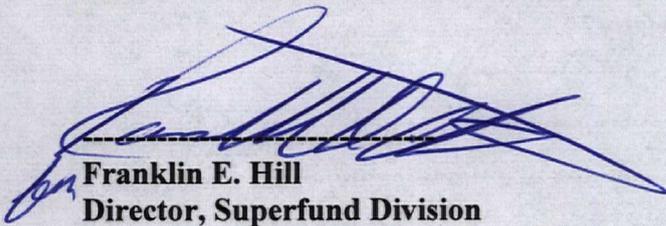


**FIVE-YEAR REVIEW REPORT FOR
ICG ISELIN RAILROAD YARD SUPERFUND SITE
JACKSON, MADISON COUNTY, TN**



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Date



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LIST OF ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
ATSDR	Agency for Toxic Substances and Disease Registry
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CN	Canadian National
COPC	Contaminants of Potential Concern
DSF	Division of Superfund (now Division of Remediation)
EPA	United States Environmental Protection Agency
FFS	Focused Feasibility Study
FS	Feasibility Study
FYR	Five-Year Review
HASP	Health and Safety Plan
HRS	Hazard Ranking System
ICs	Institutional Controls
ICG	Illinois Central Gulf
JEA	Jackson Energy Authority
LURs	Land Use Restrictions
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
mg/kg	milligrams per kilogram
MW	monitoring well
NCP	National Contingency Plan
NPL	National Priorities List
NTCRA	Non Time Critical Removal Action
O&M	Operation and Maintenance
PCE	Tetrachloroethylene
ppb	parts per billion
ppm	parts per million
PRGs	Preliminary Remediation Goals
PRP	Potentially Responsible Party
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation / Feasibility Study
ROD	Record of Decision
RPM	Remedial Project manager
RR	Railroad
RSL	Regional Screening Level
SDWA	Safe Drinking Water Act
SESD	Science and Ecosystem Support Division (of EPA Region 4)
SI	Site Investigation
START	Superfund Technical Assessment and Response Team
TCE	Trichloroethylene
TDEC	Tennessee Department of Environment and Conservation
TDOR	Tennessee Division of Remediation
TPH	Total Petroleum Hydrocarbons

$\mu\text{g}/\text{kg}$
 $\mu\text{g}/\text{L}$
VOCs

micrograms per kilogram
micrograms per liter
Volatile Organic Compounds

EXECUTIVE SUMMARY

Introduction

The ICG Iselin Railroad (RR) Yard Superfund Site (Site) is an 80-acre property located at the intersection of Eastern Street and Magnolia Street in Jackson, Tennessee. The Site is bordered to the north by a residential area, and west, east, and south by woods and agriculture.

The facility has had several owners over the years, each of which used it for various purposes related to RR operation. Past activities at the Site include engine repair, maintenance, radiator repair, diesel refueling and general RR activities. The Mobile and Ohio RR Company operated the facility as a RR station and maintenance depot from 1906 until 1940. Gulf Mobile and Ohio RR Company purchased Mobile and Ohio RR Company and continued to use the facility as a rail yard. In 1972, Gulf Mobile reorganized as the Illinois Central Gulf RR Company (ICG). ICG was later re-organized to form the Illinois Central RR Company, Inc. (Illinois Central). Illinois Central used the Site as a locomotive maintenance facility from 1972 until 1986. In 1986, Illinois Central sold approximately 16 acres of the Site, including the maintenance building, wheel house, and power plant, to Williams Steel Company, Inc. (Williams Steel), a Tennessee corporation involved in the fabrication of large steel structures used in the construction industry. In 1989, Williams Steel transferred the property to Campbell & Associates, a Tennessee general partnership. Later in 1989, Campbell & Associates transferred the property to its present owner, Iselin Properties, Inc. In 1988, the remainder of the Site, which included the rail yard and a tract located east and adjacent to the rail yard, was sold by Illinois Central to the Southern Railway Company. The Southern Railway Company was later re-organized into Norfolk Southern Railway Company, Inc. (Norfolk Southern). Norfolk Southern leases its part of the Site to the West Tennessee Railroad Corporation as a switch yard.

In October, 1990, the State of Tennessee Division of Superfund (DSF) completed a Preliminary Assessment of the Site, which resulted in a recommendation of further investigation. As a result, a Site Investigation (SI) was completed at the Site on March 15, 1991. The SI revealed high lead concentrations, as well as elevated levels of arsenic, copper, zinc and volatile organic compounds in soil. Tetrachloroethylene (PCE), trichloroethylene (TCE), and arsenic were also detected in groundwater. PCE is a solvent commonly used in dry cleaning and as a degreaser. TCE is also a degreaser.

A Remedial Investigation/Feasibility Study (RI/FS) was completed on the Site in 1993. Analytical data revealed the presence of arsenic and TCE in groundwater in excess of the Safe Drinking Water Act (SDWA) Maximum Contaminant Levels (MCL's). Further investigation, however, revealed that both contaminants were originating from an off-site source upgradient of the Site. The Tennessee Department of Environment and Conservation (TDEC), DSF staff investigated several suspect sites for the origin of the upgradient source, but failed to locate a source area. In 2001, EPA Region 4 Science and Ecosystem Support Division (SESD) and Superfund Technical Assessment and Response Team (START) also assisted in investigation of upgradient contaminant sources but to no avail. In addition, lead-contaminated soil was discovered adjacent to the locomotive maintenance facility.

The Hazard Ranking System (HRS) score for the Site was 50. The Site was proposed for the National Priority List (NPL) listing in May 1993. The Site was added to the NPL in December 1994. On June 10, 1994, the State of Tennessee and EPA entered into a Non-Fund Financed State Lead Enforcement

Agreement. This agreement designated the State of Tennessee as the lead agency for all remedial response actions for the Site.

The 1996, Feasibility Study (FS) for Groundwater, prepared by RMT, provides for groundwater monitoring and Site deed restrictions prohibiting residential development and the drilling of water wells. In August 1997, the Identification of Constituents of Concern and Conceptual Feasibility Study for Soils and the associated Non-Time Critical Removal Action (NTCRA) Work Plan were approved by TDEC. Lead, located at the northeast corner of the Locomotive Maintenance Building, was the constituent of concern (COC). In December 1998, approximately 716 tons of lead-contaminated soil was excavated and removed from the Site and transported to an appropriate disposal facility. The area was backfilled to grade. The Rail-Tie Area, south of the Locomotive Maintenance Building, was in unusable condition due to the moist nature of the soil. The area containing rail ties was restored by removing vegetation and regrading the slopes. The rail ties were compacted and capped with approximately 18 inches of clay. A 6 inch layer of topsoil was seeded and fertilized to establish vegetation for erosion control. In addition, Williams Steel Co. excavated soil from drainage ditches and demolished the above ground 1,000,000 gallon diesel fuel tank in 1997.

With EPA's concurrence, TDEC issued a Record of Decision (ROD) on November 4, 1999. The primary components of the ROD included institutional controls in the form of land use restrictions (LURs) to prevent residential development and prevent the installation of drinking water wells on the Site property.

The Remedial Action (RA) was completed in November 1999. The Site was deleted from the NPL in January 2002. The Site was removed from TDEC-DSF list of inactive hazardous waste sites in October 2002. The first Five-Year Review (FYR) Report was completed in December 2004. Deed restrictions prohibiting residential use and drilling of water wells on both the Iselin Properties, Inc. and Norfolk Southern properties were to have been recorded on each respective property deed. Visits to the Site have verified that no residential development has occurred and no water wells have been installed. The triggering action for this FYR was the signing of the previous FYR on December 1, 2009.

Remedial Action Objectives

The ROD did not formally include Remedial Action Objectives (RAO's); however, the stated goals were identified in the ROD as follows:

Restrict use of the Site to commercial and industrial uses by the implementation of LURs imposed as deed restrictions.

Restrict the use of groundwater for any reason at the Site by LURs imposed as deed restrictions.

Technical Assessment

The remedy implemented at the Site was institutional controls through deed restrictions. The deed restrictions prohibit residential development and drilling of water wells on the Site. Visits to the Site have verified that no water wells have been drilled and no residential development has occurred. The remedy selected for the Site is functioning as intended.

Protectiveness Determination

The ROD Selected Alternative requiring institutional controls through deed restrictions has been found to be protective of human health and the environment. Results of the third FYR indicate that:

The cap installed pursuant to the NTCRA is still functioning as intended.

Deed restrictions required by the ROD to prohibit residential development have been implemented and are effective. Visits to the Site have verified that no residential development has occurred.

Deed restrictions required by the ROD to prohibit drilling of water wells have been implemented and are effective. Visits to the Site have verified that no water wells have been drilled on the Site property.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: ICG Iselin Railroad Yard		
EPA ID: TND987767795		
Region: 4	State: TN	City/County: Jackson, Madison
SITE STATUS		
NPL Status: Deleted		
Multiple OUs? No	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: State Tennessee Department of Environment and Conservation		
Author name (Federal or State Project Manager): Kevin R. Smith		
Author affiliation: TDEC-DOR		
Review period: 05/01/2014 – 11/30/2014		
Date of site inspections: 6/18/2014, 7/16/2014, 9/16/14, 9/29/14		
Type of review: Statutory		
Review number: 3		
Triggering action date: 12/1/2009		
Due date (five years after triggering action date): 12/1/2014		

Five-Year Review Summary Form (continued)

Issues/Recommendations

OU(s) without Issues/Recommendations Identified in the Five-Year Review:
Operable Unit 1

Issues and Recommendations Identified in the Five-Year Review:

OU(s): Operable Unit 1	Issue Category: No Issue			
	Issue: No Issues were found during this FYR.			
	Recommendation: N/A			
Affect Current Protectiveness	Affect Future Protectiveness	Implementing Party	Oversight Party	Milestone Date
N/A	N/A	N/A	N/A	N/A

To add additional issues/recommendations here, copy and paste the above table as many times as necessary to document all issues/recommendations identified in the FYR report.

Protectiveness Statement(s)

Include each individual OU protectiveness determination and statement. If you need to add more protectiveness determinations and statements for additional OUs, copy and paste the table below as many times as necessary to complete for each OU evaluated in the FYR report.

<i>Operable Unit:</i> Operable Unit 1	<i>Protectiveness Determination:</i> Protective	<i>Addendum Due Date (if applicable):</i>
<i>Protectiveness Statement:</i> Please see Sitewide Protectiveness Statement.		

Sitewide Protectiveness Statement (if applicable)

Protectiveness Determination:
Protective

Addendum Due Date (if applicable):

The ROD Selected Alternative requiring institutional controls through deed restrictions has been found to be protective of human health and the environment. Results of the third FYR indicate that: The cap installed pursuant to the NTCRA is still functioning as intended. Deed restrictions required by the ROD to prohibit residential development have been implemented and are effective. Visits to the Site have verified that no residential development has occurred. Deed restrictions required by the ROD to prohibit drilling of water wells have been implemented and are effective. Visits to the Site have verified that no water wells have been drilled on the Site property.

Environmental Indicators

- Current human exposures at the Site are under control.
- Current groundwater migration is under control.

Are Necessary Institutional Controls in Place?

All Some None

Has EPA Designated the Site as Sitewide Ready for Anticipated Use?

Yes No

Has the Site Been Put into Reuse?

Yes No

Third Five-Year Review Report For the ICG Iselin Railroad Yard Superfund Site

1.0 Introduction

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy will continue to be protective of human health and the environment. The methods, findings, and conclusions of FYRs are documented in FYR reports. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) prepares FYRs pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Contingency Plan (NCP). CERCLA Section 121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

EPA interpreted this requirement further in the NCP; 40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii), states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such actions no less often than every five years after the initiation of the selected remedial action.

The Tennessee Division of Remediation (TDOR) conducted the FYR and prepared this report regarding the remedy implemented at the Illinois Central Gulf (ICG) Iselin Railroad (RR) Yard (Site) in Jackson, Madison County, Tennessee. This FYR was conducted from (May through November) of 2014. ICG reorganized and formed Illinois Central Railroad Inc. In 1998, Canadian National (CN) purchased Illinois Central. Therefore, CN is the lead Potentially Responsible Party (PRP) for developing and implementing the remedy at the Site.

This is the third FYR for the Site. It is required because hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure. Under current conditions at the Site, potential or actual human exposures are under control. The triggering action for this statutory review is the signing of the second FYR, which occurred December 1,

2009. The Site consists of only one Operable Unit.

2.0 Site Chronology

The following table lists the dates of important events for the Site.

Table 1: Chronology of Site Events

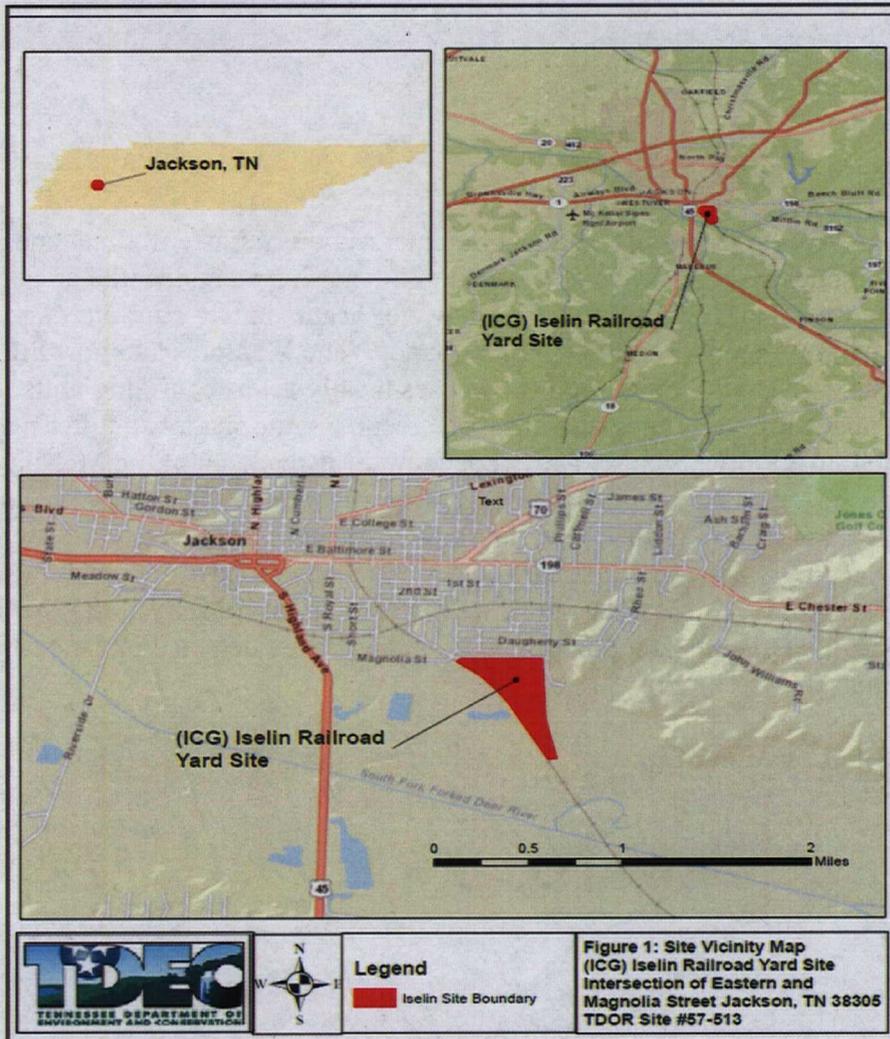
Event	Date
Site Discovery by State	June 1987
Preliminary Assessment completed	June 1990
Site Inspection completed	March 1991
Remedial Investigation (RI) and Feasibility Study (FS) Work Plan and Analysis Plan, Quality Assurance Project Plan (QAPP), and Health and Safety Plan (HASP)	February 1992
RI Report, Volume I & II, Revised February 1994	April 1993
Non-Fund State Lead Agreement	June 1994
Work Plan Addendum	November 1994
Site Added to the National Priority List (NPL)	December 1994
Work Plan Addendum II	March 1995
RIFS, Community Relations Plan, revised September 1995	May 1995
Work Plan Addendum III	November 1995
Supplemental RI Work Plan	May 1996
Focused Feasibility Study (FFS) for Groundwater, revised 1997	May 1996
Additional Groundwater Investigation Work Plan	November 1996
Agency for Toxic Substances and Disease Registry (ATSDR)-Public Health Assessment for Site	April 1997
Groundwater Investigation Summary Report	May 1997
Total Petroleum Hydrocarbon (TPH) Investigation Work Plan	July 1997
Addendum to TPH Work Plan	August 1997
Contaminants of Potential Concern (COPC) and Conceptual FS for Soils	August 1997
TPH Investigation Summary Report	March 1998
TPH Remediation Work Plan	June 1998
Proposed Non-Time Critical Removal Action (NTCRA) Work Plan	September 1998
NTCRA occurred	December 1998
FFS for Soils and NTCRA Report	January 1999
Record of Decision issued for the Site	November 1999
Construction Completion Date	March 2000
Site removed from NPL	January 2002
Site removed from State List of Inactive Hazardous Substance Sites	October 2002
TPH Well Installation and Sampling Report	October 2003
First FYR Report	December 2004
TPH FFS Report	April 2007
Second FYR Site Inspections	March 18, June 23, 30, July 6, 2009
Proposed Groundwater Sampling Activities	May 11, 2009
TPH Groundwater Sampling Report	July 2009
TPH Groundwater Sampling Report	November 11, 2009
Second FYR	December 2009
Record of Decision (ROD) for Petroleum Contaminants	May 25, 2011
Third FYR Site Inspections	June 18, July 16, September 14, September 29, 2014

3.0 Background

3.1 Physical Characteristics

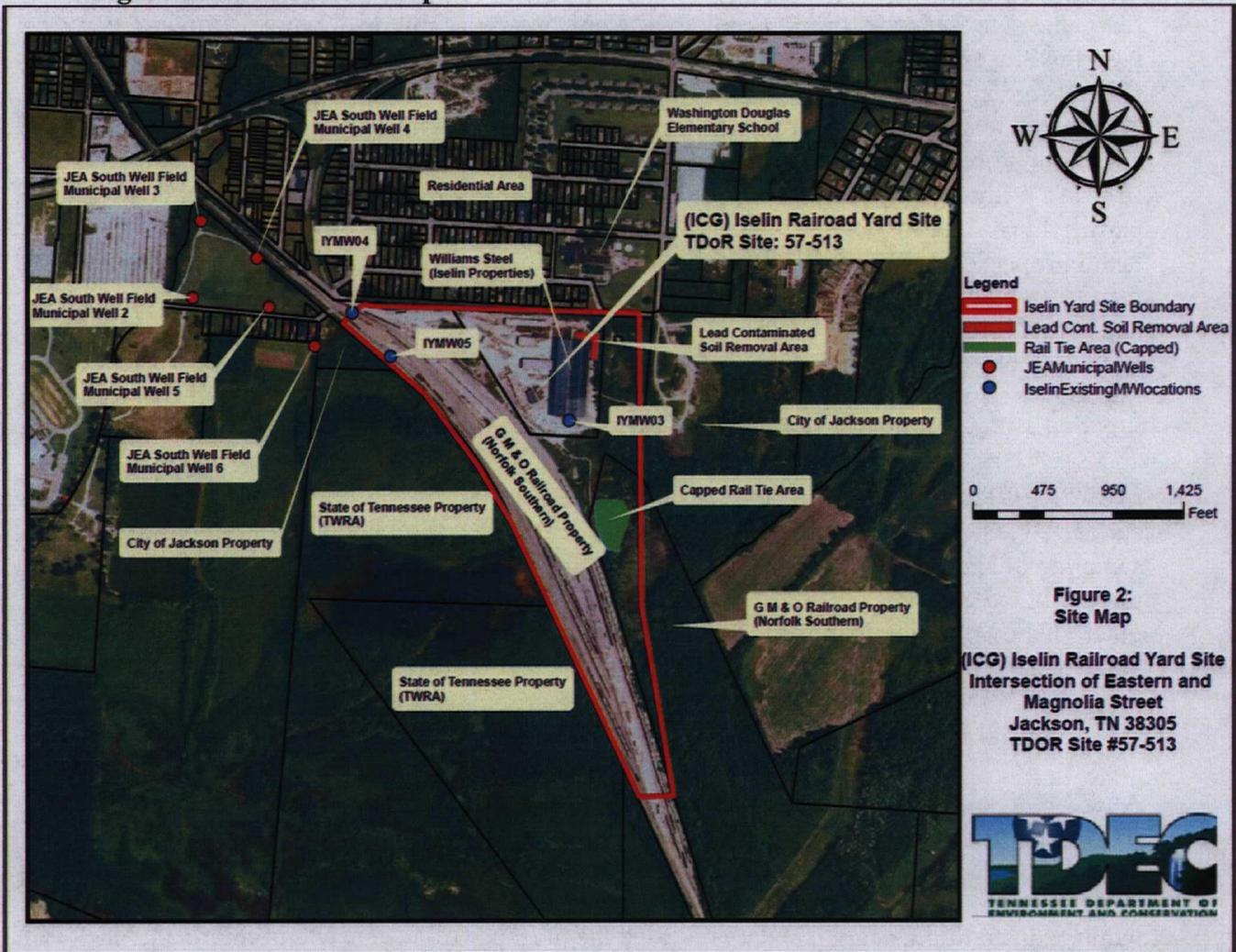
The Site is an 80-acre property located at the intersection of Eastern Street and Magnolia Street in Jackson, Tennessee. The Site is bordered to the north by a residential area, and west, east, and south by woods and agriculture. Groundwater occurs in two aquifers. The shallow aquifer is made up by the Memphis and Fort Pillow Sands. The Memphis and Fort Pillow Sands function as a single aquifer, although clay lenses locally act as confining units. The Jackson Energy Authority (JEA) municipal wells are screened in the shallow aquifer made up by the Memphis and Fort Pillow Sands. The deeper aquifer is made up of the McNairy Sand. The Porters Creek Clay, which ranges in thickness from 130 to 320 feet thick, hydraulically separates the McNairy Sand, from the shallower aquifer. Ground-water flow is generally to the west/southwest toward the major streams. Residents have access to potable water via the JEA municipal water supply. The JEA South well field is approximately 1,785 feet downgradient of the Site. Volatile Organic Compounds (VOC's) have been detected in the past in some of the JEA municipal wells.

Figure 1: Site Location Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site, and is not intended for any other purpose.

Figure 2: Detailed Site Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site, and is not intended for any other purpose.

3.2 Land and Resource Use

The Site is in an area zoned industrial and commercial by the City of Jackson Planning Commission. Deed restrictions for the Site prohibit residential use of the property, and use of the groundwater. The JEA South Well Field is approximately 1,785 feet west of the Site. Currently Williams Steel Company operates a steel fabricating operation on-site, and the Norfolk Southern property is leased to West Tennessee RR as a switch yard.

3.3 History of Contamination

Formerly owned by ICG, the Site was a locomotive maintenance facility. Types of wastes generated during these operations include radiator fluids, degreasers, diesel fuel, other organic solvents, and metals. The Site has had several owners over the years, each of which used it for various purposes related to RR operations. Past activities at the Site include engine repair, maintenance, radiator repair, diesel refueling and general RR activities. The Mobile and Ohio RR Company operated the facility as a RR station and maintenance depot from 1906 until 1940. Gulf Mobile and Ohio RR Company purchased Mobile and Ohio RR Company and continued to

use the facility as a rail yard. In 1972, Gulf Mobile reorganized as ICG. ICG was later reorganized to form the Illinois Central RR Company, Inc. (Illinois Central). Illinois Central used the Site as a locomotive maintenance facility from 1972 until 1986. In 1986, Illinois Central sold approximately 16 acres of the Site, including the maintenance building, wheel house, and power plant, to Williams Steel Company, Inc. (Williams Steel), a Tennessee corporation involved in the fabrication of large steel structures used in the construction industry. In 1989, Williams Steel transferred the property to Campbell & Associates, a Tennessee general partnership. Later in 1989, Campbell & Associates transferred the property to its present owner, Iselin Properties, Inc. From 1986 until present, Williams Steel has operated a steel fabrication facility on a portion of the Site. In 1988, the remainder of the Site, which included the rail yard and a tract located east and adjacent to the rail yard, was sold by Illinois Central to the Southern Railway Company. The Southern Railway Company was later re-organized into Norfolk Southern Railway Company, Inc. (Norfolk Southern). Norfolk Southern leases its part of the Site to the West Tennessee RR Corporation as a switch yard.

In 1990-1991, site assessment activities discovered elevated levels of contaminants in the Site's surface soil, sediment, and groundwater. Since JEA South Well Field is adjacent to the Site, sampling of JEA's individual production wells discovered that Site related contaminants were present in the groundwater at levels of concern. As a result of this contamination problem and other unknown contaminant sources, JEA installed 2 air strippers as a part of its water treatment plant.

3.4 Initial Response

After site assessment investigations, the Site was scored under the Hazard Ranking System (HRS) and placed on the National Priority List (NPL) by EPA. After this action, EPA and TDOR worked with ICG to complete Phase I and II of the RI. A RI report was submitted by ICG in April 1993. Lead-contaminated soil was discovered adjacent to the locomotive maintenance facility. In addition, analytical data revealed the presence of arsenic and trichloroethylene (TCE) in groundwater in excess of the Maximum Contaminant Levels (MCLs). TCE is a degreaser. However, further investigation revealed that both contaminants were originating from an off-site source, upgradient of the Site. The TDEC, Division of Superfund (DSF) staff investigated several suspect sites for the origin of the upgradient source, but never discovered a source area. In 2001, EPA Region 4 Science and Ecosystem Support Division (SES) and Superfund Technical Assessment and Response Team (START) also assisted in investigation of upgradient contaminant sources but to no avail.

The Site was listed on the NPL in December 1994. Removal action on-site included excavation of soil from drainage ditches by the Williams Steel Company and demolition of a 1,000,000-gallon above-ground diesel fuel tank. The Identification of Constituents of Concern and Conceptual Feasibility Study for Soils and the associated Non-Time Critical Removal Action (NTCRA) Work Plan were approved by TDEC. Lead located at the northeast corner of the Locomotive Maintenance Building, was the constituent of concern (COC). In December 1998, approximately 716 tons of lead-contaminated soil was excavated and removed from the Site and transported to an appropriate disposal facility. The area was backfilled to grade. The Rail-Tie Area, south of the Locomotive Maintenance Building, was in unusable condition due to the moist nature of the soil. The area containing rail ties was restored by removing vegetation and regrading the slopes. The rail ties were compacted and capped with approximately 18 inches of

clay. A 6 inch layer of topsoil was seeded and fertilized to establish vegetation for erosion control.

The approved Feasibility Study (FS) for Groundwater provides for groundwater monitoring and Site deed restrictions that prohibit residential development and the drilling of water wells.

3.5 Basis For Taking Action

The ATSDR Public Health Assessment Study for the Site in April 1997, and the COPC & FS in August 1997 provided the basis for taking the remedial action. Site soils were impacted by Site operations through the years. The COPC & FS concluded that lead-contaminated soils in the area surrounding the northeast Locomotive Maintenance Building and in the Rail Tie Area were at levels of concern that constituted unacceptable health risks and required the NTCRA. To address risk to future residents from the Site's surface soil and potable use of the Site's groundwater, the NTCRA recommended lead-contaminated soil be removed from the northeast corner outside of the maintenance building and clean backfill soil be used to replace the excavated soil.

The approved FS for Groundwater provides for groundwater monitoring and Site deed restrictions that prohibit residential development and the drilling of water wells.

4.0 Remedial Actions

In accordance with CERCLA and the NCP, the overriding goals for any remedial action are protection of human health and the environment and compliance with applicable or relevant and appropriate requirements (ARARs). A number of remedial alternatives were considered for the Site, and final selection was made based on an evaluation of each alternative against nine evaluation criteria that are specified in Section 300.430(f)(5)(i) of the NCP. The nine criteria include:

1. Overall Protectiveness of Human Health and the Environment
2. Compliance with ARARs
3. Long-Term Effectiveness and Permanence
4. Reduction of Toxicity, Mobility or Volume of Contaminants through Treatment
5. Short-term Effectiveness
6. Implementability
7. Cost
8. State Acceptance
9. Community Acceptance

4.1 Remedy Selection

During the RI, Site sampling revealed the need for removal of lead-contaminated soil. A cleanup goal for lead in soil was established at 1,000 micrograms/kilogram (mg/kg). This level was determined by the Baseline Risk Assessment performed in the RI. EPA has published a guidance document titled Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to lead in Soil (EPA, December 1996). The evidence describes a methodology for assessing risks associated with non-residential adult exposure to lead in soil. The methodology is conservative since it evaluates the most

sensitive adult or near adult receptor for lead (woman of child bearing age). This approach has been utilized at Superfund sites to evaluate not only worker scenarios, but also older children under recreational or trespassing scenarios. It is a protective methodology because it considers long term exposures and takes into account background blood levels in the receptor population. Using this methodology, an average lead concentration of 1,000 mg/kg in soil is protective of women workers. The average detected concentration of lead in surface soil samples were less than 1,000 mg/kg, however the surface soil from the northeast corner of the Locomotive Maintenance Building exceeded 1,000 mg/kg. Lead was therefore considered a COC at the Site.

Phase I and Phase II of the RI concluded that arsenic and trichloroethylene in groundwater on-site were above the recommended maximum MCLs. Further investigation revealed that both of these contaminants were originating from an off-site source upgradient of the Site. Both trichloroethylene and arsenic have been detected in groundwater at significant levels upgradient of the Site. The FS for Groundwater determined the need for deed restrictions prohibiting residential development and drilling of water wells.

The ROD for the Site was signed on November 4, 1999. According to the ROD the selected alternative was institutional controls which included deed restrictions to prohibit residential development and the drilling of water wells on the Site. This alternative was chosen as a result of the investigative findings and the completion of the NTCRA.

The ROD did not formally include Remedial Action Objectives (RAO's); however, the stated goals were identified in the ROD as follows:

Restrict use of the Site to commercial and industrial uses by the implementation of LURs imposed as deed restrictions.

Restrict the use of groundwater for any reason at the Site by LURs imposed as deed restrictions.

4.2 Remedy Implementation

During December 1998 and January 1999, a total of 716 tons of lead-contaminated soil was excavated above a benchmark of 1,000 mg/kg at the northeast corner of the Locomotive Maintenance Building and backfilled with clean soil. A gravel layer was placed on top of the backfill soil to allow vehicle traffic over the area. Confirmation samples collected after excavation detected lead levels remaining in the soil between 6.5 and 27 mg/kg.

During this same period, an eighteen inch (18") thick clay cap was constructed over the Rail Tie Area. A six inch (6") layer of top soil was placed on top of the clay cap. This soil layer was fertilized and seeded to provide for a vegetative cover.

The ROD called for deed restrictions on the properties currently owned by both Iselin Properties, Inc. and Norfolk Southern RR, to prohibit residential development and use of groundwater. The deed restrictions for the Norfolk Southern RR parcel were filed in October 2004 with the Madison County Register of Deeds. The deed restrictions for the Iselin Properties, Inc. parcel were filed with the Madison County Register of Deeds in September 2009. These restrictions prohibit the use of the Site as a residence and prohibit the installation of water wells on the Site.

4.3 Operation & Maintenance (O&M)

There is currently no O&M Plan in place. Current O&M activities at the Site include mowing the capped Rail Tie Area annually and re-seeding areas of stressed vegetation if observed. The current landowner of the Rail Tie Area, Norfolk Southern, is responsible for maintaining the cap. TDOR visits the Site annually to conduct institutional control inspections and make sure the capped Rail Tie Area is in good condition.

Since the last FYR in 2009, Norfolk Southern made repairs to the cap in 2010 after heavy equipment removed vegetation and left ruts, and installed a chain-link fence around the Rail-Tie Area to prevent future damage by heavy equipment.

CN became a PRP after purchasing Illinois Central in 1998. CN is responsible for O&M costs at the Site, except for maintaining the capped Rail Tie Area. Since the last FYR in 2009, CN plugged and abandoned 18 monitoring wells in 2010. This action was based on the 2007 FFS. A review of the extensive groundwater investigations conducted at the Site documented that the lateral extent of total petroleum hydrocarbons (TPH) constituents in groundwater has been defined by the non-detection of TPH constituents in groundwater samples collected at and beyond the Site property boundary, and that degradation and natural attenuation is taking place. In addition, deed restrictions on both properties, which make up the Site, prohibit residential development and drilling of water wells on the Site. TDOR requested CN to conduct two more groundwater sampling events in July and October of 2009, which included the sampling of boundary wells along the northwest and southwest property boundary. There were no petroleum related constituents detected during the July and October 2009 groundwater sampling. As a result of the 2007 FFS and the additional groundwater sampling events conducted in July and October 2009, TDOR agreed CN could discontinue monitoring for petroleum constituents and could abandon all monitoring wells except MW-3, MW-4, and MW-5. TDOR requested these three monitoring wells remain open in support of future FYRs.

Annual O&M cost are presented in Table 2. O&M cost were provided by Norfolk Southern and CN.

Table 2: Annual O&M Costs

Year	Total Costs (rounded to the nearest \$1,000)
2010	\$36,000
2011	\$2,000
2012	\$1,000
2013	\$2,000
2014	\$5,000 (estimate)

5.0 Progress Since the Last Five-Year Review

The protectiveness statement from the 2009 FYR for the Site stated the following:

- The ROD Selected implementing institutional controls through deed restrictions has been found to be protective of human health and the environment. The Non-Time Critical Removal Action remedy to compact and cap rail ties is still functioning as intended.

- Deed restrictions implemented by the ROD to prohibit residential development have been effective. Visits to the Site have verified that no residential development has occurred.
- Deed restrictions implemented by the ROD to prohibit drilling of water wells have been effective. Visits to the Site have verified that no water wells have been drilled on the property.

The 2009 FYR included one issue and recommendation. The recommendation and the current status are discussed below.

Table 3: Progress on Recommendations from the 2009 FYR

Section	Issue	Recommendation	Party Responsible	Oversight Agency	Milestone Date	Action Taken and Outcome	Date of Action
5.1	Rail Tie Cap problems.	Contact Norfolk Southern about cap maintenance: cut the trees and high grass.	Norfolk Southern	TDEC	10/31/09	Contact Norfolk Southern about cap maintenance: Norfolk Southern obtained a contractor to cut the trees and high grass. A chain-link fence was also placed around the capped area.	Norfolk Southern was contacted 2/16/10

5.1 Rail-Tie Area Clay Cap Problems

TDOR contacted Norfolk Southern regarding the condition of the capped Rail Tie Area at the Site on February 16, 2010. Norfolk Southern representatives came to Jackson, Tennessee and met with TDOR regarding the cap on March 22, 2010. Norfolk Southern indicated they would add soil, if needed, to smooth out the ruts and re-seed the capped area that had been disturbed and cover it with straw to prevent erosion. Norfolk Southern also planned to put up a chain-link fence around the capped area to prevent damage from occurring again. Norfolk Southern indicated it would probably take 2 months to set up a bid package, acquire bids, and set up a maintenance contract with a contractor. When TDOR conducted an Institutional Control (IC) inspection at the Site on October 5, 2010, the ruts were filled and straw covered the areas of removed vegetation. The cap had recently been mowed, and the small saplings had been removed. A chain-link fence with no trespassing signs was also installed around the capped area. Since being notified of the issues with the cap, Norfolk Southern requires a contractor to conduct maintenance on the capped area at least once a year.

6.0 Five-Year Review Process

6.1 Administrative Components

EPA Region 4 initiated the FYR in May 2014 and scheduled its completion for December 2014. The EPA Site review team was led by Mr. John Nolen, EPA Remedial Project Manager (RPM) for the Site. The review team also included Melissa Heath, EPA Site attorney; Ron Sells, TDOR Jackson Office Manager; and Kevin Smith, TDOR RPM. In May 2014 EPA held a scoping call with the review team to discuss the Site and items of interest as they related to the protectiveness of the remedy currently in place. A review schedule was established that consisted of the following:

- Community notification;
- Document review;
- Data collection and review;
- Site inspection;
- Local interviews; and
- FYR Report development and review.

6.2 Community Involvement

On September 19, 2014, a public notice was mailed to everyone listed on the EPA mailing list for the Site. The public notice announced the commencement of the FYR process for the Site, providing John Nolen's contact information, and inviting community participation. The press notice is available in Appendix B.

EPA attempted to contact several residents near the Site by telephone, but was unable to contact anyone. There were other residences nearby but their numbers were unpublished. As a follow up to the telephone calls, the public notice announcing the FYR was distributed to residents bordering the Site.

The FYR report will be made available to the public once it has been finalized. Copies of this document will be placed in the designated public repository, the Jackson-Madison County Library at 433 East Lafayette Street Jackson, TN 38305. Upon completion of the FYR, EPA Region 4 will place a public notice in the Jackson Sun newspaper to announce the availability of the final FYR report in the Site document repository.

6.3 Document Review

This FYR included a review of relevant, site-related documents including the ROD, remedial action reports, and recent monitoring data. A complete list of the documents reviewed can be found in Appendix A.

ARARs Review

CERCLA Section 121(d)(1) requires that Superfund remedial actions attain "a degree of cleanup of hazardous substances, pollutants, and contaminants released into the environment and of control of further release at a minimum which assures protection of human health and the environment." The remedial action must achieve a level of cleanup that at least attains those requirements that are legally applicable or relevant and appropriate.

- Applicable requirements are those cleanup standards, standards of control and other substantive requirements, criteria or limitations promulgated under federal environmental, state environmental or facility siting laws that specifically address a hazardous substance, remedial action, location or other circumstance found at a CERCLA site.
- Relevant and appropriate requirements are those standards that, while not "applicable," address problems or situations sufficiently similar to those

encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards more stringent than federal requirements may be applicable or relevant and appropriate.

- To-be-considered (TBC) criteria are non-promulgated advisories and guidance that are not legally binding, but should be considered in determining the necessary remedial action. For example, TBC criteria may be particularly useful in determining health-based levels where no ARARs exist or in developing the appropriate method for conducting a remedial action.

Chemical-specific ARARs are health- or risk-based numerical values or methodologies which, when applied to site-specific conditions, result in the establishment of numerical values. These values establish an acceptable amount or concentration of a chemical that may remain in, or be discharged to, the ambient environment. Examples of chemical specific ARARs include MCLs under the federal Safe Drinking Water Act and ambient water quality criteria enumerated under the federal Clean Water Act.

Action-specific ARARs are technology- or activity-based requirements or limits on actions taken with respect to a particular hazardous substance. These requirements are triggered by a particular remedial activity, such as discharge of contaminated groundwater or in-situ remediation.

Location-specific ARARs are restrictions on hazardous substances or the conduct of the response activities solely based on their location in a special geographic area. Examples include restrictions on activities in wetlands, sensitive habitats and historic places. Remedial actions are required to comply with the chemical-specific ARARs identified in the ROD. In performing the FYR for compliance with ARARs, only those ARARs that address the protectiveness of the remedy are reviewed.

The final remedy selected for this Site was designed to meet or exceed all chemical-specific ARARs and meet location- and action-specific ARARs. Chemical-specific ARARs identified in the selected remedy within the ROD for the groundwater at this Site and considered for this FYR for continued groundwater treatment and monitoring are listed in Table 4. Tennessee primary drinking water standards are the same as federal primary drinking standards or are more stringent than federal standards.

Table 4: Summary of Groundwater ARAR Changes

Contaminants of Concern	2009 ROD ARARs (µg/L) ¹	Current ARARs (µg/L) ¹	ARARs Changed?
Lead	15 (action level)	15 (action level)	No
Trichloroethylene	5	5	No
Arsenic	10	10	No
1. µg/L = micrograms/liter			

6.4 Data Review

Soil

The need for removal of lead-contaminated soil was determined by Site sampling during the RI. The PRP submitted a NTCRA Work Plan in September 1998. A cleanup goal for lead in soil at the northeast corner was established at 1,000 mg/kg. The risk level was determined by the Baseline Risk Assessment performed in the RI. EPA has published a guidance document titled Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to lead in Soil (EPA, December 1996). The evidence describes a methodology for assessing risks associated with non-residential adult exposure to lead in soil. The methodology is conservative since it evaluates the most sensitive adult or near adult receptor for lead (woman of child bearing age). This approach has been utilized at Superfund sites to evaluate not only worker scenarios, but also older children under recreational or trespassing scenarios. It is a protective methodology because it considers long term exposures and takes into account background blood levels in the receptor population. Using this methodology, an average lead concentration of 1,000 mg/kg in soil is protective of women workers. The average detected concentration of lead in surface soil samples were less than 1,000 mg/kg, however the surface soil from the northeast corner of the Locomotive Maintenance Building exceeded 1,000 mg/kg. Lead was therefore considered a COC at the Site. During December 1998 and January 1999, a total of 716 tons of lead-contaminated soil above a benchmark of 1,000 mg/kg were excavated and backfilled with clean soil by the PRP. A gravel layer was placed on top of the backfill soil to allow vehicle traffic over the area. Confirmation samples collected after excavation detected lead levels remaining in the soil between 6.5-27 mg/kg. No site related constituents of concern for either the child trespasser or the on-site worker exceed 10^{-4} risk across a pathway.

Groundwater

Permanent MWs and temporary MWs installed at the Site revealed arsenic and trichloroethylene (TCE) contamination above MCL's. Further investigation has determined that both arsenic and TCE were originating off-site and upgradient of the Site. Both TCE and arsenic have been detected in groundwater at significant levels upgradient of the Site. The groundwater flow direction at the Site is in a southwesterly direction.

In June 2014, TDEC, DOR collected four groundwater samples, including a duplicate, from three MWs at the Site. The groundwater samples were analyzed for VOCs and metals. Groundwater samples were collected in June 2014 at IYMW03 located 40 feet south of the Locomotive Maintenance Building, IYMW04 located at the northwest (downgradient) Site boundary and IYMW05, also located near the northwest (downgradient) Site boundary (See Figure 2). The purpose of sampling was to compare contaminant concentrations with past sample results and to determine if contaminants are migrating beyond the property boundaries. See Table 5 for analytical data.

Arsenic was the only contaminant detected above MCLs (Table 5). Arsenic was detected at 12 ppb in IYMW03, which is slightly above the current MCL of 10 ppb for Arsenic. The concentration at which arsenic was detected in IYMW03 decreased from the 2009 groundwater sampling. In 2009 arsenic was detected at 22 ppb in IYMW03. Arsenic was not detected in IYMW04 or IYMW05 during the 2009 or 2014 groundwater sampling events (Table 5). Furthermore, LURs are imposed to prevent use of the Site's groundwater.

TABLE 5: ICG Iselin Rail Yard (57-513) Groundwater Analytical Results (Data in µg/L)

Compound	MCL	IYMW03		IYMW04		IYMW05
		2009	2014	2009	2014	2014
cis-1,2 Dichloroethene	70	2.32	U	U	U	U
Aluminum	N/A	150	U	U	U	1300
Antimony	6.0	34	U	0.78J	U	U
Arsenic	10	22	12	U	U	U
Barium	2000	190	130	74	68	56
Copper	1300	44	U	U	U	U
Lead	15	16	U	2.5	U	1.6
Manganese	N/A	1300	1700	1.4	U	65
Nickel	N/A	8.6	U	2.6	U	U
Zinc	N/A	96	U	9.2	U	12.0

Notes:
U = Non-detect
µg/L = micrograms/liter
MCL = Maximum Contaminant Level
N/A = Not Available (There is no MCL listed in the May 2014 EPA RSL table for the contaminant)

Surface Water/Sediment

Surface water samples collected from the Jones Creek in December of 1994 revealed iron and manganese in the unfiltered samples slightly exceeded the range detected in the background samples during the RI. Aluminum and calcium were detected in concentrations less than background. Based on the May 1996 Supplemental RI Report, the surface water samples collected downgradient from the Site showed no adverse effects from Site related contaminants. Iron and manganese detected at concentrations greater than background are naturally occurring compounds.

6.5 Site Inspection

On July 16, 2014, Kevin Smith of TDOR inspected the Site. Iselin Properties Inc. has put the portion of the Site it owns into reuse; Williams Steel Company uses the property for steel fabrication. Norfolk Southern leases its portion of the Site to West Tennessee Railroad Corporation. Kevin Smith met with Steven Aufdenkampe of Norfolk Southern and walked the capped Rail Tie Area. The capped area had recently been mowed by Norfolk Southern's contractor. Apparently when the area was mowed the ground was wet, as there were several ruts left in the surface. Mr. Aufdenkampe indicated he would have the contractor come back out and fix the ruts. Mr. Aufdenkampe indicated that he would also have the contractor re-seed and fertilize the capped Rail Tie Area. The chain-link fence appeared to be in good condition. Mr. Aufdenkampe indicated he would ask the contractor to add a few more signs to the chain-link fence. Currently, there is one sign on the entrance gate to the capped Rail Tie Area.

LURs on both Site properties prohibit the installation of groundwater wells for the purpose of obtaining water for residential uses, including human consumption. The LURs also prohibit the Site property from being used for residential purposes. During the site inspection, TDOR

observed no residential houses or groundwater wells on the Site property. The area is currently being used for industrial purposes. Williams Steel is currently operating on part of the Site. Norfolk Southern RR leases its part of the Site as a RR switching yard. (See Appendixes D and E)

TDOR inspected the capped Rail Tie Area again on September 16, 2010. Although, Mr. Aufdenkampe had indicated to TDOR that the contractor had made repairs, on August 29, 2014, it did not appear that any of the ruts had been smoothed over, and there were still areas of stressed or removed vegetation. The condition of the capped Rail tie Area appeared to be the same as it was during the July inspection. Upon arriving back to the office, TDOR notified Mr. Aufdenkampe by phone that it didn't appear any repairs had been made. (See Appendix F)

Mr. Aufdenkampe indicated on September 29, 2014 that the contractor had made repairs to the capped Rail Tie Area at the Site on September 17, 2014. TDOR visited the Site on September 29, 2014 to confirm that repairs had been made: ruts previously observed in prior inspections had been smoothed out, the areas were reseeded and covered with a layer of straw. TDOR also observed additional "No Trespassing" signs on the chain link fence. (See Appendix G)

TDOR also performed groundwater monitoring activities in June 2014 at the Site support of the FYR. TDOR collected groundwater samples from three wells (IYMW03, IYMW04, and IYMW05). Two of the three MWs were damaged, but the damage did not prevent sampling of the MWs. The steel plate cover was not bolted down at IYMW03 because the inner portion of the casing, which the steel cover bolts to, has broken off (Appendix E, Pictures 14 and 15). IYMW05 appeared to have been struck and damaged by heavy equipment (Appendix H, Picture 10). IYMW04 was secured and in good condition at the time of TDOR's site visit. TDOR contacted CN in July 2014 regarding fixing the damaged wells. CN has obtained a contractor to repair the damaged MWs and repairs will be made once an access agreement is reached between Norfolk Southern and CN. (See Appendix H)

TDOR visited the Madison County Deed Records Office on July 28, 2014, and found the deed information pertaining to the Site listed in Table 6.

Table 6: Deed Documents from Madison County Register of Deeds Office

Date	Type of Document	Description	Book #	Page #
10-21-04	Deed restriction (Norfolk Southern RR)	Land use restriction prohibiting residential use of the property. Also, no groundwater wells are to be constructed to use for residential purposes.	T1622	pp.104-106
09-15-09	Deed restriction (Iselin Properties, Inc.)	Land use restriction prohibiting residential use of the property. Also, no groundwater wells are to be constructed to use for residential purposes.	T1868	pp. 259-261

The following Table list the ICs associated with areas of interest at the Site.

Table 7: IC Summary Table

Media	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Instrument in Place
Groundwater	Yes	No	Map 087F Group J Parcel 001.00, Map 087 Parcel 025.01, and Map 087 Parcel 036.01	Restrict installation of groundwater wells.	Deed restriction in place for Norfolk Southern property. Deed restriction in place for Iselin Properties, Inc. ¹
Soil	Yes	No	Map 087F Group J Parcel 001.00, Map 087 Parcel 025.01, and Map 087 Parcel 036.01	Restrict residential use of the site	Deed restriction in place for Norfolk Southern property. Deed restriction in place for Iselin Properties, Inc. ¹

1. Land use restriction is provided in Appendix I.

6.6 Interviews

During the FYR process, interviews were conducted with parties impacted by the Site, including the current landowners, and regulatory agencies involved in Site activities or are aware of the Site. The purpose of the interviews was to document the status of the Site and any perceived problems or successes with the phases of the remedy that have been implemented to date. All of the interviews were conducted during the months of July and September 2014. Interviews are summarized below and complete interviews are included in Appendix C.

City of Jackson: Mr. Stan Pilant, Director of the City of Jackson Planning Department, was interviewed by EPA on September 19, 2014. Mr. Pilant stated that he was unaware of any changes at the Site and has not received any inquiries about the Site from the community. He would like to be notified if anything is found that is different during the FYR or if anything changes at the Site.

Canadian National: Mr. Robert Strong is Manager of Environmental Operations with CN. CN is a PRP for the Site. Mr. Strong indicated that remediation at the Site was complete and effective and that the remedy has performed well for this application. Mr. Strong indicated that reuse of the Site has provided an employment opportunity in that Williams Steel and West Tennessee Railroad are currently operating at the Site. Mr. Strong indicated that the institutional controls have been implemented and enforced to the best of his knowledge. Mr. Strong indicated that he is not aware of any projected land use changes at the Site. Mr. Strong didn't have any comments, suggestions, or recommendations regarding the Site's management or operation.

Norfolk Southern RR: Mr. Steven Aufdenkampe is an Engineer for Environmental Remediation with Norfolk Southern Corporation. Norfolk Southern is the PRP for the capped Rail Tie Area at the Site. Mr. Aufdenkampe indicated the cap provides sufficient protection from any potential exposure at the Site. Mr. Aufdenkampe was unaware of any recent complaints or inquiries regarding the cap. Mr. Aufdenkampe indicated that the cap is maintained 2 to 3 times annually including mowing, weed eating, inspection of cap integrity, and any necessary erosion repairs. Mr. Aufdenkampe indicated he had no knowledge of any projected land use changes. Mr. Aufdenkampe didn't have any comments, suggestions, or recommendations regarding the Site's management or operation.

Williams Steel Company: Mr. Bryant is Vice President of Operations at Williams Steel. Williams Steel currently operates in the on-site building. Mr. Bryant indicated that remedial activities have had very little impact at the facility. Mr. Bryant indicated he was not aware of any effect the Site has had on the surrounding community. Mr. Bryant did not seem aware of the remedial activities that have taken place at the Site. Mr. Bryant indicated that no pollution came from this Site that he was aware of. When asked how well informed he was about the Site's activities and progress; Mr. Bryant indicated that as far as he knew, he did not have any data on the activities or progress. Mr. Bryant indicated that he was under the impression there were test wells for pollution at another location. Mr. Bryant indicated that he was not aware of any changes in projected land use. Mr. Bryant didn't have any comments, suggestions, or recommendations regarding the Site's management or operation.

West Tennessee Railroad Corporation: Mr. Barry Crabtree is the Vice President / General Manager for West Tennessee Railroad Corporation, which leases the Norfolk Southern portion of the Site property. TDOR did not ask Mr. Crabtree to do an interview form however, when TDOR notified Mr. Crabtree that staff would be on-site to collect some groundwater samples, Mr. Crabtree indicated that he didn't know a Superfund site ever existed on the property.

7.0 Technical Assessment

7.1 Question A: Is the remedy functioning as intended by the decision documents?

Removal actions at the Site were completed by January 1999. The NTCRA involved removal of lead-contaminated soil (716 tons) from the northeast corner outside of the maintenance building, to be replaced with clean backfill soil. In addition, the Rail Tie Area was capped with an eighteen inch (18") clay cover and a six inch (6") layer of topsoil and seeded. The removal action reduced the risk to human health to within acceptable levels.

The ROD issued in November 1999 required the implementation of institutional controls through deed restrictions to prohibit residential development and drilling of water wells. Deed restrictions were put in place on the Norfolk Southern and Iselin Properties Inc. portions of the Site in October 2004 and September 2009, respectively. Visits to the Site have verified that no water wells have been drilled and no residential development has occurred on the Site. The remedy selected for the Site is effective and functioning as intended.

7.2 Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?

Site operations and use of surrounding properties have not changed since the last FYR in 2009. The Jackson Planning Director, Stan Pilant, was contacted regarding the ICG Iselin RR Yard area. He stated that he was unaware of any changes at the Site and has not received any inquiries about the Site from the community.

In connection with cleanup levels, EPA Region 4 has replaced Region 9 Preliminary Remediation Goals (PRGs) with Regional Screening Levels (RSLs) for soil. The contaminant related to Site activities (lead) has a residential RSL of 400 mg/kg and an industrial RSL of 800 mg/kg in soil. There are currently no toxicity values for lead listed in the May 2014 EPA RSLs table. A cleanup goal for lead in soil at the Site was established at 1,000 mg/kg. This level was determined by the Baseline Risk Assessment performed in the RI. Surface soil from the northeast corner of the Locomotive Maintenance Building exceeded 1,000 mg/kg. During December 1998 and January 1999, a total of 716 tons of lead-contaminated soil was removed from the northeast corner of the Locomotive Maintenance Building and backfilled with clean soil by the PRP. Confirmation samples collected after excavation detected lead levels remaining in the soil between 6.5 and 27 mg/kg. A gravel layer was placed on top of the backfill soil to allow vehicle traffic over the area.

Permanent MWs and temporary MWs installed at the Site revealed arsenic and trichloroethylene (TCE) contamination above MCL's in the shallower aquifer made up of the Memphis and Fort Pillow Sands. The deeper aquifer made up of the McNairy Sand is hydraulically separated from

the shallower aquifer by the Porters Creek Clay. The Porters Creek Clay ranges in thickness from 130 to 320 feet thick. Further investigation determined that both arsenic and TCE were originating off-site and upgradient of the Site. Both TCE and arsenic have been detected in groundwater at significant levels upgradient of the Site.

Deed restrictions limiting the Site to industrial uses were filed with the Madison County Register of Deeds on October 21, 2004, and September 28, 2009. The LUR's specify that any invasive activity that could compromise the Site's remedy requires the approval of the TDEC. The LUR's implemented by the ROD to prohibit residential development and the drilling of water wells have been effective. Visits to the Site have verified that no residential development has occurred and no water wells have been drilled on the property. Recent groundwater sampling, conducted in June 2014, of boundary MWs show that no Site related contaminants are migrating off-site.

In conclusion, the exposure assumptions, toxicity data, cleanup levels, and the stated goals identified in the ROD are still appropriate and valid.

7.3 Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No other information is known that would question the protectiveness of the remedy. Overall, the remedy is functioning as intended. The ROD did not formally include RAO's; however, the stated goals identified in the ROD are still being met.

7.4 Technical Assessment Summary

The remedy required implementation of institutional controls through deed restrictions. The deed restrictions prohibit residential development and drilling of water wells. Visits to the Site have verified that no water wells have been drilled and no residential development has occurred on the Site. The remedy also required maintenance of the capped area to limit exposure. The cap has been maintained, and occasional damage to the cap has been repaired in a timely manner. The remedy selected for the Site is still valid and functioning as intended.

8.0 Issues

No issues were found during this FYR.

9.0 Recommendations and Follow-up Actions

No recommendations or follow-up actions are needed.

10.0 Protectiveness Statements

The ROD Selected Alternative requiring institutional controls through deed restrictions has been found to be protective of human health and the environment. Results of the third FYR indicate that:

The cap installed pursuant to the NTCRA is still functioning as intended.

Deed restrictions required by the ROD to prohibit residential development have been implemented and are effective. Visits to the Site have verified that no residential development has occurred.

Deed restrictions required by the ROD to prohibit drilling of water wells have been implemented and are effective. Visits to the Site have verified that no water wells have been drilled on the Site property.

11.0 Next Review

This Site requires a statutory FYR as long as waste is left on-site that does not allow for unrestricted use and unlimited exposure. The next FYR will be due within five years of the signature/approval date of this FYR. Lead remains on-site at levels above those acceptable for unrestricted use and unlimited exposure; therefore, statutory FYRs will be required in perpetuity unless Site conditions change.

Appendix A: List of Documents Reviewed

List of Documents Reviewed

Iselin Rail Yard Site, Focused Feasibility Study for Groundwater. Jackson, Tennessee. RMT Inc. Revised. July 1997.

Iselin Rail Yard Site, Remedial Investigation Workplan For Additional Groundwater Investigation. Jackson, Tennessee. RMT, Inc. November 1996.

Public Health Assessment for ICG Iselin Railroad Yard Jackson, Madison County, Tennessee CERCLIS No. TND987767795. U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry. April 17, 1997.

Iselin Rail Yard Site, Groundwater Investigation Summary Report. Jackson, Tennessee. RMT, Inc. May 1997.

Iselin Rail Yard Site, Identification of Constituents of Concern and Conceptual FS for Soils. Jackson, Tennessee. RMT, Inc. August 1997.

TPH Investigation Summary Report Iselin Rail Yard Site. RMT, Inc. March 1998.

Iselin Rail Yard Site, TPH Remediation Work Plan. Jackson, TN. RMT, Inc. June 1998.

Iselin Rail Yard Site, Proposed Non-Time Critical Removal Action Work Plan. Jackson, Tennessee. RMT, Inc. September 1998.

Iselin Rail Yard Site, FFS for Soils and NTCRA Report. Jackson, Tennessee. RMT, Inc. January 1999.

Tennessee Division of Superfund, Record of Decision, Iselin Yard Site. Jackson, Tennessee. TDEC, TDSF. November 4, 1999.

Iselin Rail Yard Site, Total Petroleum Hydrocarbons Phase II Investigation Summary Report. RMT, Inc. March 2000.

Iselin Rail Yard Site, TPH Well Installation and Sampling Report. RMT, Inc. October 2003.

Iselin Yard Superfund Site Five-Year Review. TDEC, TDSF. December 3, 2004.

Iselin Rail Yard Site, Focused Feasibility Study. Jackson, TN. RMT, Inc. April 2007.

Groundwater Sampling Results, Iselin Rail Yard Site, Jackson, TN. RMT, Inc. July 15, 2009.

Groundwater Sampling Results, Iselin Rail Yard Site, Jackson, Tennessee. RMT, Inc. November 11, 2009.

Five Year Review Report, Second FYR Report for ICG Iselin Railroad Yard. Jackson, Madison County, TN. TDEC, TDOR. December 1, 2009.

Iselin Rail Yard Site, ROD for Petroleum Contaminants, TDEC, TDOR. May 25, 2011.

Appendix B: Press Notice



U. S. Environmental Protection Agency, Region 4 Announces a Five-Year Review for the ICG Iselin Railroad Yard Superfund Site in Jackson, Madison County, Tennessee

Purpose/Objective: The U.S. Environmental Protection Agency (EPA) is conducting a Five-Year Review of the remedy for the ICG Iselin Railroad Yard Superfund Site (Site) in Jackson, Tennessee. The purpose of the Five-Year Review is to ensure that the selected cleanup actions effectively protect human health and the environment.

Site Background: The ICG Iselin Railroad Yard Superfund Site is an 80-acre property that has had several owners over the years, each of whom used it for various purposes related to railroad operation. Activities at the Site included engine repair, maintenance, radiator repair, and diesel refueling. The Site is located in a suburban, residential area. Approximately 30,000 people use 10 municipal wells located within four miles of the Site.

The Mobile & Ohio Railroad company acquired the Site in 1906. In 1940, Gulf Mobile and Ohio Railroad Company purchased Mobile and Ohio Railroad Co. Gulf Mobile continued to use the facility as a rail yard. In 1972, Gulf Mobile reorganized as the Illinois Central Gulf Railroad Company (ICG). ICG Railroad owned and operated the site as a locomotive maintenance facility from 1972-1986. A large portion of the site was purchased by the Williams Steel Company in 1986. Williams used its portion of the property as a steel fabrication facility from 1986 until 1989, when Iselin Properties, Inc., assumed ownership. The remainder of the site was sold by Illinois Central to the Southern Railway Company, which later became Norfolk-Southern, in 1988. The Norfolk Southern portion of the property is not currently considered to be part of the Site.

The site is currently owned by Williams Steel and Norfolk Southern Railroad. There were several potential contaminant source areas on the Site: a main warehouse; numerous railroad tracks; storage tanks; a battery waste disposal pile; a rail-car fueling platform; and the rail yard's pollution control system, which includes a neutralization tank, a concrete tank, several drainage ditches, and a surface impoundment

Waste disposal practices at the Site are unknown prior to ICG's operation of the facility. At one time, the facility may have included a round house, a steam locomotive fueling station, a coal-fired power plant, and a locomotive maintenance building.

Cleanup Actions: A Remedial Investigation/Feasibility Study conducted from 1992 to 1993 indicated that lead was a primary constituent of concern at the Site. EPA and the State of Tennessee entered into a Non-fund financed State Lead Enforcement Agreement. This agreement designated the State as the lead agency for all cleanup actions at the Site.

In 1998, a non-time critical removal action was undertaken, with approximately 716 tons of lead-contaminated soil removed from the site and disposed of at an appropriate facility.

The Record of Decision (ROD) for the site was issued in 1999. The selected long-term cleanup approach for the site was institutional controls: specifically, deed restrictions that prohibit residential development and drilling of water wells on site.

The ICG Iselin Railroad Yard Superfund Site was deleted from the National Priorities List in January, 2002.

Five-Year Review Schedule: The National Contingency Plan requires that remedial actions that result in any hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure be reviewed every five years to ensure protection of human health and the environment. The first Five-Year Review for the Site was signed in December 2004, the second was completed in December 2009 and third is expected to be complete in December, 2014.

EPA invites community participation in the Five-Year Review process

EPA is conducting this Five-Year Review to evaluate the effectiveness of the remedy and ensure that the remedy remains protective of human health and the environment. As part of the Five-Year Review process, EPA is available to answer any questions about the Site. Community members who have questions about the Site, the Five-Year Review process, or who would like to participate in a community interview, are asked to contact the following:

John Nolen, Remedial Project Manager
Phone: 404-562-8750
nolen.john@epa.gov

Sherryl A. Lane, Community Involvement Coordinator
404-562-8611 or 1-800-435-9234
carbonaro.sherryl@epa.gov

U.S. EPA, Region 4 – Mailing Address
61 Forsyth St. S.W.
Atlanta, GA 30303-8960

Site information is also available at the Site's Local Document Repository, at the Jackson-Madison County Library, 433 East Lafayette, Jackson, TN 38305 and online at <http://www.epa.gov/Region4/waste/npl/npltn/icgisetn.htm>.

Appendix C: Interview Forms

Interview Form

Site Name: ICG Iselin Rail Yard EPA ID No.: TND987167795
Interviewer Name: Kevin R. Smith Affiliation: TDEC
Subject's Name: Robert Strong Affiliation: Canadian National
Subject's Contact Information: 601-592-1838 / bob.strong@cn.ca
Time: 4:00pm Date: 7/3/14
Type of Interview (Circle one): In Person Phone Mail Other (Email)

1. What is your overall impression of the remedial activities at the site?
Remediation was complete and effective
2. What effect has this site had on the surrounding community, if any?
Employment opportunity (i.e. Williams Steel Co., Norfolk Southern RR.)
3. How well do you believe the remedy currently in place is performing?
Remedy has performed well for this application
4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?
No
5. What is the frequency of Operation & Maintenance (O&M) activities and inspections at the site? To your knowledge has the maintenance been implemented as intended?
NIA
6. Have the institutional control requirements been implemented and enforced as designed?
Yes - to best of my knowledge
7. What effect has the reuse of the site had on the community? Are you aware of any changes in projected land use?
*- Employment opportunity (i.e. Williams Steel, Co., Norfolk Southern RR)
- No*
8. Do you feel well informed about the site's activities and progress? If not, what other methods of conveying information should EPA use?
Yes
9. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?
No

Site Name: ICG Iselin Rail Yard EPA ID No.: TND987767795
Interviewer Name: Kevin R. Smith Affiliation: TDEC
Subject's Name: Steven Aufdenkampe Affiliation: Norfolk Southern
Subject's Contact Information: 404-582-5185 / Steven.Aufdenkampe@nscorp.com
Time: 2:00 PM Date: 7/23/14
Type of Interview (Circle one): In Person Phone **Mail** Other: Email

1. What is your overall impression of the remedial activities at the site?

The capping of the tie disposal area provides sufficient protection from any potential exposure at the site.

2. What effect has this site had on the surrounding community, if any?

The tie disposal area has little to no effect on the surrounding community to my knowledge.

3. How well do you believe the remedy currently in place is performing?

The remedy associated with the tie disposal area is performing adequately to my knowledge.

4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?

I am unaware of any recent complaints or inquiries related to the tie disposal area.

5. What is the frequency of Operation & Maintenance (O&M) activities and inspections at the site? To your knowledge has the maintenance been implemented as intended?

The cap of the tie disposal area is maintained 2-3 times annually and consists of mowing, weed eating, an inspection of cap integrity, and any necessary erosion repairs.

6. Have the institutional control requirements been implemented and enforced as designed?

I am unaware of the status of necessary institutional controls.

7. What effect has the reuse of the site had on the community? Are you aware of any changes in projected land use?

I have no knowledge of any effect the tie disposal area has on potential reuse to the community or any projected land use changes.

8. Do you feel well informed about the site's activities and progress? If not, what other methods of conveying information should EPA use?

I feel adequately informed about the site's activities and progress.

9. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

I have no comments, suggestions, or recommendations regarding the site's management or operation.

Site Name: ICG Iselin Rail Yard EPA ID No.: TND987767795
Interviewer Name: Kevin R. Smith Affiliation: TDEC
Subject's Name: Jim Bryant Affiliation: VP Production
Subject's Contact Information: jbryant@wscsteel.com 731-394-6029
Time: 12:53 Date: 8/14/18
Type of Interview (Circle one): In Person Phone Mail Other: Email
Location of Interview: 315 Lake St Jackson TN 38301

What is your overall impression of the remedial activities at the site? It had very little impact on the continued production at this facility.

What effect has this site had on the surrounding community, if any? None that I am aware of.

How well do you believe the remedy currently in place is performing? This does not apply due to the fact no pollution came from this site that I am aware of.

Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup? N/A

What is the frequency of Operation & Maintenance (O&M) activities and inspections at the site? To your knowledge has the maintenance been implemented as intended? I do not know the frequency but when the inspectors come they are courteous and excellent to work with.

Have the institutional control requirements been implemented and enforced as designed? N/A

What effect has the reuse of the site had on the community? Are you aware of any changes in projected land use? No

Do you feel well informed about the site's activities and progress? If not, what other methods of conveying information should EPA use? As far as I know I don't have any data on the activities or progress. I am under the impression they are test wells for pollution at another location.

Do you have any comments, suggestions, or recommendations regarding the site's management or operation? No

November 06, 2009

To: John Nolen

From: Sherryl Carbonaro

Subj: Community Involvement Portion of Iselin Rail Yard 5-Year Review

We attempted to contact 4 residents near the site and 1 public official. Of the 4 calls to residents, no one returned the call. There were other residences nearby but their numbers were unpublished.

I did interview one local official, the Director of the City of Jackson Planning Department, Stan Pilant, on September 19, 2014. He stated that he was unaware of any changes at the site and has not received any inquiries about the site from the community. He would like to be notified if anything is found that is different during the five year review or if anything changes at the site.

I created an excel spreadsheet that contains the information concerning each call.

Sherryl A. Carbonaro

Appendix D: Site Inspection Checklist

4. Permits and Service Agreements			
<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Effluent discharge	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Waste disposal, POTW	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Other permits _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
5. Gas Generation Records			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
6. Settlement Monument Records			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
7. Groundwater Monitoring Records			
	<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks: _____			
8. Leachate Extraction Records			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
9. Discharge Compliance Records			
<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
10. Daily Access/Security Logs			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
IV. O&M COSTS			
1. O&M Organization			
<input type="checkbox"/> State in-house	<input type="checkbox"/> Contractor for State		
<input type="checkbox"/> PRP in-house	<input checked="" type="checkbox"/> Contractor for PRP		
<input type="checkbox"/> Federal Facility in-house	<input type="checkbox"/> Contractor for Federal Facility		
<input type="checkbox"/> _____			

2. O&M Cost Records

Readily available Up to date

Funding mechanism/agreement in place Unavailable

Original O&M cost estimate _____ Breakdown attached

Total annual cost by year for review period if available

From <u>01/01/2010</u> Date	To <u>12/31/2010</u> Date	<u>36,000</u> Total cost	<input type="checkbox"/> Breakdown attached
From <u>01/01/2011</u> Date	To <u>12/31/2011</u> Date	<u>2,000</u> Total cost	<input type="checkbox"/> Breakdown attached
From <u>01/01/2012</u> Date	To <u>12/31/2012</u> Date	<u>1,000</u> Total cost	<input type="checkbox"/> Breakdown attached
From <u>01/01/2013</u> Date	To <u>12/31/2013</u> Date	<u>2,000</u> Total cost	<input type="checkbox"/> Breakdown attached
From <u>01/01/2014</u> Date	To <u>12/31/2014</u> Date	<u>5,000</u> Total cost	<input type="checkbox"/> Breakdown attached

3. Unanticipated or Unusually High O&M Costs During Review Period

Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS Applicable N/A

A. Fencing

1. **Fencing damaged** Location shown on site map Gates secured N/A

Remarks: Fencing around capped rail tie area appeared to be in good condition

B. Other Access Restrictions

1. **Signs and other security measures** Location shown on site map N/A

Remarks: Fencing around capped rail tie area had signs on it

C. Institutional Controls (ICs)

1. Implementation and enforcement				
Site conditions imply ICs not properly implemented	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	
Site conditions imply ICs not being fully enforced	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	
Type of monitoring (e.g., self-reporting, drive by) _____				
Frequency _____				
Responsible party/agency State of Tennessee DEC-DOR				
Contact <u>Kevin Smith TDEC-DOR</u>	<u>ES3</u>	<u>07/16/2014</u>	<u>731-512-1323</u>	
Name	Title	Date	Phone no.	
Reporting is up-to-date	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Reports are verified by the lead agency	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Specific requirements in deed or decision documents have been met	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Violations have been reported	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	
Other problems or suggestions: <input type="checkbox"/> Report attached				
2. Adequacy <input checked="" type="checkbox"/> ICs are adequate <input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A				
Remarks: _____				
D. General				
1. Vandalism/trespassing <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No vandalism evident				
Remarks: _____				
2. Land use changes on site <input checked="" type="checkbox"/> N/A				
Remarks: _____				
3. Land use changes off site <input checked="" type="checkbox"/> N/A				
Remarks: _____				
VI. GENERAL SITE CONDITIONS				
A. Roads <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A				
1. Roads damaged <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Roads adequate <input type="checkbox"/> N/A				
Remarks: _____				
B. Other Site Conditions				
Remarks: _____				
VII. LANDFILL COVERS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A				
A. Landfill Surface				
1. Settlement (Low spots) <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Settlement not evident				
Arial extent _____				Depth _____
Remarks: _____				

2. Cracks	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Cracking not evident
Lengths _____	Widths _____	Depths _____
Remarks: _____		
3. Erosion	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Erosion not evident
Arial extent _____		Depth _____
Remarks: _____		
4. Holes	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Holes not evident
Arial extent _____		Depth _____
Remarks: _____		
5. Vegetative Cover	<input checked="" type="checkbox"/> Grass	<input type="checkbox"/> Cover properly established
<input type="checkbox"/> No signs of stress	<input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram)	
Remarks: <u>The O&M contractor left ruts and removed vegetative cover in areas of the cap the last time it was mowed.</u>		
6. Alternative Cover (armored rock, concrete, etc.)		<input checked="" type="checkbox"/> N/A
Remarks: _____		
7. Bulges	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Bulges not evident
Arial extent _____		Height _____
Remarks: _____		
8. Wet Areas/Water Damage	<input checked="" type="checkbox"/> Wet areas/water damage not evident	
<input type="checkbox"/> Wet areas	<input type="checkbox"/> Location shown on site map	Arial extent _____
<input type="checkbox"/> Ponding	<input type="checkbox"/> Location shown on site map	Arial extent _____
<input type="checkbox"/> Seeps	<input type="checkbox"/> Location shown on site map	Arial extent _____
<input type="checkbox"/> Soft subgrade	<input type="checkbox"/> Location shown on site map	Arial extent _____
Remarks: _____		
9. Slope Instability	<input type="checkbox"/> Slides	<input type="checkbox"/> Location shown on site map
<input checked="" type="checkbox"/> No evidence of slope instability		
Arial extent _____		
Remarks: _____		
B. Benches	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1. Flows Bypass Bench	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
Remarks: _____		
2. Bench Breached	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
Remarks: _____		

3.	Bench Overtopped	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
Remarks: _____			
C. Letdown Channels <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)			
1.	Settlement (Low spots)	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of settlement
Aerial extent _____		Depth _____	
Remarks: _____			
2.	Material Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of degradation
Material type _____		Aerial extent _____	
Remarks: _____			
3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of erosion
Aerial extent _____		Depth _____	
Remarks: _____			
4.	Undercutting	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
Aerial extent _____		Depth _____	
Remarks: _____			
5.	Obstructions	Type _____	<input type="checkbox"/> No obstructions
<input type="checkbox"/> Location shown on site map		Aerial extent _____	
Size _____			
Remarks: _____			
6.	Excessive Vegetative Growth	Type _____	
<input type="checkbox"/> No evidence of excessive growth			
<input type="checkbox"/> Vegetation in channels does not obstruct flow			
<input type="checkbox"/> Location shown on site map		Aerial extent _____	
Remarks: _____			
D. Cover Penetrations <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	Gas Vents	<input type="checkbox"/> Active	<input type="checkbox"/> Passive
<input type="checkbox"/> Properly secured/locked		<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
Remarks: _____			
2.	Gas Monitoring Probes	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
<input type="checkbox"/> Properly secured/locked		<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
<input type="checkbox"/> Evidence of leakage at penetration			
Remarks: _____			

3. Monitoring Wells (within surface area of landfill)			
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
Remarks: _____			
4. Extraction Wells Leachate			
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
Remarks: _____			
5. Settlement Monuments			
	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed	<input type="checkbox"/> N/A
Remarks: _____			
E. Gas Collection and Treatment			
	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A	
1. Gas Treatment Facilities			
<input type="checkbox"/> Flaring	<input type="checkbox"/> Thermal destruction	<input type="checkbox"/> Collection for reuse	
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance		
Remarks: _____			
2. Gas Collection Wells, Manifolds and Piping			
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance		
Remarks: _____			
3. Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings)			
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A	
Remarks: _____			
F. Cover Drainage Layer			
	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A	
1. Outlet Pipes Inspected			
	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A	
Remarks: _____			
2. Outlet Rock Inspected			
	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A	
Remarks: _____			
G. Detention/Sedimentation Ponds			
	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A	
1. Siltation			
	Area extent _____	Depth _____	<input type="checkbox"/> N/A
<input type="checkbox"/> Siltation not evident			
Remarks: _____			
2. Erosion			
	Area extent _____	Depth _____	
<input type="checkbox"/> Erosion not evident			
Remarks: _____			
3. Outlet Works			
	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A	
Remarks: _____			

4. Dam	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____		
H. Retaining Walls <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1. Deformations	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident
Horizontal displacement _____	Vertical displacement _____	
Rotational displacement _____		
Remarks: _____		
2. Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
Remarks: _____		
I. Perimeter Ditches/Off-Site Discharge <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1. Siltation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
Area extent _____	Depth _____	
Remarks: _____		
2. Vegetative Growth	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
<input type="checkbox"/> Vegetation does not impede flow		
Area extent _____	Type _____	
Remarks: _____		
3. Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Erosion not evident
Area extent _____	Depth _____	
Remarks: _____		
4. Discharge Structure	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____		
VIII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1. Settlement	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Settlement not evident
Area extent _____	Depth _____	
Remarks: _____		
2. Performance Monitoring	Type of monitoring _____	
<input type="checkbox"/> Performance not monitored		
Frequency _____	<input type="checkbox"/> Evidence of breaching	
Head differential _____		
Remarks: _____		
IX. GROUNDWATER/SURFACE WATER REMEDIES <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
A. Groundwater Extraction Wells, Pumps, and Pipelines <input type="checkbox"/> Applicable <input type="checkbox"/> N/A		

<p>1. Pumps, Wellhead Plumbing, and Electrical</p> <p><input type="checkbox"/> Good condition <input type="checkbox"/> All required wells properly operating <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A</p> <p>Remarks: _____</p>
<p>2. Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances</p> <p><input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance</p> <p>Remarks: _____</p>
<p>3. Spare Parts and Equipment</p> <p><input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided</p> <p>Remarks: _____</p>
<p>B. Surface Water Collection Structures, Pumps, and Pipelines <input type="checkbox"/> Applicable <input type="checkbox"/> N/A</p>
<p>1. Collection Structures, Pumps, and Electrical</p> <p><input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance</p> <p>Remarks: _____</p>
<p>2. Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances</p> <p><input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance</p> <p>Remarks: _____</p>
<p>3. Spare Parts and Equipment</p> <p><input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided</p> <p>Remarks: _____</p>
<p>C. Treatment System <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A</p>
<p>1. Treatment Train (Check components that apply)</p> <p><input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation</p> <p><input type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers</p> <p><input type="checkbox"/> Filters _____</p> <p><input type="checkbox"/> Additive (e.g., chelation agent, flocculent) _____</p> <p><input type="checkbox"/> Others _____</p> <p><input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance</p> <p><input type="checkbox"/> Sampling ports properly marked and functional</p> <p><input type="checkbox"/> Sampling/maintenance log displayed and up to date</p> <p><input type="checkbox"/> Equipment properly identified</p> <p><input type="checkbox"/> Quantity of groundwater treated annually _____</p> <p><input type="checkbox"/> Quantity of surface water treated annually _____</p> <p>Remarks: _____</p>

<p>2. Electrical Enclosures and Panels (properly rated and functional)</p> <p><input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance</p> <p>Remarks: _____</p>
<p>3. Tanks, Vaults, Storage Vessels</p> <p><input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance</p> <p>Remarks: _____</p>
<p>4. Discharge Structure and Appurtenances</p> <p><input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance</p> <p>Remarks: _____</p>
<p>5. Treatment Building(s)</p> <p><input type="checkbox"/> N/A <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair</p> <p><input type="checkbox"/> Chemicals and equipment properly stored</p> <p>Remarks: _____</p>
<p>6. Monitoring Wells (pump and treatment remedy)</p> <p><input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition</p> <p><input type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A</p> <p>Remarks: _____</p>
<p>D. Monitoring Data</p>
<p>1. Monitoring Data</p> <p><input type="checkbox"/> Is routinely submitted on time <input type="checkbox"/> Is of acceptable quality</p>
<p>2. Monitoring data suggests:</p> <p><input type="checkbox"/> Groundwater plume is effectively contained <input type="checkbox"/> Contaminant concentrations are declining</p>
<p>E. Monitored Natural Attenuation</p>
<p>1. Monitoring Wells (natural attenuation remedy)</p> <p><input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition</p> <p><input type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A</p> <p>Remarks: _____</p>
<p>X. OTHER REMEDIES</p>
<p>If there are remedies applied at the site and not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.</p>
<p>XI. OVERALL OBSERVATIONS</p>
<p>A. Implementation of the Remedy</p>

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

LURs placed as deed restrictions are to prevent use of the property as residential and prevent use of the site's groundwater as potable drinking water. The clay cap with vegetative cover was the remedy for the rail tie disposal area. The rail tie clay cap overall is in good condition; however when the contractors last mowed the cap the ground was wet and ruts were left in the rail tie clay cap. The PRP (Norfolk Southern) is aware of the issue and plans to have their contractor fill in the ruts and re-seed the clay cap by the end of September 2014. The remedy chosen is still effective.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

Site Inspection Team:
Kevin Smith, TDEC

Appendix E: Photographs from Site Inspection Visit



Picture 1

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDoR-JFO). Remarks: Picture is of recently mowed rail tie clay cap area. Picture was taken standing at north end of the rail tie clay cap facing south.



Picture 2

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDoR-JFO). Remarks: Picture is of rail tie clay cap area. Notice ruts. Picture was taken standing at northeast end of the rail tie clay cap area facing southwest.



Picture 3

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of center portion of the rail tie clay cap area. Picture was taken facing southwest.



Picture 4

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of the rail tie clay cap area. Picture was taken standing on the southeast portion of the rail tie clay cap facing northwest.



Picture 5

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of ruts left from contractor when mowing the rail tie clay cap area. Ruts were located on the southern portion of the rail tie clay cap area. Picture was taken standing on east side of capped area facing west.



Picture 6

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of southwest corner of the rail tie clay cap area. Picture was taken facing southwest.



Picture 7

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of southwest corner of the rail tie clay cap area. Picture was taken facing south.



Picture 8

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of rail tie clay cap area. Picture was taken from the southwest corner of the rail tie clay cap area facing north.



Picture 9

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of rail tie clay cap area. Picture was taken standing near center of the rail tie clay cap area facing north. The former Iselin Rail Yard building is in the background. Williams Steel currently operates out of the building.



Picture 10

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of entrance to the rail tie clay cap area. This entrance is located on northwest side of the rail tie clay cap area.



Picture 11

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture was taken standing outside of the rail tie clay cap area facing southeast. Chain-link fence appeared to be in good condition.



Picture 12

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of former Iselin Rail Yard building. Williams Steel currently operates out of the building. Picture was taken facing north.



Picture 13

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture was taken facing northwest.



Picture 14

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of IYMW03. The 3 metal pieces inside the casing, which the steel plate cover bolts to, have broken off.



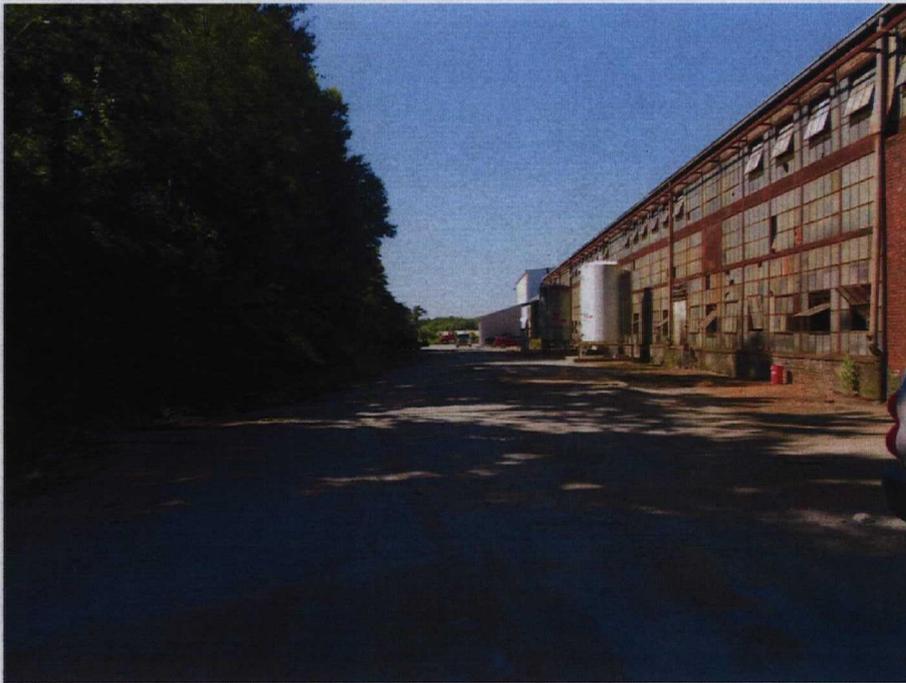
Picture 15

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of IYMW03. The 3 metal pieces inside the casing, which the steel plate cover bolts to, have broken off.



Picture 16

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of the lead soil removal area. The soil removal area is located on the northeast side of the on-site building. Picture was taken on the east side of the building facing north.



Picture 17

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of the lead soil removal area. The soil removal area is located on the northeast side of the on-site building. Picture was taken on the east side of the building facing south.



Picture 18

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of the lead soil removal area. The soil removal area is located on the northeast side of the on-site building. Picture was taken on the east side of the building facing north.



Picture 19

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of entrance to the Iselin Rail Yard site. Picture was taken facing northwest.



Picture 20

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture was taken from entrance to the Iselin Rail Yard facing southeast.



Picture 21

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture was taken from entrance to the Iselin Yard Site facing northeast toward a residential area.



Picture 22

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of TWRA sign located on adjacent property located to the west/southwest of the Iselin Rail Yard site.



Picture 23

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of entrance to field road on TWRA managed property. The TWRA managed property is located west/southwest of the Iselin Rail Yard site.



Picture 24

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of a second entrance to field road on TWRA managed property. The TWRA managed property is located west/southwest of the Iselin Rail Yard site.



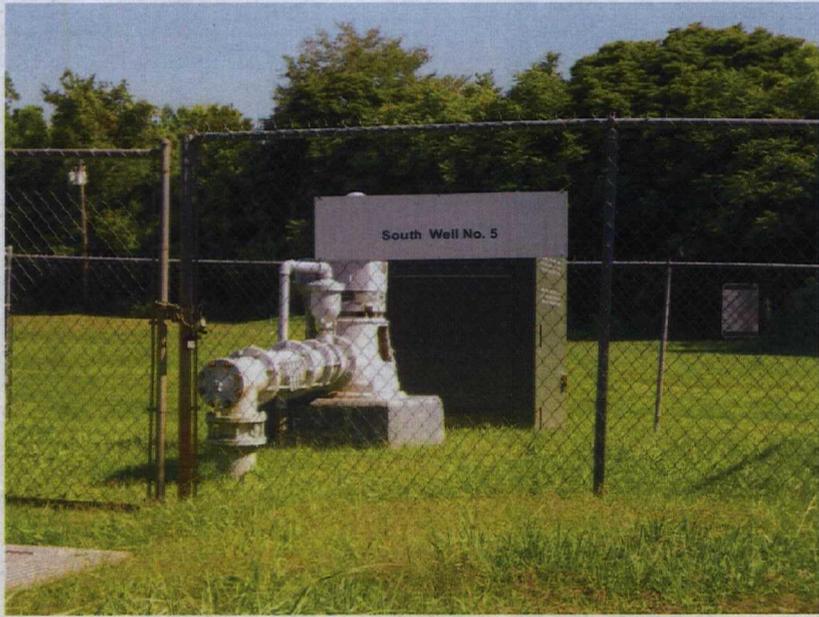
Picture 25

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture was taken facing southeast towards the Iselin Rail Yard site. The Iselin Rail Yard building is in the background. Williams Steel currently operates out of the building.



Picture 26

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture was taken from northwest corner of the Iselin site facing northwest towards the JEA South Municipal Well field.



Picture 27

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of JEA Municipal Well No. 5 in the south well field. The south well field is located northwest of the Iselin Rail Yard site.



Picture 28

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of JEA Municipal Well No. 4 in the south well field. The south well field is located northwest of the Iselin Rail Yard site.



Picture 29

Date of Photo: July 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith (TDOR-JFO). Remarks: Picture is of JEA Municipal Well No. 2 in the south well field. The south well field is located northwest of the Iselin Rail Yard site.

Appendix F: ICG Iselin Rail Yard 2nd Clay Cap Inspection Trip Report



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
JACKSON ENVIRONMENTAL FIELD OFFICE
1625 HOLLYWOOD DRIVE
JACKSON, TENNESSEE 38305-4316
PHONE (731) 512-1300 STATEWIDE 1-888-891-8332 FAX (731) 661-6283

Trip Report

Report Date: 9/17/2014

TDOR Site/Site Number: ICG Iselin Railroad Yard / 57-513

Date of Site Visit: 9/16/14

Address: Intersection of Eastern Street and Magnolia Street

County: Madison City: Jackson

TDEC personnel present: Kevin Smith (DoR-JFO)

On September 16, 2014 TDoR (Kevin Smith) visited the former ICG Iselin Railroad (RR) Yard Site (the Site) in Jackson, TN. The purpose of the site visit was to meet with Bob Strong with Canadian National to show Mr. Strong the wells which have been damaged and are in need of repair. TDoR met with Mr. Strong at the Site around 1:00p.m. TDoR and Mr. Strong first went to the IYMW03 location which is located on property now owned by Williams Steel. TDoR located the IYMW03 well and Mr. Strong took some photographs of the well to send to his contractor who is going to make repairs to the well. IYMW03 has the inner portion of the casing which the steel plate cover bolts to broken off and sediment and rainwater are getting inside.

TDoR and Mr. Strong then went to the West TN RR office to notify them that we were on the property and that we would like to walk to the IYMW05 location, which is located on the north side of the RR tracks. Personnel with West TN RR gave us the ok to walk to the IYMW05 location and asked us to call the main office and let them know when we were finished. TDoR and Mr. Strong located the IYMW05 well and Mr. Strong took some pictures to send to his contractor who is going to make repairs to the well. IYMW05 appears to have been pushed over by heavy equipment (possibly a tractor). Mr. Strong indicated that his contractor may be able to repair the wells the first part of October 2014.

After meeting with Mr. Strong, TDoR inspected the capped rail tie area located on property owned by Norfolk Southern. TDoR had been in contact with Mr. Steven Aufdenkampe with Norfolk Southern on the morning of 9-16-14. Mr. Aufdenkampe indicated that their contractor had been to the Site and made repairs to the capped rail tie area on August 29, 2014. The contractor had left ruts and removed some vegetation in spots the last time they mowed the capped rail tie area. When TDoR inspected the capped rail tie area on 9-16-14, it did not appear that any of the ruts had been smoothed over with fill dirt and there were still areas of stressed/removed vegetation. The condition of the capped rail tie area appeared to be the same as it was during the previous inspection made on 7-16-14. It appeared that the capped rail tie area has been mowed again since the 7-16-14 inspection. Upon arriving back in the office on 9-16-14, TDoR notified Mr. Aufdenkampe by phone that it did not appear that any repairs were made to the capped rail tie area. TDoR also sent Mr. Aufdenkampe a brief email with pictures stating that there didn't appear to be any repairs made to the capped rail tie area on 9-16-14.

Kevin Smith

Kevin Smith, Project Manager
TDEC, Division of Remediation



Picture 1

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of entrance to the capped rail tie area. Gate was secured at the time of TDoR's visit. There is a no trespassing sign located on the gate entrance.



Picture 2

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of chain link fence which surrounds the capped rail tie area.



Picture 3

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of capped rail tie area. Picture was taken standing on north end (end with gate entrance) of the capped rail tie area facing south.



Picture 4

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of some minor ruts and areas of removed vegetation on the north end of the capped rail tie area. Notice gate entrance in top right portion of picture.



Picture 5

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of some minor ruts observed on the north end of the capped rail tie area.



Picture 6

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of some minor ruts located on northwest portion of capped rail tie area near gate entrance.



Picture 7

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of some minor ruts located on northwest portion of capped rail tie area near gate entrance.



Picture 8

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of some minor ruts located on north portion of capped rail tie area.



Picture 9

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of some ruts and area of removed vegetation on the northeast portion of the capped rail tie area. Picture was taken facing southwest.



Picture 10

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of some minor ruts on northeast portion of the capped rail tie area. Picture was taken standing on northeast portion of the capped rail tie area facing southwest.



Picture 11

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of ruts located on southern portion of the capped rail tie area. Picture was taken facing west/southwest.



Picture 12

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of rut located on southern portion of the capped rail tie area.



Picture 13

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of ruts on the southern portion of the capped rail tie area. Picture was taken facing east/southeast.



Picture 14

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of minor ruts and areas of removed/stressed vegetation on southern portion of the capped rail tie area. Picture was taken facing south.



Picture 15

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of minor ruts and areas of removed/stressed vegetation on southern portion of the capped rail tie area. Picture was taken facing north.



Picture 16

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of minor ruts and areas of removed/stressed vegetation on southern portion of the capped rail tie area.



Picture 17

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of minor ruts and areas of removed/stressed vegetation on southern portion of the capped rail tie area.



Picture 18

Date of Photo: September 16, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture was taken standing on southern portion of capped rail tie area facing north.

Appendix G: ICG Iselin Rail Yard 3rd Clay Cap Inspection Trip Report



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
JACKSON ENVIRONMENTAL FIELD OFFICE
1625 HOLLYWOOD DRIVE
JACKSON, TENNESSEE 38305-4316
PHONE (731) 512-1300 STATEWIDE 1-888-891-8332 FAX (731) 661-6283

Trip Report

Report Date: 9/29/2014

TDOR Site/Site Number: ICG Iselin Railroad Yard / 57-513

Date of Site Visit: 9/29/14

Address: Intersection of Eastern Street and Magnolia Street

County: Madison City: Jackson

TDEC personnel present: Kevin Smith (DoR-JFO)

On Monday September 29, 2014, TDoR Kevin Smith visited the ICG Iselin Railroad Yard site (the Site) in Jackson, TN. The purpose of the visit was to confirm that repairs had been made to the capped rail tie area. Mr. Steven Aufdenkampe with Norfolk Southern indicated their contractor had made repairs to the capped rail tie area on September 17, 2014. Upon arriving at the Site, TDoR observed that there were additional "No Trespassing" signs on the chain link fence. TDoR observed that the ruts had been smoothed over and straw was placed over the areas of removed vegetation. It is TDoR's understanding that the areas covered with straw were also reseeded.

A handwritten signature in black ink that reads "Kevin Smith".

Kevin Smith, Project Manager
TDEC, Division of Remediation



Picture 1

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of chain link fence surrounding the capped rail tie area. Picture was taken facing southeast.



Picture 2

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of additional "No Trespassing" signs placed on the chain link fence surrounding the capped rail tie area. Picture was taken facing southeast.



Picture 3

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of northwest portion of capped rail tie area. Notice the straw covering the ground. This is an area where ruts were smoothed out. The area was then reseeded and a layer of straw was placed over the area. Picture was taken facing southeast.



Picture 4

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture was taken standing on the north end of the capped rail tie area facing south.



Picture 5

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of area on north end of capped rail tie area where ruts were formerly located. Ruts have been smoothed over and covered with straw.



Picture 6

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture was taken from northeast corner of capped rail tie area facing southwest. Notice areas covered with straw. Ruts were smoothed out then area was reseeded and covered with straw.



Picture 7

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of area on northern center portion of the capped rail tie area which previously had some ruts. Ruts were smoothed over then the area was reseeded and straw was placed over the area.



Picture 8

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture is of southern portion of the capped rail tie area. Ruts on the southern portion of the capped rail tie area were smoothed over, reseeded, and then a layer of straw was applied. Picture was taken on southern portion of capped rail tie area facing south.



Picture 9

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture was taken standing on southern portion of capped rail tie area facing north. Ruts were smoothed over then the area was reseeded and straw was placed over the area.



Picture 10

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture was taken on western, center portion of the capped rail tie area facing southwest. Ruts were smoothed over then the area was reseeded and straw was placed over the area.



Picture 11

Date of Photo: September 29, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO). Remarks: Picture was taken standing on southern portion of the capped rail tie area facing north.

Appendix H: ICG Iselin Railroad Yard June 2014 Monitoring Well Sampling Trip Report



TENNESSEE DEPARTMENT OF ENVIRONMENT AND
CONSERVATION
JACKSON ENVIRONMENTAL FIELD OFFICE

1625 HOLLYWOOD DRIVE JACKSON, TENNESSEE 38305-4316
PHONE (731) 512-1300 STATEWIDE 1-888-891-8332 FAX (731) 661-6283

Trip Report

Report Date: 6/19/2014

TDOR Site/Site Number: ICG Iselin Railroad Yard / 57-513

Date of Site Visit: 6/18/14

Address: Intersection of Eastern Street and Magnolia Street

County: Madison

City: Jackson

TDEC personnel present: Don Sprinkle (DoR-JFO) and Kevin Smith (DoR-JFO)

On Wednesday June 18, 2014, TDoR (Kevin Smith and Don Sprinkle) collected groundwater samples from the three remaining monitor wells on the Iselin Rail Yard Site. TDoR collected a water sample from IYMW03 first. IYMW03 is located on the southern portion of the former Iselin Rail Yard building. Williams Steel currently operates in the building (Attachment C; Pictures 1 and 2). TDoR could occasionally smell paint fumes and observed 55 gallon drums which had paint written on them while sampling at the IYMW03 monitor well. TDoR also observed sand blasting occurring southeast of the building. IYMW03 Field Sample Collection sheet is provided in Attachment A.

After collecting a groundwater sample from IYMW03, TDoR went to the IYMW04 monitor well located on Norfolk Southern property. TDoR notified West Tennessee Railroad, who leases the Norfolk Southern Property, to let them know we were on the property. IYMW04 is located near the Iselin Rail Yard property boundary and is located between the Iselin Rail Yard building and JEA municipal wells.

(Attachment C; Pictures 4, 5, and 6) IYMW04 Field Sample Collection sheet is provided in Attachment A.

TDoR then sampled IYMW05. IYMW05 is located along the western property boundary of the Iselin Rail Yard site. IYMW05 has been damaged at some point (Attachment C; Picture 10). The well appears to have been pushed over likely by a tractor. The stainless steel casing was not broke and TDoR was able to collect a groundwater sample from IYMW05. (Attachment C; Pictures 7, 8, and 9) IYMW05 Field Sample Collection Sheet is provided in Attachment A.

A map of the monitor wells sampled at Iselin is provided as Attachment B.

Kevin Smith, Project Manager

TDEC, Division of Remediation

**Attachment A:
Field Sample Collection Sheets**

**TENNESSEE DIVISION OF REMEDIATION
FIELD SAMPLE COLLECTION SHEET
Iselin Rail Yard Site (TDoR Site # 57-513)
MONITORING WELL SAMPLING**

Monitoring Well No.: IYMW03 Date Installed: 6-22-92
 Latitude: 35.60175 Longitude: -88.79887
 Total Well Depth: 12.0' Depth to Water: 8.1'
 Well Diameter: 2" Water Column: 3.9'
 Well Volume: 0.624 Screen Interval: 3'-13'

Time	Vol. Purged (Gallons)	pH (Std. Units)	Conductivity (mS/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Turbidity (NTU)
0920	0.75	6.18	0.455	71.46	1.12	-73.6	83
0930	1.15	6.17	0.465	71.27	0.35	-89.4	23
0940	1.50	6.22	0.465	71.77	0.44	-101.1	5
0950	1.90	6.24	0.464	72.09	0.56	-98.1	4

Purge Start Time: 0900 Purge End Time: 1000
 Purged Dry (y/n)? N
 Total Volume Purged: 2.0 gallons How Measured: Graduated bucket
 Method of Purging: Pump Type: Peristaltic Bailor Type: _____

Groundwater Sample(s):	
Station ID: <u>IYMW03</u>	Sample ID(s): <u>IYMW03GW</u>
Date: <u>6/18/14</u>	<u>IYMW03GWD</u>
Time: <u>1000</u>	Sampler: <u>Kevin Smith</u>
QA/QC Sample: <input checked="" type="checkbox"/> Duplicate <input type="checkbox"/> MS/MSD	

**TENNESSEE DIVISION OF REMEDIATION
FIELD SAMPLE COLLECTION SHEET
Iselin Rail Yard Site (TDoR Site # 57-513)
MONITORING WELL SAMPLING**

Monitoring Well No.: IYMW04 Date Installed: 6-24-92
 Latitude: 35.60365 Longitude: -88.80386
 Total Well Depth: 14.85' Depth to Water: 12.88'
 Well Diameter: 2" Water Column: 1.97'
 Well Volume: 0.32 Screen Interval: 5'-15'

Time	Vol. Purged (Gallons)	pH (Std. Units)	Conductivity (mS/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Turbidity (NTU)
1055	0.1 gal.	5.93	0.453	70.50	3.94	48.7	60
1105	0.4 gal.	5.92	0.456	70.25	3.34	44.8	8
1115	0.8 gal.	5.90	0.438	68.79	3.36	40.2	7
1125	1.5 gal.	5.92	0.428	67.85	3.25	40.9	2

Purge Start Time: 1048 Purge End Time: 1128
 Purged Dry (y/n)? N
 Total Volume Purged: 1.75 gal. How Measured: Graduated Bucket
 Method of Purging: Pump Type: Peristaltic Baller Type: _____

Groundwater Sample(s):	
Station ID: <u>IYMW04</u>	Sample ID(s): <u>IYMW04GW</u>
Date: <u>6-18-14</u>	
Time: <u>1130</u>	Sampler: <u>Kevin Smith</u>
QA/QC Sample: <input type="checkbox"/> Duplicate <input checked="" type="checkbox"/> MS/MSD	

**TENNESSEE DIVISION OF REMEDIATION
FIELD SAMPLE COLLECTION SHEET
Iselin Rail Yard Site (TDoR Site # 57-513)
MONITORING WELL SAMPLING**

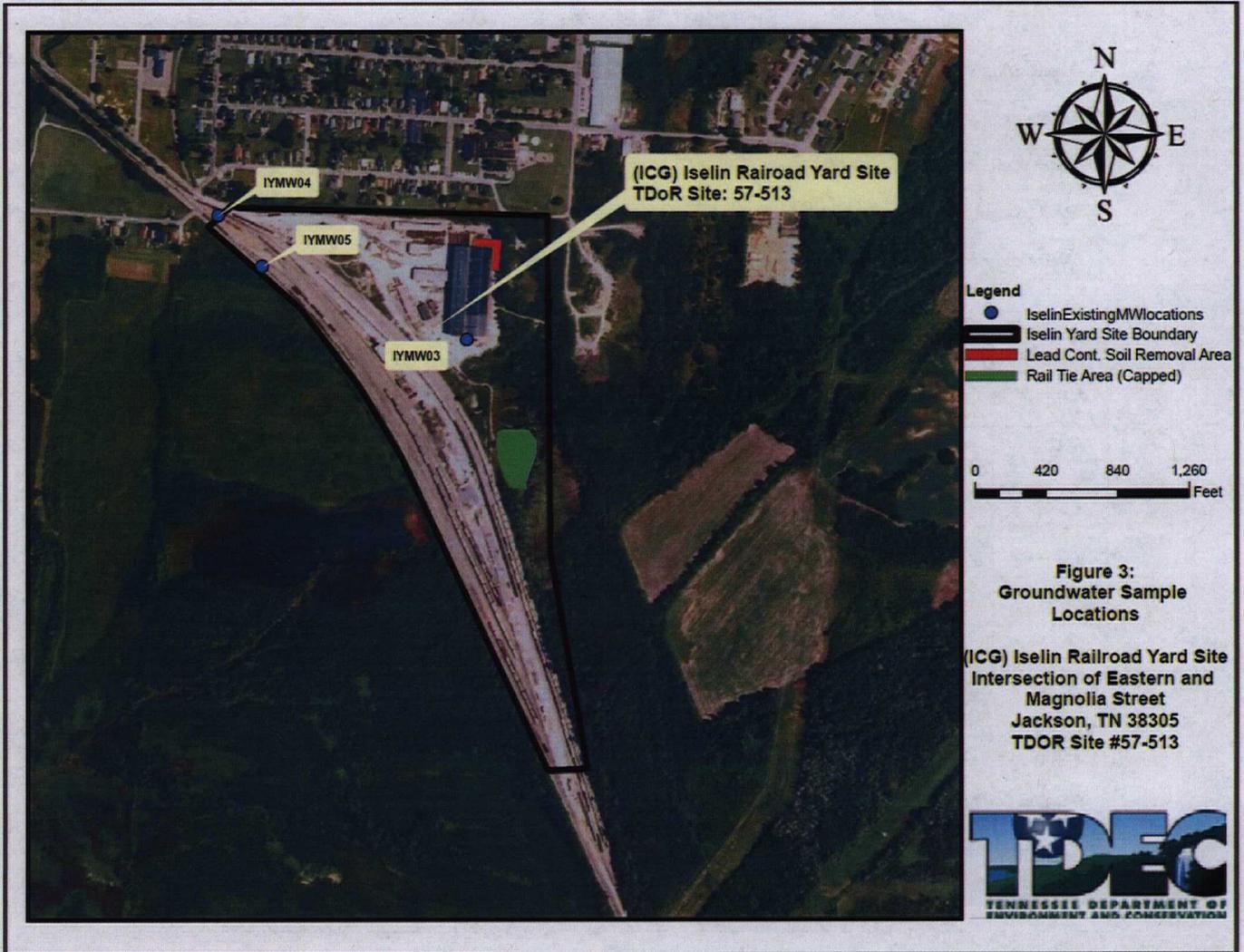
Monitoring Well No.: IYMW05 Date Installed: 6-24-92
 Latitude: 35.60276 Longitude: -88.80292
 Total Well Depth: 19' Depth to Water: 2.1' ^{HRS} 6-18-14 15.9'
 Well Diameter: 2" Water Column: 3.1'
 Well Volume: 0.496 Screen Interval: 7'-17'

Time	Vol. Purged (Gallons)	pH (Std. Units)	Conductivity (mS/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Turbidity (NTU)
1410	0.1 gal.	5.61	0.182	63.87	5.30	132.4	231
1420	1.0 gal.	4.84	0.171	63.31	4.95	142.2	118
1430	1.75 gal.	4.67	0.169	63.46	4.88	145.7	10
1438	2.25 gal.	4.62	0.165	63.78	4.73	146.6	8

Purge Start Time: 1405 Purge End Time: 14:40
 Purged Dry (y/n)? N
 Total Volume Purged: 2.4 gallons How Measured: Graduated bucket
 Method of Purging: Pump Type: Peristaltic Baller Type: _____

Groundwater Sample(s):	
Station ID: <u>IYMW05</u>	Sample ID(s): <u>IYMW05GW</u>
Date: <u>6-18-14</u>	
Time: <u>1445</u>	Sampler: <u>Kevin Smith</u>
QA/QC Sample: <input type="checkbox"/> Duplicate <input type="checkbox"/> MS/MSD	

**Attachment B:
ICG Iselin Railroad Yard Monitor Well Sample Locations**



**Attachment C:
Iselin MW Sampling Pictures**



Picture 1

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture is of IYMW03 location. IYMW03 is located on the southern side of the Williams Steel building. Picture was taken facing north.



Picture 2

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture is of IYMW03 location. Picture was taken facing west.



Picture 3

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture is of IYMW04 location. TDoR is in the process of purging IYMW04.



Picture 4

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture was taken from IYMW04 facing southwest towards the former Iselin Rail Yard building.



Picture 5

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture was taken from IYMW04 facing northeast towards JEA Municipal wells.



Picture 6

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture is of TDoR purging monitor well IYMW04.



Picture 7

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture is of TDoR purging monitor well IYMW05.



Picture 8

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture was taken from IYMW05 facing northwest towards the IYMW04 location.



Picture 9

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture was taken from IYMW05 facing east/southeast towards the former Iselin Rail Yard building.



Picture 10

Date of Photo: June 18, 2014. Photo taken by Kevin Smith. Location/Site Name: ICG Iselin Railroad Yard Superfund Site (57-513). TDEC Personnel Present: Kevin Smith(TDoR-JFO) and Don Sprinkle (TDoR-JFO). Picture is of IYMW05. IYMW05 has been damaged however; TDoR was able to obtain a sample from IYMW05.

Prepared by:
Everett Gibson, Attorney
65 Union Ave., Suite 1010
Memphis, TN 38103
(901) 843-2476

DECLARATION OF RESTRICTIVE COVENANTS

This Declaration of Restrictive Covenants is made as of the 16th day of Sept., 2004, by Norfolk Southern Railway Company, a Virginia corporation ("Declarant");

WITNESSETH:

WHEREAS, Declarant is the owner of the real property described in Exhibit A attached hereto and by reference incorporated herein ("Property");

WHEREAS, an investigation of certain hazardous substances believed to be present on the Property has been conducted;

WHEREAS, the Declarant has agreed to impose certain restrictions on the future use of the Property as hereinafter set forth;

NOW, THEREFORE, for and in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Declarant hereby declares that all of the Property should be held, sold, and conveyed subject to the following restrictive covenants which shall run with the Property and which shall be binding on all parties having any right, title or interest in the Property or any part thereof, their heirs, successors, successors-in-title, and assigns, and shall inure to the benefit of each owner thereof and to the Tennessee Department of Environment & Conservation and the respective successors and assigns of such parties:

1. Use Restriction. No groundwater wells shall be constructed on the Property for the purpose of obtaining water for residential uses, including human consumption. Furthermore, the Property shall not be used for residential purposes. The term "residential purposes" shall be defined as use as permanent resident or domicile by any natural person.
2. Enforcement. This Declaration of Restrictive Covenants may be enforced by any party owning any portion of the Property or the Tennessee Department of Environment & Conservation or their respective legal representatives, heirs, successors and assigns.
3. Term. This Declaration of Restrictive Covenants shall run with and bind the Property until this Declaration shall be amended or terminated as set forth in Paragraph 4 hereof, subject to the terms and conditions of Paragraph 5 hereof.
4. Amendment or Termination. This Declaration of Restrictive Covenants may be amended or terminated by an instrument in writing executed by the owners of more than one-half (1/2) of the acreage constituting the Property and the Tennessee Department of Environment & Conservation or such entities' respective successors or assigns. No amendment to or termination of this Declaration shall be effective until such amendment or instrument

terminating this Declaration is recorded in the Register's Office for Rutherford County, Tennessee.

5. Severability. Invalidation of any one of these covenants or restrictions by judgment or court order shall in no way affect any other provisions, which shall remain in full force and effect.

IN WITNESS WHEREOF, the undersigned Declarant has executed this Declaration as of the day and date first above written

NORFOLK SOUTHERN RAILWAY COMPANY

By: *[Signature]*
Title: Vice President

COMMONWEALTH OF VIRGINIA)
CITY OF NORFOLK)

Before me, the undersigned, a Notary Public in and for the City and Commonwealth aforesaid, personally appeared *F. B. Wimbush*, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who upon oath acknowledged to be Vice President of Norfolk Southern Railway Company, the within named bargainer, a corporation, and that he as such Vice President being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation himself as Vice President.

Witness my hand and seal, at office in Norfolk, Virginia, this the 16th day of September, 2004.

Marilyn J. Flettman
NOTARY PUBLIC

My Commission Expires: January 31, 2004

Exhibit A

Engineering Description

All those strips, pieces or parcels of land situate, lying and being in the Eighth and Fifteenth Civil Districts, Madison County, Tennessee, being all of that property as described in the following deeds: E. M. Williams, et ux to the Mobile & Ohio Railroad Company, dated March 2, 1906, as recorded September 5, 1906 in Deed Book: 71 Page: 217; E. C. Forbis, et ux, to the Mobile & Ohio Railroad Company, dated March 3, 1906, as recorded September 5, 1906 in Deed Book: 71 Page: 215; R. H. Cartmell to the Mobile & Ohio Railroad Company, dated March 3, 1906, as recorded September 5, 1906 in Deed Book: 71 Page: 214; and Annie R. Pope, et al, to the Mobile & Ohio Railroad Company, dated March 2, 1906, as recorded September 5, 1906 in Deed Book: 71 Page: 208, all of the County Records. Containing 156.9 acres, more or less.

LESS and EXCEPT, all of that property as described in a deed from Illinois Central Gulf Railroad Company to Williams Steel Company by deed dated March 31, 1986 and all of that property as described in a deed from Norfolk Southern Railway Company to Lewis Electronics Company by deed dated August-18, 1997: Containing 15.76 acres, more or less.

TOGETHER WITH that portion of said Norfolk Southern Railway Company's right of way for it's main track, as it runs between Henderson and Jackson, Tennessee, being bounded on the north by the northerly line of that property as described in aforesaid deed from Anne R. Pope, et al, to the Mobile & Ohio Railroad Company, dated March 2, 1906, as recorded September 5, 1906 in Deed Book: 71 Page: 208, as extended westwardly, being bounded on the south by the easterly line of aforesaid property as described in a deed from E.M. Williams, et ux, to the Mobile & Ohio Railroad Company, dated March 2, 1906, as recorded September 5, 1906 in Deed Book: 71 Page: 217, as extended southwardly, and being more particularly described as follows:

Beginning at the intersection of the original centerline of said railroad's main track, and said southerly line of that property as described in Deed Book: 71 Page: 217, as extended, said point being located at railroad valuation station 20236+00, more or less, and also being the TRUE POINT OF BEGINNING for the herein described strip of land; thence, in a general Northwestwardly direction, at all points being 50.00 feet on each side of, as measured normal from said original centerline of main track, a distance of 7,985 feet, more or less, to a point on aforesaid north line of property as described in Deed Book: 71 Page: 208, as extended, said point being located at railroad valuation station 20315+85, more or less, and also being the POINT OF ENDING for the herein described strip of land. Containing 18.3 acres, more or less.

BK/PG:T1622/104-106

04020241

3 FEB 1 1986 - RECEIVED	
CLARA BRUCE: 8166	
10/21/2004 - 09:53:08	
SEARCHED	9.00
INDEXED	4.00
SERIALIZED	0.00
FILED	15.00
CP FEE	2.00
REPRODUCTION FEE	0.00
TOTAL DUES	17.00

Book T1622 Page 106

INSTRUMENT PREPARED BY:
Charles Patterson
Attorney at Law
1023 Old Humboldt Road
Jackson, TN 38305

DECLARATION OF RESTRICTIVE COVENANTS

This Declaration of Restrictive Covenants is made as of the day of Sept 26
2009, by Campbell & Associates, a Tennessee General Partnership, ("Declarant");

WITNESSETH:

WHEREAS, Declarant is the owner of the real property described in Exhibit A attached hereto and by reference incorporated herein ("Property");

WHEREAS, an investigation of certain hazardous substances believed to be present on the Property has been conducted;

WHEREAS, the Declarant has agreed to impose certain restrictions on the future use of the Property as hereinafter set forth;

NOW, THEREFORE, for and in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Declarant hereby declares that all of the Property should be held, sold, and conveyed subject to the following restrictive covenants which shall run with the Property and which shall be binding on all parties having any right, title or interest in the Property or any part thereof; their heirs, successors, successors-in-title, and assigns, and shall inure to the benefit of each owner thereof and to the Tennessee Department of Environment & Conservation and the respective successors and assigns of such parties:

1. **Use Restriction.** No groundwater wells shall be constructed on the Property for the purpose of obtaining water for residential uses, including human consumption. Furthermore, the Property shall not be used for residential purposes. The term "residential purposes" shall be defined as use as permanent resident or domicile by any natural person.

2. **Enforcement.** This Declaration of Restrictive Covenants may be enforced by any party owning any portion of the Property or the Tennessee Department of Environment & Conservation or their respective legal representatives, heirs, successors and assigns.

3. **Term.** This Declaration of Restrictive Covenants shall run with and bind the Property until this Declaration shall be amended or terminated as set forth in Paragraph 4 hereof, subject to the terms and conditions of Paragraph 5 hereof.

4. Amendment or Termination. This Declaration of Restrictive Covenants may be amended or terminated by an instrument in writing executed by the owners of more than one-half (1/2) of the acreage constituting the Property and the Tennessee Department of Environment & Conservation or such entities' respective successors or assigns. No amendment to or termination of this Declaration shall be effective until such amendment or instrument terminating this Declaration is recorded in the Register's Office for Madison County, Tennessee.

5. Severability. Invalidation of any one of these covenants or restrictions by judgment or court order shall in no way affect any other provisions, which shall remain in full force and effect.

IN WITNESS WHEREOF, the undersigned Declarant has executed this Declaration as of the day and date first above written.

Campbell & Associates,
a Tennessee General Partnership

BY: Charles W. Campbell

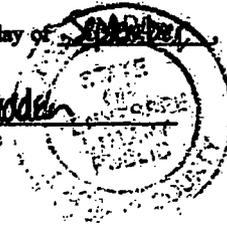
Its: Managing Partner

STATE OF Tennessee
COUNTY OF Madison

Before me, the undersigned Notary Public, in and for the aforesaid County and State, personally appeared Charles W. Campbell, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged himself to be General Partner of Campbell & Associates, a Tennessee General Partnership, the within named bargainer, a Tennessee General Partnership, and that he as such Partner, executed the foregoing instrument for the purposes therein contained, by signing the name of the Partnership by himself as Partner of such.

WITNESS MY HAND and Official Seal, this the 20th day of October,
2009.

Jina Madden
Notary Public



My Commission Expires: 4/25/12

Exhibit "A"

Legal Description

A parcel of land forming a portion of the Illinois Central Gulf Railroad Company's Okolona District "Iselin Yard" Locomotive Repair Shop right-of-way and property, said parcel situated in the southeast portion of Jackson, Madison County, Tennessee, is described as follows: from the northeast corner of said "yard" property, being the northeast corner of that 54.6 acre tract of land acquired by the former Mobile and Ohio Railroad Company from Mrs. A. R. Pope, et al, 3-2-1906 (recorded Deed Book 71 page 208), runs South 89 degrees 00 minutes west along the north line of said 54.6 acre tract, 360 feet to the point of beginning; thence South 01 degrees 00 minutes East, 860 feet; thence south 24 degrees 10 minutes 30 seconds West, 155.01 feet; thence South 89 degrees 10 minutes 30 seconds West, 112.47 feet; thence North 55 degrees 32 minutes West, 467.03 feet; thence North 36 degrees 34 minutes 10 seconds West, 906.72 feet to a point in the north line of the aforesaid 54.6 acre tract; thence North 89 degrees 00 minutes east along said North line, 1080 feet to return to the point of beginning.

Being the same real estate conveyed to Campbell & Associates, a Tennessee General Partnership composed of James E. Campbell, III, Charles W. Campbell, John L. Campbell and Mary F. Campbell by Quitclaim Deed of record in Deed Book 488 at page 860 in the Register's Office of Madison County, Tennessee.

BK/P6:T1868/259-261

09013177

STATE OF TENNESSEE, MADISON COUNTY	
3 FOR 1 DE - REPRODUCTION	
LINDA WALDON - BOOK	
09/28/2009 - 0122 PM	
VALUE	0.00
RECORDING FEE	0.00
TRANSFER TAX	0.00
RECORDING FEE	15.00
SP FEE	3.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	17.00

LINDA WALDON
REGISTER OF DEEDS