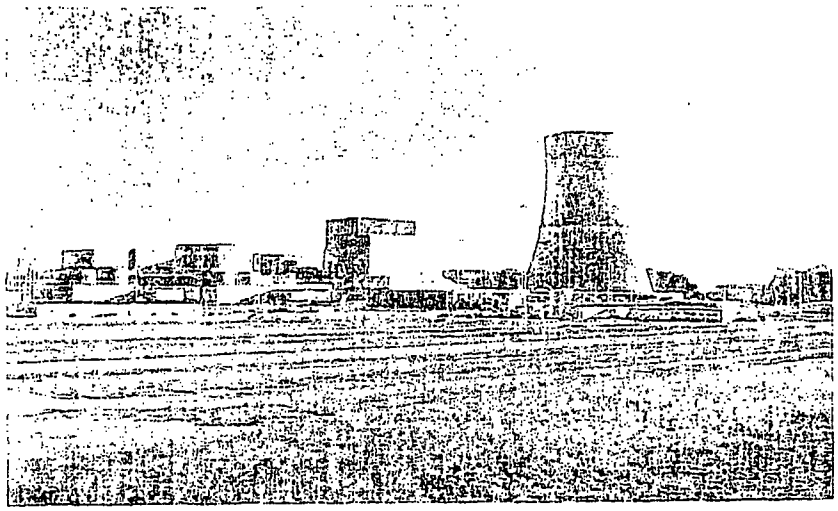
Attachment 30 to

GNRO-2012/00039

ER Reference - GGNS. 2011k. Grand Gulf Nuclear Station, Spill Prevention, Control, and Countermeasure Plan. September 1, 2011

GRAND GULF NUCLEAR STATION

SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN



P.E. Certification [40CFR112.3(d)]

I hereby certify that I have examined the facility and being familiar with the provisions of 40CFR112, attest that this SPCC Plan has been prepared in accordance with good engineering practices, including consideration of applicable industry standards and with the requirements of these parts, that procedures for required inspections and testing have been established, and that the Plan is adequate for the facility.

Printed Name: James N. Fowler

Signature: [signature]

Registration Number: 12241

State: Mississippi

Date: August 30, 2011

This Plan will be implemented as herein described:

Signature: [signature] 9/1/11

Name: Michael Perito

Title: Vice President, Operations

REGULATORY CROSS REFERENCE INDEX

Topic	Regulatory Citation	SPCC Section
SPCC Plan Purpose	40CFR112.1	1.1
Applicability (Containers/Tanks)	40CFR112.1(b)	1.2
General Plant Information	Not Applicable	2.1
P.E. Certification	40CFR112.3(d)	Cover Page
EPA SPCC Plan Amendments	40CFR112.4(a) 40CFR112.4(c) 40CFR112.4(e)	3.1.A 3.1.B 3.1.C
Facility SPCC Plan Amendments	40CFR112.5(a)	3.2
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• Type of oil, gasoline and containers and storage capacity	40CFR112.7(a)(3)(i)	4.2.B
• Discharge prevention measures for loading/unloading	40CFR112.7(a)(3)(ii)	4.2.C
• Discharge and drainage controls	40CFR112.7(a)(3)(iii)	4.2.D
• Countermeasures for discharge discovery, response and cleanup	40CFR112.7(a)(3)(iv)	4.2.E
• Disposal of recovered material	40CFR112.7(a)(3)(v)	4.2.F
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• Locked or secured oil pump starter controls	40CFR112.7(g)	4.8.C
• Capped or flanged loading/unloading connections	40CFR112.7(g)	4.8.D
• Facility lighting	40CFR112.7(g)	4.8.E

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• Examination of drains and outlets prior to filling and departure	40CFR112.7(h)(3)	4.9.C
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• Warnings for above ground piping	40CFR112.8(d)(5)	4.14.E
Facility Response Plan Applicability	40CFR112.20(e)	5.0

SPCC PLAN REVIEW PAGE

Review Date	Revision Needed (Yes or No)	Revision Type * (Technical or Non-Technical)	Signature

* Professional Engineer certification is only needed for technical amendments to the SPCC Plan.

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1.0 PURPOSE AND APPLICABILITY

1.1 The purpose of this Spill Prevention, Control and Countermeasure (SPCC) Plan is to identify and describe the procedures, materials, equipment and facilities that are utilized at Grand Gulf Nuclear Station (GGNS) to minimize the frequency and severity of oil spills **[40CFR112.1].**

1.2 The SPCC requirements are applicable to the following containers **[40CFR112.1(b)]:**

- Above ground containers that have a shell capacity of 55 gallons or greater.
- Completely buried tanks not subject to ALL the technical requirements of 40CFR280 and 40CFR281.
- Containers (shell capacity of ≥55 gallons) used for standby storage, seasonal storage or temporary storage, or not otherwise "permanently closed".
- Any "bunkered tank" or "partially buried tank", or any container in a vault, each of which is considered an Above Ground storage container.

1.3 This SPCC Plan applies to all Entergy employees and all contractors working at the GGNS.

1.4 GGNS is a boiling water reactor electrical generating facility, which generates megawatts of electrical power via a nuclear powered steam turbine. Associated with the primary power production are numerous oil tanks and piping systems, and other features common to a nuclear electrical power generating facility.

2.0 GENERAL PLANT INFORMATION

2.1 The information shown below is for informational purposes only.

A.	Name of Facility:	Grand Gulf Nuclear Station
B.	Facility Operator:	Entergy Operations, Incorporated 1340 Echelon Parkway Jackson, MS 39213
C.	Facility Owner:	System Energy Resources, Incorporated Post Office Box 31995 Jackson, MS 39286-1995 Southwest Mississippi Electric Power Association Post Office Box 1589 Hattiesburg, MS 39401
D.	Facility Location:	Claiborne County, Mississippi, in the vicinity of mile marker 406, on the east bank of the Mississippi River, approximately 25 miles south of Vicksburg and 37 miles north-northeast of Natchez. (Refer to Figure 1 of this Plan)
E.	Initial Facility Operation:	July 1, 1985
F.	Facility Description:	On-Shore Facility - Nuclear Fuel Steam Electrical Generation
G.	Nearest Receiving Water:	Mississippi River

3.0 SPCC PLAN AMENDMENTS AND REVIEWS

3.1 EPA Amendments

A. **IF** GGNS discharges more than 1,000 U.S. gallons of oil in a single discharge or discharges more than 42 U.S. gallons of oil in each of two discharges occurring within any twelve month period, **THEN** submit the following information to the EPA within 60 days: **[40CFR112.4(a)]**

- Name of facility.
- Your name.
- Location of facility.
- Maximum storage or handling capacity of facility and normal daily throughput.
- Corrective action and countermeasures taken, including description of equipment repairs and replacements.
- Adequate description of facility, including maps, flow diagrams, and topographical maps, as necessary.
- Cause of discharge, including a failure analysis of system or subsystem in which failure occurred.
- Additional preventive measures taken or contemplated to minimize possibility of recurrence.
- Such other information as the EPA may reasonably require pertinent to Plan or discharge.

B. State agency or agencies in charge of oil pollution control activities should be on copy for all information provided to the EPA. **[40CFR112.4(c)]**

C. **IF** EPA notifies facility that an amendment is necessary, **THEN** the SPCC Plan must be amended within 30 days after the notice, unless otherwise specified, and implemented no later than six months after the amendment. **[40CFR112.4(e)]**

3.2 Facility Amendments [40CFR112.5(a)]

A. GGNS must amend the SPCC Plan whenever there is a change in facility design, construction, operation or maintenance that materially affects the potential for a discharge within six months and implemented as soon as possible but no later than six months.

3.3 SPCC Plan Reviews

A. The SPCC Plan must be reviewed and evaluated at least once every five years and if necessary, amended within six months of the review to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge. Amendments must be implemented no later than six months. **[40CFR112.5(b)]**

B. SPCC Plan reviews and evaluations must be documented on the SPCC Plan Review Page contained in this Plan.

3.4 Professional Engineer Certification [40CFR112.5(c)]

A. Professional Engineer must certify any technical amendments to the SPCC Plan.

4.0 SPCC GENERAL REQUIREMENTS [40CFR112.7]

4.1 Facility Conformance [40CFR112.7(a)(1) & 40CFR112.7(a)(2)]

A. The GGNS SPCC Plan has been developed in accordance with the requirements and guidelines for preparation of SPCC Plans described in 40CFR112. The purpose of this Plan is to establish procedures and methods that will prevent and control, and define countermeasures to be implemented for the spillage from oil-filled equipment or oil bulk storage tanks. The ultimate goal of this Plan is to minimize the risk of a discharge into navigable waters of the United States and waters of the State of Mississippi. This Plan has the approval of Management at a level of authority necessary to commit the required resources for proper implementation and has been prepared in accordance with good engineering practices. As allowed by 40CFR112.7(a)(2), one environmental equivalence deviation is being applied as discussed in Section 4.1.B below.

B. The environmental equivalence provision, contained in §112.7(a)(2), allows for deviations from specific requirements of the SPCC rule, as long as the alternative measures provide equivalent environmental protection. As shown in Table 2.2, there are several small non-PCB sub-transformers located on-site that do not have secondary containment. However, should there be a release or rupture from these transformers, any oil would flow to a retention pond that is equipped with an oil boom to prevent the material from reaching the Mississippi River. Therefore, equivalent environmental protection is obtained.

4.2 GGNS Facility Information

A. Layout of the GGNS facility is shown in Figure 2 to this Plan. **[40CFR112.7(a)(3)]**

B. Types of oil and gasoline present on the GGNS site, along with storage capacity and location, are identified in Tables 1 through 5 and Figures 3 through 5 to this Plan. **[40CFR112.7(a)(3)(i)]**

C. Discharge prevention measures including procedures for routine handling of oil products are incorporated into overall plant operations and are administratively controlled by the site procedures, instructions and tasks listed below: **[40CFR112.7(a)(3)(ii)]**

- GGNS Procedure 02-S-01-35, "Outside Rounds", requires operations personnel inspections and their presence during the verification that the storage tank can accept the delivered volume, proper alignment and opening/closing of valves, verification of no leakage from any hoses or connections and a notification requirement in the event of a spill or leak.

- GGNS Procedure 04-1-01-P75-1, "Standby Emergency Diesel Generator System", requires proper alignment and opening/closing of valves when transferring diesel fuel between Div 3 Diesel Fuel Oil Tanks and Div 1 or Div 2 Diesel Fuel Oil Tanks (75,000 gallons each).

- GGNS Procedure 04-1-01-P81-1, "High Pressure Core Spray Diesel Generator", requires proper steps are taken to provide additional Lube Oil Additions to the Diesel during emergency conditions.

- GGNS Procedure 02-S-01-5, "Shift Logs and Records", provides documentation of compliance with applicable Technical Specifications, maintenance of good operating AND/OR engineering practices, AND provide documentation for Quality Assurance criteria.

- GGNS Procedure 04-1-01-N34-1, "Lube Oil Conditioning and Transfer System", provides directions for performing task associated operation of the site's Lube Oil Conditioning and Transfer System.

- GGNS Procedure 04-S-01-P64-1, "Fire Protection Water System", provides directions for performing fuel oil reservoir fill and transfer for FWPH Day Tanks.

- GGNS Procedure 08-S-08-06, "Environmental Incident Response", prescribes responsibilities and actions related to limited responses to spills and releases; and subsequent notifications resulting from unplanned releases that include PCBs and Oil.

- GGNS Procedure EN-EV-120, "Polychlorinated Biphenyl Management Program", provides guidance for the management of non-radiological PCBs.

- GGNS Procedure 01-S-04-33, "Hazardous Materials Training Program", provides personnel regularly employed at GGNS the training required to work safely with hazardous materials.

- GGNS Procedure 01-S-12-20, "Hazardous Materials Emergency Response Plan", provides a consolidated plan to address the recognition and emergency response to incidents involving the uncontrolled release of oil or other hazardous material, including wastes.

- GGNS Procedure 01-S-08-12, "Monitoring and Control of Non-Radiological Discharges (NPDES)", prescribes methodologies and responsibilities for managing and documenting releases regulated by the National Pollutant Discharge Elimination System (NPDES) Permit.

- GGNS Procedure EN-EV-112, "Chemical Control Program", outlines use and storage requirements for onsite oils and chemicals.

For unloading activities associated with oil or gasoline storage locations that are not administratively controlled by site procedures, the department responsible for the unloading activity ensures that Chemistry / Environmental is contacted for guidance and best management practices.

Additional prevention measures include the following:

- **Mobile/Portable Tanks (≥55 gallons)** – GGNS has two mobile tankers located within secondary containment, one near the Vehicle Maintenance Shop. This tanker, along with additional portable tanks may be utilized on-site for purposes of refueling operations or temporary storage of oil. The second tanker located west of the CIA/PSW bldg, is periodically used for larger volume fuel storage. These tankers are staged at locations where a discharge could be promptly addressed utilizing absorbents available at the site to prevent a discharge to water.

- **Discovery of Leaks** - If leaks are discovered that results in oil, gasoline or chemical accumulations, the accumulated material is removed and disposed of appropriately. Typically, these type conditions are documented in accordance with Entergy Nuclear fleet procedure EN-LI-102, "Corrective Action Process". In addition, depending on the situation, a Work Request may be initiated in accordance with fleet procedure EN-WM-100, "Work Request (WR) Generation, Screening and Classification".

D. Discharge and drainage controls that exist for oil and gasoline storage containers located on the GGNS site are identified in Tables 1 through 6 to this Plan. As already discussed in Section 4.2.C above to this Plan, spill prevention measures are established prior to the unloading of oils or gasoline. In addition, in the event of a spill, response personnel are cognizant of spill response material locations. **[40CFR112.7(a)(3)(iii)]**

E. Countermeasures for discharge discovery, response and cleanup are incorporated into overall plant operations and are administratively controlled by GGNS Procedure 01-S-12-20, "Hazardous Material Emergency Response Plan". This procedure prescribes the steps to be taken in the event of a spill, and outlines notification, response and cleanup actions. **[40CFR112.7(a)(3)(iv)]**

F. Disposal of recovered spill materials is managed in accordance with Entergy Nuclear's fleet Procedure EN-EV-106, "Waste Management Program". This procedure prescribes the requirements that the site must follow when managing and disposing of generated waste. **[40CFR112.7(a)(3)(v)]**

G. Contact list and phone numbers for site spills are as follows: **[40CFR112.7(a)(3)(vi)]**

1. Facility Response Coordinator - At GGNS, all spills are reported to the Control Room at Extension 2374 or by radio (Channel 1) in accordance with GGNS Procedure 01-S-12-20, "Hazardous Material Emergency Response Plan". The Control Room then notifies the appropriate Hazmat Team member utilizing the current on-call duty list.

2. Hazmat Team - Contact list and telephone numbers are maintained in the Control Room separate from this Plan since this list changes frequently.

3. National Response Center
   Phone: (800) 424-8802

4. Federal, State and Local Agencies

   - Mississippi Department of Environmental Quality (MDEQ)
     Phone: (601) 961-5171

   - Environmental Protection Agency (EPA) Region IV
     Phone: (404) 562-9900

5. Cleanup Contractors – Contracts are in place with the following contractors if response and cleanup services are needed:

   - United States Environmental Services LLC
     Jackson, MS 39272
     Phone: (601) 372-3232 or (601) 372-3356

   - Port Hudson Specialty Products
     Baton Rouge, LA 70817
     Phone: (225) 978-9604 or (225) 753-9537

4.3 Reporting and Response Procedures

A. Reporting related to spills is procedurally controlled in accordance with GGNS Procedures 08-S-08-05, "Environmental Reporting" and 08-S-08-6, "Environmental Incident Response". These procedures specify the information to be gathered and reported to offsite regulatory agencies in the event of a spill. **[40CFR112.7(a)(4)]**

B. Spill responses are procedurally controlled in accordance with GGNS Procedure 01-S-12-20, "Hazardous Material Emergency Response Plan". This procedure outlines the notification and response actions to be taken in the event of a spill. **[40CFR112.7(a)(5)]**

4.4 Equipment Failures [40CFR112.7(b)]

A. The anticipated quantity of oil and gasoline that could result in the event of a spill and the predicted flow direction is described in Tables 1 through 6 to this Plan.

4.5 Containment Measures

A. Where applicable, oil and gasoline containers at the GGNS site are equipped with containment or diversionary structures as shown in Tables 1 through 5 to this Plan. In addition, response personnel are cognizant of spill response material locations. **[40CFR112.7(c)]**

B. As discussed in Section 4.1.B, there are several small non-PCB sub-transformers located on-site that do not have secondary containment. However, should there be a release or rupture from these transformers, any oil would flow to a retention pond that is equipped with an oil boom to prevent the material from reaching the Mississippi River. Therefore, equivalent environmental protection is obtained. **[40CFR112.7(d)]**

C. **IF** containment or diversionary structures are not practicable for containers, **THEN** GGNS will: **[40CFR112.7(d)]**

- Follow the contingency plan outlined in GGNS Procedure 01-S-12-20, "Hazardous Material Emergency Response Plan".

- Commit the required manpower, equipment and materials to expeditiously control and remove harmful quantities of spilled materials should a spill event occur.

4.6 Inspections, Tests & Records [40CFR112.7(e)]

A. Plant Tours

- Plant tours are conducted periodically to visually identify abnormal plant conditions (i.e., drums, tanks, transformers, valves, leakage and deterioration of containment structure) in accordance with GGNS Procedure 02-S-01-5, "Shift Logs and Records". Findings of these inspections are recorded in the shift log/data loggers.

- If abnormal conditions such as leaks or container deterioration are observed, a Work Request may be initiated in accordance with NMM Fleet Procedure EN-WM-100, "Work Request (WR) Generation, Screening and Classification" and the condition is typically documented in accordance with NMM Fleet Procedure EN-LI-102, "Corrective Action Process".

B. Above Ground Tanks

- GGNS has several stationary oil tanks located inside buildings and covered structures that act as a back-up spill containment mechanism and that are not exposed to weather conditions. Any leaks associated with these tanks would be promptly identified in accordance with the procedures listed in Section 4.6.A above to this Plan and corrective actions taken as needed in accordance with NMM Fleet Procedure EN-LI-102, "Corrective Action Process". As a result of the location of these tanks, it is highly unlikely that a tank failure would result in oil reaching navigable waters. Therefore based on best professional engineering judgment, GGNS will continue to rely on visual observations to verify the integrity of these tanks in accordance with the process described in Section 4.6.A above to this Plan and the procedures listed in Section 4.6.D below to this Plan.

- Remaining tanks that are located outside exposed to the weather are elevated to facilitate inspection of all tank areas and are within secondary containment structures. These tanks are visually inspected on a scheduled periodic basis by Chemistry.

- 55-gallon containers are placed on pallets and typically stored under covered areas. These containers are periodically visually observed during Chemistry site rounds and during inspections conducted in accordance with NMM Fleet Procedure EN-EV-112, "Chemical Control Program".

C. Diked Storage Area Inspections

Rainwater from secondary containment structures that drain directly to a stormwater drain is checked for the presence of oil sheen prior to discharging, with appropriate corrective actions taken.

D. Miscellaneous Inspections

Additional practices utilized in conjunction with other site activities that would identify plant equipment malfunctions or deteriorations are included in the following site procedures.

- GGNS Procedure 02-S-01-35, Operations Section Procedure, "Outside Rounds", requires operations personnel inspections and their presence during the verification that the storage tank can accept the delivered volume, proper alignment and opening/closing of valves, verification of no leakage from any hoses or connections and a notification requirement in the event of a spill or leak.

- GGNS Procedure EN-EV-106, "Waste Management Program", prescribes the requirements for site inspections of waste areas and accumulation areas when managing and disposing of generated waste.

- GGNS Procedure EN-EV-112, "Chemical Control Program", outlines use and storage requirements for onsite oils and chemicals.

E. Spill Supplies

Spill response supplies are maintained and replenished as necessary in accordance with GGNS Procedure 01-S-12-20, "Hazardous Material Emergency Response Plan".

F. Above Ground Valve and Piping

The facility has identified the following locations of Above Ground permanent pipelines or valves used for the movement of oil or fuel. These include:

- Transfers between the Clean and Dirty Lube oil tanks and the plant [Above ground portions of this system, including valves, are contained within a concrete berm].

- Piping connecting the vehicle fuel tanks and pumps

- Piping connecting the Fire Water Pump House fuel tanks and engines

- Piping connecting the EOF emergency generator to the UST

- Piping connecting the Division diesel(s) day tanks and USTs

- Radial well lube oil reservoirs and associated piping

- Water Treatment Facility backup diesel water pump and day tank

GGNS Operations personnel control valves and transfers and routinely inspect equipment and assess its general condition. These assessments include valve positioning and security devices, when applicable. If abnormal conditions such as leaks or container deterioration are observed, a Work Request is initiated in accordance with NMM Fleet Procedure EN-WM-100, "Work Request (WR) Generation, Screening and Classification" and the condition is typically documented in accordance with NMM Fleet Procedure EN-LI-102, "Corrective Action Process".

G. Records

Records of inspections and testing of tanks at the GGNS site are maintained in accordance with NMM Fleet Procedure EN-AD-103, "Document Control and Records Management Activities" for a minimum of three years.

4.7 Personnel Training [40CFR112.7(f)]

A. Site-Wide Personnel Training **[40CFR112.7(f)(1)]**

- Employees and contractors employed at the site are required to complete Plant Access Training, including a written test, on an annual basis. Plant Access Training instructs personnel to immediately notify the Control Room upon discovering a leak or spill and report improper operating practices and deteriorating storage conditions that could lead to a spill.

- In addition, employees and contractors are required to complete the environmental awareness training computer based module (ENV. AWARENESS) annually. This module addresses the SPCC program, and satisfies the regulatory training requirements associated with this program.

B. Site-Specific Personnel Training **[40CFR112.7(f)(1)]**

- The site procedures listed in this Plan are utilized at the GGNS site for the operation and maintenance of oil-related equipment. Department personnel involved with these type activities receive training on these procedures.

- The Haz-Mat Response Team, made up of site-specific employees from different departments, responds to all site spills and receives more in-depth training.

- Personnel involved in hazardous waste activities are trained annually.

C. Spill Prevention Designee **[40CFR112.7(f)(2)]**

The General Manager, Plant Operations is designated as having the responsibility for oil spill prevention at GGNS.

D. Spill Prevention Briefings **[40CFR112.7(f)(3)]**

Spill prevention briefings consisting of SPCC Plan revisions, spill events or failures, or malfunctioning components when applicable, are included as part of the environmental awareness training module discussed in Step 4.7.A above to this Plan.

Additional spill prevention briefings may also be conducted by any of the following methods:

- Departmental briefings for personnel involved with oil handling activities. This may be accomplished by sending out a memo with a discussion of the issue and an employee sign-up sheet to the department lead or review of Operational Events sent out for departmental review and impact assessment from the site's Operational Event Coordinator.
- Distribution of newsletter briefings to site employees via Inside Entergy outlining spill events and spill prevention requirements.
- Documented spill events utilizing the Condition Reporting system with plant management/department reviews.
- During focus group meetings consisting of environmental representatives from different nuclear sites.

4.8 Security [40CFR112.7(g)]

A. Tanks

- Chain link fences, with one of the fences topped with barbed wire, enclose the operating plant.
- Access into the plant is controlled through gates by security officer's 24-hours per day.
- The owner controlled area is patrolled routinely by plant security.

B. Valves

GGNS plant operating procedures listed in Sections 4.2.C and 4.6.D above to this Plan ensure that master flow and drain valves and other valves that will permit direct outward flow of a tank's content to the surface are in the closed position or restrained by other positive means when in non-operating or non-standby conditions.

C. Oil Pumps

GGNS plant operating procedures listed in Sections 4.2.C and 4.6.D above to this Plan ensure that starter control on oil pumps are either secured in the off position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

D. Loading/Unloading Connections

- Should a piping system be out of service for an extended period of time, GGNS would ensure that the piping is marked as to its origin and its out of service status in accordance with Procedure EN-OP-102, "Protective and Caution Tagging".

- Unloading and tank transfers are performed in accordance with Section 4.2.C above to this Plan.

E. Facility Lighting

- The GGNS site is provided with numerous floodlights and other lighting fixtures, which provide satisfactory illumination for visual detection of significant releases during hours of darkness.

- The lighting described above, along with 24-hours per day security surveillance, discourages any attempts of vandalism.

4.9 Loading/Unloading Procedures [40CFR112.7(h)]

A. Management practices identified in Section 4.2.C above to this Plan are followed during unloading activities to contain any potential discharges from unloading activities associated with large quantities of oils or gasoline. **[40CFR112.7(h)(1)]**

B. Management practices identified in Section 4.2.C above to this Plan are followed during unloading activities to prevent premature departure of the truck and/or the wheels are chocked. **[40CFR112.7(h)(2)]**

C. Prior to filling and departure, the fill pipe of the truck is verified to be disconnected and not leaking in accordance with the management practices identified in Section 4.2.C above to this Plan. In addition, truck drivers are required to comply with the unloading requirements specified in Section 4.2.C above to this Plan. **[40CFR112.7(h)(3)]**

4.10 Field-Constructed Above Ground Tanks [40CFR112.7(i)]

A. GGNS does not have any field-constructed tanks on-site. Therefore, this issue is not applicable.

4.11 Additional Prevention Standards [40CFR112.7(j)]

A. The State of Mississippi relies on the 40CFR112 federal standards for SPCC Plan preparation and implementation. Therefore, there are no additional prevention standards.

B. Due to security concerns associated with a nuclear facility, diagrams for tank piping are not shown in this Plan. However if requested, tank piping diagrams may be viewed on-site only.

4.12 Facility Drainage [40CFR112.8(b)]

A. Diked Storage Areas **[40CFR112.8(b)(1)]**

- Bulk storage containers (as defined in 40CFR112.2) located within the Protected Area Fence are either not exposed to rainfall and are within totally enclosed buildings designed to handle any leakage or located in areas with design features to prevent discharge of oil.

- For bulk storage containers located outside the Protected Area Fence that are exposed to rainfall, secondary containment drainage is checked by Chemistry or Operations personnel to ensure that it meets appropriate water quality standards prior to discharging to either the east or west plant drainage ditches, which also have weirs to act as diversionary structures.

B. Drainage Valves **[40CFR112.8(b)(2)]**

- Where applicable, only valves of manual and open-and-closed design are used for drainage of diked areas.

- For secondary containment areas, the contents are checked by Chemistry or Operations personnel to ensure water quality standards are met as discussed in Section 4.12.A above to this Plan.

C. Undiked Areas

- The only Above Ground piping outside undiked areas is associated with fuel unloading activities. However, as already discussed in Section 4.2.C above to this Plan, spill prevention measures are established prior to unloading activities to prevent oil from reaching navigable waters. **[40CFR112.8(b)(3)]**

- As shown in Table 1, there are no undiked areas associated with bulk storage containers at the GGNS site. **[40CFR112.8(b)(4)]**

D. Facility Drainage System Treatment **[40CFR112.8(b)(5)]**

GGNS has several onsite oil water separators that receive facility drainage. However, no pump transfer operations are associated with these systems. See Table 6 for GGNS site drainage system.

4.13 **Bulk Storage Containers [40CFR112.8(c)]**

A. Tank Construction **[40CFR112.8(c)(1)]**

- Bulk storage tanks used at the GGNS facility are compatible with the materials stored within them and with the conditions of storage, such as pressure and temperature.

- 55-gallon containers are DOT approved and rated for storage of petroleum derived oils.

B. Secondary Containment Structures **[40CFR112.8(c)(2)]**

Secondary containment structures are designed to provide containment for the entire tank contents plus sufficient freeboard for rainfall.

C. Secondary Containment Drainage **[40CFR112.8(c)(3)]**

- Management of drainage from secondary structures is discussed Section 4.12 above to this Plan.

- GGNS Chemistry or Operations personnel examine diked areas prior to draining to ensure that it meets appropriate water quality standards prior to discharging to either the east or west plant drainage ditches.

D. Buried or Partially Buried Tanks **[40CFR112.8(c)(4) – 40CFR112.8(c)(5)]**

GGNS has three 75,000 gallon coated underground metallic tanks located inside the Protected Area Fence that are cathodically protected. In addition, although not applicable here, GGNS has one 6,000 gallon underground fiberglass diesel fuel oil storage tank located at the Energy Services Center.

GGNS Underground Storage Tanks (USTs) undergo periodic cleaning and integrity testing as directed by System Engineering [see PMRQ No. 50021460 for the ESC UST]. If a leak is detected, an investigation is conducted to verify the test results and, if necessary, to locate and repair the leak. If any repairs are made excavated areas are also visually inspected for evidence of contamination and tested, if required.

GGNS USTs are either deferred or exempted under the 40CFR280 rule and therefore fall under the provisions of 40CFR112.

GGNS does not use any partially buried or 'bunkered' tanks.

E. Above Ground Tank Testing **[40CFR112.8(c)(6)]**

- GGNS has several stationary oil tanks located inside buildings and covered structures that act as a back-up spill containment mechanism and that are not exposed to weather conditions. Any leaks associated with these tanks would be promptly identified in accordance with the procedures listed in Section 4.6.A above to this Plan and corrective actions taken as needed in accordance with NMM Fleet Procedure EN-LI-102, "Corrective Action Process". As a result of the location of these tanks, it is highly unlikely that a tank failure would result in oil reaching navigable waters. Therefore based on best professional engineering judgment, GGNS will continue to rely on visual observations to verify the integrity of these tanks in accordance with the process and procedures identified in Sections 4.6.A and 4.6.D above to this Plan.
- Remaining tanks that are located outside exposed to the weather are elevated to facilitate inspection of all tank areas and are within secondary containment structures. These tanks are visually inspected on a scheduled periodic basis by Chemistry and Operations personnel.
- 55 gallon containers are placed on pallets and typically stored under covered areas. These containers are periodically visually observed during Chemistry site rounds and during inspections conducted in accordance with NMM Fleet Procedure EN-EV-112, "Chemical Control Program".

F. Internal Heating Coils **[40CFR112.8(c)(7)]**

There are no internal heating coils associated with the bulk storage containers at GGNS.

G. Fail-Safe Engineering **[40CFR112.8(c)(8)]**

- High level alarms using float level switches and return lines are utilized on oil storage facilities within the power block [see Table 3] to minimize the potential for oil spills. In addition, high level alarms are included on the Clean and Dirty Lube Oil Tanks, Division Diesel Day Tanks and the Division Diesel USTs. Other tanks and reservoirs have local indicators, such as sight glasses, and are inspected by procedures listed in Sections 4.2.C and 4.6.D of this plan.

H. Effluent Treatment Facilities **[40CFR112.8(c)(9)]**

- Plant design is such that leaks or spills from bulk storage containers are contained within the containment structure.

- Onsite oil water separators are maintained with periodic maintenance and GGNS personnel periodically conduct visual inspections of the NPDES storm water outfalls 013 and 014 as a means to detect possible system upsets that could cause a discharge.

I. Visible Oil Leaks **[40CFR112.8(c)(10)]**

- Visible leaks that result in a loss of material from tank seams, gaskets, rivets or bolts are repaired appropriately. Typically, these conditions are documented in accordance with GGNS Procedure EN-LI-102, "Corrective Action Process". Depending on the significance of the condition, a Work Request may be initiated in accordance with GGNS Procedure EN-WM-100, "Work Request (WR) Generation, Screening and Classification".

- Any accumulation of spilled material is managed in accordance with GGNS Procedure EN-EV-106, "Waste Management Program".

J. Mobile Oil Storage Tanker (≥55 gallons) **[40CFR112.8(c)(11)]**

- GGNS has two mobile fuel tanker trucks on-site, one of which remains empty until needed for a specific project, that are utilized for fueling operations or temporary storage of fuel/oils. When these tankers are utilized, spill prevention measures are established such as secondary containment and nearby storm water drains are blocked, as necessary.

- Additional portable tanks may also be present on site for purposes of temporarily storing oil while maintenance is being performed on equipment. Although these tanks are staged at locations where any leakage could be promptly addressed by using absorbents available at the site to prevent any discharge to water, preventative measures such as blocking off nearby storm drains or installing temporary containment measures are implemented.

4.14 Facility Transfer Operations [40CFR112.8(d)]

A. Buried Piping **[40CFR112.8(d)(1)]**

No underground piping associated with oil has been or replaced after August 16, 2002 at the GGNS site. However should any deficiencies associated with existing buried piping be identified, the condition identified in accordance with GGNS Procedure EN-LI-102, "Corrective Action Process" and appropriate actions taken.

B. Out of Service Pipeline **[40CFR112.8(d)(2)]**

Should a piping system be out of service for an extended period of time, GGNS would ensure that the piping is marked as to origin and status in accordance with GGNS Procedure EN-OP-102, "Protective and Caution Tagging".

C. Pipe Supports **[40CFR112.8(d)(3)]**

GGNS pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction. In addition, any potential problems associated with abrasion or corrosion would be identified during the plant tour process that is discussed in Section 4.6.A above to this Plan.

D. Above Ground Valves and Pipelines **[40CFR112.8(d)(4)]**

Valves and pipelines located in indoor locations are periodically inspected visually in accordance with the site procedures and practices listed in Sections 4.6.A, 4.6.B and 4.6.D above to this Plan.

The facility has identified the following locations of aboveground permanent pipelines or valves used for the movement of oil or fuel. These include:

- Transfers between the Clean and Dirty Lube Oil tanks and the Plant [Aboveground portions of this system, including valves, are contained within a concrete berm].

- Piping connecting the vehicle fuel tanks and pumps
- Piping connecting the Fire Water Pump House fuel tanks and engines.
- Piping connecting the EOF emergency generator to the UST
- Piping connecting the Division Diesel(s) day tanks and USTs
- Radial Well Lube Oil Reservoirs and associated piping
- Water Treatment Facility backup diesel water pump and day tank.

E. Vehicular Traffic **[40CFR112.8(d)(5)]**

All oil transfer lines are protected from vehicular traffic due to their location. Where applicable, protection of valves from vehicular traffic is accomplished either through the use of curbs, guardrails, stanchions, signs, or through the use of facility personnel accompanying the delivery trucks while at GGNS.

5.0 FACILITY RESPONSE PLAN APPLICABILITY [40CFR112.20(e)]

5.1 Based on screening criteria shown in Attachment 1, GGNS does not represent a substantial harm to the environment by discharging oil into or upon navigable waters or adjoining shorelines, and therefore, is not required to develop a facility response plan.

Figure 1

GGNS Facility Location

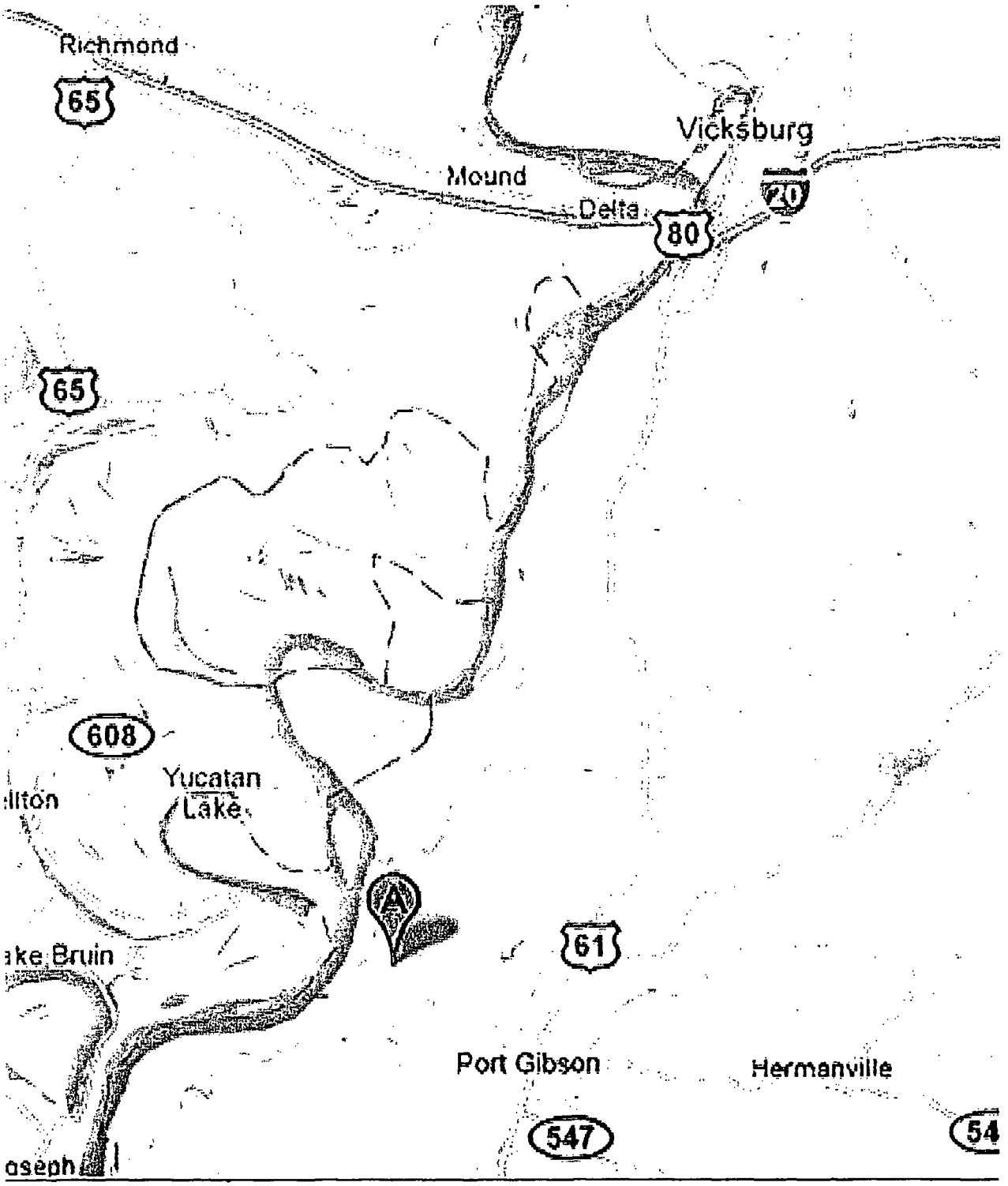

Figure 2
GGNS Facility Layout

Table 1.1
Oil and Gasoline Product Locations (*Above Ground Tanks*)

Description	Volume [gallons]	Location	Drainage	Secondary Containment
1. Clean Lube Oil Storage Tank	30,000	East of Turbine Bldg	Through Manhole #82 [MH] into Sedimentation Basin B	YES
2. Dirty Lube Oil Storage Tank	60,000	East of Turbine Bldg	Through MH-82 into Sedimentation Basin B	YES
3. Vehicle Diesel Fuel Tank	2,000	Vehicle Maintenance Shop	Through Oil Water Separator into Basin A	YES
4. Vehicle Gasoline Tank	1,000	Vehicle Maintenance Shop	Through Oil Water Separator into Basin A	YES
5. Fuel Supply Truck [1]	1,300	Vehicle Maintenance Shop	Through Oil Water Separator into Basin A	YES
6. Fuel Supply Tanker Truck [2]	8,750	West of PSW Chem Add Bldg	Onto ground and through OSN 007 into Basin B	YES
7. Radial Well Lube Oil Tank	140	Radial Well #1	Onto Ground Adjacent to MS River	YES
8. Radial Well Lube Oil Tank	140	Radial Well #3	Onto Ground Adjacent to MS River	YES
9. Radial Well Lube Oil Tank	140	Radial Well #4	Onto Ground Adjacent to MS River	YES
10. Radial Well Lube Oil Tank	140	Radial Well #5	Onto Ground Adjacent to MS River	YES
11. Radial Well Lube Oil Tank (*under construction*)	120	Radial Well #6	Onto Ground Adjacent to MS River	YES
12. Telecommunication Diesel Generator	120	Telecom Bldg	Onto Ground	YES
13. Maintenance Shop Used Oil Tank	2,000	Maintenance	Through Oil Water Separator into Basin B	YES
14. Power Block Storage Tanks [See Table 3]	Various	Inside the CAA	Contained by Plant Design.	YES
15. Well No. 1 Diesel Fuel Tank	105	Drinking Water Well #1 Shack	Onto building floor and through OSN 016	NO
16. ESC Diesel Fuel Storage Tank	75	Inside ESC Bldg.	Onto internal ESC floor drainage system	YES
17. Vehicle Transmission Storage Tank	250	Vehicle Maintenance Shop	Through Oil Water Separator into Basin A	YES
18. Vehicle Oil Storage Tank	250	Vehicle Maintenance Shop	Through Oil Water Separator into Basin A	YES
19. OSC Diesel Storage Tank	120	North of Maintenance Shop	Through Oil Water Separator into Basin B	YES

[1] When not in use, truck resides in a berm.
[2] When in use, tanker resides in a berm.

FIGURE 3.1

Due to security concerns associated with a nuclear facility, this detailed diagram or picture is not shown in this Plan. However, if requested, detailed diagrams or pictures may be viewed on-site only.

Table 1.2

Oil and Gasoline Product Locations (*Underground Tanks*)

Description	Volume [gallons]	Location	Master Parts List Number	Secondary Containment
1. Standby Diesel Generator Fuel	75,000	Northwest of Diesel Generator Building	Q1P75-A003A	N/A
2. Standby Diesel Generator Fuel	75,000	Northwest of Diesel Generator Building	Q1P75-A003B	N/A
3. HPCS Diesel Generator FuelTank	75,000	Northwest of Diesel Generator Building	Q1P81-A001	N/A
4. ESC Diesel Fuel Storage Tank	6,000	South of ESC Cafeteria	N/A	YES

FIGURE 3.2

Due to security concerns associated with a nuclear facility, this detailed diagram or picture is not shown in this Plan. However, if requested, detailed diagrams or pictures may be viewed on-site only.

Table 2.1
Transformer Locations (*Non – PCB Transformers*)

Description	Volume [gallons]	Location	Master Parts List Number	Secondary Containment	Drainage
1. BOP14 (RCP-9151)	1,888	West Side of Water Trmt Bldg	N1R13S214	YES	Through MH-63 into Sedimentation Basin B
2. BOP 24(RCP-1915-2)	1,888	West Side of Water Trmt Bldg	N2R13S224	YES	Through MH-63 into Sedimentation Basin B
3. ESF 11(C-05136-5-1)	2,868	Entrance to Control Bldg	N1R11S111	YES	Through MH-61 into Sedimentation Basin B
4. ESF 21(C-05136-5-2)	2,868	Entrance to Control Bldg	N2R11S121	YES	Through MH-61 into Sedimentation Basin B
5. ESF 12 (REP-4024-1)	9,116	East of Radwaste Bldg	N2R11S012	YES	Through MH-79
6. BOP 11A (C-05225-5-1X)	2,856	Corner of Aux. Bldg	N1R11S311A	YES	Through MH-63 into Sedimentation Basin B
7. BOP 11B (C-05226-5-1)	9,520	Corner of Aux. Turbine Bldg	N1R12S211B	YES	Through MH-63 into Sedimentation Basin B
8. BOP 12A (C-05225-5-2)	2,856	East side of Turbine Bldg	N1R11S312A	YES	Through MH-82 into Sedimentation Basin B
9. BOP 12B (C-05226-5-2)	9,520	East side of Turbine Bldg	N1R12S312B	YES	Through MH-82 into Sedimentation Basin B
10. Main A (7002512)	15,000	East side of Turbine Bldg	N1R14S001A	YES	Through MH-81 into Sedimentation Basin B
11. Main B (7003029)	9,928	East side of Turbine Bldg	N2R14S001B-N	YES	Through MH-81 into Sedimentation Basin B
12. Main C (7002524)	15,000	East side of Turbine Bldg	N1R14S001C	YES	Through MH-81 into Sedimentation Basin B
13. Main D (7002609)	15,000	East side of Turbine Bldg	N1R14S001D	YES	Through MH-81 into Sedimentation Basin B
14. BOP 13 (PGP-99641)	1,535	Radial Well Switchgear House	N1R11S113	YES	On ground or Mississippi River
15. BOP 23 (PGP-99642)	1,535	Radial Well Switchgear House	N2R11S123	YES	On ground or Mississippi River
16. Main Phase A (7003030)	7,400	Storage, East side of Turbine Bldg	N2R14S001A-N	YES	Through Stream B into Sedimentation Basin B
17. Main Phase C (7003028)	7,400	Storage, East side of Turbine Bldg	N2R14S001C-N	YES	Through Stream B into Sedimentation Basin B
18. BOP 21A (C-05225-5-1)	2,856	Storage, East side of Turbine Bldg	N2R11S221A-N	YES	Through Stream B into Sedimentation Basin B
19. BOP 21B (C-05226-5-3)	9,330	Storage, East side of Turbine Bldg	N2R12S221B-N	YES	Through Stream B into Sedimentation Basin B
20. Aux. Cooling Tower [South]1X192	714	East side of Aux. Tower Support Bldg	1R20S920	YES	On ground or to 100 Year Ditch
21. Aux. Cooling Tower North]1X191	694	East side of Aux. Tower Support Bldg	1R20S910	YES	On ground or to 100 Year Ditch
22. ST-11	24,070	GGNS Switchyard	N/A	YES	On ground or to 100 Year Ditch
23. ST-21	24,070	GGNS Switchyard	N/A	YES	On ground or to 100 Year Ditch

FIGURE 4.1

Due to security concerns associated with a nuclear facility, this detailed diagram or picture is not shown in this Plan. However, if requested, detailed diagrams or pictures may be viewed on-site only.

Table 2.2
Non-PCB *(Sub)* Transformer Locations

Description	Volume [gallons] (1)	Location	Secondary Containment	Drainage
1. ABS-1	*(1)*	Southeast corner of Administration Building	Retention Ponds and Oil Booms	Over ground to Catch Basin [CB]-51 and/or the drain in the Security Island curb.
2. ABS-2	*(1)*	Southeast corner of Administration Building	Retention Ponds and Oil Booms	Over ground to CB-51 and/or the drain in the Security Island curb.
3. Sub A	*(1)*	Concrete Batch Plant	Retention Ponds and Oil Booms	Over ground to 100 year ditch then to stream B.
4. Sub B [B-1]	*(1)*	Cooling Tower	Retention Ponds and Oil Booms	Over ground to 100 year ditch then to stream B.
5. Sub C	*(1)*	Across from Administration Building HVAC	Retention Ponds and Oil Booms	Over ground to CB-51 or CB-60
6. Sub D	*(1)*	North of Paint Shop near Pole Transformers	Retention Ponds And Oil Booms	Over ground to NPDES Outfall 016 and stream A.
7. Sub E	*(1)*	Outside Telecommunications Building	Retention Ponds and Oil Booms	Over ground to CB-20, MH-13 and/or 100 year ditch to stream A.
8. Sub F	*(1)*	East side of Turbine Building outside PA	Retention Ponds and Oil Booms	MH-38, MH-82, CB-39 and/or spillway to drainage system into stream A.
9. Sub G	*(1)*	North of Unit 2 Turbine Building inside PA	Retention Ponds and Oil Booms	MH-32, MH-33 and/or MH-34
10. Sub G-1	*(1)*	North of Unit 2 Turbine Building inside PA	Retention Ponds and Oil Booms	MH-32, MH-33 and/or MH-34
11. Sub H	*(1)*	Behind Northeast corner of Unit 2 Warehouse	Retention Ponds and Oil Booms	Over ground to oil water separator and/or drainage system then into stream A.
12. Sub J	*(1)*	Southeast of Vehicle Maintenance Shop	Retention Ponds and Oil Booms	Drainage system into stream A.
13. Sub K	*(1)*	Old Sewage Plant Site near ESC access road	Retention Ponds and Oil Booms	Spillway adjacent to new Sewage Pant entrance and into stream A.
14. Sub L	*(1)*	West side of SSW Basins	Retention Ponds and Oil Booms	Over ground into ditches and/or 100 year ditch then into stream B.
15. Sub M	*(1)*	North end of Site Processing Facility	Retention Ponds and Oil Booms	Over ground into ditches and then into stream B.
16. Sub N	*(1)*	Across from Sub H	Retention Ponds and Oil Booms	Over ground to oil water separator and/or drainage system into stream A.
17. Sub O	*(1)*	Buildings and Grounds Office	Retention Ponds and Oil Booms	Over ground into ditches and then into stream B.
18. Sub P	*(1)*	North of Burn Pit at road fork	Retention Ponds and Oil Booms	Along spring drainage into 100 year ditch and the into stream B
19. Sub R	*(1)*	Northwest corner of M&E Building	Retention Ponds and Oil Booms	Over ground into MH-24 and/or MH- 28.

(1) Plant Staff [Electrical] verifies the volume is > 55 gallons. Because these are energized and pose significant personnel safety hazards the actual volumes from the equipment tags located inside the transformer cabinets cannot be verified until these are de-energized. [Ref: CR-GGN-2004-4285].

FIGURE 4.2

Due to security concerns associated with a nuclear facility, this detailed diagram or picture is not shown in this Plan. However, if requested, detailed diagrams or pictures may be viewed on-site only.

Table 3

Major Oil Storage (Contained within the Power Block) [1]

Description	Volume Gallons	Location	Drainage	Secondary Containment [2]
1. Main Turbine Lube Oil Reservoir	18,700	Turbine Building	Into Power Block	Yes
2. Reactor Water Feed Pump Turbine Lube Oil Reservoirs [2 – A&B]	1,000 ea.	Turbine Building	Into Power Block	Yes
3. EHC Reservoir	5,700	Turbine Building	Into Power Block	Yes
4. Lube Oil Conditioner	2,838	Turbine Building	Into Power Block	Yes
5. Lube Oil Sump Tank	3,000	Turbine Building	Into Power Block	Yes

(1) This lists the major oil storage locations. Other smaller lubricating storage locations are contained inside the power block with various amounts of lubricating oil and associated piping. Additional information on these systems may be obtained from Engineering.

(2) This plan takes credit for the power block as containment, as previously described.

Table 4

Fuel - Off Load Locations

DESCRIPTION	LOCATION
1	Entergy Services Center Underground Storage Tank
2	Site vehicle Maintenance Shop Fuel Tanks
3	Diesel Generator Underground Storage Tanks

FIGURE 5.1

Due to security concerns associated with a nuclear facility, this detailed diagram or picture is not shown in this Plan. However, if requested, detailed diagrams or pictures may be viewed on-site only.

Table 5

Drum Storage Locations

Description	Volume [gallons]	Location	Comments	Secondary Containment
1. Satellite Waste Area No. 4	55	Waste Processing Area	Oil stored for disposal	YES
2. Waste Processing Area	Various(1)	Waste Processing Area	Used Oil for recycle	YES
3. Satellite Waste Area No. 5	55	Water Treatment Building	Diesel Fuel with solvents	YES
4. Inside Oil Issue Facility	Various(1)	Inside Power Block	Oil storage for maintenance use	YES
5. Outside Oil Issue Facility	Various(1)	Outside Power Block in Protected Area	Oil storage for maintenance use	YES
6. Unit 1 Warehouse Chemical Storage Oil Facility	Various(1)	Unit 1 Warehouse Yard	Oil storage for maintenance use	YES
7. Unit 2 Warehouse and Yard	Various(1)	Unit 2 Warehouse & Yard	Temporary Oil storage for maintenance use	YES
8. Unit 1 Warehouse Flammable Chemical Buildings	Various(1)	Unit 1 Warehouse Yard	Oil storage for maintenance use	YES
9. Vehicle Maintenance Shop	Various(1)	Unit 2	Oil storage for vehicle maintenance use	YES
10. Radwaste & Power Block Storage	Various(1)	Various locations inside power block	Oil storage for maintenance use	YES
11. ESC Cafeteria Used Oil	55	ESC Dock	Used Cooking Oil for recycle	YES

(1) Individual container sizes are 55 gallons or less.

Table 6

DRAINAGE FLOW PATHS FOR STORM DRAIN MANHOLES AND CATCH BASINS

Page 1 of 3

MANHOLE [MH]	DESCRIPTION
MH-82	Drainage includes Clean and Dirty Lube Oil Tank rainwater, Balance of Plant (BOP) Transformers (XFMRS) #BOP12A and B on east side of Unit 1 Turbine Building Catch Basin (CB)-83, east side Unit 1 Turbine Building roof run-off (CB-84), and electrical trenches from switchyard.
MH-81	Drainage includes water from MH-82 and main XFMR rainwater from east side of Unit 1 Turbine Building.
MH-79	Drainage includes water from MH-81; ESF XFMR #ESF12 on east side of Unit 1 Turbine Building; and Unit 1 Circulating Water Pump house via CB-80.
MH-78	Drainage includes water from MH-79.
MH-77	Drainage includes water from MH-78.
MH-75	Drainage includes water from MH-77 and Radwaste Building Roof via CB-76.
MH-73	Drainage includes water from MH-75 and Radwaste Building Roof via CB-74.
MH-71	Drainage includes water from MH-73, CB-72, Regeneration Waste Neutralizing Tank, Demineralized Water Storage Tank and Caustic Chemical Area.
MH-70	Drainage includes water from MH-71, east side of Firewater Pump house and Firewater Storage Tank via CB-90, and Acid Storage Tanks.
MH-69	Drainage includes water from MH-70 and Warehouse Office loading ramp.
MH-68	Drainage includes water from MH-69, oil separator unit adjacent to Firewater Pump house, west side of Firewater Pump house, and Firewater Storage Tank.
MH-63	Drainage includes CB-64 fed from north side Firewater Pump house; CB-65 fed from south side Unit 1 Auxiliary Building and southwest side of Unit 1 Turbine Building; and CB-66 which includes water from BOP XFMRs 11B, 11A, 24, 14 and south side of Condensate Storage Tank and Water Refueling Storage Tank, and Water Treatment Building roof.

Table 6

DRAINAGE FLOW PATHS FOR STORM DRAIN MANHOLES AND CATCH BASINS

Page 2 of 3

MANHOLE [MH]	DESCRIPTION
MH-61	Drainage includes roof run-off from Unit 1 Auxiliary Building, CB-62 which includes Control Building roof run-off, oil water separator at ESF 11 XFMR, CB-26 which includes roof run-off from Unit 2 Auxiliary and Control Buildings, and oil water separator at ESF 21 XFMR.
MH-57	Drainage includes MH-63, MH-68, Unit 1 Diesel Generator Building and an oil water separator.
MH-54	Drainage includes water from MH-57; CB-55, CB-56, CB-93, CB-92, CB-91 (north side of Unit 1 warehouse) and main unloading dock on west side of Unit 1 warehouse; CB-58 and MH-102 (middle of street at Fire Garage); and CB-59, CB-60 and MH-61.
MH-52	Drainage includes water from MH-54; CB-46, CB-45 and CB-53; CB-98 and CB-97 in parking lot.
MH-42	Drainage includes water from MH-52; CB-96; and CB's-43, 44, 48, 49, 51 and concrete pad behind Maintenance Shop.
MH-8	Drainage includes water from MH-17, CB-9, CB-10 (Flagpole), south side of Administrative Building, CB-12, CB-94, and oil water separator on south side of shop area.
MH-7	Drainage includes water from MH-8 and CB-101.
MH-6	Drainage includes water from MH-7, MH-42 and CB-13. This is main discharge tie-in for Unit 1 and area from Unit 2.
MH-4	Discharge includes water from MH-6 and CB-5. Also drains CB-99 & CB-100.
MH-3	Drainage includes water from MH-4.
Outfall 007	Drainage includes water from MH-3.
MH-38	Drainage includes water from CB-40 (Unit 2 BOP XFMRS21A and B).
MH-37	Drainage includes water from MH-38 and area for Unit 2 Main XFMR rainwater.

Table 6

DRAINAGE FLOW PATHS FOR STORM DRAIN MANHOLES AND CATCH BASINS

Page 3 of 3

MANHOLE [MH]	DESCRIPTION
MH-36	Drainage includes water from MH-37.
MH-34	Drainage includes water from MH-36, water from Unit 2 Circulating Water Pump house, rainwater from BOP XFMRS21A and B through CB-41, CB-35, CB-47 and east side of Unit 2 Turbine Building.
MH-33	Drainage includes water from MH-34.
MH-32	Drainage includes water from MH-33, Unit 2 Turbine Building and northeast side of Unit 2 Auxiliary Building.
MH-31	Drainage includes water from MH-32.
MH-30	Drainage includes water from MH-31 and the northwest side of Unit 2 Auxiliary Building.
MH-28	Drainage includes water from MH-30 and CB-29.
MH-24	Drainage includes water from MH-28, southwest side of M&TE Building, CB-25 and CB-15.
MH-23	Drainage includes water from MH-24 and CB-27.
MH-22	Drainage includes water from MH-23.
MH-19	Drainage includes water from MH-22, CB-21, CB-20, CB-16 and north side of Administration Building.
MH-17	Drainage includes water from MH-19 and CB-95.

Attachment 1

Certification of Substantial Harm Determination

Facility Name: Grand Gulf Nuclear Station

Facility Address: 7003 Bald Hill Road
Port Gibson, MS 39150

1. Does the facility have a maximum storage capacity greater than or equal to 42,000 gallons and do the operations include over water transfers of oil to or from vessels?

   Yes _____ No __X____

   Although GGNS has an oil storage capacity of 42,000 gallons, they do not transfer oil over water to or from vessels.

2. Does the facility have a maximum storage capacity greater than or equal to 1 million (1,000,000) gallons and is the facility without secondary containment for each Above Ground storage area sufficiently large to contain the capacity of the largest Above Ground storage tank within the storage area?

   Yes _____ No __X____

   Based on GGNS's SPCC Plan, total onsite oil storage capacity is less than 400,000 gallons (~274,977 gallons associated with oils, gasoline and electrohydraulic fluid and ~103,092 gallons associated with transformers). Therefore maximum storage capacity is less than 1 million gallons.

   Although the second part of Item 2 does not apply since maximum storage capacity is less than 1 million gallons, GGNS's SPCC Plan states that secondary containment is provided for each Above Ground tank and is large enough to contain the capacity of the largest tank within the storage area plus sufficient freeboard for rainfall.

3. Does the facility have a maximum storage capacity greater than or equal to 1 million (1,000,000) gallons and is the facility located at a distance such that a discharge from the facility could cause injury to an environmentally sensitive area?

   Yes _____ No __X____

   As discussed in Item 2, the maximum storage capacity at GGNS is less than 1 million gallons. Therefore the second part of Item 3 is not applicable.

Attachment 1 (*cont.*)
Certification of Substantial Harm Determination

4. Does the facility have a maximum storage capacity greater than or equal to 1 million (1,000,000) gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake?

   Yes _____ No __X__

   As discussed in Item 2, the maximum storage capacity at GGNS is less than 1 million gallons. Therefore the second part of Item 4 is not applicable.

5. Does the facility have a maximum storage capacity greater than or equal to 1 million (1,000,000) gallons, and within the past five years, has the facility experienced a reportable spill in an amount greater than or equal to 10,000 gallons?

   Yes _____ No __X__

   As discussed in Item 2, the maximum storage capacity at GGNS is less than 1 million gallons. Therefore the second part of Item 5 is not applicable. However based on review of past spill records, no reportable spills greater than or equal to 10,000 gallons have occurred within the past five years.

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete.

Signature:
Name: Patrick Donahue, REM
Title: Sr. Project Manager – Entergy Nuclear
Date: 09/28/10