



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: E-2011030328  
2. This is to report: A

### PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident:  
02/23/2011
4. Time of Incident (use 24-hour time):  
15:00
5. Enter National Response Center Report Number (if applicable):
6. If you submitted a report to another Federal DOT agency, enter the agency and report number:
7. Location of Incident:
- City: CLEVELAND  
County: CUYAHOGA  
State: OH  
Zip Code: (if known): 44110  
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:  
610 East 152nd Street
8. Mode of Transportation: Rail
9. Transportation Phase: Unloading
10. Carrier/Reporter:
- Name: Savage Services Corporation  
Street: 152 E. High Street; Suite 200  
City: Pottstown  
State: PA  
Zip Code: 19464  
Federal DOT Id Number: Hazmat Registration Number: 052709 550 075
11. Shipper/Officer:
- Name: Occidental Chemical Corporation  
Street: 5005 LBJ Freeway; PO Box 809050  
City: Dallas  
State: TX  
Zip Code: 75380-9050  
Waybill/Shipping Paper: Hazmat Registration Number:
12. Origin (if different from shipper address)
- Street: 4700 Buffalo Avenue  
City: Niagara Falls  
State: NY  
Zip Code: 14304-3821
13. Destination:
- Street:  
City:  
State:  
Zip Code:
14. Proper Shipping Name of Hazardous Material: SODIUM HYDROXIDE, SOLUTION
15. Technical/Trade Name:
16. Hazardous Class/Division: Corrosive Material
17. Identification Number: (E.g. UN2764, NA 2020) UN1824

- 18. Packing Group:** (if applicable) II
- 19. Quantity Released:** (Include Measurement Units) 75 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: - 134-Liquid Valve

How Failed: - 303-Burst or Ruptured

Causes of Failure: - Human Error

**26a. Provide the packaging identification markings, if available.**

Identification Markings: DOT-111A-100W

(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:<br>Material of Construction:<br>Head Type (Drums only):                                                                                                                                                                                                                                                                                                                                                                                   | Packaging Type:<br>Material of Construction:                                     |
| <b>27. Describe the package capacity and the quantity:</b>                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                  |
| Single Package or Outer Packaging:                                                                                                                                                                                                                                                                                                                                                                                                                        | Single Package or Inner Packaging (if any):                                      |
| Package Capacity: 16710 Liquid - Gallon<br>Amount in Package: 12289 Liquid - Gallon<br>Number in Shipment: 1<br>Number Failed: 1                                                                                                                                                                                                                                                                                                                          | Package Capacity:<br>Amount in Package:<br>Number in Shipment:<br>Number Failed: |
| <b>28. Provide packaging construction and test information, as appropriate:</b><br>Manufacturer:<br>Serial Number:<br>Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)<br>Design Pressure: (if Tank Car, CTMV, Portable Tank)<br>Shell Thickness: (if Tank Car, CTMV, Portable Tank)<br>Head Thickness: (if Tank Car, CTMV)<br>Service Pressure: (if Cylinder)<br>If valve or device failed:<br>Type:<br>Model:<br>Manufacturer: |                                                                                  |
| <b>29. If the packaging is for Radioactive Materials, complete the following:</b><br>Packaging Category:<br>Packaging Certification:<br>Certification Number:<br>Nuclide(s) Present: Transport Index:<br>Activity:<br>Critical Safety Index:                                                                                                                                                                                                              |                                                                                  |

## PART IV – CONSEQUENCES

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

- |                           |       |                                          |       |
|---------------------------|-------|------------------------------------------|-------|
| - Spillage:               | True  | - Fire:                                  | False |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | False |
| - 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: False  
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: \$ 0.00  
Carrier Damage: \$ 0.00  
Property Damage: \$ 0.00  
Response Cost: \$ 0.00  
Remediation/Cleanup Cost: \$ 60,000.00  
(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: 1  
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: 0

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

False

If yes, provide the following information:

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

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

False

If yes, how many? 0

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

False

If yes, provide the following information:

Estimated speed (mph): 0  
Weather conditions:  
Vehicle overturned?  
Vehicle left roadway/track?

## 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:

On 2/23 at 3:00 PM, while attempting to break down an Occidental Chemical tank car GATX 22445 that was spotted toward the east end of track # 566 containing 156,400 lbs of Sodium Hydroxide Solutions 50% (Class 8; UN 1824; PG II), TRANSFLO - Cleveland East Ops Manager - Mike Nelson was sprayed with product from the tank car liquid education line valve assembly without a tank car fitting being applied. Lead Operator - Mike Vouk who was working on a tank car in the vicinity heard the commotion and saw that Mr. Nelson was in distress on the top of GATX 22445. Mr. Nelson was able to successfully get down off the top of the tank car's platform, as product continued to spray from the aforementioned valve assembly. Mr. Vouk went to the 'steam access' side of the car in anticipation of ascending the railcar from that side, he then determined that the other side of the car would have the least risk for exposure and returned back to the north side of Track #556 (area by the office) and ascended the tank car's ladder. Mr. Vouk was then able to safely shut off the liquid education line/standpipe valve and minimize the release of material. At this point in time Mr. Nelson shredded his PPE which included: Chemical Protective Acid Gear (Overalls and Jacket; Hard Hat; Face Shield; Chemical Splash Goggles, Chemical Resistant Gloves; etc.). Mr. Vouk then proceeded to escort Mr. Nelson to the office industrial shower/bathroom facility, where Mr. Nelson proceeded to rinse out his eyes in the sink and utilize the shower which did not have ample water available (e.g., obstructed water line). Mr. Vouk then contacted Cleveland's CSR/Coordinator, Ms. Helen Longo who previous left for the day via her cell phone, where he request her to contact 911 and have an ambulance dispatched to the terminal immediately. Mr. Vouk then proceeded to escort Mr. Nelson to A&R Transport (neighboring business), in order to utilize their facility's safety shower and eyewash station. While over at A&R, Mr. Vouk then asked them to ensure that 911 was dispatched to the TRANSFLO - Cleveland East terminal within the CSX Collinwood rail yard off East 152nd Street. Mr. Vouk then left Mr. Nelson over at A&R Transportation in order to retrieve the MSDS for Occidental Chemical's Sodium Hydroxide Solutions 50%. At this point in time, ~ 3:20 PM, Local Police, EMS and Fire Department arrived onsite to treat Mr. Nelson and transport him to the local hospital (Metro Health Medical Center Burn Unit). Mr. Vouk was encouraged by the Fire Dept to decontaminate his clothing and get checked out by their EMS, which included checking his vital signs. Mr. Vouk declined any further medical assistance and provided the product specific MSDS to the Fire Department, where they then proceeded to douse the tank car GATX 22445 with water along with the vicinity in order to dilute the alkalinity of the caustic soda. Mr. Vouk then depressurized GATX 22445 by opening the tank car's vapor/air induction valve assembly thus allowing the internal pressure to equalize with the outside atmosphere. Mr. Vouk then proceeded to resecure GATX 22445 closures tool-tight and then contacted CleanHarbors Environmental Services. CleanHarbors handled the site environmental remediation which included cleaning up the tank car, excavating and disposing of the soiled ballast, subsequent pH testing and inserting new ballast.

## 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:

Conduct a comprehensive re-evaluation of Corrosive handling practices, which includes:

- Understanding basic chemistry (pH 0-14 scale, 7 neutral; acids versus alkali/bases)
- Chemical characteristics and hazards associated with handling class 8 Corrosives
- Routes of exposure (e.g., Inhalation; Ingestion; Absorption, Eye/Skin Contact)
- First Aid Measures (e.g., proper decontaminate soiled garments; flush affected area with copious amounts of water via emergency safety shower/eye wash station; seek medical assistance, 911)
- Prescribed PPE (e.g., Chemical Resistant Suit; Chemical Impervious Gloves; Steel Toed Rubber/Over Boots; Hard Hat w/Face Shield; Chemical Splash Goggles) Availability, Proper Usage, Care, Maintenance & Storage; Adequate Inventory Levels
- Emergency Safety Shower/Eye Wash Stations, staged within 50'/10 seconds of corrosive handling area with tepid water (>60°F - <100°F); copious amount of water (minimum flushing rate of 0.4 gpm for eyewash, and 20 gpm for shower with a duration of 15 minutes)
- Environmental supplies availability, inventory & usage (e.g., frost free water access for rinsing down soiled tank car platforms and fittings; spill pans placed underneath trailer's crash box hose tubes; spill overpack kits stocked with water based absorbent booms, pads & pillows; pallet of water based inert (sand; vermiculite) granulated absorbent.
- Emergency Response strategies (confine, contain, clean-up)
- Personal Hygiene Standards wash thoroughly after handling; decontaminate PPE, ensure to thoroughly rinse the article, inspect the integrity of the article as deemed necessary, dispose of soiled garments accordingly, do not eat, drink or smoke in work area.
- Review the content of existing transfer procedures (e.g, tank car set-up; method of transfer via regulated air pressure <35 PSI, tank car top to tank trailer top); caustic soda tank car heating via regulated steam pressure 15 PSI
- Conduct Retraining w/employees which handle Corrosive including HazCom module and transfer procedural training

Implementation date for the above corrective actions is: 4/30/2011

## PART VIII – CONTACT INFORMATION

|                            |                                                                                 |
|----------------------------|---------------------------------------------------------------------------------|
| Contact's Name:            | Richard J. Stanley                                                              |
| Contact's Title:           | Director, SH&E                                                                  |
| Business Name and Address: | Savage Services Corporation<br>152 E. High Street; Suite 200 Pottstown PA 19464 |
| E-mail Address:            | richards@savagecompanies.com                                                    |

|                             |                                                       |
|-----------------------------|-------------------------------------------------------|
| Telephone Number:           | 484-363-2017                                          |
| Fax Number:                 | 610-970-8910                                          |
| Hazmat Registration Number: |                                                       |
| Date:                       | 03/21/2011                                            |
| Preparer is:                | Other - Terminal Operator acting on behalf of Shipper |