



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-2018030180
2. This is to report: A

PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident: 02/11/2018
4. Time of Incident (use 24-hour time): 13:15
5. Enter National Response Center Report Number (if applicable): 1204134
6. If you submitted a report to another Federal DOT agency, enter the agency and report number:
7. Location of Incident:
City: DIAMOND BAR
County: LOS ANGELES
State: CA
Zip Code: (if known): 91765
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:
Golden Spring Dr & Brea Canyon
8. Mode of Transportation: Highway
9. Transportation Phase: In Transit
10. Carrier/Reporter:
Name: Air Products and Chemicals, Inc
Street: 7201 Hamilton Boulevard
City: Allentown
State: PA
Zip Code: 18195
Federal DOT Id Number: 101263
Hazmat Registration Number: 052215550040XZ
11. Shipper/Officer:
Name: Air Products and Chemicals, Inc.
Street: 7201 Hamilton Boulevard
City: Allentown
State: PA
Zip Code: 18195
Waybill/Shipping Paper: 5210-71587
Hazmat Registration Number:
12. Origin (if different from shipper address)
Street: 700 Henry Ford Avenue
City: Wilmington
State: CA
Zip Code: 90744
13. Destination:
Street: 21865 E. Copely Drive
City: Diamond Bar
State: CA
Zip Code: 91765
14. Proper Shipping Name of Hazardous Material: HYDROGEN, COMPRESSED
15. Technical/Trade Name:
16. Hazardous Class/Division: Flammable Gas
17. Identification Number: (E.g. UN2764, NA 2020) UN1049

- 18. Packing Group:** (if applicable)
- 19. Quantity Released:** (Include Measurement Units) 530 Gas - Pound
- 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?** True
If yes, provide the Exemption, Approval, or CA number: SP14576
- 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:
Other, tube trailer

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: - 120-Fusible Pressure Relief Device or Element; 141-Piping or Fittings
How Failed: - 303-Burst or Ruptured; 303-Burst or Ruptured
Causes of Failure: - Loose Closure, Component, or Device; Misaligned Material, Component, or Device

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

Identification Markings: non-spec DOT SP 14576

(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:

Packaging Type:
Material of Construction:
Head Type (Drums only):

Single Package or Inner Packaging (if any):

Packaging Type:
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Package Capacity: 551 Gas - Pound
Amount in Package: 530 Gas - Pound
Number in Shipment: 25
Number Failed: 1

Single Package or Inner Packaging (if any):

Package Capacity:
Amount in Package:
Number in Shipment:
Number Failed:

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

Manufacturer: SCI
Serial Number: ALT-1015-306
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: CG-5 device PRD
Model: 3132
Manufacturer: Sherwood

Manufacture Date: 08/01/2013
Last Test Date: 12/29/2017

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:
Packaging Certification:
Certification Number:
Nuclide(s) Present:
Activity:
Critical Safety Index:

Transport Index:

PART IV – CONSEQUENCES

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

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

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

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

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: \$ 1,500.00
Carrier Damage: \$ 175,000.00
Property Damage: \$ 0.00
Response Cost: \$ 24,000.00
Remediation/Cleanup Cost: \$ 0.00
(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?

False

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: 0

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

True

If yes, provide the following information:

Total number of general public evacuated: 500
Total number of employees evacuated: 0
Total evacuated: 500
Duration of the evacuation: 14

36. Was a major transportation artery or facility closed?

True

If yes, how many? 14

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 Feb 11th, 2018 at 11:00 AM an Air Products driver picked up the loaded hydrogen tube trailer from the Air Products Wilmington, CA plant. In the process of making a delivery, the driver was stopped at a traffic light in Diamond Bar, CA at approximately 1:15 PM when he heard a loud bang and observed flames emitting from the trailer behind him. The driver immediately exited the tractor, signaled people in the immediate vicinity to move to a safe location, and called 9-1-1 from a nearby parking lot. Emergency services and Air Products personnel worked to put out the fire, isolate the leaking tubes, and depressurize the tubes to allow for transportation of the trailer to an Air Products facility. At approximately 3:00 AM on Feb 12th, the venting of the trailer tubes was completed, emergency responders left scene, and a tow truck was dispatched to move the trailer to the Air Products Santa Fe Springs Terminal.

Upon visual inspection of the failed trailer, damage was observed on multiple tubes and it was identified that seven (7) pressure relief device (PRD) assemblies on the back of the trailer were ejected from their corresponding tubes. The subsequent investigation identified the following preliminary root causes for the failure: (1) one of the PRDs [ejected from tube #14] was found to have the incorrect pressure rating, 5,833 psi vs the correct 10,000 psi [with a trailer operating pressure of 7,500 psi], (2) compression fittings on the PRD discharge vent piping were assembled incompletely. The incident investigation is currently ongoing to finalize the root causes and corrective actions.

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:

As an immediate action, Air Products performed a 100% inspection of all vehicles constructed with the same specification cylinder to identify/replace any incorrectly rated PRDs and repair any incorrectly assembled compression fittings. In addition, the following items have been put in place to ensure PRDs and fittings are correctly installed following requalification.

Air Products implemented 100% quality inspection of its vendors' work with particular focus on PRD set point and vent tube assembly.

Detailed work instructions were developed in conjunction with the third party requalification facility to ensure trailers have correctly rated PRDs and correctly installed vent piping following a requalification.

PART VIII – CONTACT INFORMATION

Contact's Name:	Lisa A Miller
Contact's Title:	Safety Specialist
Business Name and Address:	Air Products and Chemicals, Inc. 7201 Hamilton Boulevard Allentown PA 18195
E-mail Address:	millerl5@airproducts.com
Telephone Number:	315-509-4229
Fax Number:	610-706-6784
Hazmat Registration Number:	
Date:	03/13/2018
Preparer is:	Other - Carrier and Shipper

08/01/2013