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1. Introduction

1.1 Operation and Maintenance Background

This O&M Plan was prepared for the Hattiesburg Derailment Site (herein referred to as the Site) for CN, to be implemented during clearing activities, subsurface assessments, excavation activities, and restoration activities in accordance with good engineering practices.

1.2 Purpose and Scope

The purpose of this O&M plan is to assist CN and their contractors in the implementation of control measures to eliminate direct exposure of humans, exposure to potential ecological receptors, and impacted stormwater runoff from the Site. The O&M achieves this by specifying plans for preventing contact or controlling runoff associated with activities.

The O&M also documents the following:

- Adherence by CN and contractors to plans specified in the O&M
- The effectiveness of control measures specified in the O&M Plan and modification of the O&M Plan if countermeasures are found to be ineffective
- Regular inspections of the Site and maintenance of control measures by project personnel

2. Site Description

2.1 Location

The Site is north of Hattiesburg, Mississippi, on the Bouie River near Lakeview Road in Forrest County. The geographic coordinates near the center of the Site are N 31.354342°, W 89.330536°. Figure 1 is a vicinity map showing the location of the Site. A Site Plan is provided on Figure 2.

2.2 Setting and Site Background

The derailment occurred on a railroad track running parallel to Bouie River near Hattiesburg, Mississippi. The area surrounding the derailment is predominately undeveloped timber land. Current available information indicates that 20 tank cars from a Bakken Unit Oil Train were derailed. Four tank cars are breached and are on fire, and 2 undamaged tank cars are in the Bouie River adjacent to the railroad track in the area shown on Figure 2.

The material reportedly released from the ten derailed railcars includes:

- Bakken crude oil

3. Plan Description

3.1 Purpose

The purpose of this project is to assess residual constituent concentrations of material released during the derailment after initial remediation efforts have been completed. Once the Site has been assessed, any areas that require additional remediation will be addressed.

3.2 Nature of Site Activity

The Site is currently being unused. However, CN contractors will conduct site assessment activities and additional remediation efforts if necessary. Once project activities have ceased and proper approval/closure has been gained, the Site will be restored to previous condition.

3.3 Sequence of Major Activities

The site assessment activities will be initiated upon receipt of written approval from the regulatory authority. The general order of project activities follows:

- Underground utility clearance
- Mobilization of equipment
- Surface and subsurface investigation of soil and groundwater
- Excavation and remediation of impacted soil (if needed)
- Backfill of excavated area (if needed)
- Restoration of Site
- Closure of project

4. Pollution Prevention

The intent of this Plan is to prevent contamination due to the migration of impacted or released material associated with the remaining activities. If prevention is not possible, then this Plan identifies the quality measures that will be placed into effect to prevent contamination from leaving the Site. CN will use an environmental contractor(s) for these activities that will implement quality measures, including absorption and collection of remaining residual product, if present. Throughout these activities, the Contractor will implement controls and minimize the impact of Site activities by utilizing the plans listed in this document.

These plans include the following:

- Minimize the disturbed area and protect natural features and soil
- Control stormwater flowing on and through the Site
- Stabilize soils promptly
- Protect storm drains and drainage laterals
- Establish perimeter controls

- Retain any potential pollutants in the Site
- Establish stabilized construction entrance and exit
- Inspect and maintain all controls

4.1 Site Assessment Component

The anticipated sequence of Site assessment activities and installation of quality measures at the Site follows:

- Absorbent fencing will be installed around the perimeter of the release area and will remain in place until Site assessment activities are complete
- Absorbent fences used in conjunction with absorbent boom will be utilized down-gradient of all work activities and at all outfall locations where stormwater and/or released product has the potential to leave the Site
- To prevent migration of released product via drainage features, earthen dams will be installed and maintained throughout the activities

The locations of all identified control devices are depicted on Figure 2, and the control device details are included in Appendix A.

The Contractor will remove debris from the absorbent fencing, when necessary, and replace absorbent fencing if worn, torn, or otherwise damaged, or retrench any absorbent fencing that is not properly anchored to the ground.

A typical photograph of an absorbent fence is included in Appendix A. The absorbent fence will be constructed to the specifications listed below:

- Use a sheet of absorbent fiber material
- Anchor the absorbent fence with T Post
- Construct to a minimum height of 24 inches above ground elevation

Potential pollutant sources associated with these activities will include the previous mentioned released products, heavy trucks, and equipment. Associated materials present in heavy trucks and equipment include diesel fuel, oil, and anti-freeze. For all fueling activities that take place on-Site, the Contractor shall provide a spill kit for fuel tank trucks, and qualified personnel will be in attendance during all fueling operations. The potential pollutants of concern for stormwater are suspended solids (i.e., soil, vegetation, sediment) and petroleum products (i.e., oil and grease related to heavy trucks and equipment). The stormwater quality measures implemented during this project will prevent stormwater contamination that may result from Project activities leaving the Site.

Conducting excavation activities creates a large amount of soil disturbance and open space for wind to pick up dust particles. Dust control measures reduce surface and air movement of dust from distributed areas, reducing the likelihood of dust being carried off-Site. The dust control measures to be used at the Site will include water spraying, as necessary.

Building materials and other Site waste will be properly managed and disposed to reduce the risk of pollution. On-site generated waste will be collected and stored in designated covered containers

prior to disposal at an off-Site permitted solid waste landfill. Waste storage areas will be routinely inspected and areas around trash bins will be kept free of litter.

The Contractor will remove all sanitary wastewater from temporary facilities located at the Site for disposal. No sanitary wastewater will be discharged from the construction Site to waters of the State.

4.2 Post-Remediation/Excavation Component

The Site will be graded to the final topography and seeded or covered with other permanent non-erosive material. The Contractor will plant seed in the drainage areas to reduce potential erosion. Furthermore, the Contractor will ensure that surface stabilization will occur as soon as possible after final grading in all drainage areas to reduce potential erosion.

5. Maintenance and Inspections

5.1 Monitoring and Maintenance Procedures

The following procedures will be used to monitor pollution, stormwater erosion, and sediment controls for all activities on-Site.

- Identify areas where maintenance of pollution prevention, erosion, and sediment controls are inadequate
- Replace absorbent fences when buildup reaches one-third the height of the fence
- Re-anchor and/or repair absorbent fences, absorbent boom, and absorbent pompoms as necessary
- Conduct follow-up inspections of disturbed areas to determine the success of remediation/excavation
- Monitor remediation/excavation areas for signs of weeping oil
- Monitor railroad bed for any signs of weeping oil
- Conduct inspections of earthen dams to ensure any released product is contained
- Remove any observed product with skimmers, vacuum trucks and/or absorbent pads/pompoms

Consider revegetation successful if, upon visual survey, the density and cover of non-nuisance vegetation is similar in density and cover to adjacent undisturbed lands. Once at least 70 percent of all unpaved areas and areas not covered with permanent structures have a uniform vegetative cover, the Site will be considered stabilized.

5.2 Inspection Procedures

A qualified person who is knowledgeable of conditions at the Site will be designated to conduct inspections during Project activities. The inspector will have authority to stop activities that may result in a potential threat to human health or the environment.

Inspections shall be conducted weekly, before anticipated storm events, and within 24 hours of the end of a storm event that equals or exceeds 0.50 inch of rainfall.

The inspector will be responsible for:

- Ensuring compliance with the requirements of this O&M plan and other environmental permits and approvals
- Verifying that the limits of authorized project work areas and locations of access roads are properly marked before clearing
- Verifying the location of drainage systems
- Identifying stabilization needs in all areas
- Ensuring that temporary pollution prevention and erosion controls are properly installed and maintained daily, as necessary
- Inspecting areas of disturbed or bare soil
- Inspecting areas used for storage of materials that are exposed to stormwater
- Inspecting temporary structural pollution control devices/measures such as absorbent fences and earthen dams
- Inspecting areas where vehicles enter or exit the Site
- Inspecting locations where stormwater discharges from the Site
- Ensuring the repair of all ineffective, temporary erosion control measures within 24 hours of identification
- Ensuring restoration of contours and topsoil

A Site Inspection Checklist for documenting inspections is provided as Appendix B. This checklist will be completed and signed by the inspector certifying compliance with the O&M plan. Based on the conditions noted during the inspection, this O&M plan will be revised as needed, but in no case later than seven calendar days following the inspection. The modifications will provide for timely implementation of any changes to the O&M plan. Revisions to the O&M plan will be documented on a Tracking Form for O&M plan Amendments included in Appendix C. A copy of this O&M plan, including the inspection checklists and modifications, will be kept and maintained on-Site.

6. Hazardous Substances or Oil

Prevention of and immediate response to spills or leaks when they occur minimizes the likelihood of contact with stormwater runoff from the Site. CN, or the Contractor, will have equipment available to contain and clean-up minor to moderate volumes of spilled materials. Equipment and materials may include, but are not limited to, spill kits, shovels, wheelbarrows, dirt, sand, and visqueen that may be used to dike, contain, or remove minor to moderate spills or releases. If necessary, a spill response contractor will be contacted to clean up larger spills or releases.

Certain discharges or releases of hazardous substances must be reported to the Mississippi Department of Environmental Quality (MDEQ) within one or 24 hours, depending on the circumstances.

7. Operation and Maintenance Amendments

This O&M plan will be amended as needed during the project and, at a minimum, it will be amended whenever:

- There is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants to the waters of the State and which has not otherwise been addressed in this O&M plan
- Inspections or investigations indicate the O&M plan is not effective in eliminating or significantly minimizing pollutants from clearing, grading, or trenching; or is not achieving the objectives of controlling pollutants
- A new contractor responsible for implementing stormwater pollution prevention measures is brought on-Site

Amendments to the O&M plan will be documented on the Tracking Form for O&M plan Amendments included in Appendix C.

The O&M plan must be modified within 14 calendar days of knowledge of a spill or release occurring at the Site. The modifications must include:

- Description of the release
- Description of the circumstances leading to the release
- Date of the release

CN, or the Contractor, will document information relating to a spill or release on the Spill Report included in Appendix D. This report will be kept on file as part of the O&M plan. In addition, the O&M plan must be reviewed to identify measures to prevent the recurrence of such spills or releases, and the O&M plan must be modified where appropriate.

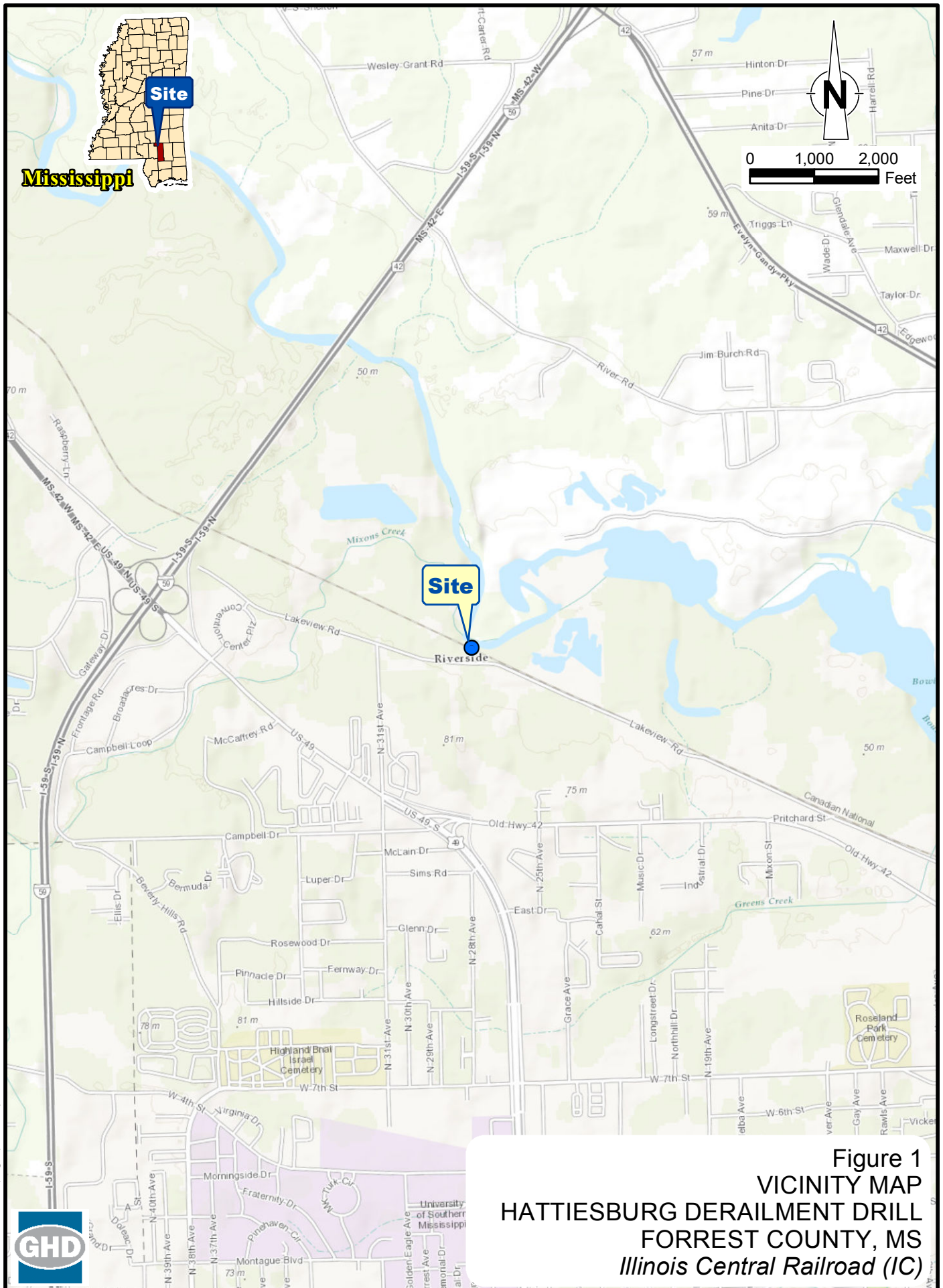
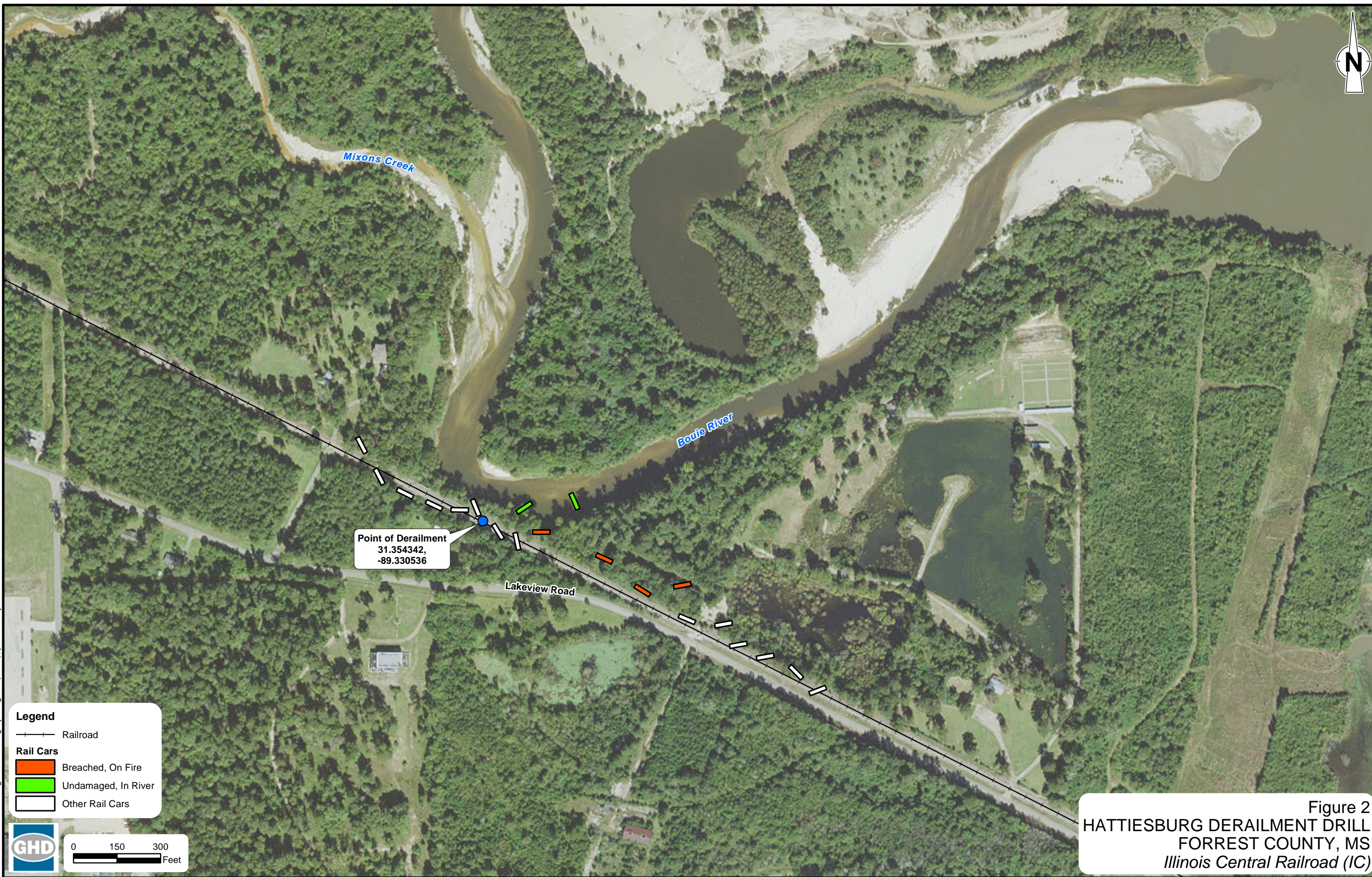


Figure 1
VICINITY MAP
HATTIESBURG DERAILMENT DRILL
FORREST COUNTY, MS
Illinois Central Railroad (IC)



Appendices

Appendix A

Pollution Control Devices



Photo 1 - Photograph of installed absorbent fence.



Photo 2 - Photograph of installed absorbent material and hay wattles.



Site Photographs



Photo 3 - Photograph of installed absorbent material and hay wattles.

Appendix B

Site Inspection Checklist

Appendix B
O&M Plan
Site Inspection Checklist
CN-Hattiesburg Derailment Drill

Inspections of the site will be conducted at least once every 7 days, before an anticipated storm event, and within 24 hours after the end of a storm event that is equal to or exceeds 0.50 inches. Inspections will be conducted at least once every 7 days by USES personnel, documented, signed, and retained with the O&M Plan.

Inspector Name & Title: _____

Date: _____

Signature: _____

Time: _____

		Comments
Weather conditions for the period since the last inspection including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred.	-	
Weather information and a description of any discharges occurring at the time of the inspection.	-	
Project Site		
Prior to working on site, have all contractors and supervisory personnel been informed and understood the requirements of the site's O&M plan?	Yes or No	
Have site conditions changed in a way that affect the nature of operations regarding the O&M plan?	Yes or No	
Is the work area free of trash and debris?	Yes or No	
Are the site entrance and interior roads swept clear of large soil clumps?	Yes or No	
Have there been any spills or releases of oil or hazardous substances on the work area?	Yes or No	
If so, have all spills and spill response measures (containment, cleanup, etc.) been documented on the inspection summary report?	Yes or No or NA	
		Comments
Disturbed Areas Not Finally Stabilized		
Are all structural controls (i.e., absorbent fences and containment berms) in place, maintained, and operational?	Yes or No	
Location and type of structural controls that failed to operate as designed.	-	
List any areas where additional controls are needed.	-	

Appendix B
O&M Plan
Site Inspection Checklist
CN-Hattiesburg Derailment Drill

Disturbed Areas Not Finally Stabilized Continued		
In areas where work activities have permanently or temporarily ceased, are stabilization measures (sodding, seeding, mulching, gravel, etc.) in place?	Yes or No	
If not, will measures be in place within 14 days?	Yes or No or NA	
Areas which have reached final stabilization (70%) note in comments.	-	
<i>Note: After a storm event, ensure that absorbent fences and containment berms have not been washed out of position or backfilled with sediment. If problems are noted, repair or replace sediment and erosion controls immediately and document corrective actions below.</i>		
Potential Pollutant Sources		
Are culverts, perimeter ditches, or storm drain inlets clear of debris or other obstructions that would prevent drainage of excavation/remediation area?	Yes or No	
Is there evidence of exposed waste or other significant materials (paints, solvents, detergent, oils, etc.)?	Yes or No	
All fueling vehicles will be equipped with spill kits and drip pans.	Yes or No	
Potential Pollutant Sources		
Is there evidence of oil sheen or other contamination in any standing water located within the excavation/remediation site?	Yes or No	
Is there evidence of any unauthorized equipment or vehicle repair or maintenance activity within the construction site?	Yes or No	
Are there any leaks from construction equipment?	Yes or No	

Appendix B
O&M Plan
Site Inspection Checklist
CN-Hattiesburg Derailment Drill

		Comments
Vehicle Entry and Exit Points		
Have the entrances to all disturbed areas been stabilized with gravel or concrete?	Yes or No	
Is there evidence of off-site tracking of sediments by vehicles or equipment exiting the site?	Yes or No	
Is there evidence of on-site tracking of sediments by vehicles or equipment entering the construction site?	Yes or No	
COMMENTS/CORRECTIVE ACTIONS:		
Date:		
ADDITIONAL COMMENTS		

Appendix C

Tracking Form for O&M Plan Amendments

Appendix C

O&M Plan Tracking Form for Operation & Maintenance Plan Amendments CN-Hattiesburg Derailment Drill Forrest County, Mississippi

The O&M plan must be updated whenever: (1) there is a change in design, construction, operations, or maintenance which has a significant effect on the discharge of pollutants to waters of the United States or State and which has not otherwise been addressed in the O&M plan; (2) inspections or investigations indicate the O&M plan is not effective in eliminating or significantly minimizing storm water runoff from excavation activities; or (3) a new contractor or subcontractor that will implement stormwater pollution prevention measures is brought on-Site.

Revisions to the O&M plan are noted below:

Date	Page No.:	Section No.:	Revision	Revisions Made By:	
				Name :	Signature:

Appendix D

Spill Report

Appendix D

O&M Plan Spill Report Form CN-Hattiesburg Derailment Drill Forrest County, Mississippi

In the event of an oil or hazardous substance spill, the Spill Report Form must be completed to the extent information is available prior to contacting regulatory agencies and/or emergency response organizations.

Date of Spill: _____

Date of Spill Discovery: _____

Time of Spill: _____

Time of Spill Discovery: _____

Name and Title of Discoverer: _____

Type of material spilled and manufacturer's name: _____

Description of spill location: _____

Directions from nearest community: _____

Estimated volume of spill: _____

Weather conditions: _____

Topography and surface conditions of spill site: _____

Spill medium (pavement, sandy soil, water, etc.): _____

Proximity of spill to surface waters: _____

Did the spill reach a waterbody? _____ Yes _____ No

If so, was a sheen present? _____ Yes _____ No

Describe the causes and circumstances resulting in the spill: _____

Describe the extent of observed contamination, both horizontal and vertical (*i.e.*, spill-stained soil in a 5-foot radius to a depth of 1 inch): _____

Describe immediate spill control and/or cleanup methods used and implementation schedule: _____

Current status of cleanup actions: _____

Name/Company/Address/Phone Number for the following:

Spill Coordinator: _____

Person Who Reported the Spill: _____

Environmental Inspector: _____

Form completed by: _____ Date: _____