



CrownZellerbach  
Chemical Products Division

32

January 10, 1985

Mr. James Enoch Jones  
Chief, Approvals Branch  
Officer of Hazardous Materials Regulation  
U. S. DEPARTMENT OF TRANSPORTATION  
400 Seventh Street, S. W.  
Washington, D. C. 20590

Dear Mr. Jones:

Reference: SA-830307

This record of experience covers the calendar year 1984 and is a response to condition F of approval SA-830307.

Tank car UTLX 82329 contains 84,500 lbs. of nitrogen tetroxide and is stored at the PakTank Corporation storage terminal in Westwego, Louisiana. There have been no storage problems and no shipping operations in 1984.

Tank car UTLX is in Bogalusa, Louisiana and has not yet received any nitrogen tetroxide.

Please let us know if any additional information is required.

Sincerely,

*G R Cowan*

G. R. COWAN/lvt

Senior Project Engineer

cc: J. L. Ferguson - CZ  
J. G. Stanley - CZ  
G. W. Bartu - CZ

Mailing Address: P.O. Box 4266, Vancouver (Orchards) WA 98662  
Street Address: 10619 N.E. Coxley Dr. Phone: (206) 254-0922 TWX 910 474 8663



January 9, 1984

Mr. James Enoch Jones  
Chief, Approvals Branch  
Officer of Hazardous Materials Regulation  
U. S. DEPARTMENT OF TRANSPORTATION  
400 Seventh Street, S.W.  
Washington, D. C. 20590

Dear Mr. Jones:

Reference: SA-830307

This record of experience covers the calendar year 1983 and is a response to condition F of approval SA-830307.

Tank car UTLX 82329 received 84,500 lb. of nitrogen tetroxide at our Bogalusa, Louisiana plant site on 7/26/83 through 7/28/83. On 8/18/83 the tank car was shipped to the PaKtank Corporation storage terminal in Westwego, Louisiana. The material remains at PaKtank to be used by Crown Zellerbach at some date in the future. All transfer, transportation and storage operations have been routine with no safety or spillage problems.

Tank car UTLX 82026 is in Bogalusa, Louisiana and has not yet received any  $N_2O_4$ .

Please let us know if any additional information is required.

Sincerely

A handwritten signature in cursive script that reads 'G. R. Cowan'.

Senior Project Engineer

G. R. COWAN/lvt

cc: J. B. McComb - CZ  
H. B. Lackey - CZ  
J. L. Ferguson - CZ

Mailing Address: P.O. Box 4266, Vancouver (Orchards) WA 98662  
Street Address: 10619 N. E. Coxley Dr. Phone: (206) 254-0922 TWX 910 474 8663

34 (2)



US Department  
of Transportation

400 Seventh Street S.W.  
Washington, D.C. 20590

Research and  
Special Programs  
Administration

August 5, 1983

Mr. T. J. Sutfin  
Systems & Materials Manager  
Crown Zellerbach  
Chemical Products Division  
P.O. Box 4266  
Vancouver (Orchards), Washington 98662

SA-830307

Dear Mr. Sutfin:

Under provisions of Section 173.336(a)(4) of Title 49, Code of Federal Regulations (49 CFR) Crown Zellerbach is hereby issued approval number SA-830307. This approval covers details of tank car appurtenances, dome fittings and safety devices, and marking, loading, handling, inspection and testing practices presented in Union Tank Car Company's submission of March 14, 1983, and your submissions of June 2 and July 22, 1983, examined by the Bureau of Explosives.

Crown Zellerbach may make shipments in accordance with the above procedure subject to the following conditions:

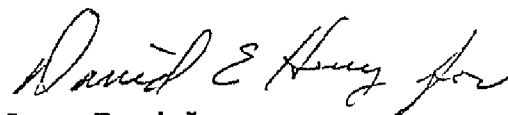
- A. Authorized Commodity: Nitrogen Tetroxide
- B. Authorized Packaging: Tank cars identified as UTLX82329 and 82026
- C. This approval does not relieve Crown Zellerbach or its employees from any obligations imposed by applicable requirements of the DOT's Hazardous Materials Regulations (49 CFR).
- D. Crown Zellerbach must furnish each carrier with a copy of this approval. All shipping papers must be marked with the approval number SA-830307.
- E. Each car used in this service must be marked with the approval number SA-830307 in characters at least 4 inches high near the U.N. number.
- F. A record of experience including any difficulties, casualties, or losses shall be sent to the Chief, Approvals Branch within 60 days of completion of each calendar year of operation. In addition, an immediate detailed report shall be sent in the event of any incident involving damage, injury, or loss of contents while handling or transporting materials covered by this authorization. This requirement is in addition to requirements of 49 CFR Sections 171.15 and 171.16.

Continuation of SA-830307

- G. Advance notice and approval by the Approvals Branch is required for any changes in the processes and procedures covered by this authorization.
- H. This approval shall remain valid so long as there is no change or modification in the information submitted in support of this approval.

Any correspondence relative to this approval should be addressed to the Approvals Branch and reference SA-830307.

Sincerely,



James Enoch Jones  
Chief, Approvals Branch  
Office of Hazardous Materials  
Regulation  
Materials Transportation Bureau

35 (9)



ASSOCIATION  
OF AMERICAN  
RAILROADS



August 1, 1983

Roy J. Holden  
Manager  
Technical Services

Mr. James F. Jones  
Materials Transportation Bureau  
Department of Transportation  
Washington, D.C. 20590

SUBJECT: Safety Procedures, Shipment of Nitrogen  
Tetroxide in Single Unit Tank Cars, BA-3359

Dear Mr. Jones:

Pursuant to the requirements of §173.336(a)(4), we have examined the material submitted by Crown Zellerbach covering procedures involved in the shipment of Nitrogen Tetroxide in single unit tank cars including marking, loading, handling, inspection, testing and a plan for emergency response. We feel that these procedures are acceptable and recommend that they be approved.

These procedures consists of Railcar Inspection and Loading Procedures, revised February 15, 1983, which was received with Application C-837000 Rev. A together with Crown Zellerbach's letters of June 2, 1983, and July 22, 1983 which contain the routings and emergency procedure. We are also attaching of a previously approved procedure prepared by Vertac Chemical Corp. You will note that the major difference in these procedures is the description of the safety relief device. The Vertac cars use the Crosby valve and the Crown Zellerbach cars use the Midland valve. Both have been approved. Each installation is a combination device; that is, a valve is installed in series with a frangible disc. The space between the disc and the valve is vented and the vent is closed by a valve which is closed while the car is in transportation. This is an AAR requirement and is identical to the requirement described in DOT E-3992 for Hydrogen chloride.

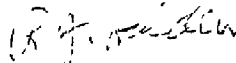
1920 L Street, N.W.  
Washington, D. C. 20036  
(202) 835-9500 (24 Hours)

Mr. James E. Jones  
August 1, 1983  
Page 2

Two cars UTLX 82329 and UTLX 82026 will be used. Both are existing cars. The conversion of UTLX 82329 was approved on Application C-837000 Rev. B. and the conversion of UTLX 82026 was handled on an Exhibit R-1. The proponent is aware that these procedures must be kept up to date and that supplementary information should be supplied in the event of a change in procedures, equipment or routings.

For identification purposes, BA-3359 has been assigned.

Very truly yours,



R. J. Holden

cc: T. J. Sutfin

(206-254-0924)

CROWN ZELLERBACH  
NITROGEN TETROXIDE ( $N_2O_4$ )  
Railcar Inspection & Loading Procedures

TABLE OF CONTENTS

<u>Description</u>	<u>Section</u>
<u>RAIL CARS</u>	
Inspection of rail cars	1.0
Loading of rail cars	2.0
Inspection of rail cars @ Receiving Location	3.0
Attachment 1	$N_2O_4$ Tank Car Safety Valve
Attachment 2	Rail Car Inspection Check List

Issued: 1/18/83

Attachment 1 Revised 2/15/83

RAILCARS (N<sub>2</sub>O<sub>4</sub>)

1.0 Inspection of Railcars

1.1 Prior to Loading

1.1.1 Verify that "Nitrogen Tetroxide" is stenciled on both sides of car in letters not less than four (4) inches high. (CFR 49. § 173.336 & § 172.330)

1.1.2 Verify that tank and safety valve have been retested within required time periods. Tanks must be retested every 10 years. Safety valves must be retested every five years. Stenciling on side of car will state dates of last tank and safety valve tests. (ICC regulations.)

1.1.3 Verify that car is equipped with four (4) 1" angle valves, ACF type 1301, Monei trim, plug valves; two (2) liquid valves and two (2) vapor valves.

1.1.4 Verify that each valve is fitted with a screw plug to prevent leakage in the event of a valve failure. (CFR 49. § 173.336)

1.1.5 Assure that safety valve cover (vent stack) is secure. Assure that safety valve is equipped with an intact, approved stainless steel or platinum frangible disk. Drawing attached. (CFR 49. § 173.336)

1.1.6 Inspect interior dome area of car for loose rust and debris. Rust pitting may be present and is not a basis for car rejection; however, such condition should be reported for future corrective action.

1.1.7 Check general condition of car for obvious defects. If general condition is questionable, contact servicing railroad and rail car owner.

1.1.8 Check pressure on tank car. Should be at least five (5) PSIG.

1.2 After Product Loading

1.2.1 Insure that screw plugs in each valve are tightly secured.

1.2.2 Check each valve for leaks (visual inspection).



- 1.2.3 Assure that "Poison Gas" placards are securely applied, one to each side and each end of car. Assure that identification number (1067) panels are securely applied to each side and each end of car. (CFR 49. § 172.330 & § 172.332)
- 1.2.4 Assure that any spillage has been washed from dome area and sides of car with clear water.
- 1.2.5 Complete inspection check list for general condition of car. Attached.

### 1.3 Corrective Actions

- 1.3.1 Cars which do not meet the above indicated criteria will not be loaded or released for shipment.
- 1.3.2 Corrective measure may be accomplished at the shipping facility, when the facility is agreeable to performing such service without reimbursement.
- 1.3.3 More serious deficiencies will be corrected only at the direction of the tank car owner.

## 2.0 Loading of Rail Cars

- 2.1 A storage tank containing  $N_2O_4$  cannot be filled and loaded from at the same time. The operator must, therefore, check to make sure when he is ready to fill a rail car that the  $N_2O_4$  is not being transferred into the storage tank that he plans to load from and he must tag the valves into the storage tank warning other persons not to fill the storage tank or not to open the valves. The tag should state that he is loading from that storage tank and it should have his initials on it. Maintain log record of this indicating time and date.
- 2.2 Connect hoses to valves on rail car for loading purposes. Open appropriate valves and start loading pump.
- 2.3 There is no meter supplied for rail car loading, therefore flow or amount loaded will be gauged by rail car scale and tank level gauge.
- 2.4 All weights shown on loading sheets and bills of lading will be actual scale weights, and actual tare weights will be used for loading. Marked tares and calculated full weights are not permissible.

3.0 Inspection of Rail Cars at Receiving Location

3.1 Upon Receipt of Car - Prior to Unloading

- 3.1.1 Verify that "NITROGEN TETROXIDE" is stencilled on both sides of car in letters not less than four (4) inches high. (CFR 49. § 173.336 & § 172.330)
- 3.1.2 Verify that tank and safety valves have been retested within required time periods. Tanks must be retested every 10 years. Safety valves must be retested every 5 years. Stencilling on side of car will state dates of last tank and safety valve test. (ICC regulations.)
- 3.1.3 Verify that car is equipped with four (4) 1" angle valves, ACF type 1301, Monel trim, plug valves; two (2) liquid valves and two (2) vapor valves.
- 3.1.4 Verify that each valve is fitted with a screw plug to prevent leakage in the event of a valve failure. (CFR 49. § 173.336)
- 3.1.5 Assure that safety valve cover (vent stack) is secure. Assure that safety valve is equipped with an intact, approved stainless steel or platinum frangible disk. Drawing attached. (CFR 49. § 173.336)
- 3.1.6 Inspect interior dome area of car for loose rust and debris. Rust pitting may be present and is not a basis for car rejection; however, such condition should be reported for future corrective action.
- 3.1.7 Check car's piping, valves, flanges and welds for evidence of leakage.
- 3.1.8 Check general running condition of each car to assure no apparent defects exist. If condition of running gear is questionable, contact servicing railroad, requesting car inspection and running gear repair if needed.
- 3.1.9 Cars, regardless if empty or filled, will be moved a minimum of 100 feet each month.

3.2 After Unloading - Prior to Release of Car to Railroad

- 3.2.1 Assure that any spillage has been washed from dome area and sides of car with large quantity of clear water. (Any spillage of  $N_2O_4$  on the car should be washed off promptly to prevent corrosion, and staining of car exterior and pitting of dome area).
- 3.2.2 Assure car interior is charged with nitrogen to pressure of 10 psig, plus or minus 5 psig, to prevent interior contamination or corrosion.
- 3.2.3 Insure that screw plugs in each valve are tightly secured.
- 3.2.4 Assure that "POISON GAS" placards are reversed to read "POISON GAS-EMPTY" and securely applied one to each end and each side of car. Assure that identification number (1067) panels are securely applied to each side and each end of car. (CFR 49. § 172.330 & § 172.332)
- 3.2.5 Assure car is unloaded to maximum extent possible prior to release; arrange for car to be weighed.

3.3 Corrective Actions and Reporting Procedures

- 3.3.1 Corrective actions which receiving facility is agreeable to performing without reimbursement may be accomplished at the receiving facility.
- 3.3.2 Report major deficiencies to tank car owner.



ATTACHMENT 2

T/C Inspection - General Condition

Date: \_\_\_\_\_

Checked by: \_\_\_\_\_

Tank Car No. \_\_\_\_\_

	Check X if OK	Comments
I. SAFETY ITEMS (1) Ladders, hand-holds, and handrails (2) Walkways (3) Hand brake; dog, shaft, and cotter key (4) Air date on auxiliary reservoir (to be done every 4 years).		
II. JOURNAL BOXES (1) Last repack date (to be packed every 30 mos.) (2) Check lubricators		
III. RUNNING GEAR (1) Axle, wheels, truckside (2) Truck springs, truck bolster (3) Brake beams, rods, key bolts and cotter keys		
IV. BRAKE SHOES (1) Should be at least 1/2"		
V. MISCELLANEOUS (1) Check end bolts(3) on auxiliary reservoir (2) Check bolts(4) on pipe bracket (3) Check couplings and coupling rods (4) Check retainer valve on air system (5) Check cross key and cross key retainer (6) Check angle cock handle (7) Check burst hoses.		
VI. OTHER ITEMS (1) Verification of "Nitrogen Tetroxide" stencilled on both sides.		
(2) Verification that tank has been retested in last 10 years		
(3) Verification that safety valve has been retested in last 5 years		
(4) Verify that placards are in proper order		
(5) Condition of placard holders		



CrownZellerbach  
Chemical Products Division

36 (2)

July 22, 1983

Mr. Roy Holden, Director  
ASSOCIATION OF AMERICAN RAILROADS  
Bureau of Explosives  
1920 L Street, N.W.  
Washington, D.C. 20036

Dear Mr. Holden:

As a follow-up to our earlier phone conversation, this is to confirm a possible alternative routing of our  $N_2O_4$  tank cars from that described in my letter of June 2, 1983. As you will recall, our original interest was to receive delivery of  $N_2O_4$  at our plant in Bogalusa, Louisiana by tank truck. This would necessitate transfer of material from the tank trucks to our tank cars with subsequent movement to Westwego, Louisiana for storage until needed back at Bogalusa. As a means of minimizing transfer handling and possible exposure, we may elect to send the empty tank cars to Vertac Chemical Corporation in Vicksburg, Mississippi for direct loading. Loaded movement of the tank cars then would be either to Bogalusa for transfer to our in-plant storage tank or on to Westwego, Louisiana for interim track storage.

The respective movements would be as follows:

Vicksburg to Bogalusa

Carrier - ICG  
Route - Vicksburg to Jackson to Wanilla to Bogalusa.

Vicksburg to Westwego

Carrier - ICG (MP delivery)  
Route - Vicksburg to Jackson to Brookhaven-McComb-  
New Orleans-Westwego.

This should cover all of the presently contemplated moves for our  $N_2O_4$  tank cars, UTLX 82329 and UTLX 82026.

We look forward to the early receipt of approval for the use of these cars in this service.

Thank you for your patience and assistance as we've worked our way through the approval procedures.

T. J. SUTFIN/lt

Sincerely yours,

  
Systems & Materials Manager

cc: Mr. J. B. McComb - CZ  
Mr. H. B. Lackey - CZ

Mailing Address P.O. Box 4266, Vancouver (Orchards) WA 98662  
Street Address: 10619 N.E. Coxley Dr. Phone: (206) 254-0922 TWX: 910 474 8663

VALVE ASSEMBLY NO. 105-117  
 CARDS  
 STEAM GAGE & VALVE  
 BOSTON, MASS SET  
 FOR 10-3300 LBS  
 10-3300 LBS  
 10-3300 LBS

PERFORMED FRANGIBLE DISC  
 FOR HCN. TO BE OF  
 PLATINUM BURSTING AT  
 2000 LBS. 10-3300 LBS

350-355

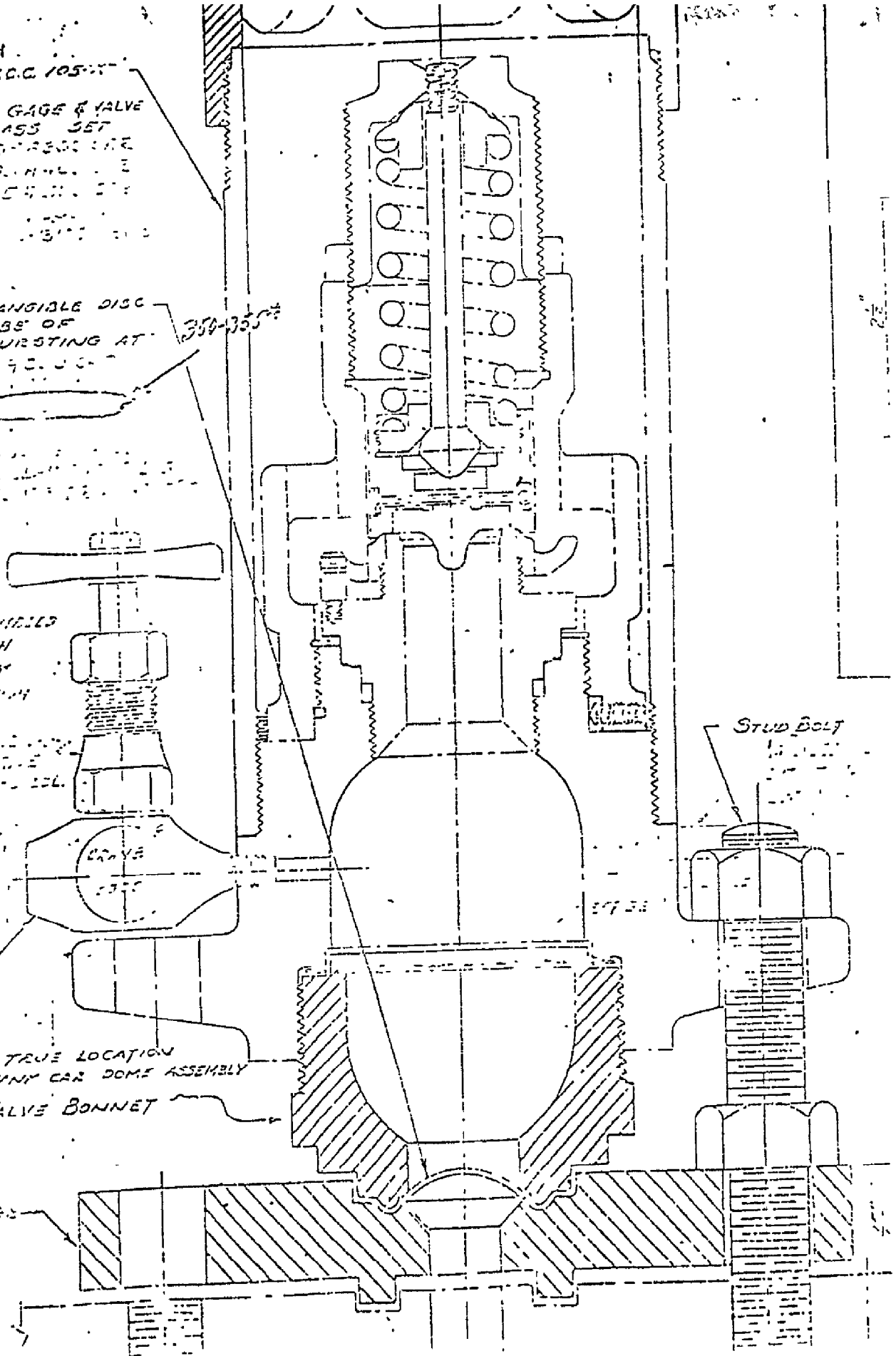
VALVE ASSEMBLY  
 HAS BEEN  
 WITH STEAM  
 POSITION

VALVE ASSEMBLY  
 HAS BEEN  
 WITH STEAM  
 POSITION

NOTE  
 FOR TRUE LOCATION  
 SEE TINY CAR DOME ASSEMBLY  
 VALVE BONNET

WALL FLANGES

STUD BOLT



2 1/2"



CrownZellerbach  
Chemical Products Division

June 2, 1983

Mr. Roy Holden, Director  
Association of American Railroads  
Bureau of Explosives  
1920 L Street, NW  
Washington, D.C. 20036

Dear Mr. Holden:

In response to our earlier phone conversation, here is the additional information requested concerning the movements of our  $N_2O_4$  tank cars.

The movement is anticipated to be minimal, approximately 2 round trips per year, between our plant at Bogalusa, Louisiana and a storage siding at PAK TANK Terminal in Westwego, Louisiana. Routing for this movement is via ICG-New Orleans (Central Ave. yard)/MP and the reverse.

In the unlikely event of an emergency situation, the following procedures are to be followed. As advised by the railroads involved, they will assess the situation based on information supplied by the involved train crew, then notify CHEMTREC and the Bureau of Explosives. CHEMTREC has a list of emergency names and phone numbers, within Crown Zellerbach, to notify for  $N_2O_4$ , as well as other materials which we ship. We are also notifying CHEMTREC of the availability of an "Emergency Response Team" from Vertac Chemical Corporation in Vicksburg, Mississippi. The contact person and phone number at Vertac is: Mr. Fred Ahlers, Plant Manager, Ph. (601) 636-1231.

Vertac is the sole U.S. producer of  $N_2O_4$  and has an Emergency Response (ER) Team which has been trained and is equipped to handle emergency situations involving  $N_2O_4$ , chlorine, and other similar chemicals. Vertac has agreed to be available and responsive to our needs. Their team is located at their plant in Vicksburg.

An alternative/back-up response procedure would rely on Environmental Emergency Services Company, a division of Riedel International, Inc. EES has a Fast Response System consisting of 23 prepositioned, fully equipped truck and trailer units covering 28 Western states. The unit closest to our movement route is located in Monroe, Louisiana. EES has a 24-hour phone Hot Line.

The CHEMTREC name and 800 number is stencilled on the tank cars and is included on all shipping documents.

The above referenced ER Teams are properly equipped with acid suits, chlorine kits, and other equipment they deem appropriate for handling hazardous materials in emergency situations.

Mailing Address: P O Box 4266, Vancouver (Orchards) WA 98662  
Street Address: 10619 N.E. Coxley Dr. Phone: (206) 254-0922 TWX: 910 474 8663



Association of American Railroads  
Bureau of Explosives

2

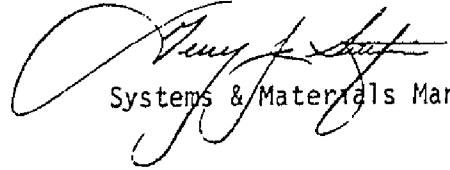
June 2, 1983

We trust that this will sufficiently answer any concerns regarding procedures to be followed should a hazardous situation develop with the movement of our N<sub>2</sub>O<sub>4</sub> tank cars.

As additional information, I am enclosing a promotional brochure from Environmental Emergency Services Company.

Thank you for your concern and assistance in obtaining the necessary approvals to allow use of our cars in this service.

Sincerely yours,



Systems & Materials Manager

T. J. SUTFIN/lt

Enclosures

cc: Mr. J. B. McComb - CZ  
Mr. H. B. Lackey - CZ

38 (8) ..  
SA-830307

Union Tank Car Company



151st & Railroad Ave  
East Chicago, Indiana 46312  
219/392 1500

An Affiliate of  
Trans Union Corporation

March 14, 1983

Mr. Alan I. Roberts  
Director  
Department of Transportation  
Office of Hazardous Materials  
2100 Second Street, S.W.  
Washington, D.C. 20590

Dear Sir:

Find attached, a copy of the Loading and Inspection Procedures for handling Nitrogen Tetroxide in a Union Tank Car Company tank car reporting marks UTLX 82329.

These are being submitted to you for approval, as required in The Hazardous Materials Regulations Paragraph 173.336(4). Copies have also been sent to the Bureau of Explosives for their examination.

Would appreciate receiving your approval and/or comments just as soon as possible.

Very truly yours,

George J. Griger  
Product Engineer

/dh  
Attachment

cc: AAR Bureau of Explosives - Roy Holden

CROWN ZELLERBACH

NITROGEN TETROXIDE ( $N_2O_4$ )

Railcar Inspection & Loading Procedures

TABLE OF CONTENTS

<u>Description</u>	<u>Section</u>
<u>RAIL CARS</u>	
Inspection of rail cars	1.0
Loading of rail cars	2.0
Inspection of rail cars @ Receiving Location	3.0
Attachment 1	$N_2O_4$ Tank Car Safety Valve
Attachment 2	Rail Car Inspection Check List

Issued: 1/18/83

Attachment 1 Revised 2/15/83  
1.1.2, 3.1.2 and 2.4 Revised 3/2/83

## RAILCARS (N<sub>2</sub>O<sub>4</sub>)

### 1.0 Inspection of Railcars

#### 1.1 Prior to Loading

- 1.1.1 Verify that "Nitrogen Tetroxide" is stenciled on both sides of car in letters not less than four (4) inches high. (CFR 49. § 173.336 & § 172.330)
- 1.1.2 Verify that tank and safety valve have been retested within required time periods. Tanks must be retested every 10 years. Safety valves must be retested every five years. Stenciling on side of car will state dates of last tank and safety valve tests and test due dates.
- 1.1.3 Verify that car is equipped with four (4) 1" angle valves, ACF type 1301, Monel trim, plug valves; two (2) liquid valves and two (2) vapor valves.
- 1.1.4 Verify that each valve is fitted with a screw plug to prevent leakage in the event of a valve failure. (CFR 49. § 173.336)
- 1.1.5 Assure that safety valve cover (vent stack) is secure. Assure that safety valve is equipped with an intact, approved stainless steel or platinum frangible disk. Drawing attached. (CFR 49. § 173.336)
- 1.1.6 Inspect interior dome area of car for loose rust and debris. Rust pitting may be present and is not a basis for car rejection; however, such condition should be reported for future corrective action.
- 1.1.7 Check general condition of car for obvious defects. If general condition is questionable, contact servicing railroad and rail car owner.
- 1.1.8 Check pressure on tank car. Should be at least five (5) PSIG.

#### 1.2 After Product Loading

- 1.2.1 Insure that screw plugs in each valve are tightly secured.
- 1.2.2 Check each valve for leaks (visual inspection).

1.2.3 Assure that "Poison Gas" placards are securely applied, one to each side and each end of car. Assure that identification number (1067) panels are securely applied to each side and each end of car. (CFR 49. § 172.330 & § 172.332)

1.2.4 Assure that any spillage has been washed from dome area and sides of car with clear water.

1.2.5 Complete inspection check list for general condition of car. Attached.

### 1.3 Corrective Actions

1.3.1 Cars which do not meet the above indicated criteria will not be loaded or released for shipment.

1.3.2 Corrective measure may be accomplished at the shipping facility, when the facility is agreeable to performing such service without reimbursement.

1.3.3 More serious deficiencies will be corrected only at the direction of the tank car owner.

## 2.0 Loading of Rail Cars

2.1 A storage tank containing  $N_2O_4$  cannot be filled and loaded from at the same time. The operator must, therefore, check to make sure when he is ready to fill a rail car that the  $N_2O_4$  is not being transferred into the storage tank that he plans to load from and he must tag the valves into the storage tank warning other persons not to fill the storage tank or not to open the valves. The tag should state that he is loading from that storage tank and it should have his initials on it. Maintain log record of this indicating time and date.

2.2 Connect hoses to valves on rail car for loading purposes. Open appropriate valves and start loading pump.

2.3 There is no meter supplied for rail car loading, therefore flow or amount loaded will be gauged by rail car scale and tank level gauge.

2.4 All weights shown on loading sheets and bills of lading will be actual scale weights, and actual tare weights will be used for loading. Marked tares and calculated full weights are not permissible. Tank car is to be loaded to a maximum weight of 110,000 lbs. Maximum pressure to which a tank car of Brown or Green  $N_2O_4$  can be loaded is 50 P.S.I.G.

3.0 Inspection of Rail Cars at Receiving Location

3.1 Upon Receipt of Car - Prior to Unloading

- 3.1.1 Verify that "NITROGEN TETROXIDE" is stencilled on both sides of car in letters not less than four (4) inches high. (CFR 49. § 173.336 & § 172.330)
- 3.1.2 Verify that tank and safety valves have been retested within required time periods. Tanks must be retested every 10 years. Safety valves must be retested every 5 years. Stencilling on side of car will state dates of last tank and safety valve test and test due dates.
- 3.1.3 Verify that car is equipped with four (4) 1" angle valves, ACF type 1301, Monel trim, plug valves; two (2) liquid valves and two (2) vapor valves.
- 3.1.4 Verify that each valve is fitted with a screw plug to prevent leakage in the event of a valve failure. (CFR 49. § 173.336)
- 3.1.5 Assure that safety valve cover (vent stack) is secure. Assure that safety valve is equipped with an intact, approved stainless steel or platinum frangible disk. Drawing attached. (CFR 49. § 173.336)
- 3.1.6 Inspect interior dome area of car for loose rust and debris. Rust pitting may be present and is not a basis for car rejection; however, such condition should be reported for future corrective action.
- 3.1.7 Check car's piping, valves, flanges and welds for evidence of leakage.
- 3.1.8 Check general running condition of each car to assure no apparent defects exist. If condition of running gear is questionable, contact servicing railroad, requesting car inspection and running gear repair if needed.
- 3.1.9 Cars, regardless if empty or filled, will be moved a minimum of 100 feet each month.

3.2 After Unloading - Prior to Release of Car to Railroad

- 3.2.1 Assure that any spillage has been washed from dome area and sides of car with large quantity of clear water. (Any spillage of  $N_2O_4$  on the car should be washed off promptly to prevent corrosion, and staining of car exterior and pitting of dome area).
- 3.2.2 Assure car interior is charged with nitrogen to pressure of 10 psig, plus or minus 5 psig, to prevent interior contamination or corrosion.
- 3.2.3 Insure that screw plugs in each valve are tightly secured.
- 3.2.4 Assure that "POISON GAS" placards are reversed to read "POISON GAS-EMPTY" and securely applied one to each end and each side of car. Assure that identification number (1067) panels are securely applied to each side and each end of car. (CFR 49. § 172.330 & § 172.332)
- 3.2.5 Assure car is unloaded to maximum extent possible prior to release; arrange for car to be weighed.

3.3 Corrective Actions and Reporting Procedures

- 3.3.1 Corrective actions which receiving facility is agreeable to performing without reimbursement may be accomplished at the receiving facility.
- 3.3.2 Report major deficiencies to tank car owner.

Attachment 1.

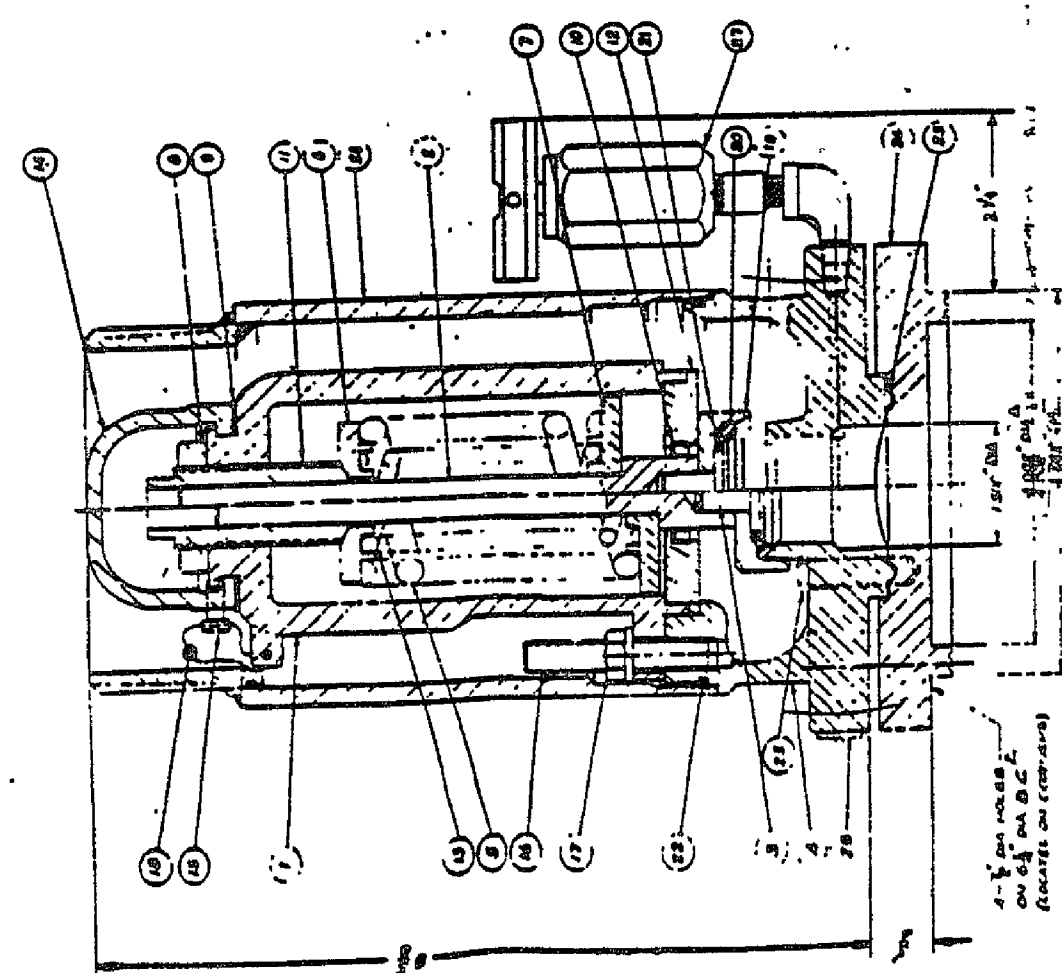
ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	TOTAL	REMARKS
1	FLANGE	1	EA	1.00	1.00	
2	FLANGE	1	EA	1.00	1.00	
3	FLANGE	1	EA	1.00	1.00	
4	FLANGE	1	EA	1.00	1.00	
5	FLANGE	1	EA	1.00	1.00	
6	FLANGE	1	EA	1.00	1.00	
7	FLANGE	1	EA	1.00	1.00	
8	FLANGE	1	EA	1.00	1.00	
9	FLANGE	1	EA	1.00	1.00	
10	FLANGE	1	EA	1.00	1.00	
11	FLANGE	1	EA	1.00	1.00	
12	FLANGE	1	EA	1.00	1.00	
13	FLANGE	1	EA	1.00	1.00	
14	FLANGE	1	EA	1.00	1.00	
15	FLANGE	1	EA	1.00	1.00	
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27	FLANGE	1	EA	1.00	1.00	
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31	FLANGE	1	EA	1.00	1.00	
32	FLANGE	1	EA	1.00	1.00	
33	FLANGE	1	EA	1.00	1.00	
34	FLANGE	1	EA	1.00	1.00	
35	FLANGE	1	EA	1.00	1.00	
36	FLANGE	1	EA	1.00	1.00	
37	FLANGE	1	EA	1.00	1.00	
38	FLANGE	1	EA	1.00	1.00	
39	FLANGE	1	EA	1.00	1.00	
40	FLANGE	1	EA	1.00	1.00	
41	FLANGE	1	EA	1.00	1.00	
42	FLANGE	1	EA	1.00	1.00	
43	FLANGE	1	EA	1.00	1.00	
44	FLANGE	1	EA	1.00	1.00	
45	FLANGE	1	EA	1.00	1.00	

Ø VALUES UP TO 225" STD HAVE BOLTS IN PLACE OF STUDS (IF ANY)  
 NO ALTERNATE MATERIALS AVAILABLE.  
 NOT FURNISHED UNLESS REQUESTED

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	TOTAL	REMARKS
1	FLANGE	1	EA	1.00	1.00	
2	FLANGE	1	EA	1.00	1.00	
3	FLANGE	1	EA	1.00	1.00	
4	FLANGE	1	EA	1.00	1.00	
5	FLANGE	1	EA	1.00	1.00	
6	FLANGE	1	EA	1.00	1.00	
7	FLANGE	1	EA	1.00	1.00	
8	FLANGE	1	EA	1.00	1.00	
9	FLANGE	1	EA	1.00	1.00	
10	FLANGE	1	EA	1.00	1.00	
11	FLANGE	1	EA	1.00	1.00	
12	FLANGE	1	EA	1.00	1.00	
13	FLANGE	1	EA	1.00	1.00	
14	FLANGE	1	EA	1.00	1.00	
15	FLANGE	1	EA	1.00	1.00	
16	FLANGE	1	EA	1.00	1.00	
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18	FLANGE	1	EA	1.00	1.00	
19	FLANGE	1	EA	1.00	1.00	
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21	FLANGE	1	EA	1.00	1.00	
22	FLANGE	1	EA	1.00	1.00	
23	FLANGE	1	EA	1.00	1.00	
24	FLANGE	1	EA	1.00	1.00	
25	FLANGE	1	EA	1.00	1.00	
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34	FLANGE	1	EA	1.00	1.00	
35	FLANGE	1	EA	1.00	1.00	
36	FLANGE	1	EA	1.00	1.00	
37	FLANGE	1	EA	1.00	1.00	
38	FLANGE	1	EA	1.00	1.00	
39	FLANGE	1	EA	1.00	1.00	
40	FLANGE	1	EA	1.00	1.00	
41	FLANGE	1	EA	1.00	1.00	
42	FLANGE	1	EA	1.00	1.00	
43	FLANGE	1	EA	1.00	1.00	
44	FLANGE	1	EA	1.00	1.00	
45	FLANGE	1	EA	1.00	1.00	

NOTE 1: SIZE OF FLANGE HOLES: 1/2" IN STANDARD OR ALL HOLE, EXCEPT 1/2" ON 1-1/2" AND 1-1/2" IN SPECIAL CASE OR HOLE IN CENTER, USE SUPPLY "B" FOR ANY FLANGE, USE SUPPLY "C"  
 2: BOLT CIRCLE: 4-1/2" IN STANDARD OR ALL HOLE, EXCEPT 1/2" ON 1-1/2" AND 1-1/2" IN SPECIAL CASE OR HOLE IN CENTER, USE SUPPLY "B" FOR ANY FLANGE, USE SUPPLY "C"  
 3: ALTERNATES: 1: THE ARE STANDARD THICKNESS AND EXCEPT WITH AN OD OF 4" AND 4-1/2" AND 4" AND 4-1/2" IN STANDARD OR ALL HOLE, EXCEPT THE 1-1/2" AND 1-1/2" IN SPECIAL CASE OR HOLE IN CENTER, USE SUPPLY "B" FOR ANY FLANGE, USE SUPPLY "C" FOR ANY OTHER ALTERNATE, USE SUPPLY "D" FOR ANY OTHER ALTERNATE, USE SUPPLY "E" FOR ANY OTHER ALTERNATE.

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	TOTAL	REMARKS
1	FLANGE	1	EA	1.00	1.00	
2	FLANGE	1	EA	1.00	1.00	
3	FLANGE	1	EA	1.00	1.00	
4	FLANGE	1	EA	1.00	1.00	
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8	FLANGE	1	EA	1.00	1.00	
9	FLANGE	1	EA	1.00	1.00	
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13	FLANGE	1	EA	1.00	1.00	
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19	FLANGE	1	EA	1.00	1.00	
20	FLANGE	1	EA	1.00	1.00	
21	FLANGE	1	EA	1.00	1.00	
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42	FLANGE	1	EA	1.00	1.00	
43	FLANGE	1	EA	1.00	1.00	
44	FLANGE	1	EA	1.00	1.00	
45	FLANGE	1	EA	1.00	1.00	



NOTE: A ALTERNATES AVAILABLE

4-1/2" DIA HOLES ON 4 1/2" DIA B.C. (LOCATE ON CENTER)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	TOTAL	REMARKS
1	FLANGE	1	EA	1.00	1.00	
2	FLANGE	1	EA	1.00	1.00	
3	FLANGE	1	EA	1.00	1.00	
4	FLANGE	1	EA	1.00	1.00	
5	FLANGE	1	EA	1.00	1.00	
6	FLANGE	1	EA	1.00	1.00	
7	FLANGE	1	EA	1.00	1.00	
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21	FLANGE	1	EA	1.00	1.00	
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23	FLANGE	1	EA	1.00	1.00	
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27	FLANGE	1	EA	1.00	1.00	
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43	FLANGE	1	EA	1.00	1.00	
44	FLANGE	1	EA	1.00	1.00	
45	FLANGE	1	EA	1.00	1.00	

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	TOTAL	REMARKS
1	FLANGE	1	EA			



ATTACHMENT 2

T/C Inspection - General Condition

Date: \_\_\_\_\_

Checked by: \_\_\_\_\_

Tank Car No. \_\_\_\_\_

Check X  
if OK

Comments

	Check X if OK	Comments
<b>I. SAFETY ITEMS</b> (1) Ladders, hand-holds, and handrails (2) Walkways (3) Hand brake; dog, shaft, and cotter key (4) Air date on auxiliary reservoir (to be done every 4 years).		
<b>II. JOURNAL BOXES</b> (1) Last repack date (to be packed every 30 mos.) (2) Check lubricators		
<b>III. RUNNING GEAR</b> (1) Axle, wheels, truckside (2) Truck springs, truck bolster (3) Brake beams, rods, key bolts and cotter keys		
<b>IV. BRAKE SHOES</b> (1) Should be at least 1/2"		
<b>V. MISCELLANEOUS</b> (1) Check end bolts(3) on auxiliary reservoir (2) Check bolts(4) on pipe bracket (3) Check couplings and coupling rods (4) Check retainer valve on air system (5) Check cross key and cross key retainer (6) Check angle cock handle (7) Check burst hoses.		
<b>VI. OTHER ITEMS</b> (1) Verification of "Nitrogen Tetroxide" stencilled on both sides.		
(2) Verification that tank has been retested in last 10 years		
(3) Verification that safety valve has been retested in last 5 years		
(4) Verify that placards are in proper order		
(5) Condition of placard holders		



VERTAC CHEMICAL CORPORATION  
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO P O BOX 3  
VICKSBURG, MS 39180  
(601) 636-1231

JANUARY 3, 1983

UNION TANK CAR COMPANY  
151ST STREET AT RAILROAD AVENUE  
EAST CHICAGO, INDIANA 46312

ATTN: MR. TERRY GOSE

DEAR MR GOSE:

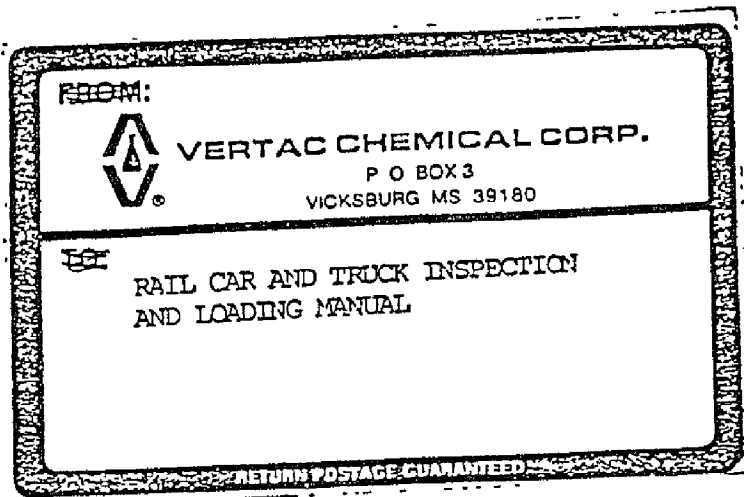
AT REQUEST OF CROWN ZELLERBACH THERE IS ATTACHED TO THIS LETTER  
A COPY OF THE RAIL CAR SECTION OF VERTAC CHEMICAL CORPORATION'S  
RAILCAR AND TRUCK INSPECTION AND LOADING MANUAL FOR N2O4. THIS  
MANUAL COVERS OUR LOADING, SAMPLING AND PRE-TRIP INSPECTION  
PROCEDURES FOR THE SHIPMENT OF NITROGEN TETROXIDE. THESE  
PROCEDURES WERE DEVELOPED FOR THE DEPARTMENT OF DEFENSE.

IF YOU HAVE ANY QUESTION OR SUGGESTIONS CONCERNING THIS MANUAL,  
PLEASE LET ME KNOW.

VERY TRULY YOURS,

ANDY McMILLAN  
TRAFFIC MANAGER

AM/jd



Prepared by: R. F. Maraman  
Approved by: *[Signature]*  
Name: K. R. Dale  
Title: Vice President-Manufacturing  
Date: 8-21-72  
Document: L-11  
Revision: 4-25-1978  
Effective date: 4-25-78  
Superseding: \_\_\_\_\_

## TABLE OF CONTENTS

<u>Description</u>	<u>Section</u>
<u>TRUCKS</u>	
Inspection of trucks	1.0
Loading of rail cars	2.0
Sampling of trucks	3.0
<u>RAIL CARS</u>	
Inspection of rail cars	1.0
Loading of trucks	2.0
Sampling of rail cars	3.0
Attachment 1	Truck trailer inspection checklist
Attachment 2 (DD Form 626)	Motor vehicle inspection checklist
Attachment 3 (DD Form 836)	Special instructions for motor vehicle drivers
Attachment 4	Rail car inspection checklist
Attachment 5 (DD 1089)	Movement of military interchange railroad cars
Attachment 6	N <sub>2</sub> O <sub>4</sub> T/C safety valve
Attachment 7	T/C inspection - general condition
Attachment 8	Nitrogen tetroxide loading report
Attachment 9	N <sub>2</sub> O <sub>4</sub> T/C inspection check list revision 1 dated 25 April 1978.
Attachment 10	N <sub>2</sub> O <sub>4</sub> Tank trailer inspection check list revision 1 dated 25 April 1978.

## Introduction

This manual is issued to describe the truck and rail car inspection and loading system and procedures to be used at the contractor's Vicksburg, Mississippi facility to attain compliance with requirements as prescribed in MIL-I-45208 A (12-6-63).

## RAIL CARS

### 1.0 Inspection of Rail Cars

#### 1.1 Prior to Loading

- 1.1.1 Verify that "nitrogen tetroxide - nitric oxide mixtures only" or "nitrogen tetroxide only" is stenciled on both sides of car in letters not less than four inches high.  
*RECOMMENDED BY 12/173*
- 1.1.2 Verify that tank and safety valve have been retested within required time periods. Tanks must be retested every 10 years. Safety valves must be retested every five years. Stenciling on side of car will state dates of last tank and safety valve test.
- 1.1.3 Verify that car is equipped with four stainless steel ball type valves; two liquid valves and two vapor valves.
- 1.1.4 Verify that each valve is secured with a blind flange and four stainless steel bolts and lock-nuts per flange. Remove blind flanges and inspect for foreign material.
- 1.1.5 Assure that safety valve cover (vent stack) is secure (screwed snug only to prevent removal by hand). Disk in cover below vent openings must be intact. Drawing attached.
- 1.1.6 Inspect interior dome area of car for loose rust and debris. Rust pitting may be present and is not a basis for car rejection; however, such condition should be reported for future corrective action, as indicated in 1.3.
- 1.1.7 Check general condition of car for obvious defects. If general condition is questionable, contact servicing railroad as well as MTMTS.
- 1.1.8 Check pressure on tank car. Should be at least five PSIG.

#### 1.2 After Product Loading

- 1.2.1 Insure that blind stainless steel flanges on liquid and vapor valves are tightly secured with stainless steel lock-nuts and bolts, four each per valve.
- 1.2.2 Check each valve for leaks (visual inspection).

- 1.2.3 Assure that "Poison Gas" placards are securely applied one to each end and side of car. *Also single placard 1067 - Orange + black*
- 1.2.4 Assure that any spillage has been washed from dome area and sides of car with clear water.
- 1.2.5 Inspection checklists are attached - one for general condition of car and one for loading.
- 1.2.6 Assure shipping papers are placed in dome of car and that dome is sealed.

### 1.3 Inactive Cars

- 1.3.1 Monthly checks for leaks and general condition of cars will be made monthly by the Shipping Department. Records of inspections will be kept on file.

### 1.4 Corrective Actions

- 1.4.1 Cars which do not meet the above indicated criteria will not be loaded nor released for shipment.
- 1.4.2 Corrective actions, where shipping activity is agreeable to performing without reimbursement, will be accomplished at the shipping activity.
- 1.4.3 Written reports of specific deficiencies to specific cars will be submitted to MTMTS, ~~St. Louis Field Office, Attention: MTE-SLO-B, P. O. Box 7829, St. Louis, Mo. 63177.~~ Copy of report to be furnished to SAAMA (SAOT), Kelly AFB, Texas 78241, and ~~DCAS, Concord.~~ The shipping agent is responsible for issuance of these written reports.

MTMTS  
Bayonne, N.J.

## 2.0 Loading of Rail Cars

- 2.1 A storage tank containing  $N_2O_4$  cannot be filled and loaded from at the same time. The operator must, therefore, check to make sure when he is ready to fill a rail car that the  $N_2O_4$  is not being transferred into the storage tank that he plans to load from and he must tag the valves into the storage tank warning other persons not to fill the storage tank or not to open the valves. The tag should state that he is loading from that storage tank and it should have his initials on it. Maintain log record of this indicating time and date.
- 2.2 Connect hoses to valves on rail car for loading purposes. Open appropriate valves and start loading pump.

- 2.3 There is no meter supplied for rail car loading, therefore flow or amount loaded will be gauged by rail car scale and tank level gauge.
- 2.4 Rail cars are to be loaded to an exact weight of 110,000 lbs. Maximum pressure to which a T/C of brown or green  $N_2O_4$  can be loaded is 50 PSIG. A proposed loading form is attached.
- 2.5 After cars are loaded and the after-loading inspection has been completed, the government inspector must approve the car as evidenced by signing DD 250 form before it can be released for shipment.



- 2.6 For shipment, all rail cars shall be tagged with the tag firmly wired to the tank car inside the dome. The tag and markings shall be impervious to climatic conditions and shall contain the following information:

Propellant, nitrogen tetroxide  
Specification MIL-P-26509 C  
Federal Stock No. 9135 - 754- \_\_\_\_\_  
Quantity \_\_\_\_\_  
Contract or Order No. \_\_\_\_\_  
Name of manufacturer \_\_\_\_\_  
Lot identification \_\_\_\_\_  
Date of manufacture \_\_\_\_\_

or

~~Propellant, inhibited nitrogen tetroxide (0.6 to 1.0  
percent nitric oxide)  
Specification MSC-PPD-2C  
Quantity \_\_\_\_\_  
Contract or Order No. \_\_\_\_\_  
Name of manufacturer \_\_\_\_\_  
Lot identification \_\_\_\_\_  
Date of manufacture \_\_\_\_\_  
Federal Stock No. 9135-926-1 \_\_\_\_\_~~

- 2.7 In case of an emergency loading situation, the contractor is required by the contract to begin loading within one (1) hour after notification that an emergency exists. Emergency loading will be on a 24-hour-per-day, 7-days-per-week basis.
- 2.8 The contractor will build up an inventory of 220,000 lbs. of brown nitrogen tetroxide and maintain this minimum inventory during the life of the contract.
- 2.9 Form DD 1089 (Movement of Military Interchange Railroad Cars) must be filled out and sent in for any movement of  $N_2O_4$  T/C's. A copy of DD 1089 is attached.
- 2.10 All weights shown on loading sheets will be actual scale weights and actual tare weights will be used for loading. Marked tares and calculated full weights are not permissible. Recording of weights (actual tare and filled weight) should be reported on a separate loading report for  $N_2O_4$ .

3.0

Sampling of Rail Cars

3.1 Analyses to be performed:

3.1.1 Green  $N_2O_4$

- a. Nitric oxide assay
- b. Nitrogen tetroxide assay
- c. Water equivalent
- d. Chloride as nitrosyl chloride
- e. Particulate

3.1.2 Brown  $N_2O_4$

- a. Nitrogen tetroxide assay
- b. Moisture content
- c. Chloride as nitrosyl chloride
- d. Particulate

3.2 Samples. Two 1 liter samples shall be taken with a sampler for the above sampling tests. For green, one sample will be used for tests (a) through (d) and one sample for (e). For brown, one sample will be used for tests (a) through (c) and one sample for (d).

3.3 A set of samples shall be taken from each tank car.

3.4 Method of taking sample. Connect a 1/4" stainless steel tube approximately 1 1/2' in length to the container (cylinder or tank) dip tube valve. Fit one end of the tube with a 1" to 1 1/2" tee. Fit one leg of the tee with a 1/2" needle valve for purging, and the other leg for connecting to the sampler inlet valve. Attach approximately 5 feet of polyethylene tubing to the purging valve to direct the propellant fumes away from the sampling area. Apply thread tape in accordance with MIL-T-27730 to all thread connections. Wrap the tape under tension starting 3 threads back from the end and in the direction with the male pipe thread helix toward thread run out. Wrap once plus an overlap of 1/2" at thread run out end. Connect the evacuated sampler to the tee at an inclined 45° angle with the inlet valve down. Open the dip-tube valve on the purging valve. Purge until approximately 5 liters of propellant has been removed to clear the dip-tube. Then close the purging valve and open the sampler inlet valve. Open the outlet valve and continue sampling until liquid propellant appears. Close the sampler inlet, outlet, and dip-tube valves. Open the purging valve to clear the sample line and disconnect the sampler.

Checked by \_\_\_\_\_

T/C Inspection - General Condition

Tank Car No. \_\_\_\_\_

Check X  
if C

Comments

I. SAFETY ITEMS

- (1) Ladders, hand-holds, and handrails
- (2) Walkways
- (3) Hand brake, dog, shaft, and cotter key
- (4) Air date on auxiliary reservoir  
(to be done every 4 years).

II. JOURNAL BOXES

- (1) Last repack date (to be packed every 30 mos.)
- (2) Check lubricators

III. RUNNING GEAR

- (1) Axle, wheels, truckside
- (2) Truck springs, truck bolster
- (3) Brake beams, rods, key bolts and cotter keys

IV. BRAKE SHOES

- (1) Should be at least 1/2".

V. MISCELLANEOUS

- (1) Check end bolts (3) on auxiliary reservoir
- (2) Check bolts (4) on pipe bracket
- (3) Check couplings and coupling rods
- (4) Check retainer valve on air system
- (5) Check cross key and cross key retainer
- (6) Check angle cock handle
- (7) Check burst hoses.

VI. OTHER ITEMS

- (1) Verification of "Nitrogen Tetroxide-Nitric Oxide Mixtures, Only" or "Nitrogen Tetroxide Only" stencilled on sides
- (2) Verification that tank has been tested in last 10 years
- (3) Verification that safety valve has been tested in last 5 years
- (4) Verify that placards are in proper order
- (5) Condition of placard holders

INSPECTION CHECK LIST  
NITROGEN TETROXIDE (N<sub>2</sub>O<sub>4</sub>) TANK CAR  
(ARRIVING UNDER LOAD)  
AT RECEIVING ACTIVITIES

Upon Receipt of Car - Prior to Unloading:

1. Verify that "NITROGEN TETROXIDE ONLY" is stencilled on both sides of car in letters not less than four inches high.
2. Verify that tank and safety valves have been retested within required time periods. Tanks must be retested every 10 years. Safety valves must be retested every 5 years. Stencilling on side of car will state dates of last tank and safety valve test.
3. Verify that car is equipped with four stainless steel ball type valves. (two liquid valves and two vapor valves). Valves must be in closed position at all times except during loading/unloading operations.
4. Verify that each valve is secured with a blind flange and four each stainless steel bolts and lock-nuts. Remove blind flange and inspect valve outlets for any evidence of foreign materials or leakage.
5. Assure that safety valve cover (vent stack) is secure (tightened snug only to prevent removal by hand). Disc in cover below vent openings should be intact.
6. Inspect interior dome area of car for excessive rust. This area should be free of loose rust and be clean in appearance. Minor rust pitting may be present and is not a basis for car rejection; however, such condition should be reported for future corrective action.
7. Check car's piping, valves, flanges and welds for evidence of leakage.
8. Check general running condition of each car to assure no apparent defects exist. Check journal packings and add oil to maintain a level of  $\frac{1}{2}$  inch in the journal boxes. If condition of running gear is questionable, contact servicing railroad, requesting car inspection and running gear repair if needed.
9. Cars, regardless if empty or filled, will be moved a minimum of 100 feet each month.

After Unloading - Prior to Release of Car to Railroad:

10. Assure that any spillage has been washed from dome area and sides of car with large quantity of clear water. (Any spillage of N204 on the car should be washed off promptly to prevent corrosion, and staining of car exterior and pitting of dome area).

11. Assure car interior is charged with MIL-P-27401 nitrogen gas to pressure of 10 psig, plus or minus 5 psig, to prevent interior contamination or corrosion.

12. Assure that blind flanges on liquid and vapor valves are tightly secured with stainless steel nuts and bolts, four (4) each per valve.

13. Assure that "POISON GAS" placards are reversed to read "POISON GAS-EMPTY" and securely applied one to each end and each side of car. (Reference Title 49, code of Federal Regulation Parts 100 to 199).

14. Assure car is unloaded to maximum extent possible prior to release; arrange for car to be weighed or use alternative positive method.

Corrective Actions and Reporting Procedures:

1. Corrective actions which receiving activity is agreeable to performing without reimbursement will be accomplished at the receiving activity.

2. Written report of car deficiencies will be submitted to MTMCEA-MTE/INR, Bayonne, NJ 07002. Copy of discrepancy report will be furnished SA-ALC/SFRM, Kelly AFB, TX 78241.

3. Receipt and shipment of each car will be reported to Transportation Officer, SA-ALC/SFRM, Kelly AFB, TX 78241. Telephone (512) 925-6937 Autovon 945-6937 on the date action occurs.

Attachment 8

VICKSBURG CHEMICAL COMPANY

Nitrogen Tetroxide Loading Report

Car No., truck No., or cylinder serial No. \_\_\_\_\_

Stencilled weight on container \_\_\_\_\_

Weight of container and heel \_\_\_\_\_

Heel weight \_\_\_\_\_

Weight before filling \_\_\_\_\_

Weight after filling \_\_\_\_\_

Net loaded weight \_\_\_\_\_

Loader \_\_\_\_\_

Date \_\_\_\_\_

Note: Maximum heel weight for containers:

Cylinders - 50 lbs.

Trucks - 800 lbs.

T/C's - 1200 lbs.



US Department  
of Transportation  
**Research and  
Special Programs  
Administration**

DOT-E 11335  
(SECOND REVISION)

400 Seventh Street S.W.  
Washington D.C. 20590

OCT 17 1995

40 (4)

EXPIRATION DATE: November 1, 1995

(FOR RENEWAL, SEE 49 CFR SECTION 107.105.)

1. GRANTEE: Trinity Industries, Incorporated, Dallas, Texas  
(SEE APPENDIX A OF THIS EXEMPTION)
2. PURPOSE AND LIMITATION: This emergency exemption authorizes the use of non-destructive testing techniques, in lieu of a hydrostatic test, to qualify repairs of DOT Specification tank car tank. This exemption provides no relief from any regulation other than as specifically stated.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: The provisions of 49 CFR Appendix B to Subpart B of Part 107 entitled Packages, Containers, Shipments; and 173.31(c) (9).
5. BASIS. This emergency exemption is based on Trinity Industry, Incorporated's application of October 16, 1995, submitted in accordance with 49 CFR 107.113 and 107.105, and a determination that it is necessary to prevent serious economic loss. (SEE APPENDIX A OF THIS EXEMPTION)
6. HAZARDOUS MATERIALS (49 CFR 172.101): The proper shipping description authorized under the terms of this exemption shall be as specified in 49 CFR Part 172, an exemption issued under 49 CFR Subpart B of Part 107 or as authorized in accordance with 49 CFR 171.12 or 49 CFR 171.12a.
7. PACKAGING(S) and SAFETY CONTROL MEASURES:  
PACKAGING. Tank cars must conform to 49 CFR Parts 173 and 179 and successfully pass the initial hydrostatic test after construction. After passing the initial hydrostatic test, there is no requirement to perform a hydrostatic test to qualify a weld porosity repair if:
  - (a) The depth of a defect, including metal removed during the repair, does not exceed half the required tank thickness;
  - (b) Spacing of the defects may not be closer than that defined as acceptable for subsurface porosity in Appendix W of the Association of American Railroads Specifications for Tank Cars, M-1002; and

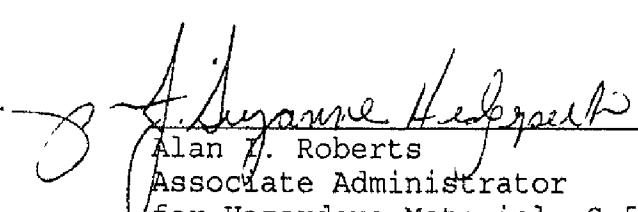
OCT 17 1995

Continuation of 2nd REV DOT E-11335

Page 2

- (c) The integrity of the repair is verified by the use of a nondestructive examination method according to Appendix W of the Association of American Railroads Specifications for Tank Cars, M-1002.
8. SPECIAL PROVISIONS. Persons who receive packages covered by this exemption may reoffer them for transportation provided no modifications or changes are made to the packages, all terms of this exemption are complied with, and a current copy of this exemption is maintained at each facility from which such reoffering occurs.
9. MODES OF TRANSPORTATION AUTHORIZED. Rail freight.
10. MODAL REQUIREMENTS: None
11. COMPLIANCE. Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation laws 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
  - o Registration required by 49 CFR 107.601 et seq., when applicable.
- No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect unless a regulation has been amended making the exemption no longer necessary.
12. REPORTING REQUIREMENTS. The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (49 CFR 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incidents involving the package and shipments made under the terms of this exemption.

Issued at Washington, D.C.:

  
\_\_\_\_\_  
Alan J. Roberts  
Associate Administrator  
for Hazardous Materials Safety

OCT 17 1995

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(DATE)