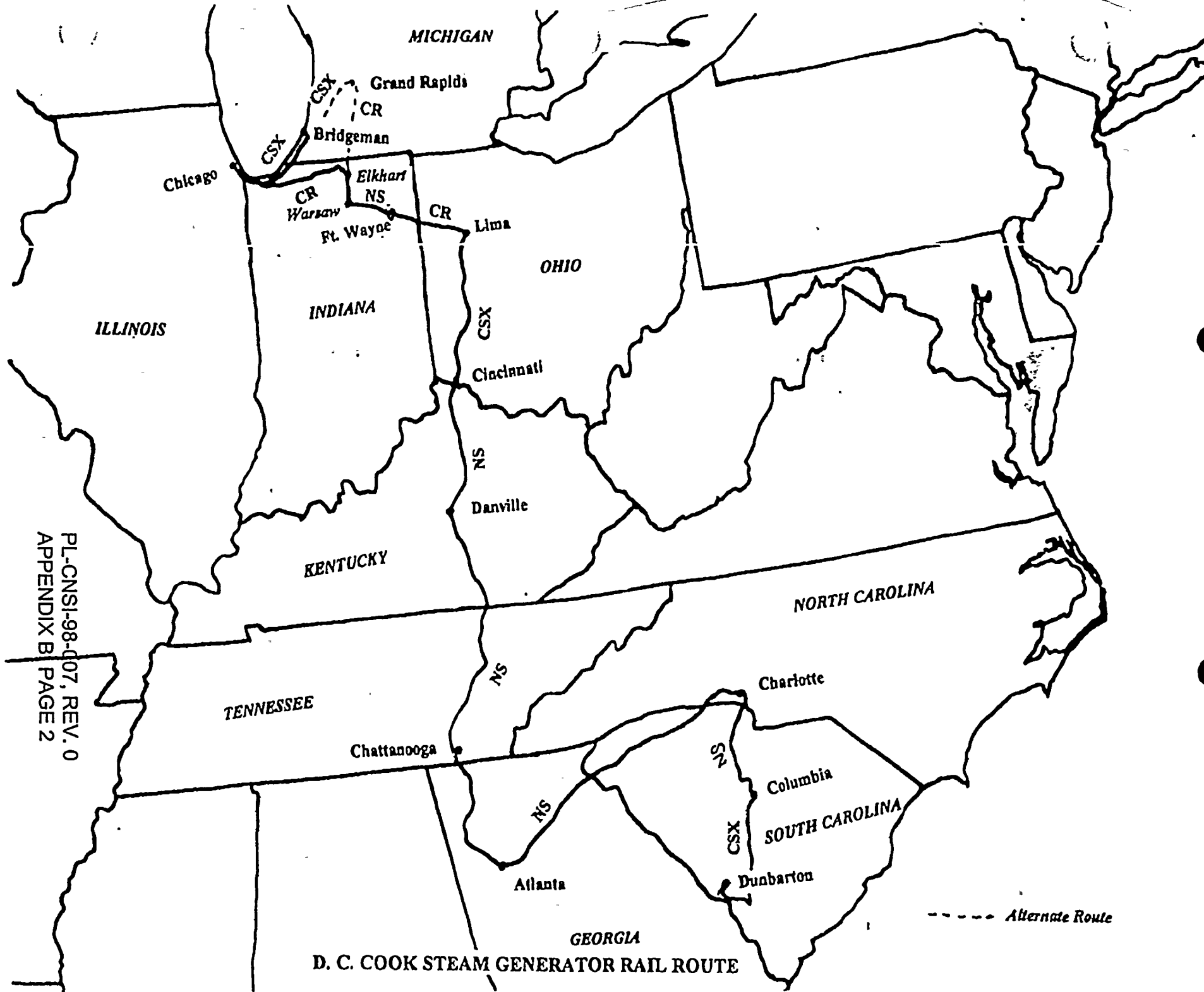
PRIMARY RAIL ROUTE

RAIL SEGMENT	RAIL CARRIER	RAIL SALVAGE COMPANY)
Bridgman to Chicago, IL	CSXT	Hulcher Services
Chicago to Warsaw, IN	CONRAIL	Hulcher Services
Warsaw to Fort Wayne, IN	NS	Hulcher Services
Fort Wayne to Lima, OH	CONRAIL	Hulcher Services
Lima to Cincinnati, OH	CSXT	Hulcher Services
Cincinnati to Danville, KY	NS	Hulcher Services
Danville to Chattanooga, TN	NS	Hulcher Services
Chattanooga to Atlanta, GA	NS	Hulcher Services
Atlanta to Charlotte, NC	NS	Hulcher Services
Charlotte to Columbia, SC	NS	Hulcher Services
Columbia to Dunbarton, SC	CSXT	Hulcher Services

ALTERNATE RAIL ROUTE

RAIL SEGMENT	RAIL CARRIER	RAIL SALVAGE COMPANY
Bridgman to Grand Rapids, MI	CSXT	Hulcher Services
Grand Rapids to Warsaw, IN	CONRAIL	Hulcher Services
Warsaw to Fort Wayne, IN	NS	Hulcher Services
Fort Wayne to Lima, OH	CONRAIL	Hulcher Services
Lima to Cincinnati, OH	CSXT	Hulcher Services
Cincinnati to Danville, KY	NS	Hulcher Services
Danville to Chattanooga, TN	NS	Hulcher Services
Chattanooga to Atlanta, GA	NS	Hulcher Services
Atlanta to Charlotte, NC	NS	Hulcher Services
Charlotte to Columbia, SC	NS	Hulcher Services
Columbia to Dunbarton, SC	CSXT	Hulcher Services

NOTE: Phone numbers for rail carriers and salvage companies are found in Appendix D.



APPENDIX C
UNUSUAL EVENTS
(2 PAGES)

APPENDIX C UNUSUAL EVENTS

Event	Actions
Bad Weather	<ol style="list-style-type: none"> 1. If weather conditions impact the safety of the rail shipment, as determined by the Train Master, seek safe shelter as directed by rail dispatcher and at discretion of the rail Engineer. 2. Notify Barnwell Site Security. 3. Consult with train crew and evaluate weather's potential impact on shipment integrity, arrival schedule, and crew's shipment surveillance capabilities. 4. Make follow-up report to AEP and CNS Management per Appendix D.
Loose tie-down cable(s)	<ol style="list-style-type: none"> 1. Loosen lock nut, rotate turnbuckle until slack in cable is taken up, and re-tighten locknuts. 2. Re-check remaining cables. 3. Continue transit
Tie-down cable, turnbuckle or shim stock failure	<ol style="list-style-type: none"> 1. Notify Barnwell Site Security. 2. Identify cause: Weld, cable hardware, or retaining pin failure, etc. 3. Consult with CNS Engineering. 4. Make field repairs as directed by Engineering, then continue transit. 5. If field repairs can not be made in timely manner, seek safe area as directed by the rail road. 6. Make follow-up report to AEP and CNS Management per Appendix D
Rotational shifting malfunction	<ol style="list-style-type: none"> 1. Notify Barnwell Site Security 2. Identify cause: Check for mechanical binding, power unit seals, hydraulic ram damage, etc. 3. Swap out hydraulic units components, as necessary. 4. If cause can not be immediately determined, consult with Westinghouse Engineering. 5. Make field repairs as directed by Engineering, then continue transit. 6. If field repairs can not be made in timely manner, seek safe area as directed by the rail road. 7. Make follow-up report to AEP and CNS Management per Appendix D
Shrink wrap damage	<ol style="list-style-type: none"> 1. Evaluate extent and cause of damage. 2. If surface of SGLA exposed, perform contamination survey of immediate area, log results. 3. Repair damage. 4. Take measures, depending on cause, to prevent reoccurrence. 5. Continue transit

**APPENDIX C
UNUSUAL EVENTS**

Event	Actions
Train mechanical breakdown	<ol style="list-style-type: none">1. Notify Barnwell Site Security2. If Westinghouse rail car involved, determine cause, have Westinghouse Supervisor facilitate effected repairs.3. If idler car or passenger car involved, consider removing SGLA cars to a safe area, as directed by the railroad.4. Make follow-up report to AEP and CNS Management per Appendix D.

APPENDIX D
EMERGENCY RESPONSE CALL LIST
(1 PAGE)

APPENDIX D

EMERGENCY NOTIFICATION LIST

Immediate Notifications (in the order listed):

1. CNS Barnwell Security: (803) 259-6069
2. State Emergency Contacts (see NOTE below)

NOTE: PER REFERENCE 2.7, BARNWELL SECURITY WILL MAKE VERBAL NOTIFICATIONS TO CNS MANAGEMENT INCLUDING CNS LICENSING. IN TURN, CNS LICENSING WILL MAKE VERBAL NOTIFICATIONS TO STATE EMERGENCY CONTACTS.

3. American Electric Power 800-424-9300
4. Westinghouse Electric (412) 374-4020
5. Rail Carrier (see NOTE below)

NOTE: NOTIFICATION TO THE COGNIZANT RAIL CARRIER (LISTED BELOW) SHALL ONLY BE MADE IN THE EVENT THAT ON-SITE RAILROAD PERSONNEL CAN NOT COMPLETE THE NOTIFICATION.

- | | |
|---|----------------|
| CSXT Police | 800-232-0144 |
| Conrail Superintendent of Transportation Operations | (313) 323-5806 |
| Norfolk Southern General Superintendent of Transportation | (404) 529-1785 |

RAIL SALVAGE COMPANY INFORMATION

1. Hulcher Services-Primary
Central Dispatch: 800-637-5471
2. R. J. Corman Rail Road-Alternate
Central Dispatch: 800-772-9091

AMERICAN ELECTRIC POWER
DONALD C. COOK NUCLEAR PLANT

STEAM GENERATOR DISPOSAL EXEMPTION REQUEST

ATTACHMENT 3

STRUCTURAL EVALUATION OF THE
D.C. COOK UNIT 2 SGLA PACKAGE

AMERICAN ELECTRIC POWER
DONALD C. COOK NUCLEAR PLANT

STEAM GENERATOR DISPOSAL EXEMPTION REQUEST

ATTACHMENT 6

PRELIMINARY WASTE CHARACTERIZATION