

STATE OF MINNESOTA
COUNTY OF RAMSEY

BEFORE THE
MINNESOTA COMMISSIONER
OF TRANSPORTATION

In the Matter of Proposed
Rules Relating to Variances
for Tank Motor Vehicles

STATEMENT OF
NEED AND REASONABLENESS

The Commissioner of Transportation, pursuant to Minnesota Statutes, section 221.033, subdivision 3, and Laws 1986, Chapter 398, Article 24, Section 1, presents facts establishing the need for and reasonableness of proposed rules relating to variances for small tank motor vehicles that transport gasoline.

I. Statutory Authority

Minnesota Statutes, section 221.033, subdivision 1, says

Subdivision 1. Requirements. Except as provided in subdivisions 2 and 3, no person may transport or have transported or shipped within the State of Minnesota a hazardous material, hazardous substance, or hazardous waste except in compliance with United States Code, title 49, sections 1801 to 1811 and the provisions of Code of Federal Regulations, title 49, sections 171 to 199.

Subdivision 1 applies to everyone who transports a hazardous material, including people who transport gasoline in small delivery trucks (tank motor vehicles). Transporters of

gasoline must comply with the federal hazardous material regulations that have been incorporated into Minnesota Statutes. Some of those regulations prescribe construction specifications and maintenance requirements for cargo tanks. The incorporated federal regulations that prescribe the cargo tank construction standards are the subject of this rulemaking proceeding. Certain gasoline transporters who have older cargo tanks have found it impossible to comply with the federal regulations that are now incorporated in Minnesota law. To ease the burden on certain transporters, the Legislature, in 1985, enacted Minn. Stat. 221.033, subd. 3, which was then slightly amended in 1986. It says:

Subd. 3. Variance, rules. The commissioner shall adopt rules which provide a procedure for granting a variance from those regulations adopted under subdivision 1 which prescribe specifications for tank motor vehicles used to transport gasoline. The variance may be granted only for tank motor vehicles with a capacity of 3,000 gallons or less which are used to transport gasoline and were designed and manufactured between 1950 and 1975 to transport petroleum products. The commissioner shall prescribe alternative requirements to assure the safety of the tank motor vehicles operated under the variance, and shall register each tank motor vehicle operated under the variance.

The commissioner of transportation is, therefore, required to adopt rules granting a variance from the federal construction specifications. Subdivision 3 specifies the type of tank motor vehicles that are eligible for the variance and requires that alternative safety measures be prescribed. The statute also requires the commissioner to register each tank motor vehicle operating under a variance.

II. Meaning of Terms

In this document, "cargo tank" means a tank that is attached to a motor vehicle, is loaded or unloaded without being removed from the motor vehicle, and is designed to carry bulk liquids. "Tank motor vehicle" means the motor vehicle to which a cargo tank is attached. "For-hire" means a carrier by motor vehicle who transports property for others for compensation. "Private carrier" means a person who transports property by motor vehicle within the scope of, and in furtherance of his own primary business, for example, a person who delivers something that he makes or sells. "Small" means, generally, a cargo tank with a capacity of 3,000 gallons or less. The proposed rules will apply to both for-hire and private transporters of gasoline who use small tank motor vehicles.

III. Statement of Compliance with Chapter 14

The department published a Notice of Intent to Solicit Outside Information on November 11, 1985. The department received no letters in response.

The rules do not impose a fee, do not impose "costs mandated by the state" as defined in Minn. Stat. section 3.981, subdivision 2, and do not require the expenditure of money by local public bodies. There is no effect on agricultural land. The statement of the effect of these rules on small businesses, as defined in Minn. Stat. section 14.115 is at the end of this document.

IV. Need and Reasonableness - General

Minnesota adopted the Federal Hazardous Material Regulations, 49 C.F.R. Parts 1-99 (now numbered Parts 100-199) as revised January 1, 1970, in 1970. Until 1970, Minnesota prescribed only general rules for the construction of tank motor vehicles. In 1952, the Railroad and Warehouse Commission, which regulated for-hire commercial trucking among other things, adopted rules governing the construction of petroleum transports, trucks used to haul petroleum products for-hire in quantities exceeding 2000 gallons. Rule RWC 447 required petroleum transports to be constructed "in accordance with the best known and usual practices and with such material to withstand road shocks ... shall be bulkhead or baffled ... equipped with proper tank vents", threaded valves and faucets. Remote emergency valves for shutting off the flow of petroleum out of the tank were required, as were other similar safety devices. In 1960, the Railroad and Warehouse Commission included a very similar rule, 9050(a), in the compilation of its regulations. That rule was

slightly amended in 1967 by the Minnesota Public Service Commission (PSC), the agency to which the duties of the Railroad and Warehouse Commission had been transferred. That rule, renumbered PSC 4(f) was readopted by the Public Service Commission in 1968.

In 1970, the PSC adopted PSC 5 Safety, a rule that incorporated the Federal Hazardous Material Regulations of the Federal Highway Administration, U.S. Department of Transportation into the Minnesota rules. The original Railroad and Warehouse Commission rule on petroleum transport construction was also retained. PSC 5, adopting the federal regulations, was amended in 1974 and 1977 in order to amend the revision date of the federal regulations. PSC 5 is now coded Minnesota Rule 7800.4500.

After 1970, all tank motor vehicles that were used in for-hire transportation service in Minnesota were required to comply with the federal specifications. In 1980, by Laws 1980, Chapter 465, Section 1, effective April 4, 1980, private carriers who were manufacturers, producers, dealers, or distributors were made subject to the driver qualification and safety rules that applied to the for-hire carriers. The safety rules arguably included the incorporated federal regulations that applied to the transportation of petroleum. In 1983, by Laws 1983, Chapter 371, Section 22, the federal hazardous material regulations were incorporated by reference in

Minnesota Statutes and applied to every person transporting a hazardous material in Minnesota. That law became effective on June 15, 1983, and from that date, it is clear that the hazardous material regulations for tank motor vehicle construction apply to all private, as well as for-hire carriers. Thus, intrastate for-hire carriers of gasoline have been subject to the incorporated federal cargo tank construction specifications since 1970, but all private carriers of gasoline have been subject to those rules only since 1980 or 1983, depending on one's interpretation of Laws 1980, Ch. 465.

Gasoline is a hazardous material and is classified by the U.S. Secretary of Transportation as a flammable liquid. See 49 C.F.R. Part 172.101. The table in Part 172.101 refers to 49 C.F.R. Part 173.119 as the source for packaging requirements for gasoline. Section 173.33 requires every cargo tank used to transport hazardous materials to be an authorized packaging. 49 C.F.R. Part 173.119(a)(17) prescribes the specifications for tank motor vehicles used to carry flammable liquids that have a flash point of 20°F or below. This includes gasoline, which has a flashpoint of -45°F. Paragraph (17) of Part 173.119(a) describes the codes for cargo tank specifications that were developed and adopted by the U.S. D.O.T. These codes prescribe the design and construction specifications for tanks that may be used to transport flammable liquids. The federal

regulations and specifications do not provide any alternative to or exemption from those regulations that would allow the nonconforming cargo tanks to continue to be used legally on the highways. In some cases, older tanks may have been constructed according to the specifications in effect at that time, but no manufacturer's certificate was obtained then. Now the manufacturer may be out of business, the tank may have been modified, or it may not be possible to find records of the tank construction. In those cases no certification as to compliance with specifications can be obtained and therefore, the tank is nonconforming. 49 C.F.R. Part 178.340-10 requires all tanks to bear a metal certification plate that is affixed by the manufacturer and shows that the tank was constructed according to federal specifications.

However, the federal regulations do allow other tanks that fail to meet current specifications to be used to transport other kinds of hazardous materials if they meet alternative safety requirements. For example, see 49 C.F.R. Part 173.315(k)(1)-(8), which prescribes alternative requirements for the transportation of liquified petroleum gas.

The federal regulations prescribing specifications for gasoline cargo tanks used in interstate commerce have been in effect since the 1940's. Until they were adopted by reference in Minnesota, they applied only to tank motor vehicles used in interstate commerce. As a result, tank motor vehicles used in

interstate transportation have been constructed according to federal specifications for many years. The U.S. D.O.T. sees no need for it to adopt an alternative regulation for nonconforming gasoline cargo tanks, because tanks now used in interstate commerce were manufactured after the federal government adopted the cargo tank specification regulations. As Minnesota didn't adopt the federal regulations until 1970, those specifications didn't apply to for-hire tank motor vehicles used solely in Minnesota intrastate commerce until 1970, and to all private tank motor vehicles until 1983. Many of the vehicles manufactured and used in Minnesota prior to those dates are still on the road, and, technically, are illegal.

The Materials Transportation Bureau of the Research and Special Programs Administration of the U.S. D.O.T. has authority under federal law and regulations to grant exemptions from the hazardous material regulations when the applicant transports the materials in a manner that the U.S. Secretary of Transportation determines will provide a level of safety equal to or greater than the level of safety that would be required in the absence of the exemption. The Federal Highway Administration issued a memo in August, 1984, (copy attached, Exhibit A) in which it explained that the Materials Transportation Bureau would not amend the federal regulations to "grandfather" gasoline cargo tanks that fail to meet the

specifications because the cargo tanks used to transport gasoline may have been manufactured to a multitude of varying specifications with no consensus national standard and because the cargo tanks in question are prohibited in interstate commerce and are used only in intrastate transportation. The memo stated "it is felt that as States adopt the HMR (Hazardous Material Regulations), they should provide appropriate grandfather provisions or should develop an exemption type process in order to address this type of operation and subsequent compliance difficulties." Therefore U.S. D.O.T. has suggested that if Minnesota has a local problem with nonconforming cargo tanks, Mn/DOT should develop its own exemption or variance procedure for the noncomplying vehicles used in intrastate commerce. This subject was discussed on the telephone with U.S. D.O.T. employees in the Office of Hazardous Material Regulations in March and April 1985¹.

It has been estimated that there are from 4,000 to 5,000 small, cargo tank motor vehicles in Minnesota. Some are used to transport fuel oil and are not subject to the construction specifications. Some were constructed according to the specifications. No one knows exactly how many are nonconforming, but it has been estimated that 1,000 to 1,500 are nonconforming². All the tanks that transport gasoline are subject to the federal hazardous material transportation regulations incorporated in Minn. Stat. section 221.033,

subdivision 1. In the last two years, enforcement of the federal regulations has increased greatly due to public concern about hazardous materials transportation, federal encouragement of local enforcement, funding of state employees known as hazardous material specialists, and the training of local law enforcement personnel. Thus, transporters using cargo tank motor vehicles that don't comply with the incorporated federal regulations have been warned that their older vehicles are illegal under the regulations.

Some of the Minnesota companies that make and repair cargo tanks have estimated that it would cost from a few hundred dollars for very minor modifications, up to \$6,000 per cargo tank for major modifications to make the tank vehicles comply with the construction regulations³. Because of the potentially large cost of modifying or replacing vehicles, the transporters have asked the Minnesota Department of Transportation to find some way to allow them to continue using the older trucks in intrastate commerce when it can be determined that the older nonconforming trucks present no hazard to the public.

The department proposes to grant a variance to transporters who own certain older cargo tank motor vehicles upon their submitting evidence of the generally safe operating condition of the vehicles. The variance will excuse the owner from being required to modify the cargo tank to meet current requirements. This is an acceptable solution because 1) the object of the

tank construction specifications can be met by imposing less costly, alternative requirements and 2) the federal government has made similar exceptions for trucks like these that are engaged in interstate commerce. In addition, the state wishes to have rules that are uniform with the federal regulations. Therefore it will retain the federal rule, but will grant variances from compliance for tank operators whose tank can meet certain alternative rules. To assure that the cargo tanks are safe, the state will substitute the less onerous inspection requirements for the burden of reconstructing the cargo tanks.

A literature search has revealed no publication that discusses the safety of small, noncomplying cargo tanks. They are regarded as safe as long as they are regularly and thoroughly inspected and any leaks or defects are corrected. This attitude is exemplified by the U.S. D.O.T. memo attached as Exhibit A. The Interstate Commerce Commission, the predecessor of the U.S. D.O.T. in this activity, grandfathered older cargo tanks constructed to earlier specifications when it replaced the old specifications with new ones in 1967⁴.

V. Part by Part Analysis of Proposed Rules Relating to Variances for Tank Motor Vehicles

Part 8860.0100 Definitions

The definitions are needed to provide a shorthand reference.

The definition of "cargo tank" is needed to explain what a cargo tank is. It is the definition in the Code of Federal Regulations, title 49, section 171.8, revised as of November 1, 1985. This definition was adopted in Minn. Stat. 221.033, subdivision 1, in the incorporation by reference of the federal hazardous material regulations.

"Commissioner" is defined to identify the person authorized by the Legislature to grant the variances. Applicants must know to whom they must submit variance applications.

The phrase "tank motor vehicle" is used in section 221.033, subd. 3 to describe the kind of vehicles for which a variance may be sought. It is defined according to its commonly understood meaning.

8860.0200 Scope; Incorporation

Part 8860.0200 tells what tank motor vehicles the rules apply to. The rules will limit the availability of the variance to vehicles that transport gasoline. This restriction is in the authorizing legislation. No other hazardous material is transported as frequently as gasoline. The transportation of fuel oil in small cargo tank motor vehicles is already excepted from compliance with the federal regulations under 49 C.F.R. Part 173.118a, revised as of November 1, 1985.

The authorizing statute restricts the variance to the transportation of gasoline in tank motor vehicles with a

capacity of 3,000 gallons or less that were manufactured between 1950 and 1975. These limitations are restated for consistency and completeness. In addition, the rule restricts the variance to vehicles used only in intrastate commerce. The state cannot grant a variance to a vehicle engaged in interstate commerce because it does not have jurisdiction to do so. Those vehicles are subject to the regulations as adopted by the U.S. Department of Transportation. Finally, the rule states the specific sections of the incorporated federal regulations that prescribe specifications for the construction of cargo tanks used to transport gasoline. Transporters must know exactly which sections of the regulations apply to the construction of gasoline cargo tanks so that they can determine whether their vehicles comply with the regulations. A variance may be granted for cargo tanks that do not comply with construction or certification specifications but not for any other lack of compliance.

The rule also specifies that a cargo tank that lacks the required metal certification plate does not comply with the specifications. This needs to be stated because most people probably don't think of a certification plate as a construction specification. The certification plate is a small metal plate that is permanently attached to the cargo tank. It contains the manufacturer's certification that the tank has been designed, constructed and tested in accordance with the federal

specifications for cargo tanks. See 49 C.F.R. Part 178.340-10(b), revised as of November 1, 1985. If a tank lacks a certification plate, it does not comply with the regulation, one can't be sure that it was made according to the specifications and therefore, one can't be sure that it is safe. A reasonable way to attempt to assure the safety of a tank that has no certification plate is to require the owner of the tank to apply for a variance. Before a variance can be granted, the tank must be inspected for defects, leaks, compliance with motor carrier safety equipment regulations, and proper operation of emergency devices and valves. This offers an opportunity to determine whether a cargo tank is safe.

8860.0300 General Requirements

This part states outright the requirement that is implicit in the statute: a person must comply with the federal hazardous material regulations or must obtain the variance provided in section 221.033, subd. 3. This makes the requirement plain.

8860.0400 Procedural Requirements

This part requires the commissioner to grant a variance to the owner of a tank motor vehicle when the owner meets the eligibility criteria of the statute and the rule. The commissioner does not have discretion to refuse to grant the variance if the applicant complies with the law and rule. This assures that all applicants will be treated fairly and equally.

An applicant must submit an application for each tank motor vehicle, so that each cargo tank may be evaluated individually to determine that it satisfies the inspection requirements. The application form also serves as a registration form. Registration will allow the commissioner to keep track of the nonconforming cargo tanks being used in intrastate commerce. Now, no one knows how many of those tanks are still being used. Registration is a reasonable way of determining the continuing need for the granting of variances. Eventually, all the tanks made before 1975 will become obsolete and the rule can be repealed. Registration also provides a way of recording compliance with the inspection and application procedure in case the owner loses his copy of the variance or does not transfer it when he leases or sells the vehicle.

Item B requires the applicant to certify that the tank has been inspected visually within the past two years. This means that a person who is qualified to judge the condition of cargo tanks must examine the tank to see if it has corroded areas, bad dents, defects in welds, defects in piping, valves and gaskets, or other conditions, including leakage that might make the tank unsafe. This procedure is necessary to make sure that the tank can safely contain the cargo. It is especially important because of the uncertainty about the standards under which the tank was manufactured. The requirement is a reasonable one because it duplicates the federal requirement imposed on

similar nonconforming cargo tanks⁵ and because the visual inspection is the least expensive and least time consuming kind of inspection. The cost of a visual inspection has been estimated at \$75.00-\$100.00 by one local tank manufacturer and from \$60.00-\$75.00 by another⁶. The federal regulation says that the inspection must be made by a "responsible and experienced inspector", but it doesn't define those who qualify. That requirement is generally understood in the industry to include cargo tank manufacturers, owners, mechanics and sometimes, drivers who are familiar with tank construction and maintenance.

49 C.F.R. Part 171.16, requires that any "unintentional release of hazardous materials from a package (including a tank)" during transportation in interstate commerce, must be reported to U.S. D.O.T. The records maintained by U.S. D.O.T.'s Hazardous Materials Information System show that from January 1976 to January 1986, interstate motor carriers of gasoline aren't transported using tanks under 3000 gallons reported 201 package failures, i.e. the failure of the tank body, valves, fittings, closures, hoses to retain the cargo⁷. Of these, only 2 occurred in Minnesota. Minnesota law did not require the filing of those kinds of reports until 1984, so there are no comparable state statistics showing package failure for intrastate gasoline transporters.

Item C requires the applicant to certify that a tank has been hydrostatically or pneumatically tested when the tank is one

described in part 8860.0500. A hydrostatic or pneumatic test requires the tank to be filled with water or air and pressurized to determine whether the tank can retain the test pressure without leakage, undue distortion, excessive permanent expansion, or evidence of impending failure. The test pressures and the test procedures are prescribed by federal regulation. See 49 C.F.R. Part 177.824(d) revised as of November 1, 1985. All tank valves, piping and accessories that will be in contact with the contents of the tank must also be pressure tested. The purpose of testing a tank with water or air pressure is to see if it has structural defects that are not apparent.

One local tank manufacturer estimates that a hydrostatic test would cost from \$350.00 to \$500.00 depending on the number of compartments in the tank and that a pneumatic test would cost about \$400.00. Another local manufacturer has estimated the cost of a pneumatic test at \$500.00 to \$900.00.⁸

One of these tests would be required only in the situations described in part 8860.0500. They are required only when there is a possibility that the tank may not perform safely. Items A-C are retained from the federal regulations. These requirements are incorporated by reference in Minn. Stat. section 221.033, subd. 1. These are reasonable requirements because they only apply subsequent to the occurrence of some other event that may have reduced the safety of the tank. In

those cases, the burden and expense of conducting a pneumatic or hydrostatic test is small compared to the potentially severe consequences that would follow if a tank leaked or ruptured when it was being used to transport gasoline on the highway.

8860.0600 Application for Variance

The information on the variance application is needed so that the applicant and the cargo tank can be identified. The commissioner must know to whom he grants a variance. Only a minimal amount of information is being requested. The cargo tank information is needed so that the commissioner can make sure that the cargo tank is eligible for the variance. This requires asking for the date of manufacture, the capacity, and whether the tank has been visually inspected within the preceding two years. The serial number and the name of the manufacturer are requested so that each tank can be identified and distinguished from other tanks. The name of the operator or lessee must be known so that the commissioner will know who has possession of the tank. Cargo tank vehicles are often leased and operated by someone other than the owner.

All trucks are subject to inspection on the road. When one of these tank vehicles is stopped, it will be apparent that it doesn't comply with the federal cargo tank specifications, because it won't bear the required metal certification plate. The driver will then be asked to produce a copy of the

variance. In the case of a leased vehicle, the driver may not have the written variance with him because it was issued to the owner. If the department has a record of the lease of the vehicle, it will be able to establish that a variance was granted for that vehicle and can forego issuing a ticket.

8860.0700 Commissioner's Duties

This part requires the commissioner to grant or deny the variance within 30 days of receiving the application. This is a reasonable length of time. It allows the commissioner time to investigate the application, if necessary, and to determine the accuracy of the information. It also assures applicants that they will have to wait only a short time for the variance. Minn. Stat. 14.05, subd. 4 requires an agency to set forth in writing its reasons for granting or denying a variance.

Subpart 1 complies with that requirement. The application may be resubmitted so that an applicant whose cargo tank fails to qualify may have it repaired or re-inspected and may resubmit the application.

Subpart 2 makes a variance effective for the life of the cargo tank unless the tank fails to comply with the testing and marking requirements. This relieves both the commissioner and the tank owner of the burden of renewing the variance. In order to assure the safety of the public, the commissioner must revoke the variance if the cargo tank fails to comply with the

visual inspection requirements. To provide due process for the variance holder, the commissioner will hold a contested case hearing under Minn. Stat. Chapter 14 before revoking a variance. This is necessary because it is a constitutional requirement. Minn. Stat. Section 14.57 requires an agency to initiate a contested case hearing when one is required by law.

8860.0800 Additional Requirements

Subpart 1 requires a person who sells a tank motor vehicle operating under a variance to report the sale to the commissioner. This is necessary because the variance goes with the tank. The commissioner needs to know who the tank belongs to so that he will know who is responsible for the inspection and maintenance of the cargo tank. This is a reasonable requirement because it imposes only a very limited notification requirement on the owner. The notification can take the form of a letter.

The variance must be carried in the vehicle so that law enforcement personnel who stop the vehicle for inspection will be able to see that the vehicle is excused from compliance with the cargo tank construction specifications. This requirement protects the vehicle operator from being ticketed by mistake for noncompliance with tank specifications. It also enables law enforcement officers to identify cargo tanks that do not comply with the specifications but have not been granted a

variance. This requirement places no burden on the driver. Once the variance is placed in the truck no further contact with the department is necessary as long as the cargo tank is inspected as required.

Subpart 3 requires that every tank motor vehicle operated under the variance must be inspected visually every two years. This is needed to assure that the tank is safe. Because, the cargo tanks described in these rules were not constructed according to the specifications, some method is needed to ascertain whether the tank is safe. The periodic inspection that the department proposes to require would provide a minimum level of safety by assuring that the tank, pipes, fittings, closures and the valves are closely examined for defects and corrosion on a regular basis.

Small Business Considerations

The principal users of small gasoline cargo tanks are petroleum distributors (see footnote 1). Most of the distributors are small businesses within the definition of Minn. Stat. section 14.115. These rules are being proposed to reduce the burden on small petroleum distribution businesses. Under current rules, the persons using small cargo tanks to transport gasoline in intrastate commerce must operate tanks that comply with the federal cargo tank construction specifications or must stop using the vehicles. Because Minnesota adopted the federal

regulations for application to for-hire carriers only in 1970, and because cargo tanks are used for many years, there are many old tank vehicles in service. These tanks are illegal. Tank manufacturing companies have estimated that it could cost up to \$6,000 per cargo tank, depending on the condition of the tank, to bring it into compliance. Therefore the department proposes to adopt a variance procedure to allow those cargo tanks to be used legally, despite noncompliance with current specifications if they meet less burdensome, alternative requirements. These rules will reduce the burden of the current hazardous material regulations on small businesses.

These rules establish minimal reporting requirements. Only one application and registration must be made. If the tank owner sells the tank, he must report the buyer's name. Otherwise the single registration is effective for as long as the tank is in service. A sale of a tank must be reported within 30 days. That is the only reporting requirement after the variance is granted. The department has developed a one page form that requests the information prescribed in proposed Parts 8860.0400 and 8860.0600 for reporting the results of the inspection that is necessary in order to qualify to receive a variance. That one form also serves as a registration form, thus simplifying the reporting requirement.

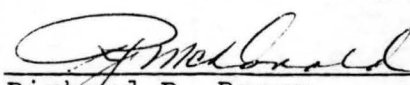
There are no schedules or deadlines for compliance apart from the fact that compliance is required after the effective date of the rules.

These rules establish performance standards that replace the design standards in the current regulation.

We cannot exempt small businesses from compliance with these rules because these rules replace more burdensome rules and create exceptions for small businesses.

Although these rules aid small businesses, they also benefit businesses that are larger than businesses defined as small businesses in Minn. Stat. 14.115, subd. 1.

July 18, 1986
Date


for Richard P. Braun
Commissioner
Minnesota Department of Transportation

Footnotes

1. Conversation with Joseph Horning, Chief, Division of Exemptions and Approvals, U.S. D.O.T., March 26, 1985; Thomas Holian, Attorney, Federal Highway Administration, U.S. D.O.T., March 21, 1985 and April 4, 1985.
2. Estimate of Bob Krogman, Assistant to Executive Director, Northwest Petroleum Association, an organization of distributors of petroleum. The members are the main users of the tanks subject to these rules.
3. See letters sent to Bob Krogman, attached as exhibits B, C, and D. These letters were sent to the Department of Transportation at the request of Mr. Krogman after the Legislature directed the department to write rules for variances.
4. See 32 Federal Register 3452 (March 2, 1967), Amendments to 49 C.F.R. Parts 71-90.
5. See 49 C.F.R. 173.315(k).
6. Telephone conversations with Jim Determan, Determan Welding & Tank Service, Inc. Minneapolis, MN., week of July 14, 1986; G.N. Orth, L. P. Products Manager, Arrow Tank and Engineering Co., Minneapolis, MN., June 19 and July 14, 1986.

7. Computer printout supplied by Kevin M. Coburn, Technical Associate, Research and Special Programs Administration, Office of Hazardous Materials Transportation, U.S. D.O.T.
8. See footnote 6.



U.S. Department
of Transportation

Federal Highway
Administration

Memorandum

EXHIBIT A

Subject Interpretation Follow-up

Date 8 15 1984

From: Director, Bureau of Motor Carrier Safety
Washington, D.C. 20590

Reply to
Attn of HMC-23

To: Mr. John O. Hibbs
Regional Federal Highway Administrator
HMC-05 Homewood, Illinois

This is in response to a memorandum of July 25 from Mr. Wesley A. Bridwell, Director, Office of Motor Carrier and Highway Safety, requesting a follow-up on two previous memoranda.

The first memorandum was in regard to the use of nonspecification cargo tanks, in intrastate transportation of hazardous materials, which become in violation of the Hazardous Materials Regulations (HMR) due to State adoption of the HMR.

At this time, the Materials Transportation Bureau (MTB) does not expect to provide a grandfather clause for this type of operation within the HMR. It is felt that as States adopt the HMR, they should provide appropriate grandfather provisions or should develop an exemption type process in order to address this type of operation and subsequent compliance difficulties. Further, the situation involving the use of gasoline cargo tanks is dissimilar to that encountered with cargo tanks used to transport propane or anhydrous ammonia. The cargo tanks used for anhydrous ammonia and propane were manufactured in accordance with the ASME Code specifications. Unfortunately, the cargo tanks used to transport gasoline may have been manufactured to a multitude of varying specifications with no consensus national standard. Therefore, a general grandfather clause on a national level would be difficult to achieve.

Enforcement decisions regarding the applicability of the HMR to intrastate transportation of hazardous materials must be made by the individual States. Operations which are involved in interstate transportation are, of course, subject to the HMR.

The second memorandum dealt with the situation involving the mixing of different materials in a cargo tank, one of which is nonregulated, but when mixed could cause a dangerous evolution of heat and fire potential.

The MTB is in the process of developing a notice to be published in the Federal Register regarding this type of situation. However, to date no specific expected publication date has been assigned to this project. As soon as the notice is published, we will provide information to you regarding its contents.

Kenneth L. Pierson
for Kenneth L. Pierson

FINVA, BACS

AUG 17 1984



EXHIBIT 3

DETERMAN WELDING & TANK SERVICE, INC.

1241 72nd Ave. N.E., Minneapolis, Minnesota 55432

(612) 571-8110

August 13, 1985

Northwest Petroleum Association
2345 Rice St. Suite 173
St. Paul, MN. 55113

Attention: Bob

Dear Sir,

Regarding the draft for a variance for tank wagons not meeting MC306 specifications:

Subd 3 variance rules and subpart 1-C should read, "was manufactured between 1950 and 1975 according to sound engineering and construction practices of that time period." The draft states that tank wagons should have had to be manufactured to A.S.M.E. specifications. This specification is for boiler and pressure vessels only (see Federal regulations 49, part 178.340-3).

In answer to your questions #1 & 2:

Work required to bring a truck tank up to MC306 specifications can vary greatly. In some instances, all that is required is installing pads between the tank shell and ladder brackets and reinforcing the rear bumper, approximate cost \$300 to \$400. Other truck tanks may need emergency valves, emergency valve operator and emergency shutoff cable installed, approximate cost \$1500 to \$2000. Some truck tanks can be so badly rusted that metal sections of the tank itself must be replaced. This work along with the above mentioned improvements can bring the total cost to approximately \$3500.00 to \$6000.00, when painting is included.

Please call if we can be of further service.

Sincerely,

Garth Gillett
Sales Manager

GG/ks



Subd. 3. [VARIANCE, RULES.] The commissioner shall adopt rules which provide a procedure for granting a variance from those regulations adopted under subdivision 1 which prescribe specifications for tank motor vehicles used to transport gasoline. The variance may be granted only to persons who transport gasoline in tank motor vehicles with a capacity of ,000 gallons or less which were manufactured between 1950 and 1975 according to American society of mechanical engineers specifications in effect at the time of manufacture. The commissioner shall prescribe alternative requirements to assure the safety of the tank motor vehicles operated under the variance, and shall register each tank motor vehicle operated under the variance.

DRAFT 7-15-85

Chapter 8860

8860.0100 Definitions

8860.0200 Application.

Subpart 1. The rules in parts _____ to _____ apply to a cargo tank that:

- A. Transports only gasoline;
- B. Has a capacity of 3000 gallons or less;
- C. Was manufactured between 1950 and 1975 according to the specifications of the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code that was in effect when the cargo tank was manufactured;
- D. Is used only in intrastate transportation; and
- E. Fails to comply with cargo tank specifications in Code of Federal Regulations, title 49, parts 178.340 and 178.341, as amended through November 1, 1984, in the following ways:

(1) lacks a metal certification plate required by Code of Federal Regulations, title 49, part 178.340-10 (a) and (b), as amended through November 1, 1984;

(2) lacks a manufacturer's certificate required by Code of Federal Regulation§ title 49, part 178.340-10 (c) as amended through November 1, 1984;

(3) fails to meet dome cover requirements described in Code of Federal Regulations, title 49, part 178.341-3;

(4) lacks self closing shutoff valves and remote shut off devices described in Code of Federal Regulations, title 49, parts 178.340-8 (d) and 178.341-5, as amended through November 1, 1984; or

turer shall furnish the owner with all certificates, as well as the documents required by paragraph (a) of the section.

(c) The owner shall retain the data report, certificates, and related papers throughout his ownership of the cargo tank. In the event of change of ownership, the prior owner shall retain non-fading photographically reproduced copies of these documents for at least one year. Each operator using the cargo tank vehicle, if not the owner thereof, shall obtain a copy of the data report and the certificate or certificates and retain them during the time he uses the cargo tank and for at least one year thereafter.

(Approved by the Office of Management and Budget under control number 2137-07)

Amdt. 178-77, 48 FR 27707 and 27713, June 16, 1983]

§ 178.340 General design and construction requirements applicable to specifications MC 306 (§ 178.341), MC 307 (§ 178.342), and MC 312 (§ 178.343) cargo tanks.

[Order 73, 32 FR 3459, Mar. 2, 1967. Redesignated at 32 FR 5606, Apr. 5, 1967]

§ 178.340-1 Specification requirements for MC 306, MC 307, and MC 312 cargo tanks.

(a) Specifications MC 306, MC 307, and MC 312 cargo tanks constructed on or after December 1, 1967, for the bulk transportation of hazardous materials must meet the requirements contained in this section in addition to the requirements of each applicable specification as contained in § 178.341 (MC 306), § 178.342 (MC 307), and § 178.343 (MC 312).

(b) All of these specification requirements are minimum requirements.

[Order 73, 32 FR 3459, Mar. 2, 1967. Redesignated at 32 FR 5606, Apr. 5, 1967]

§ 178.340-2 General requirements.

(a) Every cargo tank and vessel shall be designed and constructed in accordance with the best known and available practices in addition to the other applicable cargo tank specification requirements.

(b) Those requirements relating to parts and accessories applicable to all motor vehicles engaged in interstate commerce as contained in Part 393 of the Motor Carrier Safety Regulations of this title are an integral part of this specification.

(c) Where applicable the additional requirements prescribed in Part 173 of this chapter to accommodate specific commodities are considered an integral part of these specifications.

(d) Multipurpose cargo tank:

(1) A single cargo tank may be divided into compartments of different specification construction. Each such compartment shall conform to specification requirements concerned.

(2) A single cargo tank may be physically altered to comply with another cargo tank specification in the regulations in this part; or altered to accommodate a commodity not requiring a DOT specification tank.

[Order 73, 32 FR 3459, Mar. 2, 1967. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 178-21, 36 FR 18469, Sept. 15, 1971; Amdt. 178-64, 45 FR 81573, Dec. 11, 1980]

§ 178.340-3 Material.

(a) All sheet and plate material for shell, heads, bulkheads and baffles for cargo tanks which are not required to be constructed in accordance with the American Society of Mechanical Engineers' Bollex and Pressure Vessel Code shall meet the following minimum applicable requirements:

(1) Aluminum Alloys (AL). Only aluminum alloy material suitable for fusion welding and in compliance with one of the following ASTM specifications shall be used:

ASTM B-209 Alloy 5052.
ASTM B-209 Alloy 5086.
ASTM B-209 Alloy 5154.
ASTM B-209 Alloy 5254.
ASTM B-209 Alloy 5454.
ASTM B-209 Alloy 5652.

All heads, bulkheads, baffles, and rings stiffeners may use O temper (annealed) or stronger tempers. All shells shall be made of materials with properties equivalent to H32 or H34 tempers, except that lower ultimate strength tempers may be used if the minimum shell thicknesses in Table II

in § 178.341-2, § 178.342-2, or § 178.343-2 are increased in inverse proportion to the lesser ultimate strength.

(2) Steel.

| | Mild steel (MS) | High strength low alloy steel (HSLA) | Austenitic stainless steel (SS) |
|--|-----------------|--------------------------------------|---------------------------------|
| Yield point, p.s.i..... | 25,000 | 45,000 | 25,000 |
| Ultimate strength, p.s.i..... | 45,000 | 60,000 | 70,000 |
| Elongation, 2-inch samples, percent..... | 20 | 25 | 30 |

[Order 73, 32 FR 3460, Mar. 2, 1967. Redesignated at 32 FR 5606, Apr. 5, 1967]

§ 178.340-4 Structural integrity.

(a) Maximum stress values. The maximum calculated stress value must not exceed 20 percent of the minimum ultimate strength of the material as authorized in § 178.340-3, except when ASME Code pressure vessel design requirements apply.

(b) Loadings. Cargo tanks shall be provided with additional structural elements as necessary to prevent resulting stresses in excess of those permitted in paragraph (a) of this section. Consideration shall be given to forces imposed by each of the following loads individually, and where applicable a vector, summation of any combination thereof:

(1) Dynamic loading under all product load configurations.

(2) Internal pressure.

(3) Superimposed loads such as operating equipment, insulation, linings, hose tubes, cabinets, and piping.

(4) Reactions of supporting lugs and saddles or other supports.

(5) Effect of temperature gradients resulting from product and ambient temperature extremes. Thermal coefficients of dissimilar materials where used should be accommodated.

[Order 73, 32 FR 3460, Mar. 2, 1967. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 178-7, 34 FR 18251, Nov. 14, 1969]

§ 178.340-5 Joints.

(a) Method of joining. All joints between tank shells, heads, baffles (or baffle attaching rings), and bulkheads

shall be welded in accordance with requirements contained in this section.

(b) Strength of joints (Aluminum Alloy (AL)). All welded aluminum joints shall be made in accordance with recognized good practice, and the efficiency of a joint shall be not less than 85 percent of the proper strength of the adjacent material. Aluminum alloys shall be joined by an inert arc welding process using aluminum magnesium type of filler metals are consistent with the material manufacturer's recommendations.

(c) Strength of joints (Mild Steel (MS), High Strength Low Alloy (HSLA), Austenitic Stainless Steel (SS)). Joints shall be welded in accordance with recognized good practice and the efficiency of any joint shall be not less than 85 percent of the minimum mechanical properties of the adjacent material in the tank.

(1) Combinations of mild steel, high strength low alloy (HSLA) or austenitic stainless steel (SS) shall be used in the construction of a cargo tank, provided that each material where used, shall comply with the minimum requirements specified in § 178.340-3(a) for the material used in the construction of that section of the tank. Whenever stainless steel is used in combination with other types of steel, joints may be welded shall be formed by the use of stainless steel electrodes or filler rods and the stainless steel electrode filler rods used in the welding shall be suitable for use with the grade of stainless steel concerned, according to the recommendations of the manufacturer of the stainless steel electrode or filler rods.

(d) Compliance test. Compliance with the requirements contained in paragraph (b) or (c) of this section shall be demonstrated by the welded joints indicated in paragraph (a) of this section shall be determined by preparing from material representative of those to be used in the tanks subject to this specification by the same technique of fabricating two test specimens conforming to the figure as shown below and testing them to failure in tension. One pair of test specimens may represent all joints to be made of the same combination of materials by the same

EXHIBIT C

Lange Tank & Maintenance, Inc.

682 39th Ave. N.E. Minneapolis, MN 55421 612/788-1669

Sales, Service, & Repair - Petroleum & LP Equipment

August 19, 1985

Bob Krogman
Northwest Petroleum Assoc.
2345 Rice St., Suite 173
St. Paul, MN 55113

Dear Bob:

In response to your letter of August 7th regarding the variance sought for non-spec tankwagons, Lange Tank is pleased to offer the following information as requested.

The truck tank manufacturer facility involved with DOT modification would have to perform the following functions to assure compliance to MC 306.

1. Check appurtenances (grab handles, steps, etc.) and pad those areas in accordance with specifications
2. Modify bumper
3. Install emergency valves if not so equipped complete with fusible protection and remote trip
4. Install manways and proper venting capacity
5. Check roll over protection and modify if required
6. Check material thickness on head and shell
7. Hydrostatic testing of all compartments
8. Provide metal certification plate permanently affixed to tank
9. Provide manufacturer's certificate of compliance
10. Check tank supports and anchoring devices (tank frame and U bolts)
11. Check working pressure of hose and fittings
12. Check material thickness on walkways and modify if required

The average cost of repair and modification to meet MC306 specifications will be approximately \$4,000.00 if tank wagon meets minimum shell and head thickness.



August 26, 1985

Minnesota Department of Transportation
Transportation Building
Room 404
St. Paul, Minnesota 55155

Attention: Betsy Parker

Dear Ms. Parker:

In reply to a letter from Bob Krogman with Northwest Petroleum Assoc., dated August 7, 1985, I have the following comments:

- A. Refer to attached estimate for modification.
Keep in mind -
1. If material thickness is not enough to satisfy current MC306 spec then nothing can be done to bring unit up to code.
 2. If the work is done on a truck tank as indicated by the attached estimate, then the unit will very likely require a paint job which will add 800 - 1200 dollars.
- B. The reference to the A.S.M.E. Code bothers me since these truck tanks we are concerned with relative to this variance and in fact the MC 306 units we are fabricating today, are not designed to the A.S.M.E. Code. The A.S.M.E. Code is required when we design and fabricate tanks or vessels to be used in pressure applications. MC 306 tanks are non-pressure tanks and vented to atmosphere.

Please feel free to phone me if you have any questions or we can provide you with any further information.

Sincerely,

ARROW TANK & ENGINEERING CO.

A handwritten signature in cursive script, appearing to read "G.N. Orth", is written over the typed name.

G.N. Orth
L.P. Products Manager

GNO/ld

STATE OF MINNESOTA

STATE REGISTER

DEPARTMENT OF ADMINISTRATION—DOCUMENTS DIVISION



Monday 4 August 1986

VOLUME 11, NUMBER 5

Pages 121-168