UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 8, 2002

MEMORANDUM TO: Melvyn N. Leach, Chief
Special Projects and Inspection Branch
Division of Fuel Cycle Safety
and Safeguards

THRU: Joseph G. Giitter, Chief **/RA/**
Special Projects Section
Special Projects and Inspection Branch, FCSS

FROM: Timothy C. Johnson **/RA/**
Senior Mechanical Systems Engineer
Special Projects Section
Special Projects and Inspection Branch, FCSS

SUBJECT: OCTOBER 3, 2002, MEETING SUMMARY: LOUISIANA ENERGY SERVICES PRE-APPLICATION MEETING ON SITE CHARACTERIZATION

On October 3, 2002, U.S. Nuclear Regulatory Commission (NRC) staff met with staff from Louisiana Energy Services (LES) to discuss the LES approach for site characterization of the proposed Hartsville, Tennessee site. These were pre-application discussions related to LES's planned submittal of an application for a gas centrifuge enrichment plant in January 2003. I am attaching the meeting summary for your use. This summary contains no proprietary or classified information.

Docket: 70-3103

Attachment: Louisiana Energy Services
Meeting Summary

cc: William Szymanski/DOE
Rod Krich/Exelon
James Curtiss/W&S
Mario Robles/USEC
Jerry Clift/Trousdale
Michael Marriotte/NIRS
Ed Nanney/Tenn

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NAME	TCJohnson:dw		KValloch		JGiitter	
DATE	10/ 07 /02		10/ 07 /02		10/ 08 /02	

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Louisiana Energy Services Pre-Application Meeting Summary

Dates: October 3, 2002

Place: U.S. Nuclear Regulatory Commission (NRC) offices; Rockville, MD

Attendees: See Attachment 1

Purpose:

The purpose of this meeting was to discuss with Louisiana Energy Services (LES) staff their approach for characterizing the proposed Hartsville, Tennessee, site. The meeting agenda is provided in Attachment 2. LES presentation handouts are provided in Attachment 3.

Discussion:

Following introductions, R. Krich confirmed that the license application is now scheduled to submitted in January 2003.

E. Maher then discussed the LES primary and secondary site selection criteria. He said that primary selection criteria included an acceptable seismology with accelerations of 0.04 to 0.08 g for a 500-year earthquake. LES also wanted a site with a moderate climate, an existing set of robust site characterization data with no previous contamination at the site. LES also wants redundant sources of electrical power and a plot with sufficient size to construct the needed facilities. LES also noted a natural gas pump station and natural gas pipelines located in the vicinity of the site. This operation will be addressed in the Integrated Safety Analysis.

E. Maher indicated that the Hartsville site was originally purchased by the Tennessee Valley Authority (TVA) for nuclear power plants in the late 1960's and consists of 1700 acres. Two units of Hartsville Plant A were 65 percent completed prior to TVA abandoning the project. Two units of Hartsville Plant B were 20 percent completed. From this site, the Four Lake Regional Industrial Development Authority (FLRIDA) purchased 552 acres. From the FLRIDA, LES plans to purchase 262 acres surrounding the Hartsville Plant B site for its gas centrifuge enrichment plant.

The LES site includes no surface water features. Small streams adjacent to the LES site, runoff, and groundwater drain south toward the Cumberland River. The site is outside of wetland areas and the 100- and 500-year floodplains. LES is proposing to use County-supplied water rather than groundwater to supply water needs. LES will be drilling 6 wells to verify groundwater quality, including radiological characteristics. Of the 9 wells referenced in the 1975 Hartsville nuclear plant environmental report, 3 still exist. New data will be compared to the data presented in 1975. Bedrock consists of shaley limestone that is considered adequate for foundation support. Little remediation work is expected for foundation construction.

Due to previous construction of the Hartsville nuclear plant, about 80 percent of the LES site has been previously altered. Only limited environmental impacts are expected. No rare, threatened, or endangered plant or animal species have been found on the LES site. LES plans to control erosion and release of sediments during construction activities and operations.

Previous studies have identified National Registry sites within the LES site, although Native American burial mounds have been found or suspected off-site nearer the Cumberland River. No known historical or archeological impacts are expected.

For the environmental justice evaluation, previous studies will need to be upgraded to be consistent with NRC guidance in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs." This analysis will be presented in the LES Environmental Report.

Existing documents that will be referenced in the Environmental Report include TVA documents applicable to the Hartsville nuclear plant licensing and environmental submittals, the March 2002 Environmental Assessment performed for the land transfer to FLRIDA, and the NRC safety evaluation report and Environmental Impact Statement for the Hartsville nuclear plants. NRC staff reminded LES that all references used will need to be publically available. E. Maher indicated that most of the Environmental Report will be based on existing data requiring at most minor updating. The socioeconomic, waste management, and noise sections will require major updates. LES indicated that it has begun to meet with U.S. Department of Energy staff on waste management issues relating to disposition of depleted uranium tails.

E. Maher discussed the need for several State of Tennessee permits. These include a National Pollutant Discharge Elimination System permit for waste and storm drainage, an air operating permit, a hazardous waste permit, and a possible landfill permit if previous Plant B construction areas need to be filled in. At this time, LES does not expect to demolish any existing structures on the site.

Action Items:

None

Attachments:
1. Attendee List
2. Meeting Notice and Agenda
3. LES Presentation Handouts

Louisiana Energy Services Pre-Application Meeting on
Site Characterization
Date: October 3, 2002

NAME	AFFILIATION	PHONE	EMAIL ADDRESS
TIM JOHNSON	NRC	301-415-7299	TCJ@NRC.GOV
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Rex Wescott	NRC	301-415-6722	RGW@NRC.GOV
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R M Krich	Exelon Nuclear	630-657-2813	rod.krich@exeloncorp.com

Attachment 1

Louisiana Energy Services Pre-Application Meeting on
Site Characterization
Date: October 3, 2002

NAME	AFFILIATION	PHONE	EMAIL ADDRESS
CHRIS ANDREWS	URENCO	+44-7880-781933	c.andrews@dial.pipex.com
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Joseph P. Mulherek	Public Citizen	202-454-5109	jmulherek@citizen.org
Edward F. Maher	Framatome-anp DE&S	(978) 568-2785	edward.maher@framatome-anp.com

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 9, 2002

MEETING NOTICE

Applicant:	Louisiana Energy Services Suite 200 1133 Connecticut Avenue, NW Washington, DC 20036
Docket:	70-3103
Date and Time:	October 3, 2002; 1:00 P.M.
Location:	U.S. Nuclear Regulatory Commission One White Flint North Building, Room O-7B4 11555 Rockville Pike Rockville, Maryland
Purpose:	To discuss site characterization information applicable to a gas centrifuge license application.
NRC Attendees:	M. Leach, J. Giitter, T. Johnson, J. Lieberman, D. Brown, S. Flanders, T. Harris, technical staff
Other Attendees:	P. Upson/LES; R. Krich/Exelon; C. Andrews/LES; E. Maher/LES; technical staff
Contact:	T. Johnson; 301-415-7299; tcj@nrc.gov Attendance at this meeting by other than those listed above should be made known via phone to above contact.
Category:	Category 1 Meeting: The public is invited to observe this meeting and will have one or more opportunities to communicate with the NRC after the business portion, but before the meeting is adjourned.

NOTE: NRC Meetings are open for interested members of the public to attend pursuant to the "Enhanced Public Participation in NRC Meetings; Policy Statement," 67 *Federal Register* 36920, May 28, 2002.

Portions of this meeting may be closed to members of the public due to the proprietary nature of information to be discussed pursuant to 10 CFR 2.790.

Attachment: Meeting agenda

Attachment 2

Louisiana Energy Services Pre-Application Meeting Agenda
October 3, 2002

___ Purpose/Introductions (TJohnson)

___ Site Characterization Approach

___ Summary and Conclusions

Hartsville Site Characterization

Edward F. Maher, Sc.D., CHP

October 3, 2002
Rockville, MD

Environmental Report

Attachment 3

Topics Covered

Site Selection Criteria

About the Hartsville, TN Site

Site Environmental Conditions

- Hydrology/Geology/Ecology
- Historical and Archeology
- Environmental Justice

Environmental Report (ER) Data Sources

Status of ER Data Collection

Permits Required

Environmental Report

Site Selection Criteria (Primary)

Acceptable Seismology (0.04-0.08 g)

Robust Site Characterization Data

Moderate Climate (construction)

Land Not Previously Contaminated

Redundant Electrical Power Supply

Size of Land Plot

Site Selection Criteria (Secondary)
Examples

Suitable Land Topography

Political/Public Support

Extant Nuclear Site

Availability of Skilled Workers

Good Transportation Routes

Good Quality Electrical Power

Disposal of Low-Level Waste

Site Selection Criteria (Secondary) Examples

Proximity of Hazardous Operations

Low-Cost Electrical Power

Acceptable Environmental Impact

Good Amenities for Workforce

Hartsville, Tennessee

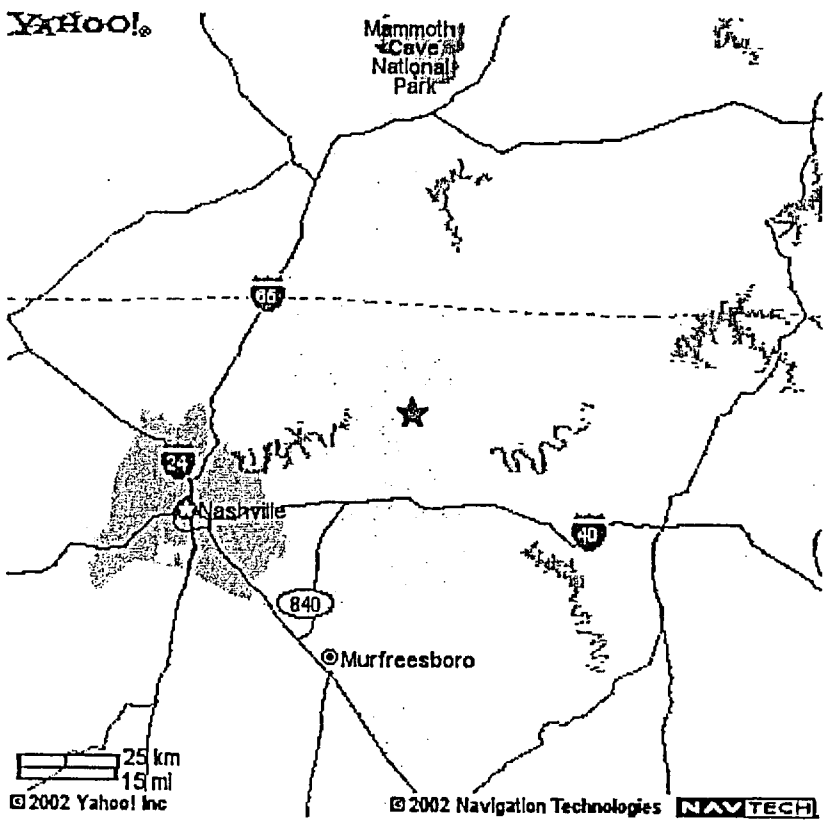
40 Miles NE of Nashville, TN

5 Miles NW of TVA Nuclear Plant Site

Trousdale County

Population: 2500

Near Cumberland River



Environmental Report

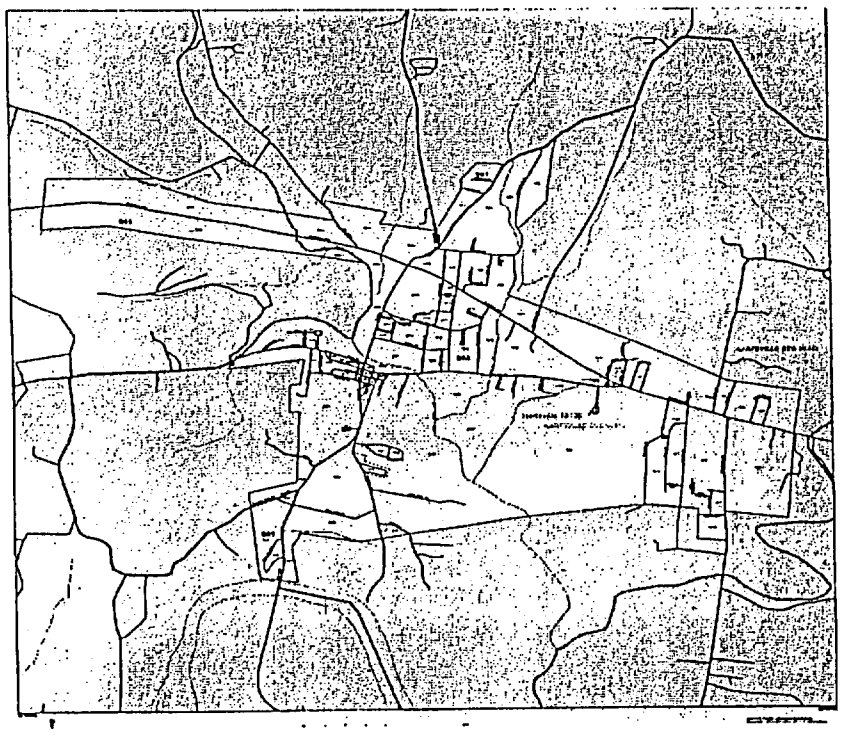
Hartsville, Tennessee

Technical Center

Utilities:

- Potable Water
- Sewer Service

Good Highway Access



Environmental Report

TVA Site at Hartsville

Purchased by TVA in Late 1960's

Proposed Site of Hartsville Nuclear Plants

- Plant A (2 units) was 65% completed
- Plant B (2 units) was 20% completed

Project Abandoned in Early 1980's

Still Under Custodial Care of TVA

552 Acres Transferred to Four Lake Regional Industrial Development Authority

Environmental Report

PROPOSED

262-ACRE SITE

ENVIRONMENTAL

CHARACTERISTICS

Environmental Report

Site Hydrology

No surface water bodies on the site

Adjacent small streams, runoff, and ground water drain toward the Cumberland River

Ground water flow controlled by infrequent joints in relatively impermeable bedrock

Unremarkable site hydrogeology

Hydrologic Baseline

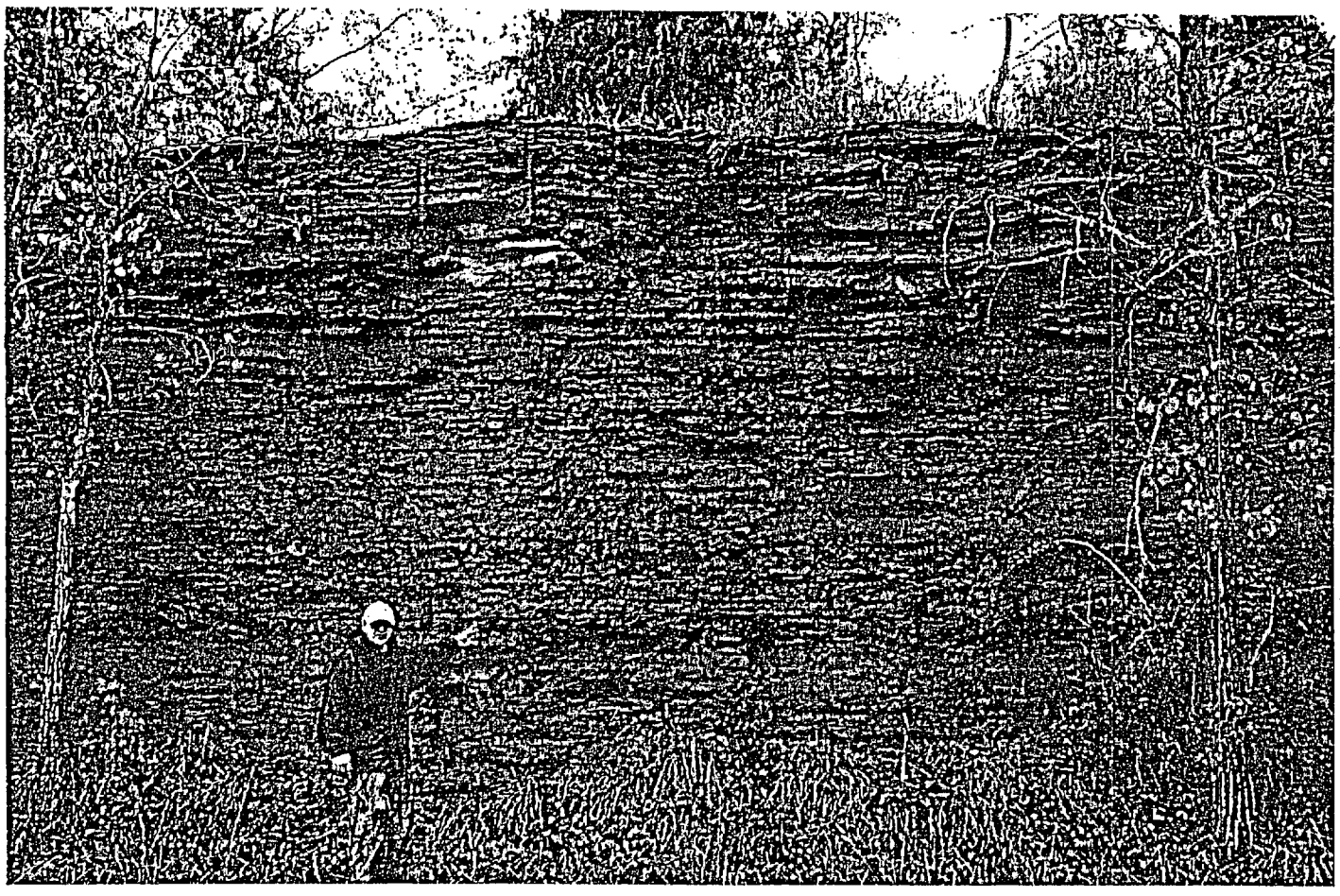
Groundwater Hydrology to be Verified

- 9 wells with level & quality data (1975)
- ER (1975) found no water quality issues
- Install 6 monitoring wells
- Sample wells weekly then monthly
- ER (1975) test parameters, plus radiological and primary drinking water standards
- Compare new data to 1975 data

Site Geology

- Most soil thin or removed from the site
- Bedrock at or near the ground surface
- Massive shaley limestone fully adequate for foundation support
- Limited pockets of weathering may require minor remedial work for foundation construction
- Simple and adequate site geology

Site Geology (continued)



Ecological Impacts

Ecological Impacts Limited due to:

- Previous site development (80% altered)
- No outstanding natural communities
- No proposed development within floodplain and wetland areas
- Preservation of riparian areas

Ecological Impacts (continued)

Ecological Impacts Limited due to:

- No rare, threatened or endangered species (animals or plants) have been found
- Use of Best Management Practices by LES relative to sediment and erosion control
- No industrial discharge to navigable waterway being proposed
- Little or no impact expected from construction or operation

Historical and Archeological Impacts

Previous studies did not indicate National Registry sites within 262 acre site

Native American burial mounds were found and/or suspected off-site

Majority of 262 acres has previously been altered for plant construction

No known historical or archeological impacts expected

Environmental Justice (EJ)

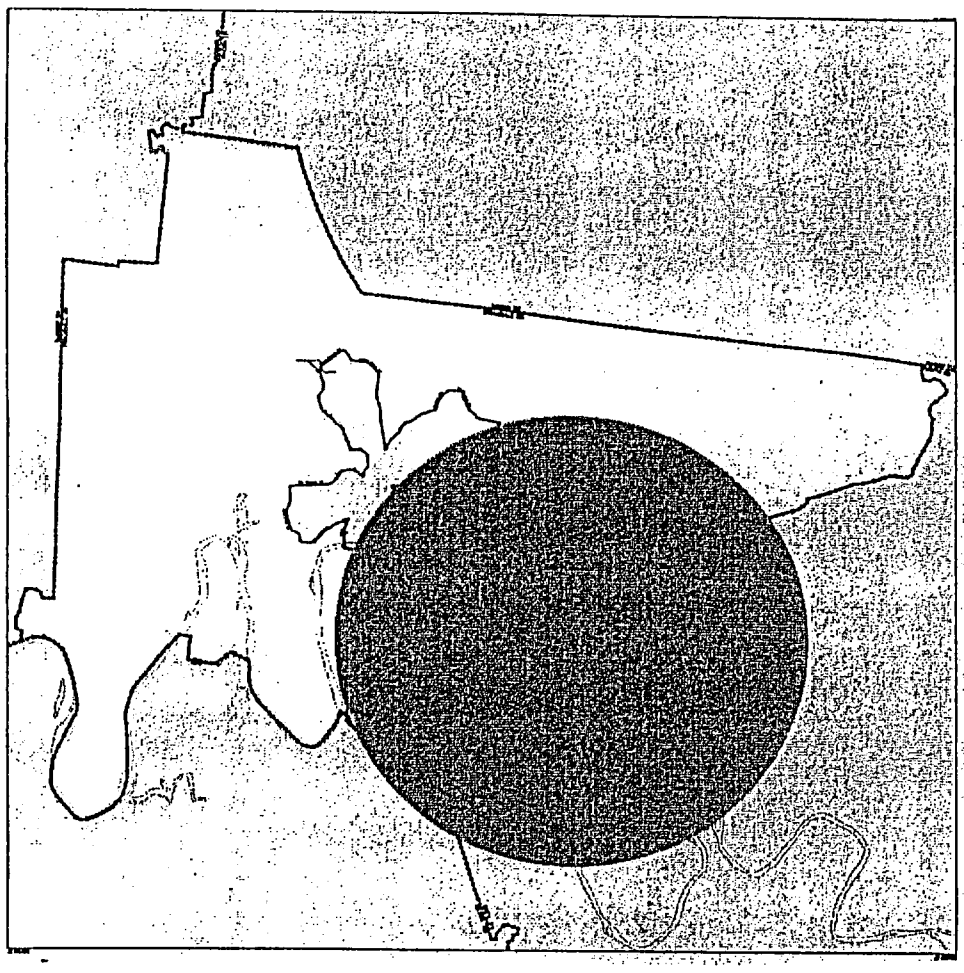
TVA 2002 Environmental Assessment (EA)

- Used county data only; no census areas
- Not consistent with NUREG 1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs
- Found no EJ issues

EJ Re-Evaluation

- Two census areas (901 & 902)
- 50 mi^2 area includes one-half of Hartsville
- Results will be provided in ER

Environmental Report



Regulatory Requirements and Guidance

10 CFR 51, Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions

NUREG 1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs

NUREG 1520, Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility

Regulatory Guide 4.9, Preparation of Environmental Reports for Commercial Uranium Enrichment Facilities

ER Data Sources

TVA Phase I Environmental Survey (2002)

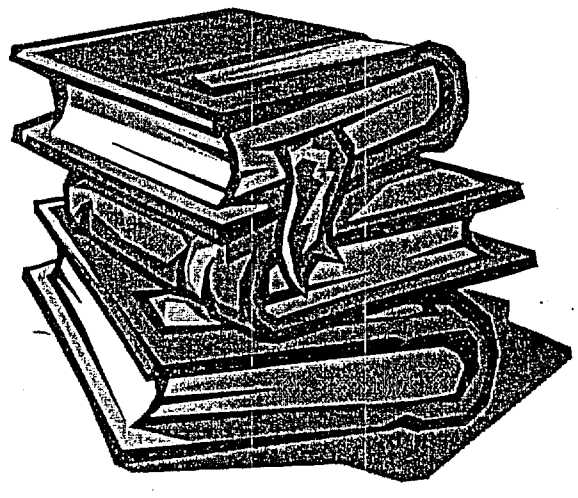
TVA EA (2002)

LES-1 FEIS and ER (1993-4)

LES-1 Safety Evaluation Report, NUREG 1491 (1994)

NRC Safety Evaluation Report for Hartsville Nuclear Plant (1976)

Hartsville Nuclear Plant FEIS, NUREG 75/039 (1975)



ER Data Sources (continued)

Hartsville Nuclear Site ER and PSAR (1975)

TVA Documents/Files

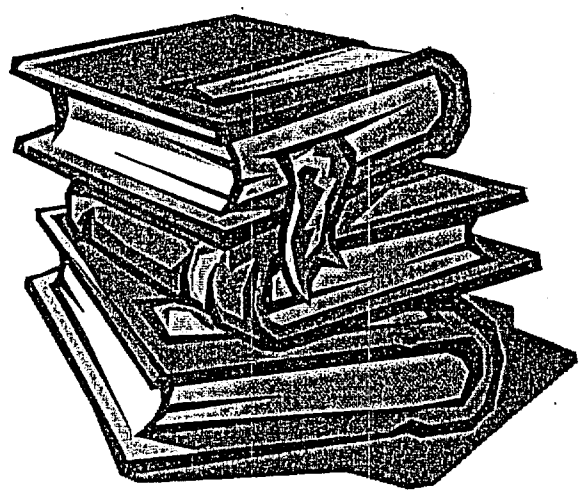
A/E Design & Integrated Safety Analysis Documents

Government Web Sites

Public & Private Sources

Local Universities

New Data Collected at Site



TVA Phase I Environmental Survey Results

No known Use of Hazardous Materials

No Known NR Sites within 262 Acre Site

No Rare or Endangered Species' Habitats

No Above Ground- or Underground Storage Tanks

Site is Above 100- and 500-Year Floodplains

Handling and Transportation of Nuclear Materials

Electric Transmission Lines

Potential Impact of 13-Acre TVA Plant B Site

Tails Storage

ER Section	Type Data	Existing Adequate	Minor Updating	Major Revision
3.1	Site Description		√	
3.2	Land Use		√	
3.3	Transport - ation	√		
3.4	Geology & Soils	√		
3.5	Water Resources		√	

Adequacy of Existing ER Data (Continued)

ER Section	Type Data	Existing Adequate	Minor Updating	Major Revision
3.6	Ecology		√	
3.7	Meteorology Air Quality		√	
3.8	Noise			√
3.9	Historic & Cultural	√		
3.10	Visual & Scenic		√	

Adequacy of Existing ER Data (Continued)

ER Section	Type Data	Existing Adequate	Minor Updating	Major Revision
3.11	Socio-economic			√
3.12	Public & Worker Health		√	
3.13	Waste Management			√

National Pollutant Discharge Elimination System (NDPES) - Waste and Storm

Air Operating Permit

Hazardous Waste Permit

Landfill Permit (potential)

Conclusions

Hartsville, TN Site Scored Highest Relative to Site Selection Criteria

Very Low Environmental Impact from Facility based on European Plant Experience

Construction Impacts Minimal because the Site Already Altered

Robust Existing Environmental Data