U.S Department of Transportation
Research and Special Programs Administration

Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at http://hazmat.dot.gov. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at http://hazmat.dot.gov.

PART I - REPORT TYPE

1. Incident Id: X-2012080008
2. This is to report: A

PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident:
07/11/2012

4. Time of Incident (use 24-hour time):
02:05

5. Enter National Response Center Report Number (if applicable):
1017364

6. If you submitted a report to another Federal DOT agency, enter the agency and report number:

7. Location of Incident:
City: COLUMBUS
County: FRANKLIN
State: OH
Zip Code: (if known): 43210
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:

8. Mode of Transportation: Rail

9. Transportation Phase: In Transit

10. Carrier/Reporter:
Name: Norfolk Southern Railway Company
Street: 1200 Peachtree Street, NE
City: Atlanta
State: GA
Zip Code: 30309
Federal DOT Id Number: 555
Hazmat Registration Number: 060603450002LN

11. Shipper/Offeror:
Name: Eco Energy Inc
Street: 725 Cool Springs Blvd Ste 500
City: Franklin
State: TN
Zip Code: 37067
Waybill/Shipping Paper: CRIC289362
Hazmat Registration Number:

12. Origin (if different from shipper address)
Street: 3150 12th St., SW
City: Cedar Rapids
State: IA
Zip Code: 52404

13. Destination:
Street: 810 Hollins Rd. NE
City: Roanoke
State: VA
Zip Code: 24012

14. Proper Shipping Name of Hazardous Material: ALCOHOLS, N.O.S.

15. Technical/Trade Name:

16. Hazardous Class/Division: Flammable - Combustible Liquid

17. Identification Number: (E.g. UN2764, NA 2020) UN1987

18. Packing Group: (if applicable) II

19. Quantity Released: (Include Measurement Units) 23740 Liquid - Gallon

20. Was the material shipped as a hazardous waste? False
If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? False
If yes, provide the Hazard Zone:

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False
If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:
Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.
Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 150-Tank Shell
How Failed: - 303-Burst or Ruptured
Causes of Failure: - Derailment; Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.
Identification Markings: 111A100W1
(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:	**Single Package or Inner Packaging (if any):**
Packaging Type:	Packaging Type:
Material of Construction:	Material of Construction:
Head Type (Drums only):	

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:		**Single Package or Inner Packaging (if any):**
Package Capacity:	30067 Liquid - Gallon	Package Capacity:
Amount in Package:	28440 Liquid - Gallon	Amount in Package:
Number in Shipment:	1	Number in Shipment:
Number Failed:	1	Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:	ACF300	Manufacture Date:
Serial Number:	NATX364017	Last Test Date:
Material of Construction:	AAR TC-128, Gr. B (if Tank Car, CTMV, Portable Tank, or Cylinder)	
Design Pressure:	(if Tank Car, CTMV, Portable Tank)	
Shell Thickness:	0.437 INCH (if Tank Car, CTMV, Portable Tank)	
Head Thickness:	0.437 INCH (if Tank Car, CTMV)	
Service Pressure:	(if Cylinder)	

If valve or device failed:
Type:
Model:
Manufacturer:

29. If the packaging is for Radioactive Materials, complete the following:
Packaging Category:
Packaging Certification:
Certification Number:
Nuclide(s) Present: Transport Index:
Activity:
Critical Safety Index:

PART IV – CONSEQUENCES

30. Result of Incident (check all that apply):

- Spillage:	True	- Fire:	True
- Explosion:	True	- Material Entered Waterway/Storm Sewer:	True
- Vapor (Gas) Dispersion:	False	- Environmental Damage:	True
- No Release:	False		

31. Emergency Response: The following entities responded to the incident: (Check all that apply)

Fire/EMS Report #:	False
Police Report #:	False
In-house cleanup:	True
Other Cleanup:	True

32. Damages Was the total damage cost more than $500? True

If yes, enter the following information: (If no, go to question 33.)

Material Loss:	$ 116,703.00
Carrier Damage:	$ 1,219,740.00
Property Damage:	$ 0.00
Response Cost:	$ 12,000.00
Remediation/Cleanup Cost:	$ 280,000.00

(See damage definitions in the instructions)

33a. Did the hazardous material cause or contribute to a human fatality? False

If yes, enter the number of fatalities resulting from the hazardous material:

Employees:	0
Responders:	0
General Public:	0

33b. Were there human fatalities that did not result from the hazardous material? False

If yes, how many? 0

34. Did the hazardous material cause or contribute to personal Injury? True

If yes, enter the number of injuries resulting from the hazardous material:

Hospitalized (Admitted Only):

Employees:	0
Responders:	0
General Public:	0

Non-Hospitalized:
(e.g.: On site first aid or Emergency Room observation and release)

Employees:	0
Responders:	0
General Public:	2

35. Did the hazardous material cause or contribute to an evacuation? True

If yes, provide the following information:

Total number of general public evacuated:	100
Total number of employees evacuated:	0
Total evacuated:	100
Duration of the evacuation:	12.5

36. Was a major transportation artery or facility closed? False

If yes, how many?

37. Was the material involved in a crash or derailment? True

If yes, provide the following information:

Estimated speed (mph):	23
Weather conditions:	dark 70F clear
Vehicle overturned?	False
Vehicle left roadway/track?	True

PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)

38. Was the shipment on a passenger aircraft?

If yes, was it tendered as cargo, or as passenger baggage?

39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?

40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

Describe:

At approximately 02:05 hrs (Eastern Daylight Time) on July 11, 2012 NS train 186L809, traveling eastbound derailed on the Sandusky District at Milepost S2+1032ft. The train consisted of 2 locomotives, 97 loaded freight cars and one empty freight car.

The 3rd through 19th cars derailed for a total of 17 cars derailed. The 12th through 14th cars contained denatured ethanol, which were breached, released product, and caught fire.

There were two NRC reports made by Norfolk Southern. NRC Report 1017364, made at 03:53 hrs on 7/11/2012, reported the incident time as 02:05hrs. NRC Report 1017451, made at 16:16 hrs on 7/11/2012 updated the original report to include an evacuation and confirm the fact that hazardous materials had been released.

Approximately 100 people were evacuated for up to 12.5 hours and the initial evacuation radius was 1 mile. The initial evacuation area included the area from 17th Avenue (north boundary) to 5th Avenue (south boundary) and from Essex Avenue (east boundary) to 6th Street (west boundary) was evacuated from approximately 2:30am until 10:00am. At 10:00am the fire department reduced the evacuation area to include only 11th Avenue (north boundary) to 5th Avenue (south boundary) and to Fields Avenue (east boundary) to Grant Street (west boundary). The residents in this area remained out of their homes until 3:00pm. Everyone was able to return home at 3:00pm.

No train crew members were injured; however, there were 2 citizens that sustained alleged minor thermal burns while attempting to view the derailment.

Hazmat tank cars involved:

Reporting Mark	Gallon Capacity	Gallons in Car	Gallons Released/burned	Damage
NATX 354017	30,067	28,440	23,740	Thermal rupture in shell
NATX 364083	30,046	28,457	21,457	Head puncture
NATX 364118	30,078	20,550	7,850	Thermal rupture in shell

Total estimated quantity ethanol released: 53,047 gallons.

NTSB is currently conducting an investigation of this incident.

PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

Describe:

Norfolk Southern recommends that DOT minimum packaging for ethanol tank cars be improved to require thicker tanks, full height head shields, jackets, and thermal protection to These improvements would provide better puncture resistance and more time to take defensive actions to reduce the opportunity for thermal ruptures.

PART VIII – CONTACT INFORMATION

Contact's Name:	Paul Williams
Contact's Title:	Hazardous Materials Compliance Officer
Business Name and Address:	Norfolk Southern Railway Company 110 Franklin Road, SE Roanoke VA 24042
E-mail Address:	paul.williams2@nscorp.com
Telephone Number:	(540) 524-6942
Fax Number:	(540) 524-4651
Hazmat Registration Number:	060603450002LN
Date:	
Preparer is:	Carrier

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Research and Special Programs Administration

Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

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PART I - REPORT TYPE

1. Incident Id: X-2012080008
2. This is to report: A

PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident:
07/11/2012

4. Time of Incident (use 24-hour time):
02:05

5. Enter National Response Center Report Number (if applicable):
1017364

6. If you submitted a report to another Federal DOT agency, enter the agency and report number:

7. Location of Incident:
City: COLUMBUS
County: FRANKLIN
State: OH
Zip Code: (if known): 43210
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:

8. Mode of Transportation: Rail

9. Transportation Phase: In Transit

10. Carrier/Reporter:
Name: Norfolk Southern Railway Company
Street: 1200 Peachtree Street, NE
City: Atlanta
State: GA
Zip Code: 30309
Federal DOT Id Number: 555
Hazmat Registration Number: 060603450002LN

11. Shipper/Offeror:
Name: Eco Energy Inc
Street: 725 Cool Springs Blvd Ste 500
City: Franklin
State: TN
Zip Code: 37067
Waybill/Shipping Paper: CRIC289362
Hazmat Registration Number:

12. Origin (if different from shipper address)
Street: 3150 12th St., SW
City: Cedar Rapids
State: IA
Zip Code: 52404

13. Destination:
Street: 810 Hollins Rd. NE
City: Roanoke
State: VA
Zip Code: 24012

14. Proper Shipping Name of Hazardous Material: ALCOHOLS, N.O.S.

15. Technical/Trade Name:

16. Hazardous Class/Division: Flammable - Combustible Liquid

17. Identification Number: (E.g. UN2764, NA 2020) UN1987

18. Packing Group: (if applicable) II

19. Quantity Released: (Include Measurement Units) 21457 Liquid - Gallon

20. Was the material shipped as a hazardous waste? False
If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? False
If yes, provide the Hazard Zone:

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False
If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:
Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.
Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 150-Tank Shell
How Failed: - 303-Burst or Ruptured
Causes of Failure: - Derailment; Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.
Identification Markings: 111A100W1
(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:	**Single Package or Inner Packaging (if any):**
Packaging Type:	Packaging Type:
Material of Construction:	Material of Construction:
Head Type (Drums only):	

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:		**Single Package or Inner Packaging (if any):**
Package Capacity:	30046 Liquid - Gallon	Package Capacity:
Amount in Package:	28457 Liquid - Gallon	Amount in Package:
Number in Shipment:	1	Number in Shipment:
Number Failed:	1	Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:		Manufacture Date:
Serial Number:	NATX364083	Last Test Date:
Material of Construction:	(if Tank Car, CTMV, Portable Tank, or Cylinder)	
Design Pressure:	(if Tank Car, CTMV, Portable Tank)	
Shell Thickness:	(if Tank Car, CTMV, Portable Tank)	
Head Thickness:	(if Tank Car, CTMV)	
Service Pressure:	(if Cylinder)	

If valve or device failed:
Type:
Model:
Manufacturer:

29. If the packaging is for Radioactive Materials, complete the following:
Packaging Category:
Packaging Certification:
Certification Number:
Nuclide(s) Present: Transport Index:
Activity:
Critical Safety Index:

PART IV – CONSEQUENCES

30. Result of Incident (check all that apply):

- Spillage:	True	- Fire:	True
- Explosion:	True	- Material Entered Waterway/Storm Sewer:	True
- Vapor (Gas) Dispersion:	False	- Environmental Damage:	True
- No Release:	False		

31. Emergency Response: The following entities responded to the incident: (Check all that apply)

Fire/EMS Report #:	False
Police Report #:	False
In-house cleanup:	True
Other Cleanup:	True

32. Damages Was the total damage cost more than $500? True

If yes, enter the following information: (If no, go to question 33.)

Material Loss:	$ 116,703.00
Carrier Damage:	$ 1,219,740.00
Property Damage:	$ 0.00
Response Cost:	$ 12,000.00
Remediation/Cleanup Cost:	$ 280,000.00

(See damage definitions in the instructions)

33a. Did the hazardous material cause or contribute to a human fatality? False

If yes, enter the number of fatalities resulting from the hazardous material:

Employees:	0
Responders:	0
General Public:	0

33b. Were there human fatalities that did not result from the hazardous material? False

If yes, how many? 0

34. Did the hazardous material cause or contribute to personal Injury? True

If yes, enter the number of injuries resulting from the hazardous material:

Hospitalized (Admitted Only):

Employees:	0
Responders:	0
General Public:	0

Non-Hospitalized:
(e.g.: On site first aid or Emergency Room observation and release)

Employees:	0
Responders:	0
General Public:	2

35. Did the hazardous material cause or contribute to an evacuation? True

If yes, provide the following information:

Total number of general public evacuated:	100
Total number of employees evacuated:	0
Total evacuated:	100
Duration of the evacuation:	12.5

36. Was a major transportation artery or facility closed? False

If yes, how many?

37. Was the material involved in a crash or derailment? True

If yes, provide the following information:

Estimated speed (mph):	23
Weather conditions:	dark 70F clear
Vehicle overturned?	False
Vehicle left roadway/track?	True

PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)

38. Was the shipment on a passenger aircraft?

If yes, was it tendered as cargo, or as passenger baggage?

39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?

40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

Describe:

At approximately 02:05 hrs (Eastern Daylight Time) on July 11, 2012 NS train 186L809, traveling eastbound derailed on the Sandusky District at Milepost S2+1032ft. The train consisted of 2 locomotives, 97 loaded freight cars and one empty freight car.

The 3rd through 19th cars derailed for a total of 17 cars derailed. The 12th through 14th cars contained denatured ethanol, which were breached, released product, and caught fire.

There were two NRC reports made by Norfolk Southern. NRC Report 1017364, made at 03:53 hrs on 7/11/2012, reported the incident time as 02:05hrs. NRC Report 1017451, made at 16:16 hrs on 7/11/2012 updated the original report to include an evacuation and confirm the fact that hazardous materials had been released.

Approximately 100 people were evacuated for up to 12.5 hours and the initial evacuation radius was 1 mile. The initial evacuation area included the area from 17th Avenue (north boundary) to 5th Avenue (south boundary) and from Essex Avenue (east boundary) to 6th Street (west boundary) was evacuated from approximately 2:30am until 10:00am. At 10:00am the fire department reduced the evacuation area to include only 11th Avenue (north boundary) to 5th Avenue (south boundary) and to Fields Avenue (east boundary) to Grant Street (west boundary). The residents in this area remained out of their homes until 3:00pm. Everyone was able to return home at 3:00pm.

No train crew members were injured; however, there were 2 citizens that sustained alleged minor thermal burns while attempting to view the derailment.

Hazmat tank cars involved:

Reporting Mark	Gallon Capacity	Gallons in Car	Gallons Released/burned	Damage
NATX 354017	30,067	28,440	23,740	Thermal rupture in shell
NATX 364083	30,046	28,457	21,457	Head puncture
NATX 364118	30,078	20,550	7,850	Thermal rupture in shell

Total estimated quantity ethanol released: 53,047 gallons.

NTSB is currently conducting an investigation of this incident.

PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

Describe:

Norfolk Southern recommends that DOT minimum packaging for ethanol tank cars be improved to require thicker tanks, full height head shields, jackets, and thermal protection to These improvements would provide better puncture resistance and more time to take defensive actions to reduce the opportunity for thermal ruptures.

PART VIII – CONTACT INFORMATION

Contact's Name:	Paul Williams
Contact's Title:	Hazardous Materials Compliance Officer
Business Name and Address:	Norfolk Southern Railway Company 110 Franklin Road, SE Roanoke VA 24042
E-mail Address:	paul.williams2@nscorp.com
Telephone Number:	(540) 524-6942
Fax Number:	(540) 524-4651
Hazmat Registration Number:	060603450002LN
Date:	
Preparer is:	Carrier

U.S Department of Transportation
Research and Special Programs Administration

Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

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PART I - REPORT TYPE

1. Incident Id: X-2012080008
2. This is to report: A

PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident:
07/11/2012

4. Time of Incident (use 24-hour time):
02:05

5. Enter National Response Center Report Number (if applicable):
1017364

6. If you submitted a report to another Federal DOT agency, enter the agency and report number:

7. Location of Incident:

City: COLUMBUS
County: FRANKLIN
State: OH
Zip Code: (if known): 43210
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:

8. Mode of Transportation: Rail

9. Transportation Phase: In Transit

10. Carrier/Reporter:

Name: Norfolk Southern Railway Company
Street: 1200 Peachtree Street, NE
City: Atlanta
State: GA
Zip Code: 30309
Federal DOT Id Number: 555
Hazmat Registration Number: 060603450002LN

11. Shipper/Offeror:

Name: Eco Energy Inc
Street: 725 Cool Springs Blvd Ste 500
City: Franklin
State: TN
Zip Code: 37067
Waybill/Shipping Paper: CRIC289362
Hazmat Registration Number:

12. Origin (if different from shipper address)

Street: 3150 12th St., SW
City: Cedar Rapids
State: IA
Zip Code: 52404

13. Destination:

Street: 810 Hollins Rd. NE
City: Roanoke
State: VA
Zip Code: 24012

14. Proper Shipping Name of Hazardous Material: ALCOHOLS, N.O.S.

15. Technical/Trade Name:

16. Hazardous Class/Division: Flammable - Combustible Liquid

17. Identification Number: (E.g. UN2764, NA 2020) UN1987

18. Packing Group: (if applicable) II

19. Quantity Released: (Include Measurement Units) 7850 Liquid - Gallon

20. Was the material shipped as a hazardous waste? False
If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? False
If yes, provide the Hazard Zone:

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False
If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:
Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.
Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 150-Tank Shell
How Failed: - 303-Burst or Ruptured
Causes of Failure: - Derailment; Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.
Identification Markings: 111A100W1
(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:	**Single Package or Inner Packaging (if any):**
Packaging Type:	Packaging Type:
Material of Construction:	Material of Construction:
Head Type (Drums only):	

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:		**Single Package or Inner Packaging (if any):**
Package Capacity:	30078 Liquid - Gallon	Package Capacity:
Amount in Package:	20550 Liquid - Gallon	Amount in Package:
Number in Shipment:	1	Number in Shipment:
Number Failed:	1	Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:		Manufacture Date:
Serial Number:	NATX364118	Last Test Date:
Material of Construction:	(if Tank Car, CTMV, Portable Tank, or Cylinder)	
Design Pressure:	(if Tank Car, CTMV, Portable Tank)	
Shell Thickness:	(if Tank Car, CTMV, Portable Tank)	
Head Thickness:	(if Tank Car, CTMV)	
Service Pressure:	(if Cylinder)	

If valve or device failed:
Type:
Model:
Manufacturer:

29. If the packaging is for Radioactive Materials, complete the following:
Packaging Category:
Packaging Certification:
Certification Number:
Nuclide(s) Present:
Transport Index:
Activity:
Critical Safety Index:

PART IV – CONSEQUENCES

30. Result of Incident (check all that apply):

- Spillage:	True	- Fire:	True
- Explosion:	True	- Material Entered Waterway/Storm Sewer:	True
- Vapor (Gas) Dispersion:	False	- Environmental Damage:	True
- No Release:	False		

31. Emergency Response: The following entities responded to the incident: (Check all that apply)

Fire/EMS Report #:	False
Police Report #:	False
In-house cleanup:	True
Other Cleanup:	True

32. Damages Was the total damage cost more than $500? True

If yes, enter the following information: (If no, go to question 33.)

Material Loss:	$ 116,703.00
Carrier Damage:	$ 1,219,740.00
Property Damage:	$ 0.00
Response Cost:	$ 12,000.00
Remediation/Cleanup Cost:	$ 280,000.00

(See damage definitions in the instructions)

33a. Did the hazardous material cause or contribute to a human fatality? False

If yes, enter the number of fatalities resulting from the hazardous material:

Employees:	0
Responders:	0
General Public:	0

33b. Were there human fatalities that did not result from the hazardous material? False

If yes, how many? 0

34. Did the hazardous material cause or contribute to personal Injury? True

If yes, enter the number of injuries resulting from the hazardous material:

Hospitalized (Admitted Only):

Employees:	0
Responders:	0
General Public:	0

Non-Hospitalized:
(e.g.: On site first aid or Emergency Room observation and release)

Employees:	0
Responders:	0
General Public:	2

35. Did the hazardous material cause or contribute to an evacuation? True

If yes, provide the following information:

Total number of general public evacuated:	100
Total number of employees evacuated:	0
Total evacuated:	100
Duration of the evacuation:	12.5

36. Was a major transportation artery or facility closed? False

If yes, how many?

37. Was the material involved in a crash or derailment? True

If yes, provide the following information:

Estimated speed (mph):	23
Weather conditions:	dark 70F clear
Vehicle overturned?	False
Vehicle left roadway/track?	True

PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)

38. Was the shipment on a passenger aircraft?

If yes, was it tendered as cargo, or as passenger baggage?

39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?

40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

Describe:

At approximately 02:05 hrs (Eastern Daylight Time) on July 11, 2012 NS train 186L809, traveling eastbound derailed on the Sandusky District at Milepost S2+1032ft. The train consisted of 2 locomotives, 97 loaded freight cars and one empty freight car.

The 3rd through 19th cars derailed for a total of 17 cars derailed. The 12th through 14th cars contained denatured ethanol, which were breached, released product, and caught fire.

There were two NRC reports made by Norfolk Southern. NRC Report 1017364, made at 03:53 hrs on 7/11/2012, reported the incident time as 02:05hrs. NRC Report 1017451, made at 16:16 hrs on 7/11/2012 updated the original report to include an evacuation and confirm the fact that hazardous materials had been released.

Approximately 100 people were evacuated for up to 12.5 hours and the initial evacuation radius was 1 mile. The initial evacuation area included the area from 17th Avenue (north boundary) to 5th Avenue (south boundary) and from Essex Avenue (east boundary) to 6th Street (west boundary) was evacuated from approximately 2:30am until 10:00am. At 10:00am the fire department reduced the evacuation area to include only 11th Avenue (north boundary) to 5th Avenue (south boundary) and to Fields Avenue (east boundary) to Grant Street (west boundary). The residents in this area remained out of their homes until 3:00pm. Everyone was able to return home at 3:00pm.

No train crew members were injured; however, there were 2 citizens that sustained alleged minor thermal burns while attempting to view the derailment.

Hazmat tank cars involved:

Reporting Mark	Gallon Capacity	Gallons in Car	Gallons Released/burned	Damage
NATX 354017	30,067	28,440	23,740	Thermal rupture in shell
NATX 364083	30,046	28,457	21,457	Head puncture
NATX 364118	30,078	20,550	7,850	Thermal rupture in shell

Total estimated quantity ethanol released: 53,047 gallons.

NTSB is currently conducting an investigation of this incident.

PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

Describe:

Norfolk Southern recommends that DOT minimum packaging for ethanol tank cars be improved to require thicker tanks, full height head shields, jackets, and thermal protection to These improvements would provide better puncture resistance and more time to take defensive actions to reduce the opportunity for thermal ruptures.

PART VIII – CONTACT INFORMATION

Contact's Name:	Paul Williams
Contact's Title:	Hazardous Materials Compliance Officer
Business Name and Address:	Norfolk Southern Railway Company 110 Franklin Road, SE Roanoke VA 24042
E-mail Address:	paul.williams2@nscorp.com
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Hazmat Registration Number:	060603450002LN
Date:	
Preparer is:	Carrier