



June 15, 2011

Mr. Randy Nattis  
On-Scene Coordinator  
U.S. Environmental Protection Agency (EPA), Region 4  
61 Forsyth Street, SW, 11th Floor  
Atlanta, GA 30303

**Subject: Final Emergency Response Letter Report  
Midville Train Derailment  
Midville, Burke County, Georgia  
EPA Contract No. EP-W-05-054  
TDD No. TTEMI-05-001-0140**

Dear Mr. Nattis:

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) is submitting this letter report summarizing response activities that were conducted at the Midville Train Derailment in Midville, Burke County, Georgia from November 21, 2010 through November 23, 2010. This letter report includes five appendices and one attachment. Appendix A provides figures illustrating the site location, site layout, and railcar identification. Appendix B provides tables summarizing air monitoring information. Appendix C provides a photographic log of the response activities. Appendix D provides a copy of the Tetra Tech START logbook notes. Appendix E provides a table of witnesses. Attachment 1 provides a copy of the National Response Center incident reports.

## **BACKGROUND**

At approximately 1707 on November 21, 2010, 38 cars of a Norfolk Southern freight train derailed in Midville, Burke County, Georgia (see Figure 1 in Appendix A) resulting in the release of hazardous material (hazmat) into the surrounding environment. According to incident reports filed with the National Response Center (NRC), hazmat contained in some of the derailed cars included: one car containing methyl ethyl ketone (MEK) (with railcar identification label - SCM 4309); three cars containing sodium hydroxide solution (TILX 160381, GATX 90681, TCIX 6193); and five cars containing liquid chlorine residue (UTLX 900269, OLN 117086, OLN 8077, OLN 114053, OLN 8075). Residue refers to the hazmat remaining in the car after its contents have been unloaded and before the car is refilled or cleaned of hazmat and purged to remove any hazardous vapors. In addition, cars containing sodium carbonate peroxyhydrate (TCMX 450166), hexamethylenediamine, anhydrous ammonia, potassium chloride, and sulfur were also identified in the derailment according to the NRC incident reports.

The derailment occurred at milepost S95.5 near the Midville city limits in Burke County, Georgia, between the Jones Street (SR-56) crossing and the North Herndon Road crossing. This section of track is south of and runs parallel to Lee Street (SR-17). There are no houses within 1,000 ft of the derailment location. However, most of the city of Midville, with approximately 457 residents, lies within one mile of the derailment location. The east and west ends of the derailment were accessible from Lee Street (SR-17) through two pathways (see Figure 2 of Appendix A).

## EMERGENCY RESPONSE ACTIVITIES

### Unified Command

First responders to the derailment included representatives from the Midville Fire Department and Burke County Emergency Management Agency (EMA) as well as Norfolk Southern. As additional agencies and organizations arrived at the scene, a Unified Command was established to manage and coordinate the response efforts. The following list identifies agencies and organizations involved in the response:

- Midville Fire Department (Incident Commander)
- Midville Police Department – security and road closures
- Burke County EMA
- Georgia Environmental Protection Division (GA EPD)
- U.S. Environmental Protection Agency (EPA) Region 4
- Tetra Tech START – EPA contractor
- Norfolk Southern
- Center for Toxicology and Environmental Health (CTEH) – consultant for Norfolk Southern
- R.J.Corman – cleanup contractor for Norfolk Southern
- Hulcher Services Inc. – cleanup contractor for Norfolk Southern
- Hepaco – cleanup contractor for Norfolk Southern
- Eagle/SWS – cleanup contractor for Norfolk Southern
- Federal Railroad Administration – incident investigation

Because of concerns for public safety, local officials evacuated residents from approximately 25 nearby homes after the derailment occurred. The Incident Command Post was located at the Midville Fire Station located on North Railroad Street and an Equipment Staging Area was established along SR-17 near the Faith Baptist Church located to the northeast of the derailment area.

### Initial Assessment

On November 21, EPA On-Scene Coordinators (OSC) Randy Nattis and Terry Stilman mobilized to the site to provide technical support to the Incident Commander and monitor cleanup efforts. Norfolk Southern was in the process of mobilizing contractors and equipment to respond to the derailment and began to assess the situation. Initial information indicated that the railcar containing MEK was the only car that was confirmed to be leaking. At approximately 0050 on November 22, Tetra Tech START arrived at the site to support OSCs Nattis and Stilman, and began calibrating air monitoring equipment and installing chlorine and ammonia sensors on the AreaRAE units.

At approximately 0345 on November 22, EPA, Tetra Tech START, and Hepaco representatives made an entry into the eastern end of the derailment area using level B personal protective equipment (PPE) to conduct air monitoring and assess the condition of the MEK and chlorine railcars (see Figure 3 of Appendix A). During the entry, Hepaco personnel identified a 3- to 5-inch cut in the hull of one of the chlorine railcars (OLNX 114053), which was situated adjacent to the MEK rail car and two of the other chlorine railcars (see Figure 3 of Appendix A). Hepaco personnel reported a chlorine vapor concentration of 30 parts per million (ppm) at the cut. Tetra Tech START observed a maximum concentration of volatile organic compounds (VOC) up to 300 ppm (using a MultiRAE) at a distance of approximately 15 feet from the chlorine railcar. Upon exiting the eastern derailment area, personnel noted an organic odor, presumably MEK, and measured VOC concentrations up to 3 ppm.

At approximately 0800 on November 22, EPA and Tetra Tech START met with CTEH representatives to discuss air monitoring activities and coordinate placement of AreaRAE units at fixed monitoring locations along the perimeter of the derailment area to protect public health and safety. AreaRAE units allowed for wireless remote monitoring and continuous data logging on a host controller laptop computer that displayed the status of each unit. Each AreaRAE unit included sensors for chlorine and VOCs as well as other parameters such as ammonia (NH<sub>3</sub>), oxygen (O<sub>2</sub>), and lower explosive limit (LEL). Based on discussions, AreaRAE units were placed at the following locations (see Figure 2 of Appendix A):

- West of the derailment area on the northern side of the tracks near the intersection of 1<sup>st</sup> Avenue and Alice Street (Tetra Tech START location).
- Northeast of the derailment area at the equipment staging area near the Faith Baptist Church (Tetra Tech START location).
- Northwest of the derailment area on the north side of Route 17 (CTEH location).
- Immediately east of the derailment area along the tracks (CTEH location).
- South of the derailment area along Field Road (CTEH location).
- West of the derailment area on the southern side of the tracks along Field Road (CTEH location).

Air monitoring activities, which are discussed in more detail later in this report, continued for the duration of EPA's response activities, and included the use of AreaRAE units at the fixed perimeter locations described above as well as roving locations throughout the site and in the surrounding community. Except for the high concentrations of chlorine and VOCs identified in the vicinity of the damaged chlorine and MEK railcars, no air monitoring results exceeding threshold values were identified during response activities. However, concerns remained high due to the hazardous materials present at the derailment, the extent of damage to the railcars, and the proximity of nearby populations.

## Cleanup Efforts

Norfolk Southern's cleanup efforts initially focused on assessing the situation and moving railcars containing nonhazardous materials in order to gain access to those that contained hazardous materials. To provide space for the staging of derailed cars, Norfolk Southern used heavy equipment to clear vegetation from an area along the northern side of the railroad tracks and west of the derailment area (see Figures 2 and 3 of Appendix A).

At 1800 on November 22, an operations briefing was held during which Norfolk Southern reported that their crews had moved several cars from the derailment area, including two of the four intact chlorine railcars from the eastern end, which were moved further to the east and north to clear the track area. The remaining two intact chlorine railcars were also subsequently moved to the same location. During the briefing, it was agreed that the leaking MEK railcar would remain in place until the following day due to limited visibility. Based on estimates from CTEH, MEK that leaked from the railcar had impacted soil in a radius of approximately 50 feet surrounding the railcar on the northern side of the tracks as well as a similar sized area on the southern side of the tracks.

After patching the cut in the damaged chlorine railcar (OLNX 114053), Norfolk Southern uprighted the car and staged it along the northern side of the tracks to facilitate depressurization of the remaining residue. A sodium hydroxide solution was used to depressurize the contents of the car by converting the residual chlorine into a bleach solution, an operation referred to as sparging. Initial readings of the damaged railcar indicated a pressure of approximately 150 pounds per square inch (psi) inside the railcar. The objective of the sparging operation was to reduce the pressure gradually to below 20 psi, and then use air pumped into the railcar to clear out the remaining chlorine vapors. Sparging operations were

estimated to require approximately 12 to 24 hours. Table 3 of Appendix B provides a summary of the pressure readings obtained during the sparging operation.

At approximately 2200 on November 22, OSC Nattis directed Tetra Tech START to the eastern end of the derailment area, where a fire had ignited. Personnel observed flames approximately 20 feet tall in the vicinity of the MEK railcar as well as the damaged chlorine railcar (OLNX 114053) that was actively being depressurized. The fire also burned in a small wooded area around the MEK railcar, where MEK had previously leaked into soil on the northern side of the tracks. Air monitoring results obtained during the incident did not indicate any significantly elevated concentrations at the fixed perimeter locations. Subsequent roving air monitoring conducted at 0141 on November 23 while the fire still smoldered indicated chlorine concentrations up to 0.2 ppm and VOC concentrations up to 2 ppm at a distance of approximately 20 yards from the fire.

According to Norfolk Southern and its contractors, the fire ignited while attempts were being made to move the MEK railcar and a steel cable used in the operation pulled slack around the railcar and produced sparks that ignited the fire. A subsequent operations briefing was held to discuss the incident and corrective actions to be taken to prevent future incidents. It was determined that Norfolk Southern's contractor was responsible for the unscheduled move despite earlier agreements to postpone the move until daylight. Corrective actions following the incident included an agreement that all planning and operational decisions would be brought to the attention of Unified Command for approval prior to implementation.

At approximately 0630 on November 23, an operations briefing was held during which Norfolk Southern reported that crews had moved the potassium chloride (salt) railcars and gained access to the sodium hydroxide railcars. Based on the weight of the sodium hydroxide railcars, Norfolk Southern determined that only minimal amounts of the material had apparently leaked. OSC Nattis measured the pH of some small pools of black liquid in the area at approximately 12 to 13. Norfolk Southern subsequently constructed soil berms along the northern side of the railroad tracks to provide a temporary containment and staging area for the sodium hydroxide railcars. By approximately 1020 on November 23, Norfolk Southern had completed moving and staging the three sodium hydroxide railcars.

At approximately 1100 on November 23, Norfolk Southern had cleared all railcars from the track and continued to place ballast and install pre-constructed track panels on the right-of-way to get the line running again.

At approximately 1300, an operations briefing was held during which Norfolk Southern reported:

- The MEK railcar, which was empty, had been staged on plastic for future transportation; small fires in the area where the fire occurred were still burning, but were being monitored by CTEH and site personnel.
- Chlorine sparging operations had reduced the pressure inside the damaged railcar (OLNX 114053) to approximately 19 psi. The four remaining intact chlorine railcars would be loaded onto a flatbed car for transport within 10 to 14 days.
- The three sodium hydroxide railcars were secured inside the bermed area along the northern side of the tracks and arrangements were in progress to transfer their contents for transportation to Olin Corporation (Augusta, Georgia). Contaminated soil in the vicinity of the sodium hydroxide railcars was being excavated to native material and placed into rolloff containers for future disposal.
- Although the evacuation of local residents was to be lifted, CTEH would continue to conduct air monitoring at the site during response activities.

Mr. R. Nattis  
June 15, 2011

During the 1300 briefing, a representative from the Federal Railroad Association (FRA) announced that they were conducting an investigation of the derailment. The FRA representative requested any pieces of the rail from the switch area be set aside for their investigation as well as cameras that were reportedly located on each of the chlorine railcars, but had not yet been located. Based on the progress of operations and the stabilization of hazardous materials, OSC Nattis coordinated with the Midville Fire Department, and EPA and Tetra Tech START subsequently demobilized from the site at approximately 1500 on November 23.

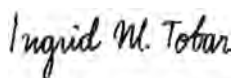
## Air Monitoring

During response activities, Tetra Tech START conducted air monitoring at roving locations throughout the derailment area as well as fixed locations along the perimeter of the site to ensure public health and safety. Based on the hazardous materials that were initially reported to be involved in the derailment according to the NRC incident reports, air monitoring concerns focused on chlorine, VOCs (MEK), and ammonia. A combination of one MultiRAE and four AreaRAE units were used by Tetra Tech START to measure these parameters as well as percent oxygen and lower explosive limits. The Acute Exposure Guideline Levels (AEGL), specifically AEGL-1 for chlorine, ammonia, and VOCs were used as threshold values for comparison of air monitoring results. In addition, threshold values for LEL and O<sub>2</sub> were obtained from the Occupational Safety and Health Administration (OSHA) Standards, 29 CFR 1910.146(b), that define a hazardous atmosphere. Table 2 of Appendix B summarizes the AEGL and OSHA values.

Maximum readings obtained at roving locations were detected during the level B entry made from the eastern end of the derailment area to assess the condition of the damaged chlorine railcar (OLNX 114053). During this entry, chlorine concentrations up to 30 ppm were measured by Hepaco representatives at the cut observed in the side of the railcar and VOC concentrations up to 300 ppm were measured by Tetra Tech START in the vicinity of the railcar, presumably attributable to the MEK that was spilled nearby. Table 1 of Appendix A provides a summary of air monitoring results obtained at roving locations. No other air monitoring results obtained by Tetra Tech START at roving locations or fixed perimeter locations indicated concentrations exceeding the AEGLs or OSHA standards.

If you have any questions about the enclosed report, please call me at (678) 775-3119 or Andrew Johnson at (678) 775-3100.

Sincerely,



Ingrid Tobar  
START III Team Member



Andrew F. Johnson  
START III Program Manager

Enclosures (5 Appendices, 1 Attachment)

cc: Katrina Jones, EPA Project Officer  
Angel Reed, START III Document Control Coordinator

## **APPENDIX A**

### **FIGURES**

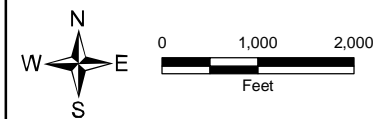
(Three Pages)





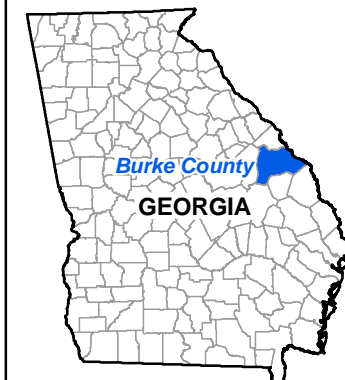
### Legend

- ★ Train Derailment Site Location
- State Highway
- Major Road



Note: The Environmental Protection Agency does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any injury or loss resulting from the reliance upon the information shown.

Map Source:  
USGS 7.5 Minute Topographic Quadrangle Map:  
Midville, GA 1981.  
HSIP Gold Dataset, 2007.



United States  
Environmental  
Protection Agency



MIDVILLE TRAIN DERAILMENT  
MIDVILLE,  
BURKE COUNTY,  
GEORGIA  
TDD: TTEMI-05-001-0140

### FIGURE 1 SITE LOCATION

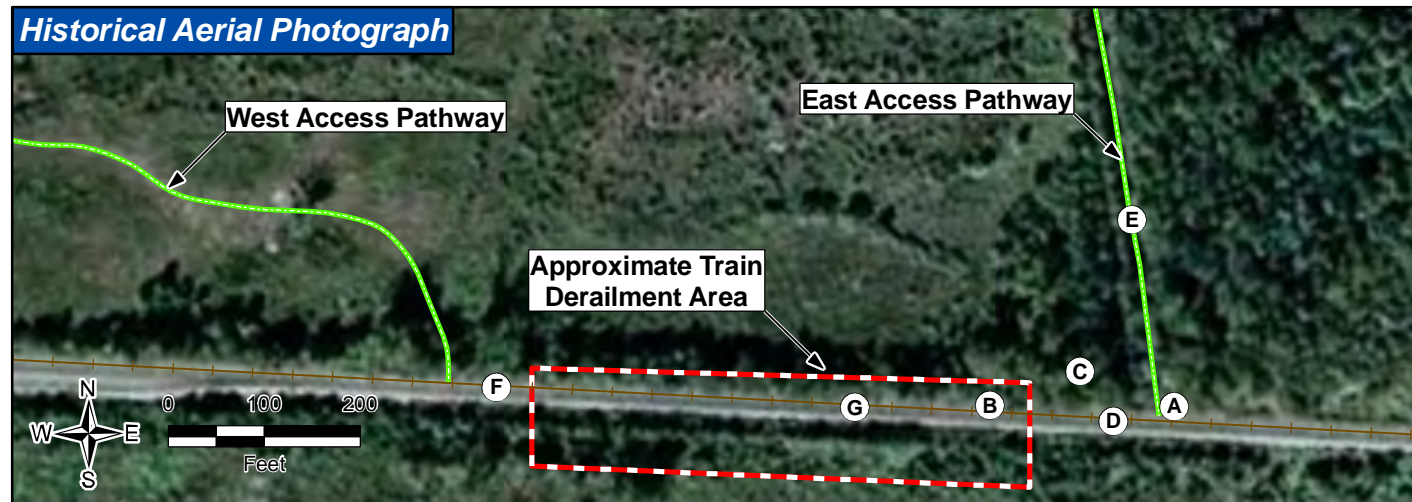




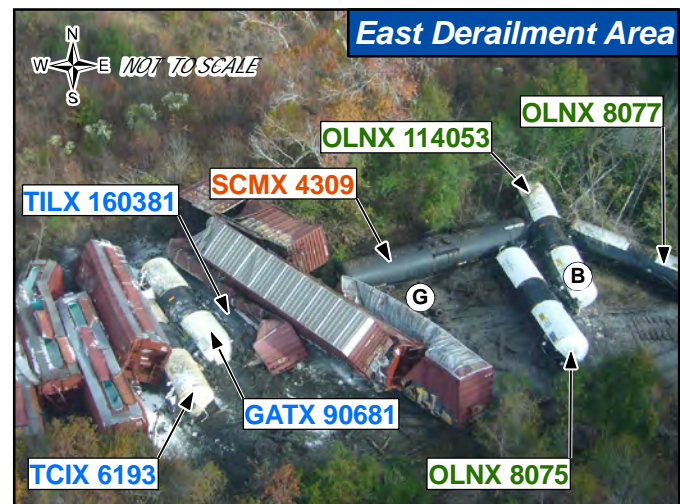




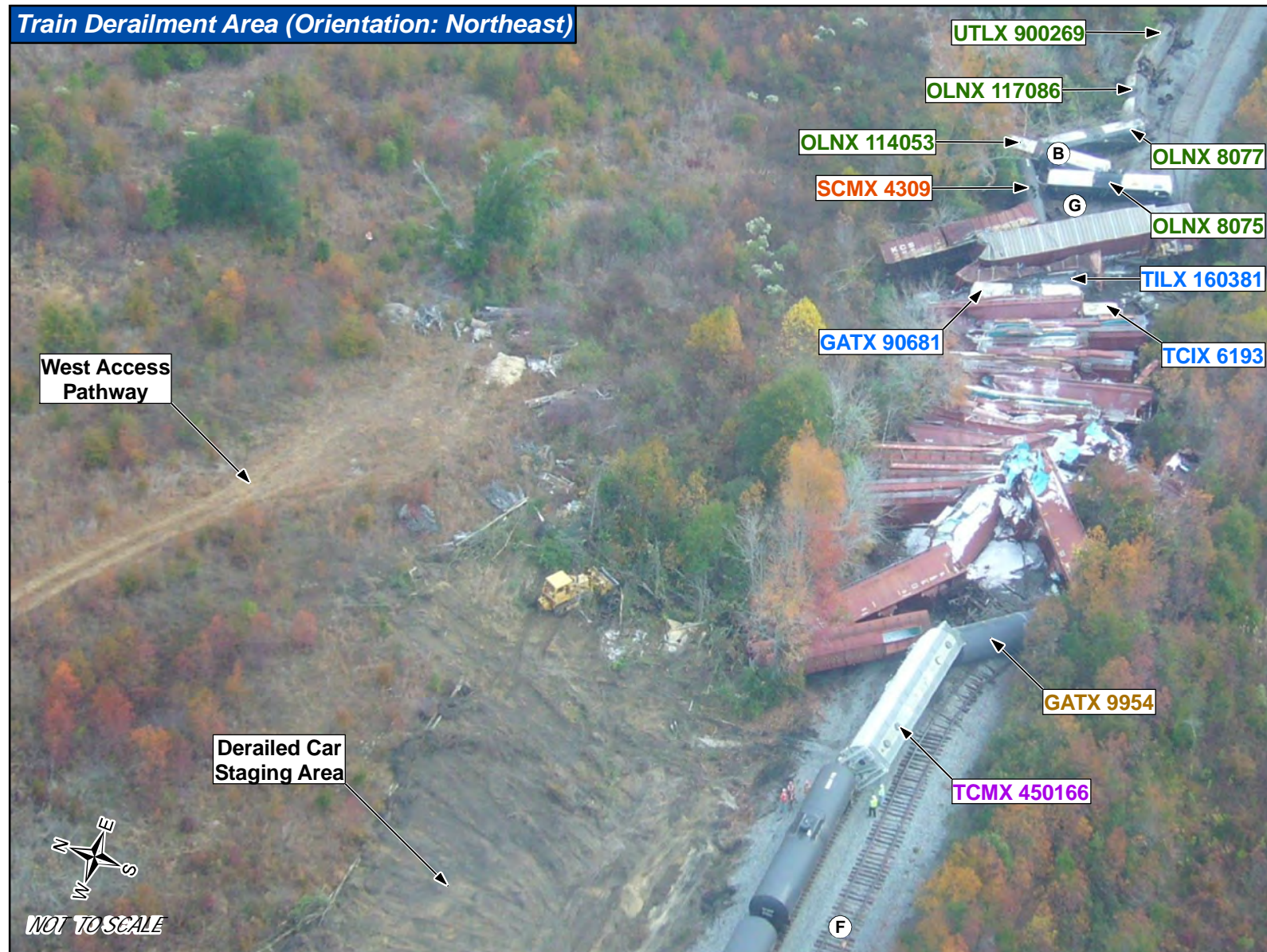
### Historical Aerial Photograph



### Train Derailment Area (Orientation: North)



### Train Derailment Area (Orientation: Northeast)



#### Legend

- Site Access Pathway
- Railroad
- Approximate Train Derailment Area

#### Identified Cars by Contents

##### Chlorine ( $\text{Cl}_2$ )

OLNX 8075, OLNX 8077, OLNX 114053, OLNX 117086, UTLX 900269

##### Methyl ethyl ketone (MEK)

SCMX 4309

##### Sodium hydroxide solution (NaOH)

GATX 90681, TCIX 6193, TILX 160381

##### Sodium carbonate peroxyhydrate

TCMX 450166

##### Unidentified

GATX 9954

#### Location ID (Air Monitoring Results in Table 1)

- (A) East derailment area entry point
- (B) Damaged chlorine residue car OLNX 114053
- (C) Staging area for chlorine residue cars east of the derailment
- (D) Center of railroad track between first derailed car and east entry point
- (E) Pathway from equipment staging area to railroad tracks
- (F) Center of railroad track between first derailed car and west entry point
- (G) MEK release and burn area

#### Railcar Reporting Marks

GATX	General American Marks Company
OLNX	Olin Corporation
SCMX	Shell Oil Company
TCIX	Trinity Chemical Leasing
TCMX	Transportation Company of America
TILX	Trinity Industries Leasing
UTLX	Union Tank Car Company

Note: The Environmental Protection Agency does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any injury or loss resulting from the reliance upon the information shown.

Map Source:  
i<sup>2</sup> Imagery Prime World 2D, 2010  
Aerial Photographs by OSC Randy Nattis, 2010



MIDVILLE TRAIN DERAILMENT  
MIDVILLE,  
BURKE COUNTY,  
GEORGIA  
TDD: TTEMI-05-001-0140

### FIGURE 3 DERAILED CAR IDENTIFICATION DIAGRAM





## **APPENDIX B**

### **TABLES**

(Three Pages)



**TABLE 1**  
**ROVING AIR MONITORING RESULTS**

Time	Instrument	Operator	Air Monitoring Results			Location ID*	Remarks
			Cl <sub>2</sub> (ppm)	NH <sub>3</sub> (ppm)	VOC (ppm)		
11/22/2010							
00:50	Unknown	Hepaco	NR	NR	50.0	--	Unknown location
01:25	MultiRAE	START	NR	NR	0.0	--	McKinney Pond Road
03:45	Unknown	Hepaco	30.0	NR	NR	Ⓑ	Cut on damaged chlorine railcar (OLNX 114053)
03:45	MultiRAE	START	NR	NR	3.0 - 5.0	Ⓐ	Railroad tracks at eastern access pathway
03:45	MultiRAE	START	NR	NR	20.0 - 300	Ⓒ	15 feet southeast of damaged chlorine railcar (OLNX 114053)
03:45	MultiRAE	START	NR	NR	1.0 - 3.0	Ⓔ	Eastern access pathway
05:00	AreaRAE	START	0.0	0.0	3.0	Ⓕ	Western end of derailment area
06:00	AreaRAE	START/CTEH	0.0	0.0	2.4 - 3.8	Ⓔ	Eastern access pathway
06:00	AreaRAE	START	0.0	0.0	0.4 - 2.3	Ⓓ	Eastern end of derailment area
06:55	AreaRAE	START	0.0	0.0	2.9	Ⓓ	Eastern end of derailment area
06:58	AreaRAE	START	0.1	0.0	14.5	Ⓓ	Eastern end of derailment area (MEK odor increased)
07:02	AreaRAE	START	0.1	0.0	20.2	--	Measurements recorded at the equipment staging area.
07:05	AreaRAE	START	0.0	0.0	0.6	Ⓕ	Western end of derailment area
12:45	AreaRAE	START	0.0	0.0	1.0 - 2.0	--	Equipment staging area (near Faith Baptist Church)
12:45	AreaRAE	START	0.0	0.0	0.0	Ⓔ	Eastern access pathway
17:00	Unknown	CTEH	NR	NR	20.0	Ⓓ	Eastern end of derailment area
20:46	AreaRAE	START	0.0	0.0	0.5	Ⓒ	40 yards south of the chlorine railcars
21:23	AreaRAE	START	0.0	0.0	6.3	Ⓕ	Western end of derailment area
23:12	AreaRAE	START	0.0	0.0	1.2	Ⓒ	Eastern end of derailment area
11/23/2010							
01:41	AreaRAE	START	0.2	0	2	Ⓒ	20 yards east of MEK fire area
04:30	AreaRAE	START	NR	NR	10	Ⓕ	Potassium chloride railcars being moved at western end
07:30	AreaRAE	START	0	0	1.2	Ⓓ	Eastern end of derailment area
08:00	AreaRAE	START	0	0	1.8	Ⓕ	Sodium hydroxide railcars being moved at western end
09:30	AreaRAE	START	0	0	3.1	Ⓓ	Eastern end of derailment area
09:30	Unknown	CTEH	NR	NR	80	Ⓒ	Small fires from MEK-saturated soil
10:30	Unknown	CTEH	0.1	NR	NR	Ⓑ	Cut on damaged chlorine railcar (OLNX 114053)
12:40	AreaRAE	START	0	0	0	--	Drive through of community to west of derailment area

**Notes:**

- \* See Figure 3 for air monitoring location
- Ⓐ Entry point to eastern access pathway
- Ⓑ Damaged chlorine residue car (OLNX 114053)
- Ⓒ Staging area for chlorine residue cars (east of the derailment area)
- Ⓓ Center of railroad track between first derailed car and eastern access pathway
- Ⓔ Pathway from equipment staging area to railroad tracks.
- Ⓕ Center of railroad track between first derailed and western access pathway
- Ⓖ MEK release and burn area

- Bold** Indicates the result exceeds a threshold level
- Cl<sub>2</sub> Chlorine
- CTEH Center for Toxicology and Environmental Health, L.L.C.
- ft Feet
- NH<sub>3</sub> Ammonia
- NR No reading
- OLNX Olin Corporation
- ppm Parts per million
- START Superfund Technical Assessment and Response Team
- VOC Volatile organic compound

**TABLE 2**  
**SENSOR THRESHOLD EXPOSURE LIMITS**

Sensor	AEGL-1* (ppm)	OSHA
Cl <sub>2</sub>	0.5	NA
LEL	NA	10.0%
NH <sub>3</sub>	30.0	NA
O <sub>2</sub>	NA	19.5 - 23.5 %
VOC**	200.0	NA

**Notes**

*	AEGL threshold exposure limits applicable to 8-hour emergency exposure periods
**	AEGL threshold value for MEK is included as a conservative VOC exposure limit
%	Percent
AEGL	Acute Exposure Guideline Level
AEGL-1	Airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.
Cl <sub>2</sub>	Chlorine
LEL	Lower explosive limit
MEK	Methyl ethyl ketone
NH <sub>3</sub>	Ammonia
NA	Not applicable
OSHA	Occupational Safety and Health Administration
O <sub>2</sub>	Oxygen
ppm	Parts per million
VOC	Volatile organic compounds



**TABLE 3**  
**PRESSURE READINGS DURING SPARGING OPERATIONS**  
**DAMAGED CHLORINE RESIDUE CAR (OLNX 114053)**

Date	Time	Operator	Pressure (psi)
11/22/2010	06:15	Eagle-SWS	150
11/23/2010	09:30	Eagle-SWS	50
	10:30	Eagle-SWS	34
	13:00	Eagle-SWS	19

**Notes**

OLNX

Olin Corporation

psi

Pounds per square inch

**APPENDIX C**  
**PHOTOGRAPHIC LOG**  
(22 Pages)





**OFFICIAL PHOTOGRAPH NO. 1**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** Aerial

**Date:** November 22, 2010

**Photographer:** OSC Randy Nattis, EPA

**Witness:** Unknown

**Subject:** Aerial view of train derailment site photographed from helicopter. Five chlorine cars and one methyl ethyl ketone (MEK) car are visible at the east end of the derailment site, seen at the bottom of the pile up.



**OFFICIAL PHOTOGRAPH NO. 2**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** Aerial

**Date:** November 22, 2010

**Photographer:** OSC Randy Nattis, EPA

**Witness:** Unknown

**Subject:** Close up aerial view of train derailment. Three chlorine cars (white with black strip) and one MEK car (black) are visible at the right end of the pile up. Three sodium hydroxide solution cars (white with black strip) are visible at the center of the photograph. Potassium chloride salt cars (rust color) are visible at the left end of the pile up.





**OFFICIAL PHOTOGRAPH NO. 3**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** Aerial

**Date:** November 22, 2010

**Photographer:** OSC Randy Nattis, EPA

**Witness:** Unknown

**Subject:** Close up aerial view of train derailment. Several potassium chloride salt cars (rust color) are visible at the center of the derailment site. A white tank car containing sodium carbonate peroxyhydrate is visible at the top left end of the pile up.



**OFFICIAL PHOTOGRAPH NO. 4**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** Aerial

**Date:** November 22, 2010

**Photographer:** OSC Randy Nattis, EPA

**Witness:** Unknown

**Subject:** Car staging area developed at the west end of the derailment site to the north of the railroad tracks.





**OFFICIAL PHOTOGRAPH NO. 5**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** West

**Date:** November 22, 2010

**Photographer:** Paul Prys, Tetra Tech

**Witness:** Unknown

**Subject:** Wrecking crew clearing wooded area to gain access to the derailment.



**OFFICIAL PHOTOGRAPH NO. 6**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** East

**Date:** November 22, 2010

**Photographer:** Paul Prys, Tetra Tech

**Witness:** Brian Croft, Tetra Tech

**Subject:** Car SHPX 204377 located in the east end of the derailment site was repositioned for removal off railroad tracks.





**OFFICIAL PHOTOGRAPH NO. 7**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** West

**Date:** November 22, 2010

**Photographer:** Paul Prys, Tetra Tech

**Witness:** OSC Terry Stilman

**Subject:** Air monitoring team assessing damage on chlorine residue railcar OLNK 114053. Residue refers to the hazmat remaining in the car after its contents have been unloaded and before the car is refilled or cleaned of hazmat and purged to remove any hazardous vapors.





**OFFICIAL PHOTOGRAPH NO. 8**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** Northwest

**Date:** November 22, 2010

**Photographer:** Ingrid Tobar, Tetra Tech

**Witness:** Didi Fung, Tetra Tech

**Subject:** Four of five chlorine residue cars located at the east end of the derailment site were segregated away from the railroad tracks. These tank cars were found not to be leaking as a result of the derailment.



**OFFICIAL PHOTOGRAPH NO. 9**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

<b>TDD Number:</b>	TTEMI-05-001-0140	<b>Location:</b>	Midville Train Derailment
<b>Orientation:</b>	Aerial	<b>Date:</b>	November 22, 2010
<b>Photographer:</b>	Ingrid Tobar, Tetra Tech	<b>Witness:</b>	Didi Fung, Tetra Tech
<b>Subject:</b>	Tetra Tech performs battery replacement and fresh air calibration on AreaRAE Unit #1 located on the western perimeter of the site; specifically located near corner of 1 <sup>st</sup> Avenue and Alice Street, across from 191 1 <sup>st</sup> Avenue. Air monitoring activities continued through the night along with train wrecking operations.		





**OFFICIAL PHOTOGRAPH NO. 10**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

<b>TDD Number:</b>	TTEMI-05-001-0140	<b>Location:</b>	Midville Train Derailment
<b>Orientation:</b>	West	<b>Date:</b>	November 22, 2010
<b>Photographer:</b>	Ingrid Tobar, Tetra Tech	<b>Witness:</b>	Didi Fung, Tetra Tech
<b>Subject:</b>	Accidental ignition of spilled MEK around cars occurred at the east side of the derailment site.		



**OFFICIAL PHOTOGRAPH NO. 11**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** West

**Date:** November 22, 2010

**Photographer:** Ingrid Tobar, Tetra Tech

**Witness:** Didi Fung, Tetra Tech

**Subject:** Flames produced by accidental ignition of spilled MEK around cars at the east side of the derailment site. Notice to the right a chlorine residue car staged for sparging operation.





**OFFICIAL PHOTOGRAPH NO. 12**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

<b>TDD Number:</b>	TTEMI-05-001-0140	<b>Location:</b>	Midville Train Derailment
<b>Orientation:</b>	Northwest	<b>Date:</b>	November 23, 2010
<b>Photographer:</b>	Ingrid Tobar, Tetra Tech	<b>Witness:</b>	Didi Fung, Tetra Tech
<b>Subject:</b>	Eagle-SWS crews begin sparging the impacted chlorine residue car with sodium hydroxide solution at the east side of the derailment site.		



**OFFICIAL PHOTOGRAPH NO. 13**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

<b>TDD Number:</b>	TTEMI-05-001-0140	<b>Location:</b>	Midville Train Derailment
<b>Orientation:</b>	West	<b>Date:</b>	November 23, 2010
<b>Photographer:</b>	Paul Prys, Tetra Tech	<b>Witness:</b>	Unknown
<b>Subject:</b>	Breached potassium chloride salt cars with contents scattered on the ground.		





**OFFICIAL PHOTOGRAPH NO. 14**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** South

**Date:** November 23, 2010

**Photographer:** Paul Prys, Tetra Tech

**Witness:** Unknown

**Subject:** Crews begin segregating three sodium hydroxide solution tank cars (white with black strip). White potassium chloride salt is visible scattered on the ground.



**OFFICIAL PHOTOGRAPH NO. 15**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

<b>TDD Number:</b>	TTEMI-05-001-0140	<b>Location:</b>	Midville Train Derailment
<b>Orientation:</b>	Aerial	<b>Date:</b>	November 23, 2010
<b>Photographer:</b>	Paul Prys, Tetra Tech	<b>Witness:</b>	OSC Randy Nattis, EPA
<b>Subject:</b>	Sludge-like material identified as sodium hydroxide solution with white potassium chloride salt scattered on the ground.		





**OFFICIAL PHOTOGRAPH NO. 16**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

<b>TDD Number:</b>	TTEMI-05-001-0140	<b>Location:</b>	Midville Train Derailment
<b>Orientation:</b>	West	<b>Date:</b>	November 23, 2010
<b>Photographer:</b>	Paul Prys, Tetra Tech	<b>Witness:</b>	Unknown
<b>Subject:</b>	Wrecking crew evaluating the damage to the sodium hydroxide solution tank car.		



**OFFICIAL PHOTOGRAPH NO. 17**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** Southwest

**Date:** November 23, 2010

**Photographer:** Paul Prys, Tetra Tech

**Witness:** Unknown

**Subject:** Wrecking crew segregating sodium hydroxide solution tank car into a bermed containment area.





**OFFICIAL PHOTOGRAPH NO. 18**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** South

**Date:** November 23, 2010

**Photographer:** Paul Prys, Tetra Tech

**Witness:** Unknown

**Subject:** Wrecking crew removing box cars away from the sodium hydroxide solution tank car on the left.





**OFFICIAL PHOTOGRAPH NO. 19**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** Northeast

**Date:** November 23, 2010

**Photographer:** Paul Prys, Tetra Tech

**Witness:** Unknown

**Subject:** Eagle-SWS crews finalize sparging the impacted chlorine residue car.





**OFFICIAL PHOTOGRAPH NO. 20**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

<b>TDD Number:</b>	TTEMI-05-001-0140	<b>Location:</b>	Midville Train Derailment
<b>Orientation:</b>	Southeast	<b>Date:</b>	November 23, 2010
<b>Photographer:</b>	Paul Prys, Tetra Tech	<b>Witness:</b>	Unknown
<b>Subject:</b>	Flames from accidental ignition continue burning fueled by residual MEK that saturated the soil.		





**OFFICIAL PHOTOGRAPH NO. 21**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** East

**Date:** November 23, 2010

**Photographer:** Paul Prys, Tetra Tech

**Witness:** Norfolk Southern

**Subject:** Railroad crews rebuilding railroad track from east end of the derailment.





**OFFICIAL PHOTOGRAPH NO. 22**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-001-0140

**Location:** Midville Train Derailment

**Orientation:** West

**Date:** November 23, 2010

**Photographer:** Paul Prys, Tetra Tech

**Witness:** Brian Croft, Tetra Tech

**Subject:** Tetra Tech conducts air monitoring on west side of derailment while railroad crews rebuild railroad track.

**APPENDIX D**  
**LOGBOOK NOTES**  
(18 Sheets)



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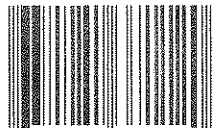
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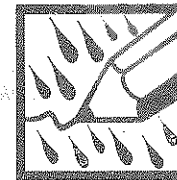


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TTEM1 - 05-001-0140

Midville Train Derailment

Logbook 1



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## CONTENTS

PAGE	REFERENCE	DATE
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Midville Train Derailment  
on Norfolk Southern Rail Line  
Milepost 595.5  
Midville, Burke County, Georgia

TDD No. TTEM1-05-001-0140

Tetra Tech EM1  
1955 Evergreen Blvd  
Bldg 200, Ste 300  
Duluth, GA 30096

### Contact:

Brian Croft, TetraTech: 206-300-0301  
Paul Prys, TetraTech: 404-844-7136  
DD Fung, TetraTech: 678-773-5660  
Ingrid Tobar, TetraTech: 678-702-3978  
Randy Nattis, USEPA: 404-229-9499  
Stephen Ball, USEPA: 404-229-9513



2.

CRAFT  
Pays

11-21-10

1900 receive call from RY duty officer

train derailment near Milledgeville, GA

- NS - 90-car train

MEK - leaking

NaOH - leaking

Cl<sub>2</sub> - empty/residual

hexamethylene diamine

any other comments

- remote/rural location - swampy

- coordinated w/ JT RSO, response coordinator

- head to office for loadout

2045 on

2045 head to GZ to pick up EPA equipment

2130 begin move to Milledgeville, GA location

Scale: 1 square = \_\_\_\_\_

BSC 11-21-10

CRAFT  
Pays

3

11-22-10

0050 arrive ① Railroad St (Milledgeville, GA)

- meet w/ OSC Stinson

- he does not want us to set up Area RAEs

with new sensors (i.e. Cl<sub>2</sub>) yet - wants

to use MEK as indicator because that is

the only known leaking material verified so

far - will calibrate MultiRAE using

standard VOC sensor &amp; placed to

Mekiney Pad Road area, which is

closer to derailment (OSC Stinson is trying

to help Fire Chief in assessment of

current evacuation radius, which is 1/4 mile

- CTEH &amp; RJ Corman crews expected onsite

soon (contractors for Norfolk Southern) - also,

Hepco is also present - Hepco reportedly

made entry earlier - VOC readings up to 50 ppm

0125 START CRAFT / PM drive to Mekiney Pad

Road to conduct air monitoring w/ MultiRAE

- all readings along stretch of Mekiney Pad

Road were below ground:

O<sub>2</sub> = 21.0 H<sub>2</sub>S = 0

LEL = 0

CO = 0

VOCs = 0

BSC 11-21-10

Scale: 1 square = \_\_\_\_\_

11-22-10

0345 START PRYS RETURNED WITH EPA Nattis AND Stillman. From conducting Entry into crash area, with NEPALCO. Prior to Entry, all personnel donned Level B. START PRYS, EPA Stillman AND 2 NEPALCO PERSONNEL ENTERED crash site to evaluate damage to chlorine car. NEPALCO ASSESSED DAMAGE AND DISCOVERED AN ~ 3-5 inch cut in the wall of the car. NEPALCO MEASURED UP TO 30 ppm OF CHLORINE NEXT TO CUT. START PRYS MEASURED 3-5 ppm AT ENTRY POINT, ~ 20-158 ppm AT DISTANCE OF 15 FEET FROM DAMAGED CAR WITH A SPIKE OF 300 ppm. FOR VOCs. EPA Stillman HAD DIFFICULTY ACTIVATING DRAGERS PUMP FOR CHLORINE READINGS. STAGING THERE WAS NO ODDOR OF VOCs (POSSIBLY MEX) AT THE STAGING AREA NEAR THE CRASH SITE, BUT MULTI-RAE VOC READINGS RANGED FROM 1-3 ppm. EVALUATION CREW WAS IN CRASH SITE AREA FOR ~ 20-25 MINUTES. UPON RETURN, EPA, NEPALCO AND OTHER RESPONSE CREWS

Scale: 1 square= BSC 11-22-10

11-22-10

0345 DISCUSSED THE FINDINGS OF THE ENTRY. START PROCEEDED WITH CALIBRATION OF AREA RAES.

0500 OSC Nattis & START CRAFT CONDUCT AIR MONITORING WALK OF RR TRACK - met CTEH/AS

0550 RETURN TO CP

0705 OSC Nattis BACK TO RR TRACK TO meet w/ CTEH again for air monitoring

note: max RGS during 1<sup>st</sup> walk @ 0500

were: VOCs = 3.0 ppm  
 $Cl_2$  = 0  
 $NH_3$  = 0

2<sup>nd</sup> entry - readings: (@ 0705)

$Cl_2$  = 0  
 $NH_3$  = 0  
VOCs = 0.6 ppm

0800 RETURN TO CP AREA

0835 meet w/ OSC Stillman, Nattis & CTEH Justin Rhodes to discuss AREA RAE placement - START to place 2 on Rte 17 (1 west of derailment & 1 east of derailment)

SEE START LOGBOOK # 2 (Pam Prys) FOR SUBSEQUENT NOTES REGARDING AREA RAE AIR MONITORING AT RTE. 17/CHURCH LOCATION

BSC 11-22-10

Scale: 1 square=



11-22-10

Craft  
Prys

1350 Still conducting Area RDE monitoring along  
Rte 17

- START Fung & Tobor are nearing site for replacement of Craft & Prys

1630 With EPA (Steven Ball) & GA Emergency Response Team (EMA) about to enter zone on east side end of tracks. Talked to No-filke Southern worked and he stated that they plan to handle the CL tank car with the remain daylight. OSC Stillman was not find due to the change in plans. Original plan was no handling of CL car until after 6pm meeting and sign off from fire chief.

1700 Justin w/ CTEH saw spikes at 200ppm on PID. Now only seeing 20ppm VOL. RT Lorman crew currently moving CL cars that are intact.

1800 Attended night briefing by CTEH H&S Chip Day.

West side: 6 side cars cleared.

East side: 2 CL cars cleared.

4000 gal of Sodium Hydroxide transferred for sparging

Scale: 1 square=

11/22/10

ad  
during the day MEK levels stayed low.

Night ops continue ~~clearing~~ <sup>clearing</sup> cars

0630 briefing in am, 1300 mtg & 1800 mtg each day.

Mike w/ CTEH talked about MEK.

MEK 50' diameter on south side impacted. North side also impacted. 50 to 75' radius Potassium Chloride has gotten into same water and will need to be scraped up before rain event. tomorrow.

@ 1300 the return of the residents will be discussed

- Increased level PPE during car #4 CL is being moved. (Levee B) was reported by the fire chief, ~~off of MEK~~

1141 after large flare up at East end of rail ops. @ ~ 1040 pm, mtg at the fire department to discuss the accidental ignition and correction actions.

Chip Day apologized for the mixup and the move of the MEK tank to car.

NF Sothier promised to improve communication and The contractor was determined to be responsible for the move of the MEK car.

Scale: 1 square=

0141

~~1341~~ 20 yards to fire pit

32.81716

0.2 82.22232

Cl<sub>2</sub> = 0ppm LEL 0% faint smell  
 VOL = 2ppm O<sub>2</sub> = 20.9% of chlorine in  
 NH<sub>3</sub> = 0ppm the air.

Eagle SWS prep'g for sparging ops.  
 Welders working from the west side only.

(419) 348-4127 John Seifert

Eagle SWS

NR Southern John Lerna

0230

~~1430~~ Replaced batt. in Unit #2 chlorine &  
 O<sub>2</sub> sensor seemed to be drifting. Unit #3  
 was used to check and was not reading  
 same values.

Bump test

Cal gas	Bump Reading	Post Cal Reading
Cl <sub>2</sub> 10ppm	9.8ppm ✓	—
NH <sub>3</sub> 50ppm	44ppm ⊗	50ppm ✓
LEL 55%	41% ⊗	49% ✓
O <sub>2</sub> 20.9%	19.9% ✓	20.9% ✓

VOC 100ppm Cal gas 100ppm ✓  
 Scale: 1 square = 100ppm  
 lot # 718575 (4gals)  
 lot # LTF180-MD-CM (150)

11/23/10

NH<sub>3</sub> Cal gas bottle Batch Dφφ241P exps 2/10/2011

0320 Cal complete for unit #2.

0320 Begin batt. replacement &amp; cal of unit #1

Cal Gas	Bump Reading	Post Cal Reading
---------	--------------	------------------

Cl <sub>2</sub> 10ppm	9.4ppm ✓	—
NH <sub>3</sub> 50ppm	50ppm ✓	—
LEL 55%	33% ⊗	50%
O <sub>2</sub> 20.9%	22.1% ⊗	20.9%
VOC 100ppm	92.1ppm ✓	100ppm

(resumed @ 0600)

0430 Brought down to west end of  
 rail to observe removal of salt cars  
 (potassium chloride) around the liquid  
 sodium hydroxide. Highest VOC readings = 10ppm  
 on the area near unit #3

0557 Completed trip to west side train wrecking  
 ops with salt cars & sodium hydroxide.  
 Resume cal of unit #1

all Sparging update 15  
 5th crew 20 min Temp 126°F steady  
 20lb/hr

Scale: 1 square =



10

11-23-10

Cort  
Pays

0630 briefing @ FD

Cl<sub>2</sub> cars have been moved to east  
MEK car also been moved (completely empty)

Barner working east

Hatcher working west

↳ 3 NaOH cars moved slightly - Hatcher  
thinks they did not lose much based  
on heavy weight when moving

bleaching ops = level C

↳ still some residual between shell &amp; hull of car

0730 tour <sup>past</sup> ~~west~~ side of derailment w/ STAFF Fung & BSCTobar - Cl<sub>2</sub> sparging ops continue on

Cl<sub>2</sub> car that was patched & moved off  
of tracks (max VOCs = 1.2 / Cl<sub>2</sub> = 0 / NH<sub>3</sub> = 0 @  
all locations)

0800 @ west side of derailment - Hatcher

is moving NaOH cars

- max VOCs = 1.8 ppm

Cl<sub>2</sub> = 0NH<sub>3</sub> = 0

0855 back @ west side staging area - bump check

Area Rec Unit 4: bump rdg

past rdg

Cl <sub>2</sub>	6.3	10.0
NH <sub>3</sub>	41	1050
VOCs	102	-
LEL	43	50
O <sub>2</sub>	20.9	-

Scale: 1 square=

BSC 11-23-10

Cort  
Pays

11-23-10

\* note: inadvertently left radio + transceiver  
for Area Rec Unit 4 on white bump  
checking / calibration - disregard readings

0930 air monitoring at <sup>east</sup> west side of derailment

- max VOCs = 3.1 ppm Area Rec unit 4

Cl<sub>2</sub> = 0 / NH<sub>3</sub> = 0

\* spoke w/ CTEH David Caution near MEK  
fire / burn area - still small flames in  
area - said that they worked perimeter  
of fire area & it matches well w/ their  
previous delineation of the MEK - got  
max VOC readings up to 80 ppm @ smoldering  
areas (CTEH readings)

- also spoke w/ Eagle / SJS rep regarding  
chlorine sparging ops - pressure is down  
to 50 psi - when they reach 20 psi they  
will begin using air pumping into rail car  
to aid in clearing out remainder

1030 meet @ Cl<sub>2</sub> sparging ops w/ CTEH Chip Day

- wants to install temporary fence around sparging  
ops & keep continuous air monitoring to allow  
NS reps to continue building track to west  
- highest reading @ railcar sparging is 0.1 ppm Cl<sub>2</sub>  
and 0 ppm in area around railcar

BSC 11-23-10

Scale: 1 square=

11-23-10

called OSC Watts & he visited area - approved at plan

- rail car pressure is down to 34 psi.

1110 last of railcars has been cleared from right-of-way

1155 OSC Watts directs START to begin packing up equipment - wants one round of air monitoring in Midvale neighborhoods before 1300 meeting

1240 Drive through air monitoring of Midvale neighborhoods to east of derailment

using Area RAE 4

VOCs = 0 (max)

Cl<sub>2</sub> = 0

NH<sub>3</sub> = 0

O<sub>2</sub> = 20.8

LEL = 0

1300 briefing

CTEH / NS or CHo Day

- digging contaminated soil to native  
- using rolloffs along area

- bringing in ballast

- MEK car - stepped on plastic (hole in Bond to be patched later)  
↳ small pieces still present in conduit area

Scale: 1 square = \_\_\_\_\_

11-23-10

- reduced exclusion zone around Cl<sub>2</sub> rail car

↳ down to 19 psi

↳ shell side temperature = 59°

shell bottom temp = 55°

} any remaining liquid has gone to gas

- 260 grams/liter in NaOH tanks

: uniform temp

= more than enough to finish bleaching

CTEH - D. Caution

- planning to lift evacuation order

NS Environmental

- working to transfer NaOH railcar contents

- going to transport to Olm (Augusta)

- working to clear way for right-of-way maintenance workers

- Cl<sub>2</sub> cars will be loaded out onto flatbed rail cars - likely 10-14 days (in tact cars)

NS Rail Ops

~ 40 track panels to be installed

~ 20 so far

~ 6 panels in remediation vicinity

NaOH cars have been oriented so no vapors are ongoing

Note Jeff from FRA also @ meeting

- requested rail pieces from switch area & connectors from Cl<sub>2</sub> cars (have 1, 2 missing)

Scale: 1 square = \_\_\_\_\_



11/23-10

1345 return to west staging area

- photoboc walk through of demilitarized area

1515 demobe

- to hotel to check out &amp; get personal items

1600 begin demobe

1915 back @ Duketh office - unlocb/charge  
air monitoring equipment

EOD

BSC 11-23-10

Scale: 1 square=

BSC 11-23-10

Scale: 1 square=

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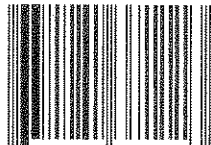
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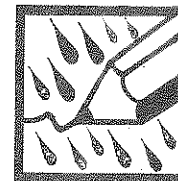
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MIDVILLE TRAIN  
DERAILMENT



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	Midville Train Derailment On Norfolk Southern Rail Line Milepost 595.5 Midville, Burke County, Georgia	
	TDD No. TTEM1-05-001-0140	
	Tetra Tech EMI 1955 Evergreen Blvd Bldg 200, Ste 300 Duluth, GA 30096	
	Contact: Brian Croft, TetraTech: 206-300-0300 Paul Prys, TetraTech: 404-849-7136 DD Fung, TetraTech: 678-773-5660 Ingrid Tobar, TetraTech: 678-702-3478 Randy Nattis, USEPA: 404-229-9499 Stephen Ball, USEPA: 404-229-9513	

11/22/10

Croft, Pays

0455 DEPARTED MAIN STAGING AREA for ~~near~~ <sup>(P)</sup> SR17 Church staging AREA.

START Pays AND GARDNER MICHELLE CORTES DROVE TOGETHER.

0505 ARRIVED AT SR17 church staging AREA. ~~START Pays~~ <sup>(P)</sup> NEARBY church was Faith Baptist Church. START Pays SPOKE to CTEN J.T. Wilson concerning Cl<sub>2</sub> and NH<sub>3</sub> monitoring during work activities. START Pays was tasked by EPA to document work activities and to conduct spot check air monitoring with CTEN during work activities.

0600 START Pays, DNR CORTES, AND CTEN Wilson ESCORTED SWS-Eagle SUPERVISOR Butch WARDEN AND SWS-Eagle CREW DOWN ACCESS ROAD NEAR church staging AREA to tracks. START AND CTEN air monitoring RESULTS RANGED 2.4-3.8 ppm for VOC AND 0 ppm for Cl<sub>2</sub> and NH<sub>3</sub>. ESCORTED SWS-Eagle FROM TRACK ACCESS POINT TO FIRST DERAILED CAR. VOC 0.4-2.3 ppm AND

Scale: 1 square =

Cal E 

11/22/10

Croft, Pays

0600 0 ppm for Cl<sub>2</sub> and NH<sub>3</sub>.

0615 SWS-Eagle CREW ENTERED CRASH AREA to determine pressure in a Cl<sub>2</sub> CAR.

PRESSURE IN CAR 114053 WAS 150 PSI

0640 CREW EXITED CRASH AREA.

0645 SECOND CREW ENTERED CRASH AREA to determine pressure for Rail CAR DLUX 8075. PRESSURE WAS 15 PSI.

0655 ~~0700~~ <sup>(P)</sup> READINGS FROM CENTER OF track AT first DERAILED CAR: VOC 2.9 ppm,

0 ppm Cl<sub>2</sub>, 0 ppm NH<sub>3</sub>

0658 MEK ODOR INCREASED. VOC 14.5 ppm, 0.1 Cl<sub>2</sub>, ~~and NH<sub>3</sub>~~ <sup>(P)</sup> 0 ppm NH<sub>3</sub>

0701 SWS-Eagle EXITED CRASH AREA. All personnel DEPARTED for staging AREA.

0702 READINGS: VOC 20.2 ppm, 0.1 ppm Cl<sub>2</sub> AND 0 ppm NH<sub>3</sub>.

0715 START Pays AND DNR CORTES DEPARTED the church staging AREA.

0725 ARRIVED AT ~~main~~ <sup>(P)</sup> midville main staging AREA for briefing.

0925 START Pays AND CROFT DEPART MAIN midville staging AREA to set out 2 AREA RABS (East and West of crash) on SR 17.

Scale: 1 square =

Cal E 



11/22/10

Croft, Prys

0940 Arrived at East monitoring location.

AREARAE #1 was placed at F. 5th post  
from southeast corner. AREARAE #1  
placed at BTS + Son Associates, Inc.

1045 START Croft attempted to solve  
REPEAT RECEPTION ISSUES.

1105 Placed AREARAE #2 in front of Faith  
Baptist Church on wooden post east  
of church sign. Location is known as  
west monitoring position along SR 17.  
START BEGAN COLLECTING AIR MONITORING  
DATA FROM BOTH AREARAEs.

1225 EPA Stillman moved AREARAE #1 to

1245 START Prys AND Croft walked the pathway  
to the crash site at the church staging  
AREA. Took AREARAE #4 to monitor air  
quality. Background in staging area:  
VOC 1-2 ppm,  $Cl_2$  0 ppm,  $NH_3$  0 ppm.

Levels DECREASED from start of pathway  
to the tracks. Levels at tracks were  
VOC 0 ppm,  $Cl_2$  0 ppm, and  $NH_3$  0 ppm.

1315 Returning to START vehicle and  
continued collecting air quality data.

Scale: 1 square =



11/22/10

Croft, Prys

1345 START Prys COLLECTED OPS POINTS of  
AREARAE monitoring locations.

1430 START Tobar and Fung arrived on site.

Ops. briefing with OSCs Stillman, Ball,  
Nattis and START Croft and Prys.

1600 Set up printer and equipment.

1800 Response ops. briefing for end of ops.  
period. Reported 2  $Cl_2$  carts cleared.

Air monitoring report by CTEH, readings  
did not go up with heat during the day.

CTEH ground observations report. Soil is  
sandy loam and absorbed spilled chemicals.

Clean up operations ongoing.  $Cl_2$  cart will be  
depressurized. may take 12-24 hr. Update on  
this estimate will be provided at 0630 meeting.

1300 meeting to determine evacuation status.

Approx need to dig 6-8 ft soil on south end  
of derailment. Approx 12-20 roll off boxes  
of soil will be removed.

1900 Revised hospital driving directions. Set up  
staging area for night ops.

2046 Checking on site activities on E end of  
derailment. CTEH confirmed that  $Cl_2$  carts  
are moved off track and the damaged  $Cl_2$  cart

Scale: 1 square =

6

11/22/10

Fung, Tobar

has been segregated from the rest of the carts.

From 40 yds away: AreaRAE Unit #3:

Cl<sub>2</sub>: 0 ppm NH<sub>3</sub>: 0 ppmVOC: 0.5 ppm O<sub>2</sub>: 20.9%

LEL: 0%

MEK cart was also segregated from other carts.

2123 Arrived @ west side of derailment

Readings for AreaRAE Unit #3: 10 yds from carts.

Cl<sub>2</sub>: 0 ppm NH<sub>3</sub>: 0 ppmVOC: 6.3 ppm O<sub>2</sub>: 20.9%

LEL: 0%

2145 Enroute to check on AreaRAE Unit #1

Performed fresh air calibration, after fresh air calibration LEL changed from 1 ppm to 0 ppm and O<sub>2</sub> from ~21-22% to 20.9%.

2200 Received information from OSC Nottis and CTEH Contractor that a cart caught fire from sparks. Continued performing bump test on AreaRAE Unit #1. No elevated readings on AreaRAE Unit #3 during fire report. Majority of plume is on S side. Finished bump test Cl<sub>2</sub> 10.8 ppm

2312 Recording coordinates of point as RR track:

Scale: 1 square=

7

11/22/10

Fung, Tobar

next to 4 Cl<sub>2</sub> carts. N 32.81715 W 82.22086Cl<sub>2</sub>: 0 ppm NH<sub>3</sub>: 0 ppmVOC: 1.2 ppm O<sub>2</sub>: 20.9%

LEL: 0%

Large fire plume with ~20' tall plumes occurred at 2239. on North side of derailment at culvert.

2332 Enroute to Fire Station.

2337 Arrived @ Fire station to meet with fire dept. and CTEH personnel.

2351 Briefing begins. Wrecking equipment hooked to carts, cable pulled slack across steel, sparks went into culvert @ N end and fire ignited. → This is the report by CTEH. MEK cart was empty, however moved out of schedule.

11/23/10

Fung, Tobar

0026 Briefing ends

404 808 5500 Brig.

0100 START Fung contacts HBS officer Draper to verify hazards of caustic soda at site

0124 START Fung and OSC Ball enroute to oversee Cl<sub>2</sub> cart barging procedure. START Tobar verifying GPS coordinates collected and creating operations map.

Scale: 1 square=



11/23/10

Fung, Tobar

0230 CTEH Air Monitoring locations:

\* ARO4 32.81730 -82.22890  
 ARO3 32.81584 -82.22060  
 ARO1 32.81874 -82.22526  
 ARO2 32.81740 -82.22031

\* Only pump station. (12hr samples)

0239 Enroute to check Cl<sub>2</sub> cart with OSC Ball  
 No elevated readings observed from  
 berm. Crew at tank operating with  
 level B PPE.

0259 Enroute to Staging Area

Staging area (Church Parking lot)

monitoring location: 32.82021 -82.21919

First Ave monitoring loc: 32.81827 -82.22869

0400 OSC Ball and start Fung overseeing Cl<sub>2</sub>  
 car operations. Start Tobar compiled air  
 monitoring locations for map.

0600 Start Croft and Prys arrive onsite, briefing  
 on operations status.

0630 Operations briefing at Fire Station.

0717 Enroute to site.

0725 EPA Ball and start Prys at west  
 side of crash. Discussed movement of  
 NAOH tanks with NS David Walker.

Scale: 1 square=



11/23/10

Croft, Prys

0725 NS will create a bermed area and  
 move NAOH cars into it. Bermed area  
 north of tanks. Approx 10 ft  
 northwest of cars, black liquid  
 substance pooled. EPA Nattis checked  
 and has pH of 12-13.

0740 NS began making bermed area  
 north of tanks for NAOH tanks.

Unknown sludge type of material  
 northeast of NAOH tanks. (~100 ft<sup>2</sup>)

EPA Nattis informed NS Walker that  
 he did not know what it was and  
 personnel should avoid walking through it.  
 NS personnel began cleaning up KCl  
 salt up from around north end of  
 NAOH tanks.

0750 NS personnel began moving first NAOH  
 tank (TCLX 6193).

0840 Start Prys back start Croft back to chnash  
 staging area.

0855 Start Prys returned to west side ops for  
 continued oversight. NS personnel moved  
 first NAOH tank to bermed area. Began  
 moving second NAOH tank (GATX 90631)

Scale: 1 square=



11/23/10

Croft, Pays

0855 to BURNED AREA.

0940 START Pays noticed a small amount of smoke coming from ground south of stacked cars. Also, noticed small fires still burning in track line south of stacked cars. Informed GA EPD of this situation. Spoke to CTEN tech<sup>(P)</sup> after they visually inspected the area. It appears to be residual MEK that may still be saturated in the soil.

0950 Completed moving 2<sup>nd</sup> NAOH tank (GATE 90481).

0955 Began moving 3<sup>rd</sup> NAOH tank (TILX 160381). NS personnel used an excavator (track hoe) to hold/stabilize cars stacked on top of tank while tank was moved out.

1020 Completed moving 3<sup>rd</sup> NAOH tank to burned area. and continued pulling down stacked rail cars. Discussed residual fires with CTEN Ch. P. Day. He said there were little to no concentrations of VOLS detected from the smoke<sup>(P)</sup> burning. Sludge 1.16 materials according to CTEN Day was

Scale: 1 square=

Gell

11/23/10

Croft, Pays

1020 IGATED NAOH. LTEX Day said locations were GPS'd and would be excavated once cars were removed. Note: Start Pays spoke to Mike FENGASTER in this entry and not Chip Day.

1100 NS personnel completed removal of cars from the track and began removal of debris from on and around the track.

1150 NS personnel continued working to restore the railroad track. Last portion of beam still had not been installed around NAOH banks. START Pays departed west ops area.

1202 START Pays picked up AREA RAE #1 from the substation located on First Ave. (across from 191 First Ave).

1207 RETURNED to church staging area. Assisted START Croft with packing up equipment for demob.

1242 START Croft and Pays depart church staging area to conduct air monitoring in nearby neighborhoods. Results are in logbook 1.

Scale: 1 square=

11/23/10

Croft, Prys

Contacts:



Center for Toxicology and Environmental Health, L.L.C.

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Scale: 1 square=\_\_\_\_\_

11/23/10

Croft, Prys



Center for Toxicology and Environmental Health, L.L.C.

**Justin Rhodes**

Environmental Scientist/Project Manager  
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**HEPACO**  
Serious experience for serious times.

**Robert Wood**

Emergency Response Manager

Scale: 1 square=\_\_\_\_\_



11/23/10

Crop, Prys



**Michael J. Black, CIH, CSP**  
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IMT - 11/23/10

Scale: 1 square=

IMT - 11/23/10

Scale: 1 square=

**APPENDIX E**

**TABLE OF WITNESSES**

(One Page)

**TABLE OF WITNESSES  
MIDVILLE TRAIN DERAILMENT  
MIDVILLE, BURKE COUNTY, GEORGIA**

Mr. Randy Nattis  
Mr. Terry Stilman  
Mr. Stephen Ball  
On-Scene Coordinator U.S. Environmental Protection Agency  
61 Forsyth Street, SW – 11<sup>th</sup> Floor  
Atlanta, GA 30303  
Telephone No.: (404) 562-8757

Mr. Brian Croft, Site Manager  
Mr. Paul Prys  
Mr. Didi Fung  
Ms. Ingrid Tobar  
Superfund Technical Assessment and Response Team  
Tetra Tech EM Inc.  
1955 Evergreen Blvd. – Building 200, Suite 300  
Duluth, GA 30096  
Telephone No.: (678) 775-3113

Mr. Michael Black, Manager Industrial Hygiene  
Mr. Gilbert Turner, Engineer Environmental Operations  
Norfolk Southern Corporation  
1200 Peachtree Street, NE – Box 136  
Atlanta, GA 30309  
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Mr. Chip Day, Project Manager  
Mr. David Cawthon  
Mr. Glen Millner  
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Mr. Robert Wood, Emergency Response Manager  
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**ATTACHMENT A**

**NRC REPORTS**

(15 Pages)

NATIONAL RESPONSE CENTER 1-800-424-8802

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Incident Report # 960451

INCIDENT DESCRIPTION

\*Report taken at 17:48 on 21-NOV-10

Incident Type: RAILROAD

Incident Cause: DERAILMENT

Affected Area:

The incident occurred on 21-NOV-10 at 17:07 local time.

Affected Medium: RAIL REPORT (N/A) ATMOSPHERE

---

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

---

INCIDENT LOCATION

County: BURKE

City: MIDVILLE State: GA

MILE POST S95.5

---

RELEASED MATERIAL(S)

CHRIS Code: UNK Official Material Name: UNKNOWN MATERIAL

Also Known As:

Qty Released: 0 UNKNOWN AMOUNT

---

DESCRIPTION OF INCIDENT

CALLER IS REPORTING A DERAILMENT WITH AN APPARENT RELEASE OF AN UNKNOWN HAZARDOUS MATERIAL. CALLER STATED THERE IS A CLOUD OF MATERIAL FORMING AROUND THE AREA WHERE THE DERAILMENT OCCURRED, BUT IT IS UNKNOWN WHAT MATERIAL AND HOW MANY CARS ARE INVOLVED. THE TRAIN WAS CARRYING CARS WITH METHYL ETHYL KETONE, 4 CAR WITH SODIUM HYDROXIDE SOLUTION, 5 CARS EMPTY CHLORINE RESIDUE, HEXAMETHYLENEDIAMINE UN 1783, AMMONIA AND SULPHUR. THE TOWN OF MIDVILLE WAS EVACUATED.

---

INCIDENT DETAILS

Grade Crossing: NO

Location Subdivision: GEORGIA

Railroad Milepost: S95.5

Type of Vehicle Involved:

Crossing Device Type:

Device Operational: YES

DOT Crossing Number:

Date and Time Service was/will be Restored:

Brake Failure: NO

Federal Post-Accident 219.201 Sub Part C Testing Required: NO

Passenger Train Route: NO

Passenger Train Delay Expected: NO

Passenger Train Delay Handling:

---RAILROAD INFORMATION---

Railroad Involved: NORFOLK SOUTHERN RAILROAD

Train Number: 192G521

Train Type: FREIGHT Train Direction: E

Train Speed: Track Speed:

Locomotives: 2 Cars: 90 Derailed:

Suspected DOT Regulation Non Compliance: NO

## DERAILED CARS:

Pos.	Carnumber	Type	Cargo
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DAMAGES

Fire Involved: UNKNOWN Fire Extinguished: UNKNOWN

INJURIES: NO Hospitalized: Empl/Crew: Passenger:

FATALITIES: NO Empl/Crew: Passenger: Occupant:

EVACUATIONS: YES Who Evacuated: PRIVATE Radius/Area:  
CITIZENS

Damages: YES \$

Closure Type	Description of Closure	Length of Closure	Direction of Closure
Air:	N		
Road:	N		Major Artery: N
Waterway:	N		
Track:	Y MAIN TRACK		ALL

Passengers Transferred: NO

Environmental Impact: UNKNOWN

Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

INVESTIGATION UNDERWAY, EMERGENCY RESPONDERS ON SCENE.

Release Secured: NO

Release Rate:

Estimated Release Duration:

WEATHER

Weather: CLEAR, 65°F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE

State/Local: EMS

State/Local On Scene: EMS

State Agency Number: NONE

NOTIFICATIONS BY NRC

USCG ICC (ICC ONI)

21-NOV-10 18:01

DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER)

21-NOV-10 18:01

DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER CON'T)

21-NOV-10 18:01

DHS SOUTH CAROLINA FUSION CENTER (LE SENSITIVE ADVISORS &amp; LIASON PROGRAM)

21-NOV-10 18:01

DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)

21-NOV-10 18:01

FEDERAL RAILROAD ADMIN. (MAIN OFFICE)

21-NOV-10 18:05

EPA OEM (MAIN OFFICE)

21-NOV-10 18:03

EPA OEM (WEEKEND CONTACT)

21-NOV-10 18:03

U.S. EPA IV (MAIN OFFICE)

21-NOV-10 18:02

FEDERAL EMERGENCY MANAGEMENT AGENCY (MAIN OFFICE)

21-NOV-10 18:01

USCG NATIONAL COMMAND CENTER (MAIN OFFICE)

21-NOV-10 18:03



GA BUREAU OF INVESTIGATION (COMMAND CENTER)  
21-NOV-10 18:01  
GA U.S. ATTORNEY'S OFFICE (MAIN OFFICE)  
21-NOV-10 18:01  
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)  
21-NOV-10 18:01  
NOAA RPTS FOR GA (MAIN OFFICE)  
21-NOV-10 18:01  
NATIONAL RESPONSE CENTER HQ (MAIN OFFICE)  
21-NOV-10 18:04  
NTSB PIPELINE (MAIN OFFICE)  
21-NOV-10 18:01  
NTSB RAIL (MAIN OFFICE)  
21-NOV-10 18:01  
HOMELAND SEC COORDINATION CENTER (MAIN OFFICE)  
21-NOV-10 18:01  
PIPELINE & HAZMAT SAFETY ADMIN (OFFICE HAZARDOUS MATERIALS)  
21-NOV-10 18:04  
PIPELINE & HAZMAT SAFETY ADMIN (OFFICE HAZARDOUS MATERIALS FAX#2)  
21-NOV-10 18:01  
SC EMERGENCY MANAGEMENT DIVISION (MAIN OFFICE)  
21-NOV-10 18:01  
SECTOR CHARLESTON (COMMAND CENTER)  
21-NOV-10 18:01  
GEORGIA EMERGENCY MNGMT AGENCY (MAIN OFFICE)  
21-NOV-10 18:01  
SC DEPT OF ENV CNTL ATTN: ERS (MAIN OFFICE)  
21-NOV-10 18:01  
TN BUREAU OF INVESTIGATION (TBI)  
21-NOV-10 18:01  
USCG DISTRICT 7 (ATTN: LCDR MARTIN MUELLER)  
21-NOV-10 18:01

---

ADDITIONAL INFORMATION

CALLER HAD NO ADDITIONAL INFORMATION.

---

\*\*\* END INCIDENT REPORT # 960451 \*\*\*

NATIONAL RESPONSE CENTER 1-800-424-8802

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**Incident Report # 960459**

INCIDENT DESCRIPTION

\*Report taken at 04:57 on 22-NOV-10

Incident Type: RAILROAD

Incident Cause: DERAILMENT

Affected Area:

The incident occurred on 21-NOV-10 at 17:07 local time.

Affected Medium: AIR / ATMOSPHERE / POSSIBLE BALLAST

---

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

---

INCIDENT LOCATION

County: BURKE

City: MIDVILLE State: GA

MILEPOST: S95.5

---

RELEASED MATERIAL(S)

CHRIS Code: CLX Official Material Name: CHLORINE

Also Known As: CHLORINE (VAPOR)

Qty Released: 0 UNKNOWN AMOUNT

CHRIS Code: MEK Official Material Name: METHYL ETHYL KETONE

Also Known As:

Qty Released: 0 UNKNOWN AMOUNT

---

DESCRIPTION OF INCIDENT

UPDATE TO REPORT # 960451. CALLER IS REPORTING THAT THERE IS A VAPOR RELEASE OF CHLORINE FROM THE 7TH HEAD CAR (OLNX114053) AND METHYL ETHYL KETONE FROM THE 9TH HEAD CAR (SCMX4309) FROM AN EARLIER DERAILMENT. CALLER STATED THAT 38 CARS DERAILED AND THAT THERE WAS PRECAUTIONARY EVACUATIONS OF 25 HOMES (FROM THE HOMES 59 PEOPLE WERE EVACUATED).

---

INCIDENT DETAILS

Grade Crossing: NO

Location Subdivision: UNKNOWN

Railroad Milepost: S95.5

Type of Vehicle Involved:

Crossing Device Type:

Device Operational: YES

DOT Crossing Number:

Date and Time Service was/will be Restored:

Brake Failure: UNKNOWN

Federal Post-Accident 219.201 Sub Part C Testing Required: UNKNOWN

Passenger Train Route: NO

Passenger Train Delay Expected: NO

Passenger Train Delay Handling:

---RAILROAD INFORMATION---

Railroad Involved: NORFOLK SOUTHERN RAILROAD

Train Number: 192.21

Train Type: FREIGHT Train Direction: E

Train Speed: Track Speed:

Locomotives: 2 Cars: 90 Derailed: 38  
 Suspected DOT Regulation Non Compliance: NO  
 DERAILED CARS:

Pos.	Carnumber	Type	Cargo
7	OLNX114053	CAR	CHLORINE RESIDUE
9	SCMX4309	CAR	METHYL ETHYL KETONE

---

DAMAGES

Fire Involved: NO    Fire Extinguished: UNKNOWN  
 INJURIES: NO    Hospitalized:    Empl/Crew:    Passenger:  
 FATALITIES: NO    Empl/Crew:    Passenger:    Occupant:  
 EVACUATIONS: YES    Who Evacuated: PRIVATE    Radius/Area:  
    CITIZENS  
 Damages: UNKNOWN

<u>Closure Type</u>	<u>Description of Closure</u>	<u>Length of Closure</u>	<u>Direction of Closure</u>
Air:	N		
Road:	N		Major Artery: N
Waterway:	N		
Track:	Y    MAIN TRACK		E/W

Passengers Transferred: NO  
 Environmental Impact: NO  
 Media Interest: NONE    Community Impact due to Material:

---

REMEDIAL ACTIONS

CONTRACTOR IS ONSITE.  
 Release Secured: NO  
 Release Rate:  
 Estimated Release Duration:

---

WEATHER

Weather: CLEAR, 65°F

---

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE  
 State/Local: NONE  
 State/Local On Scene: NONE  
 State Agency Number: NONE

---

NOTIFICATIONS BY NRC

USCG ICC (ICC ONI)  
 22-NOV-10 05:23  
 DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER)  
 22-NOV-10 05:23  
 DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER CON'T)  
 22-NOV-10 05:23  
 DHS SOUTH CAROLINA FUSION CENTER (LE SENSITIVE ADVISORS & LIASON PROGRAM)  
 22-NOV-10 05:23  
 DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)  
 22-NOV-10 05:23  
 FEDERAL RAILROAD ADMIN. (MAIN OFFICE)  
 22-NOV-10 05:28  
 EPA OEM (MAIN OFFICE)  
 22-NOV-10 05:29  
 EPA OEM (AFTER HOURS SECONDARY)  
 22-NOV-10 05:29  
 U.S. EPA IV (MAIN OFFICE)  
 22-NOV-10 05:25



FEDERAL EMERGENCY MANAGEMENT AGENCY (MAIN OFFICE)  
22-NOV-10 05:23  
USCG NATIONAL COMMAND CENTER (MAIN OFFICE)  
22-NOV-10 05:29  
GA BUREAU OF INVESTIGATION (COMMAND CENTER)  
22-NOV-10 05:23  
GA U.S. ATTORNEY'S OFFICE (MAIN OFFICE)  
22-NOV-10 05:23  
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)  
22-NOV-10 05:23  
NOAA RPTS FOR GA (MAIN OFFICE)  
22-NOV-10 05:23  
NATIONAL RESPONSE CENTER HQ (MAIN OFFICE)  
22-NOV-10 05:30  
NTSB PIPELINE (MAIN OFFICE)  
22-NOV-10 05:23  
NTSB RAIL (MAIN OFFICE)  
22-NOV-10 05:23  
HOMELAND SEC COORDINATION CENTER (MAIN OFFICE)  
22-NOV-10 05:23  
PIPELINE & HAZMAT SAFETY ADMIN (OFFICE HAZARDOUS MATERIALS)  
22-NOV-10 05:30  
PIPELINE & HAZMAT SAFETY ADMIN (OFFICE HAZARDOUS MATERIALS FAX#2)  
22-NOV-10 05:23  
SC EMERGENCY MANAGEMENT DIVISION (MAIN OFFICE)  
22-NOV-10 05:23  
SECTOR CHARLESTON (COMMAND CENTER)  
22-NOV-10 05:23  
GEORGIA EMERGENCY MNGMT AGENCY (MAIN OFFICE)  
22-NOV-10 05:23  
SC DEPT OF ENV CNTL ATTN: ERS (MAIN OFFICE)  
22-NOV-10 05:23  
TN BUREAU OF INVESTIGATION (TBI)  
22-NOV-10 05:23  
USCG DISTRICT 7 (ATTN: LCDR MARTIN MUELLER)  
22-NOV-10 05:23

---

ADDITIONAL INFORMATION

CALLER HAD NO ADDITIONAL INFORMATION.

---

\*\*\* END INCIDENT REPORT # 960459 \*\*\*

NATIONAL RESPONSE CENTER 1-800-424-8802

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Incident Report # 960492

INCIDENT DESCRIPTION

\*Report taken at 11:50 on 22-NOV-10

Incident Type: RAILROAD

Incident Cause: DERAILMENT

Affected Area:

The incident was discovered on 22-NOV-10 at 10:30 local time.

Affected Medium: BALLAST

---

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

---

INCIDENT LOCATION

MP: S95.5 County: BURKE

City: MIDVILLE State: GA

---

RELEASED MATERIAL(S)

CHRIS Code: NCC Official Material Name: NO CHRIS CODE

Also Known As: SODIUM CARBONATE PEROXYHYDRATE

Qty Released: 0 UNKNOWN AMOUNT

---

DESCRIPTION OF INCIDENT

CALLER REPORTED A TRAIN DERAILMENT THAT HAD A RAIL CAR WITH HAZARDOUS MATERIALS IN IT. THE MATERIAL HAS SPILLED ONTO THE BALLAST.

---

INCIDENT DETAILS

Grade Crossing: NO

Location Subdivision: GEORGIA

Railroad Milepost: 95.5

Type of Vehicle Involved:

Crossing Device Type:

Device Operational: YES

DOT Crossing Number:

Date and Time Service was/will be Restored:

Brake Failure: UNKNOWN

Federal Post-Accident 219.201 Sub Part C Testing Required: UNKNOWN

Passenger Train Route: NO

Passenger Train Delay Expected: NO

Passenger Train Delay Handling:

---RAILROAD INFORMATION---

Railroad Involved: NORFOLK SOUTHERN RAILROAD

Train Number: 192G521

Train Type: FREIGHT Train Direction:

Train Speed: Track Speed:

Locomotives: 2 Cars: 90 Derailed: 38

Suspected DOT Regulation Non Compliance: NO

DERAILED CARS:

Pos.	Carnumber	Type	Cargo
------	-----------	------	-------

### DAMAGES

Fire Involved:	NO	Fire Extinguished:	UNKNOWN		
INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:	
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:	
EVACUATIONS:	YES	Who Evacuated:	PRIVATE	Radius/Area:	
			CITIZENS		
Damages:	NO				

		Length of	Direction of
<u>Closure Type</u>	<u>Description of Closure</u>	<u>Closure</u>	<u>Closure</u>
Air:	N		
Road:	N		Major Artery: N
Waterway:	N		
Track:	N		

Passengers Transferred: NO  
Environmental Impact: UNKNOWN  
Media Interest: NONE Community Impact due to Material:

## REMEDIAL ACTIONS

CLEAN UP UNDERWAY, INVESTIGATION UNDERWAY.  
Release Secured: NO  
Release Rate:  
Estimated Release Duration:

## WEATHER

Weather: CLEAR, 70°F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE  
State/Local: NONE  
State/Local On Scene: NONE  
State Agency Number: NONE

## NOTIFICATIONS BY NRC

```

USCG ICC (ICC ONI)
22-NOV-10 11:54
DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER)
22-NOV-10 11:54
DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER CON'T)
22-NOV-10 11:54
DHS SOUTH CAROLINA FUSION CENTER (LE SENSITIVE ADVISORS & LIASON PROGRAM)
22-NOV-10 11:54
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
22-NOV-10 11:54
FEDERAL RAILROAD ADMIN. (MAIN OFFICE)
22-NOV-10 12:03
EPA OEM (MAIN OFFICE)
22-NOV-10 11:59
U.S. EPA IV (MAIN OFFICE)
22-NOV-10 11:56
FEDERAL EMERGENCY MANAGEMENT AGENCY (MAIN OFFICE)
22-NOV-10 11:54
USCG NATIONAL COMMAND CENTER (MAIN OFFICE)
22-NOV-10 12:00
GA BUREAU OF INVESTIGATION (COMMAND CENTER)
22-NOV-10 11:54
GA U.S. ATTORNEY'S OFFICE (MAIN OFFICE)
22-NOV-10 11:54
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)

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22-NOV-10 11:54  
NOAA RPTS FOR GA (MAIN OFFICE)  
22-NOV-10 11:54  
NATIONAL RESPONSE CENTER HQ (MAIN OFFICE)  
22-NOV-10 12:01  
NTSB PIPELINE (MAIN OFFICE)  
22-NOV-10 11:54  
NTSB RAIL (MAIN OFFICE)  
22-NOV-10 11:54  
HOMELAND SEC COORDINATION CENTER (MAIN OFFICE)  
22-NOV-10 11:54  
PIPELINE & HAZMAT SAFETY ADMIN (OFFICE HAZARDOUS MATERIALS)  
22-NOV-10 11:57  
PIPELINE & HAZMAT SAFETY ADMIN (OFFICE HAZARDOUS MATERIALS FAX#2)  
22-NOV-10 11:54  
SC EMERGENCY MANAGEMENT DIVISION (MAIN OFFICE)  
22-NOV-10 11:54  
SECTOR CHARLESTON (COMMAND CENTER)  
22-NOV-10 11:54  
GEORGIA EMERGENCY MNGMT AGENCY (MAIN OFFICE)  
22-NOV-10 11:54  
SC DEPT OF ENV CNTL ATTN: ERS (MAIN OFFICE)  
22-NOV-10 11:54  
TN BUREAU OF INVESTIGATION (TBI)  
22-NOV-10 11:54  
USCG DISTRICT 7 (ATTN: LCDR MARTIN MUELLER)  
22-NOV-10 11:54

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ADDITIONAL INFORMATION

THIS IS AN UPDATE TO A PREVIOUS DERAILEMENT.

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\*\*\* END INCIDENT REPORT # 960492 \*\*\*

NATIONAL RESPONSE CENTER 1-800-424-8802

\*\*\* For Public Use \*\*\*

Information released to a third party shall comply with any applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 960549

INCIDENT DESCRIPTION

\*Report taken at 19:52 on 22-NOV-10  
Incident Type: RAILROAD  
Incident Cause: OTHER  
Affected Area:  
The incident occurred on 22-NOV-10 at 14:00 local time.  
Affected Medium: OTHER    CONTAINMENT

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SUSPECTED RESPONSIBLE PARTY

Organization:            NORFOLK SOUTHERN RAILROAD  
                         ATLANTA, GA 30303

Type of Organization: PRIVATE ENTERPRISE

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INCIDENT LOCATION

County: BURKE  
City: MIDVILLE State: GA  
MILE S95.3

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RELEASED MATERIAL(S)

CHRIS Code: SCE      Official Material Name: SODIUM CARBONATE SOLUTIONS  
Also Known As:  
Qty Released: 25 TON(S)

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DESCRIPTION OF INCIDENT

CALLER IS REPORTING A RELEASE OF MATERIAL FROM A DAMAGED HOPPER TRAY ON A RAILCAR DURING RE-RAILMENT. CALLER STATED THE MATERIAL DISCHARGED INTO A CONTAINMENT TRAY THAT WAS PLACED UNDER THE CAR PRIOR TO RE-RAILING.

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INCIDENT DETAILS

Grade Crossing: NO  
Location Subdivision: GEORGIA  
Railroad Milepost: S95.3  
Type of Vehicle Involved:  
Crossing Device Type:  
Device Operational: YES  
DOT Crossing Number:  
Date and Time Service was/will be Restored:  
Brake Failure: NO  
Federal Post-Accident 219.201 Sub Part C Testing Required: NO  
Passenger Train Route: NO  
Passenger Train Delay Expected: NO  
Passenger Train Delay Handling:

---RAILROAD INFORMATION---

Railroad Involved: NORFOLK SOUTHERN RAILROAD  
Train Number: TCMX 450166  
Train Type: RAIL CAR Train Direction:  
Train Speed: Track Speed:  
Locomotives: Cars: 1 Derailed:  
Suspected DOT Regulation Non Compliance: NO

DERAILED CARS:

Pos.	Carnumber	Type	Cargo
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DAMAGES

Fire Involved: NO      Fire Extinguished: UNKNOWN  
 INJURIES: NO      Hospitalized:      Empl/Crew:      Passenger:  
 FATALITIES: NO      Empl/Crew:      Passenger:      Occupant:  
 EVACUATIONS: NO      Who Evacuated:      Radius/Area:  
 Damages: NO

<u>Closure Type</u>	<u>Description of Closure</u>	<u>Length of Closure</u>	<u>Direction of Closure</u>
Air:	N		
Road:	N		Major Artery: N
Waterway:	N		
Track:	Y    MAIN TRACK		ALL

Passengers Transferred: NO  
 Environmental Impact: NO  
 Media Interest: NONE    Community Impact due to Material:

REMEDIAL ACTIONS

MATERIAL DISCHARGED INTO CONTAINMENT AND WAS CLEANED UP.  
 Release Secured: YES  
 Release Rate:  
 Estimated Release Duration:

WEATHER

Weather: CLEAR, 65°F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE  
 State/Local: NONE  
 State/Local On Scene: NONE  
 State Agency Number: NONE

NOTIFICATIONS BY NRC

USCG ICC (ICC ONI)  
 22-NOV-10 19:57  
 DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER)  
 22-NOV-10 19:57  
 DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER CON'T)  
 22-NOV-10 19:57  
 DHS SOUTH CAROLINA FUSION CENTER (LE SENSITIVE ADVISORS & LIASON PROGRAM)  
 22-NOV-10 19:57  
 DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)  
 22-NOV-10 19:57  
 FEDERAL RAILROAD ADMIN. (MAIN OFFICE)  
 22-NOV-10 20:00  
 U.S. EPA IV (MAIN OFFICE)  
 22-NOV-10 19:58  
 GA BUREAU OF INVESTIGATION (COMMAND CENTER)  
 22-NOV-10 19:57  
 GA U.S. ATTORNEY'S OFFICE (MAIN OFFICE)  
 22-NOV-10 19:57  
 NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)  
 22-NOV-10 19:57  
 NOAA RPTS FOR GA (MAIN OFFICE)  
 22-NOV-10 19:57  
 NTSB RAIL (MAIN OFFICE)  
 22-NOV-10 19:57  
 HOMELAND SEC COORDINATION CENTER (MAIN OFFICE)



22-NOV-10 19:57  
 SC EMERGENCY MANAGEMENT DIVISION (MAIN OFFICE)  
 22-NOV-10 19:57  
 SECTOR CHARLESTON (COMMAND CENTER)  
 22-NOV-10 19:57  
 GEORGIA EMERGENCY MNGMT AGENCY (MAIN OFFICE)  
 22-NOV-10 19:57  
 SC DEPT OF ENV CNTL ATTN: ERS (MAIN OFFICE)  
 22-NOV-10 19:57  
 TN BUREAU OF INVESTIGATION (TBI)  
 22-NOV-10 19:57  
 USCG DISTRICT 7 (ATTN: LCDR MARTIN MUELLER)  
 22-NOV-10 19:57

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ADDITIONAL INFORMATION

CALLER HAD NO ADDITIONAL INFORMATION.

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\*\*\* END INCIDENT REPORT # 960549 \*\*\*

NATIONAL RESPONSE CENTER 1-800-424-8802

\*\*\* For Public Use \*\*\*

Information released to a third party shall comply with any applicable federal and/or state Freedom of Information and Privacy Laws

**Incident Report # 960630**

INCIDENT DESCRIPTION

\*Report taken at 16:25 on 23-NOV-10  
Incident Type: RAILROAD  
Incident Cause: DERAILMENT  
Affected Area:  
The incident occurred on 22-NOV-10 at 19:00 local time.  
Affected Medium: LAND RAIL BALLAST, SOIL

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SUSPECTED RESPONSIBLE PARTY

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Type of Organization: UNKNOWN

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INCIDENT LOCATION

County: BURKE  
City: MIDVILLE State: GA  
MILEPOST: S95.5

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RELEASED MATERIAL(S)

CHRIS Code: MEK Official Material Name: METHYL ETHYL KETONE  
Also Known As:  
Qty Released: 0 UNKNOWN AMOUNT

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DESCRIPTION OF INCIDENT

CALLER IS REPORTING A RELEASE OF METHYL ETHYL KETONE FROM A RAIL CAR (#SCMX4309) THAT WAS INVOLVED IN A FREIGHT TRAIN DERAILMENT. CALLER STATES THE ACTUAL DERAILMENT WAS ORIGINALLY REPORTED (NRC #960451) AND THE RELEASE OCCURRED WHILE CLEANING UP THE DERAILMENT. THE ORIGINAL REPORT INVOLVED 38 RAIL CARS THAT DERAILED.

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INCIDENT DETAILS

Grade Crossing: NO  
Location Subdivision: GEORGIA  
Railroad Milepost: S95.5  
Type of Vehicle Involved:  
Crossing Device Type:  
Device Operational: YES  
DOT Crossing Number:  
Date and Time Service was/will be Restored:  
Brake Failure: UNKNOWN  
Federal Post-Accident 219.201 Sub Part C Testing Required: NO  
Passenger Train Route: NO  
Passenger Train Delay Expected: NO  
Passenger Train Delay Handling:

---RAILROAD INFORMATION---

Railroad Involved: NORFOLK SOUTHERN RAILROAD  
Train Number: 192G521  
Train Type: FREIGHT Train Direction:  
Train Speed: Track Speed:  
Locomotives: 2 Cars: 90 Derailed: 38  
Suspected DOT Regulation Non Compliance: NO  
DERAILED CARS:

Pos.	Carnumber	Type	Cargo
<u>DAMAGES</u>			
Fire Involved:	NO	Fire Extinguished:	UNKNOWN
INJURIES:	NO	Hospitalized:	Empl/Crew: Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger: Occupant:
EVACUATIONS:	UNKN	Who Evacuated:	Radius/Area:
Damages:	UNKNOWN		

Closure Type	Description of Closure	Length of Closure	Direction of Closure
Air:	N		
Road:	N		Major Artery: N
Waterway:	N		
Track:	Y MAIN LINE		E/W
Passengers Transferred: NO			
Environmental Impact: UNKNOWN			
Media Interest: NONE Community Impact due to Material:			

#### REMEDIAL ACTIONS

CALLER STATES A CONTRACTOR (HEPACO) HAS BEEN HIRED TO HANDLE THE CLEANUP AND THEY ARE ASSISTING WITH THE SITUATION.

Release Secured: YES

Release Rate:

Estimated Release Duration:

#### WEATHER

Weather: PARTLY CLOUDY, 58°F

#### ADDITIONAL AGENCIES NOTIFIED

Federal: NONE

State/Local: NONE

State/Local On Scene: NONE

State Agency Number: NONE

#### NOTIFICATIONS BY NRC

USCG ICC (ICC ONI)

23-NOV-10 16:34

DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER)

23-NOV-10 16:34

DHS CUSTOMS AND BORDER PATROL (GEORGIA COMMAND CENTER CON'T)

23-NOV-10 16:34

DHS SOUTH CAROLINA FUSION CENTER (LE SENSITIVE ADVISORS & LIASON PROGRAM)

23-NOV-10 16:34

DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)

23-NOV-10 16:34

FEDERAL RAILROAD ADMIN. (MAIN OFFICE)

23-NOV-10 16:37

U.S. EPA IV (MAIN OFFICE)

23-NOV-10 16:36

GA BUREAU OF INVESTIGATION (COMMAND CENTER)

23-NOV-10 16:34

GA U.S. ATTORNEY'S OFFICE (MAIN OFFICE)

23-NOV-10 16:34

NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)

23-NOV-10 16:34

NOAA RPTS FOR GA (MAIN OFFICE)

23-NOV-10 16:34

NATIONAL RESPONSE CENTER HQ (MAIN OFFICE)



23-NOV-10 16:38  
NTSB RAIL (MAIN OFFICE)  
23-NOV-10 16:34  
HOMELAND SEC COORDINATION CENTER (MAIN OFFICE)  
23-NOV-10 16:34  
SC EMERGENCY MANAGEMENT DIVISION (MAIN OFFICE)  
23-NOV-10 16:34  
SECTOR CHARLESTON (COMMAND CENTER)  
23-NOV-10 16:34  
GEORGIA EMERGENCY MNGMT AGENCY (MAIN OFFICE)  
23-NOV-10 16:34  
SC DEPT OF ENV CNTL ATTN: ERS (MAIN OFFICE)  
23-NOV-10 16:34  
TN BUREAU OF INVESTIGATION (TBI)  
23-NOV-10 16:34  
USCG DISTRICT 7 (ATTN: LCDR MARTIN MUELLER)  
23-NOV-10 16:34

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ADDITIONAL INFORMATION

CALLER STATES THERE WAS ALREADY A PRECAUTIONARY EVACUATION FROM THE PREVIOUS NRC REPORT. THE TRACK CLOSURE IS STILL ONGOING.

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\*\*\* END INCIDENT REPORT # 960630 \*\*\*