7

FOREIGN CLAIMS SETTLEMENT COMMISSION

[F.C.S.C. Meeting Notice No. 6-84]

Announcement in Regard to Commission Meetings and Hearings

The Foreign Claims Settlement Commission, pursuant to its regulations (45 CFR Part 504), and the Government in the Sunshine Act (5 U.S.C. 552b), hereby gives notice in regard to the scheduling of open meetings and oral hearings for the transaction of Commission business and other matters specified, as follows:

Date and Time, Subject Matter

Wed., June 20, 1984 at 10:30 a.m.:
Consideration of Proposed Decisions in the Second Czechoslovakian Claims Program. Final Decisions on hearings on the record, and decisions involving claims for Vietnam prisoner of war compensation.

Subject matter listed above, not disposed of at the scheduled meeting, may be carried over to the agenda of the following meeting.

All meetings are held at the Foreign Claims Settlement Commission, 111—20th Street NW., Washington, D.C. Request for information or advance notices of intention to observe a meeting, may be directed to: Administrative Officer, Foreign Claims Settlement Commission, 1111—20th Street NW., Room 409, Washington, DC 20579. Telephone: (202) 653-6155.

Dated at Washington, D.C., on June 6, 1984.

Jeanette Matthews,

Administrative Assistant.

[FR Doc. 84-15848 Filed 6-8-84; 3:22 pm]

BILLING CODE 4410-01-M

8

NATIONAL TRANSPORTATION SAFETY BOARD

[NM-84-21]

TIME AND DATE: 9 a.m., Tuesday, June 19, 1984.

PLACE: NTSB Board Room, 8th Floor, 800 Independence Ave., SW., Washington, D.C. 20594.

STATUS: The first item will be open; the remaining items will be closed under Exemption 10 of the Government in the Sunshine Act.

MATTERS TO BE CONSIDERED:

1. *Aircraft Accident Report*—Midair Collision of a McDonnell-Douglas F-4C and a Beech D-55 Baron, near Cherry Point, North Carolina, January 9, 1983.
2. *Opinion and Order*—Administrator v. Falkner, Dockets SM-3609, SE-5815, and SE-5719; disposition of the Administrator's appeal.
3. *Opinion and Order*—Administrator v. Dopp, Docket SE-5723; disposition of the Administrator's appeal.
4. *Opinion and Order*—Petition of Wright, Docket SM-3146; disposition of the Administrator's appeal.
5. *Opinion and Order*—Administrator v. Hoyle, Docket SE-5909; disposition of the appeals of the Administrator and respondent.

CONTACT PERSON FOR MORE INFORMATION: Sharon Flemming, (202) 382-6525.

H. Ray Smith, Jr.,

Federal Register Liaison Officer.

June 8, 1984.

[FR Doc. 84-15830 Filed 6-8-84; 2:20 pm]

BILLING CODE 4910-58-M

9

NUCLEAR REGULATORY COMMISSION

DATE: Week of June 11, 1984 (Revised) and Week of June 18, 1984.

PLACE: Commissioners' Conference Room, 1717 H Street, NW., Washington, D.C.

STATUS: Open and Closed.

MATTERS TO BE DISCUSSED:

Monday, June 11

2:00 p.m.
Status Report on Decommissioning Issues (Public Meeting) (As Announced)

Wednesday, June 13

10:00 a.m.
Discussion of Management-Organization and Internal Personnel Matters (Closed—Ex. 2 & 6) (Tenative) (As Announced)

Friday, June 15

10:00 a.m.
Briefing on USI A-44 (Station Blackout) and A-45 (Shutdown Decay Heat Removal Requirements) (Public Meeting) (Date change from June 12 and replaces "Discussion of Role of the Staff/Ex Parte")
2:00 p.m.
Continuation of 4/24 Discussion of Possible Steps to Avoid Licensing Delays to Include Discussion of Last Minute Allegations (Public Meeting) (As Announced)

Week of June 18, Wednesday, June 20

10:00 a.m.
Discussion of Role of the Staff/Ex Parte (Public Meeting)
2:00 p.m.
Discussion of Indian Point Adjudicatory Proceeding (Closed—Ex. 10)

Thursday, June 21

2:00 p.m.
Discussion of Management-Organization and Internal Personnel Matters (Closed—Ex. 2 & 6) (Tenative)

Friday, June 22

10:00 a.m.
Discussion/Possible Vote on Commission Concurrence on DOE Siting Guidelines (Public Meeting)
2:00 p.m.
NUMARC Briefing on Readiness to Operate (Public Meeting)

ADDITIONAL INFORMATION: Affirmation of "UCLA Reactor License Renewal Proceeding and Interpretation of 10 CFR 73.40(a)"; "*Sua Sponte* Issues raised in the Matter of Duke Power Company"; and "Shoreham—Suffolk County Motion to Clarify CLI-84-8" was held on June 7 (Public Meeting).

TO VERIFY THE STATUS OF MEETINGS CALL: (Recording)—(202) 634-1493.

CONTACT PERSON FOR MORE INFORMATION: Walter Magee (202) 634-1410.

Dated: June 8, 1984.

Walter Magee,

Office of the Secretary.

[FR Doc. 84-15875 Filed 6-8-84; 3:15 pm]

BILLING CODE 7590-01-M

10

POSTAL SERVICE

Vote to Close Meeting

At its meeting on June 5, 1984, the Board of Governors of the United States Postal Service unanimously voted to close to public observation its meeting, scheduled for July 9, 1984, in Washington, D.C. The meeting will involve a discussion of possible strategies in anticipated collective bargaining negotiations, pursuant to chapter 12 of title 39 United States Code, involving parties to the 1981 National Agreements, between the Postal Service and four labor organizations representing certain postal employees, which are scheduled to expire in July 1984.

The meeting is expected to be attended by the following persons: Governors Babcock, Camp, McKean, Peters, Ryan, Sullivan, Voss and Waldman; Postmaster General Bolger; Deputy Postmaster General Finch; Secretary of the Board Harris; General Counsel Cox; Senior Assistant Postmaster Morris; and Counsel to the Governors Califano.

The Board is of the opinion that public access to any discussion of possible strategies that Postal Service management may decide to adopt, or the positions it may decide to assert, in any collective bargaining sessions that may take place would be likely to frustrate action to carry out those strategies or assert those positions successfully. In making this determination, the Board is aware that the effectiveness of the collective bargaining process in labor-management relations has traditionally depended on the ability of the parties to

prepare strategies and formulate positions without prematurely disclosing them to the opposite party. The public has a particular interest in the integrity of this process as it relates to the Postal Service, since the outcome of the negotiations between the Postal Service and the various postal unions, and consequently the cost, quality and efficiency of postal operations, may be adversely affected if the process is altered.

Accordingly, the Board of Governors has determined that, pursuant to section 552b(c)(3) of title 5, United States Code, and section 7.3(c) of title 39, Code of Federal Regulations, this portion of the meeting is exempt from the open meeting requirement of the Government in the Sunshine Act [5 U.S.C. 552b(b)], because it is likely to disclose information prepared for use in connection with the negotiation of collective bargaining agreements under chapter 12 of title 39, United States Code, which is specifically exempted from disclosure by section 410(c)(3) of title 39, United States Code. The Board has determined further that, pursuant to section 552b(c)(9)(B) of title 5, United States Code, and section 7.3(i) of title 39, Code of Federal Regulations, the discussion is exempt, because it is likely to disclose information the premature disclosure of which is likely to frustrate significantly proposed Postal Service action. Finally, the Board of Governors has determined that the public has an interest in maintaining the integrity of the collective bargaining process and that the public interest does not require that the Board's discussion of its possible collective bargaining strategies and positions be open to the public.

In accordance with section 552b(f)(1) of title 5, United States Code, and section 7.6(a) of title 39, Code of Federal Regulations, the General Counsel of the United States Postal Service has certified that in his opinion the meeting to be closed may properly be closed to public observation, pursuant to sections 552b (c)(3) and (9)(B) of title 5 and section 410(c)(3) of title 39, United States Code, and sections 7.3 (c) and (i) of title 39, Code of Federal Regulations.

David F. Harris,

Secretary.

Paul J. Kemp,

Alternate Liaison Officer, U.S. Postal Service.

[FR Doc. 84-15842 Filed 6-8-84; 2:58 pm]

BILLING CODE 7710-12-M

11

DEPARTMENT OF EDUCATION.

Full Council Meeting of the National Council on Educational Research

MATTERS TO BE DISCUSSED: Discussion and approval or disapproval of proposed resolutions; Receive committee reports; Report from the National Institute of Education Director.

DATE: June 14, 1984 (Thursday).

ADDRESS: Hart Senate Office Building, Room SH-708, Capitol Hill, Washington, D.C. (Second an Constitution Ave.).

STATUS: Open.

TIME: 9:00 a.m.
Recess 11:30 a.m.-2:00 p.m.
2:00 p.m.-4:30 p.m.

FOR FURTHER INFORMATION CONTACT: Renee Trent, National Council on Educational Research-Associate, 200 L St., NW.,. Suite 617B, Washington, D.C. 20036, 202-254-7490.

SUPPLEMENTARY INFORMATION: The day's agenda will include remarks from various members of the U.S. Congress, in addition to approval or disapproval of proposed resolutions, committee reports, report from the Director of the National Institute of Education.

The meeting of the Council is open to the public.

The N.C.E.R. is established under Section 405 of the General Education Provisions Act.

Dated: June 8, 1984.

James E. Hinish, Jr.,

Acting Executive Director, National Council on Educational Research

[FR Doc. 84-15840 Filed 6-11-84; 10:01 am]

BILLING CODE 4000-10-M

federal register

Tuesday
June 12, 1984

Part II

Department of Transportation

Federal Railroad Administration

49 CFR Parts 218 and 225

Control of Alcohol and Drug Use in Railroad Operations; Notice of Proposed Rulemaking

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

49 CFR Parts 218 and 225

[FRA Docket No. RSOR-6, Notice No. 4]

Control of Alcohol and Drug Use in Railroad Operations; Notice of Proposed Rulemaking

AGENCY: Federal Railroad Administration (FRA), DOT.

ACTION: Notice of proposed rulemaking.

SUMMARY: FRA proposes rules to (i) prohibit the use of alcohol and drugs in railroad operations, (ii) require toxicological testing of employees following major accidents and incidents, (iii) require pre-employment drug urine screens for applicants for certain positions, (iv) authorize the railroads to require employees to cooperate in breath and urine tests administered by or for the railroad in certain circumstances that would be deemed to constitute just cause for testing, (v) require the railroads to institute policies that will encourage the identification of employees troubled by alcohol and drug abuse, and (vi) institute improvements in the accident/incident reporting system that will assist in better documenting the extent of alcohol and drug involvement in train accidents. These measures are designed to facilitate the control of alcohol and drug use in railroad operations and thereby prevent accidents, injuries, and property damage. FRA also describes the status of its efforts to promote voluntary alcohol and drug prevention programs and makes preliminary recommendations for private sector action.

DATES: (1) Written comments must be received not later than August 15, 1984. Comments received after that date will be considered to the extent possible without incurring additional expense or delay.

(2) FRA will hold public hearings on this proposal on July 6, 19, 23, and 30, 1984, at the times and places set forth below. Any person who desires to make an oral statement at the hearings is requested to notify the Docket Clerk at least five working days prior to the date of hearing, by phone or mail.

(3) FRA proposes to make the final rule effective on or about January 1, 1985.

ADDRESSES: (1) Written comments should be submitted to the Docket Clerk, Office of Chief Counsel, FRA, 400 Seventh Street, SW., Washington, D.C. 20590. Persons desiring to be notified that their written comments have been received by FRA should submit a stamped, self-addressed postcard with their comments. The Docket Clerk will indicate on the postcard the date on which the comments were received and will return the card to the addressee. Written comments will be available for examination, both before and after the closing date for comments, during regular business hours in Room 5101 of the Nassif Building at the above address.

(2) The public hearing will be held at the following locations and times:

Denver, Colorado (Fri., July 6, 1984 at 9:00 a.m.)—Federal Office Building, 1961 Stout St., Room 239.

Chicago, Illinois (Thurs., July 19, 1984 at 10:00 a.m.)—Hotel Continental, 505 North Michigan Avenue.

New Orleans, Louisiana (Mon., July 23, 1984 at 10:00 a.m.)—U.S. Post Office Building, 701 Loyola St., Room 2186.

Washington, D.C. (Mon., July 30, 1984 at 10:00 a.m.)—Nassif Building (DOT Headquarters), 400 Seventh St., SW., Room 2230.

Persons desiring to make oral statements at the hearing should notify the Docket Clerk by telephone (202–426–2760) or by writing to the Docket Clerk at the address above.

FOR FURTHER INFORMATION CONTACT: Walter Rockey, Special Assistance to the Associate Administrator for Safety, FRA, Washington, D.C. 20590 (Telephone: 202–426–0895); or Grady Cothen, Special Assistant to the Chief Counsel, FRA, Washington, D.C. 20590 (Telephone: 202–426–9416).

SUPPLEMENTARY INFORMATION:

Introduction

Background

The problem of alcohol use on the railroads is as old as the industry itself, and efforts to deal with it through carrier rules and enforcement began more than a century ago. In recent years the railroads have augmented traditional rule compliance efforts by establishing employee assistance programs (EAPs) designed to reach employees whose drinking is complusive or symptomatic of other, treatable problems. However, all efforts to control the alcohol problem, and the newer problem of drug abuse, have failed to end the loss of life and property associated with alcohol and drug-impaired employees. Therefore, on June 30, 1983, FRA issued an Advance Notice of Proposed Rulemaking (ANPRM) concerning the control of alcohol and drug use in railroad operations (48 FR 30723; July 5, 1983). That notice provided background on industry efforts to deal with the alcohol and drug problem. The ANPRM also included a discussion of—

- The Railroad Employee Assistance Project (REAP), a joint labor-management-FRA effort to define the extent of the alcohol problem on the railroads and develop recommendations for corrective action.
- The report of that project (the "REAP Report"), which compiled data from a 1978 survey of several thousand employees on seven railroads and set forth analysis and recommendations.
- Developments since the REAP Report, including an update (White Paper) published in June of 1982 and the emergence of so-called Rule G "bypass" agreements.

The ANPRM set forth a wide range of options for action to address the alcohol and drug problem and invited views on the listed options and any other approaches that might prove useful in reducing alcohol and drug-related accidents. Information and views received in response to the notice are summarized below.

Public Proceedings on the ANPRM

Following publication of the ANPRM on July 5, 1983, FRA conducted five days of public hearings to elicit information and views. Hearings were conducted in Atlanta, Georgia, on July 25, in Kansas City, Missouri, on July 26, in Sacramento, California, on July 28, and in Washington, D.C. on September 1 and 2, 1983. Participation in the hearing process was excellent. A total of 57 individuals or organizations were represented by oral or written submissions. FRA received oral or written viewpoints from 19 employee sources (from the national level to individual union members), 20 railroads, 5 State and local government sources (one of which expressed the views of 21 State agencies), 14 private organizations and non-rail companies, 6 individual citizens, and 3 Federal agencies. In some cases, a single organization offered multiple witnesses and also filed written submissions. FRA thanks the public witnesses, railroad labor representatives, and carrier officers who devoted considerable time and expense to the examination of this issue.

Most of the comments were received on or before the comment closing date of October 17, 1983 (see 48 FR 4590; September 29, 1983). FRA reviewed and considered all comments and related materials received for the docket through April, 1984, in preparing this NPRM. In addition, FRA has continued to place in the docket relevant background materials gathered by the FRA staff in support of this effort. A

listing of documents in the background volume of the docket is available on request from the Docket Clerk at the address shown above.

General Summary of Comments Received

For purposes of general discussion, the comments may be grouped in three categories by origin: (1) Railroad labor organizations and members, (2) railroad management representatives, and (3) other commenters. FRA has noted both the common themes expressed by members of these groups and the many variations on, and exceptions to, those thems.

Rail labor organizations and members generally acknowledged the existence of a problem, but opposed Federal regulation of this subject matter. They argued that punitive approaches would only worsen the problem of denial and cover-up associated with alcohol and drug abuse. Labor representatives urged FRA to redouble its efforts to promote EAPs, foster research, and join with labor in urging the adoption of Rule G bypass agreements.

During the ANPRM process, the national rail labor organizations (through the Railway Labor Executives' Association) of the first time took strong, formal, and public stands in favor of the adoption of bypass agreements on all the railroads. Further, the Brotherhood of Locomotive Engineers filed with its comments a recent letter to each of its General Chairmen urging them to work with their respective railroads to establish effective peer referral programs, including bypass agreements and strong employee assistance programs. These developments represents a departure for the national labor organizations, which previously had shown greater deference to their system-level officers, particularly with regard to the bypass concept. Organizations supported by unions from other industries filed comments generally supportive of the position of the rail labor organizations.

A BLE spokeman stated that his review of accident reports persuaded him that the accidents said to have been caused by alcohol or drug impairment "were not investigated with an open mind"; he believed that NTSB (and presumably FRA) conclusions were not supported in a "factual manner." However, the spokesman did not provide specific criticisms concerning the accidents listed in the docket.

With notable exceptions, the railroads also opposed Federal regulation of alcohol and drugs. Railroad representatives generally contended that the railroads are already making major efforts to address the problem through enforcement of Rule G, EAPs, and—in some cases—awareness and training programs. However, the railroads were unanimous in requesting that FRA regulate in one limited respect: to authorize "state-of-the-art" testing of employees during their normal duties. They urge that FRA should simply authorize testing by devices of recognized reliability, without mandating the use of the devices or placing any restrictions on their use.

The railroads noted that, according to an award (decision) of the First Division, National Railroad Adjustment Board (NRAB), railroads may not require employees to submit to breath testing to determine Rule G compliance. The rationale of the ruling appears to bar compulsory body fluid testing to determine Rule G compliance, as well. (Award No. 23334, First Division; June 25, 1982). The railroads appear to believe that the NRAB award bars testing with or without cause.

The award grew out of an attempt by a major railroad to facilitate detection in the course of spot checks of crews at various points on the railroad. The railroad purchased two testing devices and, after a demonstration period, set out to cover its system with the objective of identifying Rule G violators. It was also hoped that the program would deter employees from using alcohol in connection with duty hours. All employees encountered at the particular locations were asked to breathe into a testing device. Employees objected to this method of detection as a departure from traditional observation techniques, and the dispute was ultimately submitted to the NRAB.

The NRAB ruled that the breath testing practice was not authorized by existing collective bargaining agreements and that requiring employees to submit to such testing was inconsistent with longstanding custom and practice under those agreements. The Railway Labor Act requires that changes in working conditions be made only by agreement or—failing agreement—after the exhaustion of elaborate procedures designed to promote peaceful settlements. The railroad admittedly did not seek to follow established Railway Labor Act procedures. The AAR and individual railroads argued in response to the ANPRM that the NRAB's award should be reversed or preempted by regulation.

Other commenters tended to support a strong Federal role. Recommendations of the National Transportation Safety Board, set forth in the ANPRM, are discussed more fully below. State and local officials, representatives of groups established to work against drunk driving, and others generally supported consideration of a wide range of options from criminalization of on-the-job substance abuse, to suspension of operating employees for alcohol and drug violations, to requirements that the railroads be required to conduct random breath tests. the American Trucking Association proposed a detailed program to assure the fitness of railroad employees, which would parallel the requirements of DOT's Bureau of Motor Carrier Safety (Federal Highway Administration).

The National Association of Regulatory Utilities Commissioners reported that 18 out of 21 states responding to its survey supported Federal involvement in this area, although the states were divided as to the nature of appropriate action.

At FRA's request, the Railway Transport Committee of the Canadian Transport Commission (CTC) submitted a helpful description of Canada's regulatory program. The uniform code of operating rules of Canadian railways, codified in government regulations, includes a rule similar to "Rule G." Both employees and the railroads are responsible for observing the rule. Canada also has in effect a criminal provision prohibiting on-the-job intoxication of certain categories of railroad employees and providing for penalties of up to five year's imprisonment. However, there has been only one (unsuccessful) prosecution under that provision. The Committee report that at least one Canadian railway believes the present operating rule is inadequate and the CTC intends to review the matter in the near future.

Extent of Alcohol and Drug Use Problem

A significant minority of railroad employees use alcohol and drugs in connection with railroad operations. If this phenomenon is not subject to precise quantification, neither can it be ignored. It is clear that alcohol use and drug use are sufficiently common to pose a significant safety problem.

Most of the industry participants in this rulemaking, on both the labor and management sides, have confirmed that alcohol and drug use does occur on the railroads with unacceptable frequency, despite existing rules and programs. Available information from all sources, including FRA safety investigations, suggests that the problem includes "pockets" of drinking and drug use involving multiple crew members (before and during work), sporadic cases of individual employees reporting to work impaired, and repeated drinking

and drug use by individual employees who are chemically or psychologically dependent on those substances.

Some of the REAP Report findings bear repetition in this regard. The authors made the following estimates for six study railroads that employed one-half of the railroad work force:

- 23 percent of railroad operating personnel were "problem drinkers" (actually between 14 and 24 percent, depending on the definition used).
- 5 percent of workers reported to work "very drunk" or got "very drunk" on duty at least once in the study year (1978).
- 13 percent of workers reported to work at least "a little drunk" one or more times during that period.
- 13 percent of operating employees drank while on duty at least once during the study year.

All survey data are difficult to interpret, and there may have been changes in these drinking patterns since the study year. Nevertheless, these data are acknowledged as credible indicators of a substantial problem by most carriers, the rail labor organizations, and many of their spokesmen.

Consider further that the REAP Report did not attempt to measure the abuse of drugs other than alcohol in the railroad environment. Drug abuse is a problem of national scope that touches all segments of our society, including the professions. It is not surprising that marijuana use is in increasing evidence on the railroads, since 27 percent of young adults reported current use of that substance in a National Institute on Drug Abuse survey (National Survey on Drug Abuse: Main Findings at 31 (1982)). There is also evidence that use of cocaine, estimated at 6.8% of young adults in the 1982 survey, may be growing among middle income persons such as railroad employees as a consequence of increases in supply. Drug users constitute a growing segment of the populations served by the employee assistance programs, and indications are increasing that drug use is emerging as a significant safety problem in railroad operations.

Safety Consequences of Alcohol and Drug Use

Alcohol and drug use result in safety risks and consequences that are unacceptable. The loss of life, limb and property from alcohol and drug-related railroad accidents has been documented, in part, over more than a decade. This pattern of human and material waste is continuing, apparently unabated. However, the documented consequences of alcohol and drug use may well be exceeded by those that have not been recorded; and the great tragedy of alcohol and drug-related accidents and incidents is that they are, for the most part, avoidable.

Even without the benefit of regular post-accident testing, the documented problem is serious enough to mandate action. Based on an intensive review of FRA and NTSB accident reports and reports filed by the railroads with FRA, FRA has identified 34 fatalities, 66 injuries and over $28 million in property damage (in 1983 dollars) that resulted from the errors of alcohol and drug-impaired employees in 45 train accidents and train incidents during the period 1975 through 1983. (*See* Table 1.) One of these accidents resulted in the release of hazardous materials and the evacuation of an entire community of 2,700 persons, some of whom were unable to return to their homes for an extended period.

The 1984 toll may set a new record. In coordination with NTSB, FRA is investigating the Wiggins, Colorado, accident that resulted in 5 fatalities, 2 injuries and an estimated $4.4 million in railroad property damage alone. Preliminary inquiry indicates that alcohol impairment may have been a factor in the accident. In another recent accident under investigation, the presence of significant levels of barbituates has been confirmed. Possible drug involvement is also under investigation in a third accident. FRA expects that the final reports of these investigations will be available before publication of a final rule in this rulemaking.

But the documented data tell only a part of the story. Many alcohol and drug-related accidents and injuries are not so recorded under the existing reporting system. From available information, it appears highly probable that because of the latitude present in that system the railroads either fail to detect or fail to report alcohol and drug involvement in a significant number of cases. For instance, of 15 significant train accidents identified by NTSB or FRA investigations as involving alcohol or drugs, the respective railroads reported alcohol or drug involvement in only 6. The under-reporting of alcohol and drug involvement is likely even more pronounced in the vast majority of accidents which do not occasion a Federal investigation.

FRA is convinced that consistent toxicological testing of employees after major accidents would disclose numerous additonal cases of alcohol and drug impairment among employees involved in human failures. A major objective of the proposed rules must be to develop this crucial information.

As explained below, FRA is also convinced that alcohol and drug-related employee fatalities in train incidents are at least twice as numerous as reflected in current statistics. In addition, although FRA has no data at all on the role of alcohol and drugs in the thousands of injuries in train incidents each year, it is likely that many are caused by alcohol and drug-impaired employees. (*See*, for example, the Union Pacific data on injury frequency and severity under "Bypass Agreements," below.)

The safety consequences of alcohol and drug use on the railroads are serious, but it is not the gravity of the problem alone that warrants the attention of the industry, concerned members of the public, and Government. Equally persuasive is the fact that these accidents are, for the most part, *avoidable*. Of the roughly one-quarter to one-third of railroad accidents caused by "human factors," accidents resulting from impairment of employees by alcohol and drugs are the most susceptible to prevention. Many operational errors that result in train accidents are apparently random occurrences that occur in the face of rigorous efforts to prevent the subject conduct. Although clearer operating rules, better training, more effective supervision and other countermeasures are often indicated in the wake of these accidents, these solutions are complex and often not well adapted to anticipate the particular "human failure" exhibited in the next serious accident. By contrast, attention to alcohol and drug use offers the possibility of changing behavior by removing the agent of impairment. The means are available to identify employees who are chemically or psychologically dependent on alcohol and drugs. Those who use alcohol and drugs volitionally can be deterred from bringing substances of abuse into the work place. The current focus on this problem inside and outside the railroad industry presents an important opportunity to forge a partnership for change.

1. *Approach to the Accident Data*

In preparing this notice, FRA conducted a new and more detailed review of the accident data, including FRA and NTSB investigation reports and accident/incident reports submitted by the railroads. This review led to the refinement of the accident and employee fatality totals used in the ANPRM, the exclusion of certain accidents from consideration, and the addition of certain accidents not previously considered. In order to facilitate

examination of this refined data base, FRA is publishing an identification of accidents specifically considered in relation to this rulemaking. FRA believes that alcohol or drug-induced impairment was a significant contributing factor in each of these accidents, such that the accident would likely not have occurred, or would have been significantly reduced in severity, in the absence of such impairment.

The accident data considered in developing this notice are summarized on Table 1 and derive from the period 1975 through 1983. FRA revised its accident/incident reporting system effective January 1, 1975, to add a new cause code (510) for accidents involving "impairment of efficiency and judgment due to drugs or alcohol." Prior to that date FRA collected information concerning the role of alcohol and drugs only in the course of its field investigations.

2. *Train Accidents*

Investigated by FRA. Table 2 lists significant train accidents investigated by FRA involving alcohol or drugs. (*1*) The table shows 15 accidents, that accounted for—

- 14 fatalities;
- 61 injuries; and
- $12.1 million in damage to railroad equipment and facilities in noninflated dollars; or
- $15.9 million in damage to railroad equipment and facilities in 1983 dollars, as adjusted according to the AAR cost index.

Costs of wreck clearance, incidentals such as extra crew costs associated with detours and train delays, loss and damage of lading, other non-railroad property damage, emergency response, and environmental clean-up are not included in the estimates above. Inclusion of some of these elements from the most costly alcohol-related accident (Livingston, Louisiana) would bring the total for investigated accidents to more than $28 million (in 1983 dollars), but equivalent data are not available for the other accidents. (*2*)

BILLING CODE 4910-06-M

TABLE 1
SUMMARY OF ALCOHOL AND DRUG-RELATED
RAILROAD ACCIDENTS/INCIDENTS (1975-1983*)

		Fatalities	Injuries	Damage (million $)
Train accidents investigated by FRA	15	14	61	12.1 (R.R.)
Other train accidents rept'd by the railroads	10	0	5	.2 (R.R.)
Total train accidents	25			
Employee casualties/train incidents**(ops only)	20	20	Not avail.	
Total accidents/ incidents	45			
Total fatalities		34		
Total injuries			66	
R.R. damage total				12.3
R.R. damage total (1983 dollars)				16.3
Total damages (1983 dollars)				28.6***

*Based on available information, there were no relevant accidents/incidents during the final three months of 1983.

**A train incident is an event involving the movement of railroad on-track equipment that results in a death, a reportable injury, or a reportable illness, but in which railroad property damage does not exceed the reporting threshold for train accidents. This listing does not include fatalities to non-operating employees.

*** Includes additional Livingston, La., damages of $12.3 million (principally environmental clean-up) (uninflated) but not damage to lading or third party property in the other accidents.

NOTES: (1) In this listing, one reported train accident that involved minor property damage has been listed with train incidents because it was investigated by FRA as an employee fatality.

(2) This listing does not include alcohol and drug-related fatalities in non-train incidents -- i.e., in settings other than railroad operations.

Table 2
Listing of Railroad Train Accidents Involving Alcohol And/Or Drug Use Investigated By FRA
(January 1975 Through September 1983)

Accident Location	Date	Autopsy Yes/No	Postive Lab Result/Carrier Drugs - Alcohol	Fatalities	Injuries	Railroad Property Damage-Equipment and Maintenance of Way Estimate of Costs	Accident Descriptive
Black Rock, N.Y.	06-15-75	N/A	.16 ENGR CN/PCT	-	35	70,281	Rear End Collision (Passenger Trains)- Intoxicated engineer of of following train failed to control train in accordance with signal indication.
Oglesby, GA	07-28-77	No	.23 ENGR SCL	1	1	458,350	Derailment caused by excessive speed on a restrictive curve (1 locomotive and 13 cars). Engineer operating under the influence of alcohol.
Wooster, Ohio	11-18-78	N/A	.14 ENGR Conrail	-	3	167,504	Side Collision - While under the influence of alcohol, engineer and front brakeman ignored stop signal.
		Yes	.10 BRA				
Carnero, NM	12-31-78	Yes	.27 ENGR ATSF	2	1	29,500	Side Collision - While under the influence of alcohol, engineer failed to control movement of train. Front brakeman failed to take appropriate action.

Aurora, NE	05-17-79	N/A		[1]ENGR BN	-	2	56,400	Rear end collision-Engineer failed to control movement. Head brakeman failed to take appropriate action
Thousands Palms, CA	07-24-79	No		.18 ENGR SP	1	4	1,441,700	Rear end collision-Engineer failed to observe stop signal indication while under alcohol influence. Front brakeman failed to take appropriate action.
Alliance, Ohio	09-12-79	N/A		.17 ENGR Conrail	-	3	2,416,000	Derailment caused by excessive speed through crossover. Engineer fell asleep. Others in cab failed to take appropriate action.
Royersford, PA	10-01-79	Yes	Yes	N/A Conrail	2	-	467,500	Rear end collision-Conductor operating locomotive under the influence of marijuana failed to control train movement in accordance with signal indication.
Farm, West VA (Welch)	09-06-80	Yes		[2].01 ENGR NW	3	-	1,396,262	Side Collision-Fireman failed to operate train in accordance with signal indication. Engineer and brakeman failed to take appropriate action.

(See footnotes on page 4)

Pisgah, CA	05-11-80	No		.16	BRA	ATSF	1	3	1,684,750	Rear end collision-Engineer failed to operate train in accordance with signal indication and at excessive speed. Brakeman failed to take appropriate action.
Bostic Yard, NC	04-01-81	N/A		.166	ENGR	Clinchfield	-	-	244,016	Head on collision-Engineer failed to operate train in accordance with signal indication while under the influence of alcohol.
Duncannon, PA	02-10-82	N/A		[3].166	ENGR	Conrail	-	4	222,600	Head-on Collision-Engineer failed to operate train in accordance with signal indication. Brakeman failed to take appropriate action.
Newport, AK	10-03-82	Yes		.08	ENGR	MP	2	2	919,000	Side collision (at end of double track)-Engineer under the influence of alcohol.
Livingston, LA	09-28-82	N/A	See Decriptive			ICG	-	-	1,669,525	Derailment (considerable hazardous commodities) Engineer and front brakeman dismissed for alcohol consumption.

Sullivan, IN	09-14-83	No	.29 ENGR .04 BRA LN	2	2	823,828	Rear end collision-Engineer failed to control train. Front brakeman failed to take appropriate action.
				14	61	$12,067,216	
						$15,916,704 - Expressed in 1983 Dollars	

Special Notes

- In accident situations where death did not occur, the metabolism of alcohol in the body continues. Hence, delayed BAC testing reflects a lower BAC than that which actually existed at the time of the accident. Therefore, in the above listed accidents, the BAC is understated due to the length of elapsed time occuring following the accident until the testing process takes place.

- Another accident occurred on the Burlington Northern Railroad at Angora, Nebraska on June 6, 1980, which resulted in two fatalities, three injuries, and having railroad properly damage estimated at $1,530,000. The engineer of locomotives assigned to a stalled train had coupled to a consist of helper service locomotives five miles forward from the location of the stalled train. Excessive speed and other poor judgement factors resulted in the collision of the combined locomotive consist with the stalled train. The BAC of the engineer controlling the movement was negative. The BAC of the non-controlling Engineer was .074. The responsibility of the controlling Engineer was clearly direct. The responsibility of the non-controlling engineer was subordinate. Therefore, this accident was deleted from the above listing, but is here-in highlighted to provide clarification.

- Known evacuation of area residents only occurred in the Livingston, Louisiana Accident.

[1]Developed through the formal hearing and investigative process. Record also revealed that employee received treatment at a prior time for alcoholism.

[2]The promoted fireman was at the operating controls. Assuming the employee had not consumed alcohol while on duty, his BAC at the time he commenced duty would have been in the .10 percent range using the average metabolic degradation rate. Further, the employee was an alcoholic and may have had a reduced tolerance for alcohol.

[3]The laboratory report concluded that the BAC was sufficient to affect reflex and coordination; however, the BAC was not specified.

Prepared by Gene Cox
Office of Safety Enforcement
January 1984.

Table 3

Listing of Railroad Train Accidents Involving Alcohol And/Or Drug Use Reported By Railroad Carriers But Not Investigated By FRA

(January, 1975 Through September, 1983)

Accident Location	Date	Reporting Carrier	Fatalities	Injuries	Railroad Property Damage Equipment and Maintenance of Way Estimate of Costs	FRA Cause Code Primary	FRA Cause Code Contributing	Accident Type
Ramsey, WY	08--2-76	UP	-	-	54,128	510	570	Derailment
Huntington, OR	08-16-76	UP	-	-	12,000	510	550	Head on Collision
Jamaica, NY	11-12-76	LI	-	2	38,030	524	510	Side Collision
Tacoma, WA	05-22-78	MILW	-	-	5,200	533	510	Rear End Collision
Memphis, TN	10-19-79	SLSF	-	-	18,000	510	-	Rear End Collision
Morrilton, AK	02-12-80	MP	-	-	24,600	510	-	Derailment
Burnsville, West VA	03-18-80	B&O	-	-	19,000	510		Broken Train Collision
Carlsbad/Eddy N.M.	04-23-82	ATSF	-	-	15,500	510	550	Side Collision
Toledo, Ohio	10-23-82	Conrail/ Toledo Term.	-	2	10,000	520	510	Side Collision
Proviso IL	07-13-83	CNW	-	1	37,000	528	510	Derailment
			-	5	233,458			
					354,979 Expressed in 1983 Dollars			

Accident Code Descriptives

510 - Impairment of Efficiency and Judgement Due to Drugs or Alcohol
520 - Fixed Signal, Failure to Comply
524 - Hand Signal Improper
533 - Failure to Stop Train in Clear
550 - Coupling Speed Excessive
570 - Buffing or Slack Action Excessive
528 - Interlocking Signal, Failure to Comply

Prepared By Gene Cox
Office of Safety Enforcement
January, 1984

Table 4

Listing of Employee Fatalities Investigated by FRA
Which Resulted From Train and Non-train Incidents
Involving Alcohol And/Or Drug Use

January 1975 through July 1982

Accident Location	Accident Date	Autoposy Yes	Autoposy No	Positive Lab Result Drug	Positive Lab Result Alcohol	Employee Category	Carrier	Accident Descriptive
Charlotte, NC	1-22-75	x			.10	Yard Foreman	SOU	Fell from moving freight train.
Red Desert, WY	7-02-75		x		.159	Track Laborer	UP	Struck by approaching train for which he had failed to provide personal safety clearance.
Secor, ILL	8-21-75	Unknown			.146	Switchman	TWP	Struck while in path of approaching train.
Portland, OR	8-31-75		x		.17	Yard Foreman	SP	Struck while in path of moving cars.
Denver, CO	2-15-76		x		.37	Dinning Car Inspector	DRGW	Fell beneath coal train he attmpted to climb over coupling device to reach opposite side.
Baltimore, MD	9-05-76	x			.08	Brakeman	UP	Fell while attempting to board locomotive.
Farmville, NC	12-22-76	x		x		Flagman	SOU	Suffocated beneath spill of corn from overturned car. Accident caused by his failure to remove derailing device prior to movement. (type of drug - impramine)
West Cambridge, MA	5-20-77	x			.19	Brakeman	BM	Struck while in path of appoaching train.
Proctor, MN	8-04-77	x			.105	Brakeman	DMIR	Crushed between side ladder of moving locomotive and standing cars (misaligned movement).
Stemmers Run, MD	2-11-77	x			.07	Brakeman	Conrail	Struck by approaching train while he crossed track.
Green River, WY	3-18-78	x			.16	M of W Foreman	UP	Expired from smoke inhalation from bunkhouse stove.
Laramie, WY	9-11-78	x			.36	M of W Laborer	UP	Lost balance and fell beneath train while crossing between moving cars.
Denver, CO	3-23-79	x			.098	Switchman	DRGW	Fell beneath moving train while alighting from caboose.
Ranier, MN	3-27-79	x			.273	Trainman	DWP	Fell beneath caboose from which he was alighting.
Livonia, MI	4-23-79	x			.07	Brakeman	CO	Fell beneath or placed himself in path of a moving. caboose.
LaJunta, CO	8-11-79	x			.133	Switchman	ATSF	Fell beneath caboose while attempting to board it.
Chicago, ILL	8-12-79	x			.14	Switchman	CNW	Ran over by approaching train while he sat on track.

Wilmington, CA	11-23-79	x		.11	Brakeman	UP	Struck by side collision with car he placed to foul during prior switching movement.
Lubbock, TX	3-23-80	x		.116	Yard Helper	ATSF	Fell beneath moving cars while crossing from one side to the other to facilitate an uncoupling. Drug type not identified.
St. Louis, MO	9-05-80	x		.111	Switchman	MP	Fell beneath moving cars he was attempting to uncouple.
E. St. Louis, ILL	11-02-80	x		.102	Clerk Messenger	NW	Operated company highway vehicle onto interstate highway against current of traffic and collided with another vechicle.
St. Helens, OR	2-11-81	x		.08	Brakeman	BN	Signaled to initiate movement and did not stand clear of it.
Hotchkiss, CO	2-19-81	x		.336	Track Patrolman	DRGW	Fell from on track inspection vehicle while it was in motion in an apparent state of unconsciousness
Calamus, OR	3-19-81	x		.38	Brakeman	SP	Alighted from locomotive into path of approaching train.
Eola, ILL	10-28-81		x	.104	Yard Clerk	BN	Placed himself in path of approaching train.
Potts Valley, VA	3-01-82	x		.36	Carpenter	NW	Fell from bridge to river. Safety belt/line not secured.
Claymont, DE	4-19-82	x		.155	Lineman	Amtrak	Electrocuted when he progressed with work prior to power being shut off.
Amherst, MA	5-26-82		x	.034	Machine Operator	CV	Drove equipment into path of approaching train.
Paxton, NE	12-10-82	x		.02	Machine Operator Helper	UP	Dismounted machine from live side into path of approaching train.
Concord, KY	4-28-83	x		.29	Trackman	CO	Struck by approaching train while inspecting track.
Villa Grove, ILL	5-03-83	x		.18	Conductor	MP	Struck while in the path of the movement of his train.
Elkhart, KS	7-07-83		x	.35	Brakeman	ATSF	Struck by overturning car for which he was to control movement.

Summary Of Employee Category And Type

Train/Engine Service	-Train	20
	- Engine	-
Transportation (Other)	- Yard Clerk	1
	Messenger	1
	Dining Car Inspector	1
Maintenance of Way	- Track Patrolman	2
	Track Laborer	2
	Foreman	1
	Carpenter	1
	Lineman	1
	Machine Operator	1
	Machine Operator Helper	1
	Grand Total	32

Prepared By Gene Cox
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Information derived from autopsies of deceased employees, breath or blood tests obtained by local authorities, and other data indicate alcohol involvement in 14 of these accidents. In one case (Royersford, Pa.) another drug—marijuana—was involved. All of the fatalities were railroad employees, but 28 of the injuries were to railroad passengers (Black Rock, N.Y.). Only one accident (Livingston, Louisiana) produced a release of hazardous materials that resulted in an evacuation, but that evacuation displaced an estimated 2,700 persons, many of them for extended periods of time. Another accident (Pisgah, California) resulted in the release of a combustible liquid from the dome of a tank car that burned for 18 hours.

All of the 15 accidents identified in Table 2 were, of course, reported by the railroads under FRA's accident/incident reporting system (49 CFR Part 225). However, even though FRA determined all 15 to have involved alcohol or drugs, the reporting railroads used code 510 to indicate primary or contributing cause only with respect to 6 of them. Stated differently, the railroads did not report alcohol or drug involvement in a majority of the accidents investigated where FRA or NTSB found such involvement. In several cases, the railroad did not employ code 510, even though an autopsy or breath test clearly showed that the operator of the train or other crew member at fault had an elevated blood alcohol concentration (BAC).

Reported by the railroads. The railroads are required to report to FRA all accidents involving damage to rail equipment exceeding a prescribed threshold that is adjusted every two years ("train accidents"). In addition to 6 of the train accidents investigated by FRA and summarized above, the railroads reported 10 accidents involving alcohol or drug impairment as a primary or contributing cause, resulting in:

- 5 injuries; and
- $233,458 in railroad property damage in noninflated dollars; or
- $354,979 in 1983 dollars.

These accidents are displayed in Table 3. Available information does not permit a breakdown of these accidents between alcohol and other drugs. However, it appears that most, if not all, involved alcohol. They were generally low speed accidents not involving significant damage, and only 3 resulted in injuries (all to employees). None involved a release of hazardous materials. In each case where code 510 was used to indicate contributing cause, the "primary" cause involved human failure; and it is reasonable to suppose that, in most cases, the failure would not likely have occurred absent impairment of the employee responsible for the failure.

One additional train accident was reported by a railroad as involving alcohol as a contributing cause. That accident (at Proctor, Minnesota) is considered below, with employee fatalities.

Incompleteness of train accident data. Although the data discussed above provide confirmation that alcohol and drug use are substantial concerns that should be considered in developing accident prevention measures, FRA believes that existing information tends to paint a seriously understated picture of the problem. For the reasons discussed below, many factors militate against detection and documentation of alcohol and drug involvement after an accident. However, FRA believes that more careful investigation of accidents by the railroads, coupled with more complete reporting procedures, would result in the identification of scores of additional accidents where human failure associated with alcohol or drug impairment was a primary or contributing cause.

3. *Employee Fatalities in Train Incidents*

As shown by Table 4, a major cost of alcohol and drugs on the railroad is the loss of life in events that result directly from the operation of a railroad but do not involve significant damage to equipment (referred to as "train incidents"). The table shows fatalities in train and non-train incidents and includes all crafts of employees. Although they are displayed for information, nontrain incidents have not been specifically considered with respect to this rulemaking, since the primary thrust of the Federal Railroad Safety Act is the prevention of accidents in railroad operations.

FRA has also made the judgment, more fully discussed below, that this initial regulatory effort should concentrate on those employees who are most directly responsible for the safe movement of railroad equipment, as defined by the Hours of Service Act.

Of the 29 employee fatalities in alcohol or drug-related *train* incidents listed on Table 4, FRA determined that alcohol or drugs was a significant factor in 28 cases (excluding one case where the blood alcohol level was low). Of the 28 cases—

- 20 involved employees subject to the Hours of Service Act, of whom—
- 19 had blood alcohol concentrations (BACs) of .05 weight/volume or more at the time of their death; and
- 1 was using a prescription drug that is believed to have adversely affected his performance.

(One of the employees with an elevated blood alcohol level also had an unidentified drug in his system.) In most of these cases the employee placed himself in the path of moving equipment or slipped while attempting to mount or alight from a locomotive or car. In three cases, employees were the victims of otherwise minor collisions or derailments resulting from their actions.

Incompleteness of the data. FRA investigates all railroad employee fatalities, and FRA is the only Federal agency that publishes narrative reports on each such fatality (with exception of fatalities in train accidents for which NTSB publishes such reports). Table 4 shows that in all cases but one since 1975, FRA made its determination that the employee was impaired by alcohol or drugs on the basis of toxicological analyses, usually conducted as a part of an autopsy or more limited postmortem examination by local authorities.

Usually the only witnesses to these occurrences are other employees, who often will not divulge any information that they may have concerning the condition of the deceased prior to the accident. However, FRA's review of employee fatality investigation files compiled since 1977 disclosed that postmortem data was available in only one-third, or 144 cases, out of 452 "qualifying" files (other than deaths due to criminal acts, natural causes, etc.). Much of that data was fragmentary. Indeed, roughly one-quarter of autopsy reports obtained by FRA lacked laboratory analysis entirely, showed tests only for alcohol, or contained toxicological findings that were inconclusive.

However, available information does suggest the existence of a larger problem than has been documented. Of the 144 cases for which some form of report was available, employees tested positive for alcohol or drugs, with other than *de minimis* levels, in the 25 cases shown on Table 4 for the years 1977 to date (17% of employees examined). Full autopsies were conducted in 136 of the 144 fatalities, and 22 of those autopsies resulted in positive toxicological findings (16% of employees examined). FRA believes that most of the 136 full autopsies, in contrast to the 8 toxicological tests without full autopsies, were ordered without reference to any specific suspicion of alcohol or drug impairment. It is

possible to project, therefore, that *if toxicological tests were performed for all fatalities, rather than just one third, the number of employee fatalities determined to involve alcohol or drugs would be two to three times the number currently documented.*

This projection is consistent with the pattern of most employee fatalities investigated by FRA. A great many fatalities occur during switching operations under circumstances that are basically inexplicable except by reference to a safety failure by the victim of the incident. Local authorities often have little interest in requiring a postmortem examination in many cases, since the employee is commonly the only victim of his apparent negligence. Further, railroad safety may be viewed as the exclusive province of the Federal Government or other instrumentalities of State government. FRA and NTSB have generally not requested autopsies or toxicological tests except where specific information indicated alcohol or drug involvement. As discussed below, FRA proposes to revise this policy in connection with a limited, but broad-based examination of alcohol and drugs in railroad accidents.

The Federal Responsibility

Railroads are instrumentalities of interstate commerce and have been subject to Federal safety regulation since 1893. The Federal Railroad Safety Act both mandates the regulation of the railroad industry "as necessary" for safety and expresses a Congressional judgment that such regulation should be uniform throughout the Nation. (*See* sections 202 and 205 of the Act, 45 U.S.C. 431, 434.) Although railroad operations are often conducted over private rights-of-way, rather than over public highways or through public air space, those operations nevertheless have a direct and obvious impact on the safety of the communities they traverse.

Uniform regulation. The measures need to be undertaken to address the alcohol and drug problem must be implemented across large railroad systems that often span many states and local jurisdictions. Piecemeal regulation of this subject matter could only result in uneconomic and potentially conflicting regulatory requirements, a point recognized by the state agencies that have participated in this rulemaking.

Regulation of other modes. Despite the obvious need for strong Federal leadership in this area, the railroads remain the only major mode of interstate transportation for which alcohol and drug standards are not in effect. The Federal Aviation Administration enforces specific prohibitions on alcohol and drug use for flight crews and other employees in safety-sensitive functions, as well as detailed medical standards. Similarly, the Federal Highway Administration enforces alcohol and drug rules for interstate motor carriers, supplementing the drunk and drugged driving laws of the states. Federal policy actively encourages the improvement of state programs to prevent drunk and drugged driving. (*See, e.g.,* Pub. L. 97–364.) By contrast, there is presently no effective regulation of alcohol or drug use by railroad employees either at the Federal or the state level.

Existing Approaches to the Alcohol and Drug Problem

The objective of any Federal regulatory program dealing with alcohol and drug use in the occupational environment of the railroads must be to reinforce and supplement existing mechanisms, providing encouragement for those adjustments in contractual relationships that are not readily susceptible to regulatory modification. Any other approach could very well impair the effectiveness of existing operating rule enforcement and the growth of other, complementary programs.

This section will discuss the strengths and limitations of existing programs and sketch the context within which the regulatory proposals are advanced. The discussion draws on FRA's long involvement with voluntary programs and information submitted to the public docket in response to the ANPRM.

Enforcement of Rule G

The railroad's primary approach to prevention of alcohol and drug-related accidents is enforcement of Rule G through supervisory observations and punishment of offenders, usually by dismissal from employment. In its current form, Rule G of the Association of American Railroads Standard Code of Operating Rules provides:

> The use of alcoholic beverages or narcotics by employees subject to duty is prohibited. Being under the influence of alcoholic beverages or narcotics while on duty, or their possession while on duty, is prohibited.

Virtually all railroads have such a rule in effect, and in recent years some railroads have adopted formulations of the rule that deal more explicitly with range of substances that can affect employee performance. Similar rules have been incorporated into the safety rules and other codes of conduct on many railroads, so that the policy of "Rule G" often applies to employees performing functions other than movement of on-track equipment. At least one railroad requires a physician's certification before an employee may use (in connection with duty hours) a controlled substance or any preparation containing alcohol for therapeutic purposes.

In order to evaluate the options for change, it is necessary to describe how the railroads interpret and apply Rule G. Although Rule G formulations vary, most versions prohibit employees from—

- Drinking or using drugs ("narcotics" in the standard rule) while subject to duty or on duty;
- Possessing alcohol or drugs while on duty; and
- Being on duty while under the influence of alcohol or drugs.

"*Subject to duty.*" Most Rule G formulations do not provide for a specific abstinence period prior to duty. However, the prohibition on consumption or use while "subject to duty" is generally construed to mean that employees may not consume alcohol at any time prior to a scheduled or unscheduled assignment if such use would result in *any level* of alcohol in the employee's system when the employee reports. Detectable levels of alcohol can remain in the bloodstream for 12 hours or more after a person stops drinking. Thus, under this interpretation, an employee would have to end an episode of very heavy drinking about 12 hours prior to reporting for a scheduled assisgnment.

The application of Rule G to operating employees in unscheduled service and to employees such as signal maintainers, who are subject to intermittent service, is particularly limiting. Generally such employees are continuously "subject to duty" once they have received their statutory rest under the Hours of Service Act. In some cases an employee who receives assignments in train or engine service from an "extra board" may wait for many hours or even days for a call advising of the employee's next assignment. The exigencies of rail operations may lead to major delays and uncertainties with respect to likely reporting times, followed by a "short call" requiring the employee to report with limited notice. Extra board emmployees are expected to keep themselves available and fit for duty. In some cases, this means that these employees are essentially subject to a modern-day equivalent of Prohibition. Being continuously subject to call at all times, they will technically be at liberty to drink only during vacation periods and periods of illness.

The extra board employee (or signal maintainer) who drinks while subject to duty and gets an unexpected call is faced with three alternatives, all of which are unacceptable. If the employee says he cannot report because he has taken a drink, he can be disciplined for violating Rule G and, in some cases, for failing to protect his assignment. If the employee accepts the call, he will report to work in violaton of Rule G and may pose a safety risk to himself and his co-workers. If the employee falsely "marks off sick" he can be disciplined both for failing to protect his assignment and for dishonesty.

To the extent Rule G expects more of human nature than would appear to be warranted, there are some compensating practices, approved and unapproved, that mitigate the effects of the Rule. At least some railroad managers will permit employees who get "caught" by an unexpected call to "mark off" without penalty. FRA is aware that employees often encourage Co-workers who report drunk to go home "sick," and it may be that local supervision on some railroads tolerates or even condones such handling so long as it involves isolated incidents. Condoning or overlooking Rule G violations naturally weakens the force of the carrier's alcohol and drug policy to some extent, although exceptions would seem to be relatively harmless where the occasional drinker admits his error and seeks to avoid creating a safety problem.

At a more serious level, however, the practice is indicative of unchecked management discretion to excuse or punish. Such broad discretion need not be abused to create an impression of unfairness that can erode the perceived legitimacy of the rule. It is enough if employees believe such discretion is subject to unchecked abuse.

On the other hand, railroad management clearly needs a strong commitment from its work force to meet the demand of quality rail service provided 24 hours a day. If employees could "lay off" without explanation at any time, it would be imposssible to maintain operations during holiday and vacation seasons. Between the extremes of effective Prohibition and unrestrained freedom to mark off lies a more plausible policy that recognizes the humanity of the worker while protecting the interest of the company and the public in assuring efficient and uninterrupted rail service. This is clearly an issue ripe for resolution through sustained and creative collective bargaining.

Supervisory observations. Although nominally all employees of a railroad are responsible for assuring rule compliance (Rule E), both the railroads and employee representatives agree that it is not reasonable to expect such cooperation with respect to Rule G (at least in the absence of a bypass agreement, as discussed below). Co-workers will not report Rule G offenders, at least partially because the conventional sanction for a violation is dismissal. Therefore, Rule G is only as effective as the moral force that it carries and the program of supervisory observations designed to prevent and detect violations. Through the hearing process on the ANPRM, field inspection activities, and review of reports submitted by the railroads, FRA has learned that observaion practices vary widely.

Note only do the railroads vary with regard to the frequency, manner and geographical reach of their observation programs, they also vary with respect to documentation of those programs. Available information suggests that only about half of the major railroads include Rule G observations as an identifiable part of the program of operational tests and inspections presently required by FRA regulations (49 CFR Part 217). Several of the railroads that have an identifiable Rule G component appear to have added it only recently.

Violations of Rule G. On an industry-wide basis, the railroads detect a relatively small number of Rule G violations, indicating either that few violations occur or that many violations are not detected. Several railroads did not appear to know how many Rule G violations they had experienced over the past few years. Others kept rather complete data, although not in any standard format. For instance, some railroads offered only totals for all employees while others were able to provide data for one or more specific crafts, *e.g.*, train and engine service.

One railroad with over 20,000 transportation employees (*3*) reported that it had identified an average of about 50 violations per year over a three-year period among its train, engine and yard employees. A railroad with about 4,000 employees reported that it had only 24 Rule G cases in the period 1978 through 1982—an average of fewer than 5 per year. A railroad with operations in the southeast that employed about 8,500 transportation employees reported detecting an average of only 10 violations per year among those employees. A western railroad that employs approximately 14,000 persons said that it has dismissed "over 50" employees per year for the past two years.

In short, the information reviewed by FRA indicated that enforcement practices, recordkeeping practices, and numbers of violations detected varied among the railroads.

Sanctions applied. Most railroads have historically dismissed even first offenders. This approach represents a genuine conviction on the part of many rail managers that alcohol and drug use are serious offenses that deserve a firm response. On the other hand, the sanction is severe enough that one would expect it is not truly reflective of final disciplinary outcomes; and, in fact, the actual disposition of employees who offend Rule G follows a more complex pattern. For instance, a large western railroad said that it sometimes uses initial sanctions short of dismissal, but never less than a 6-month suspension. Two major railroads reported that a clear majority of those dismissed were returned to service on a leniency basis with an average of five months out of service (for first offenders). Another railroad said that Rule G offenders were usually out of service about one year. At the date of publication of this notice FRA was unable to identify any major railroad that had in effect a policy totally forbidding the return to service of Rule G violators.

Role of grievance mechanisms and rehabilitation programs. A dismissed Rule G violator may be returned to service by several different routes. The employee's collective bargaining representatives may persuade management to reinstate the employee through the railroad's appeal process or, perhaps, by agreeing to drop other, unrelated grievances if the employee is brought back. Management may make available the services of the employee assistance program and follow a policy of returning first offenders to service if they successfully complete counseling and/or treatment. The employee may approach the company directly, requesting leniency and offering evidence that his problems are behind him. Finally, the union or the employee may take the dismissal before a board of adjustment under section 3 of the Railway Labor Act. All but the last of these routes generally have one thing in common—the dismissed employee is basically at the mercy of the company. The company may elect to take the employee back but is not obligated to do so. On the other hand, arbitration under the Railway Labor Act often takes considerable time, particularly where the employee is forced to pursue the claim through the National Railroad Adjustment Board. Further, as noted below, the arbitration boards uphold

Rule G dismissals in a majority of the cases. Thus, from the point of view of the employee the salient feature of Rule G discipline is not that dismissal is always permanent, but that dismissal can be cured only if the employee is a successful supplicant before the railroad.

At least two railroads have modified these traditional approaches to dismissed employees. The first railroad permits any employee "found guilty" of a Rule G violation to apply for treatment and eventual reinstatement upon waiver of the right to appeal the dismissal. This option is available only to an employee found to be "addicted" by the head of the company's rehabilitation program. Such an employee may be reinstated through the program on completion of treatment, in the case of a first offense.

Statistics provided by this railroad are particularly instructive. During a recent five-year period, the railroad experienced 172 identified Rule G violations among both operating and non-operating employees. Of the 172 affected employees, 170 elected to waive arbitration and participate in the rehabilitation program. The remaining 2 employees elected to arbitrate, and their dismissals were upheld. The 170 participants were accounted for as follows:

- 18 were identified as "without addiction," of whom 13 were restored to service on a leniency basis and 5 remained permanently dismissed.
- 92 were evaluated as addicted and, following rehabilitation, were reinstated. (Three were later dismissed for second offenses and one of the three was again reinstated after a second treatment cycle.)
- 6 completed the program, but could not be reinstated under the program because of other charges unrelated to the use of alcohol.
- 7 employees failed to conform to the required therapy.
- 39 were satisfactorily participating in therapy as of spring 1983.
- The remainder fell into miscellaneous categories (deceased, reinstated after other charges were overturned, etc).

Note that only 18 of 170 Rule G violators who waived arbitration (about 10 percent) were judged to be "volitional" drinkers or drug users.

The second railroad is the recent merger partner of the first, and had been the only railroad that reported dismissing all violators and returning none to service under a carrier leniency policy. Since it filed its initial comments in this proceeding, this railroad has joined its partner in application of similar procedures for handling dismissed Rule G violators.

The salient point here is that most railroads use dismissal as the standard sanction for Rule G violations, but those same railroads generally allow dismissed offenders to return to work under policies that range from formal and explicit to totally *ad hoc*.

Arbitration results. As might be expected, the railroads that emphasize rehabilitation and reinstatement have fewer arbitrations in proportion to their Rule G violations than railroads that have no clear policy or refuse to reinstate employees. Based on information received from the railroads that participated in the hearing process, it appears that from one-half to two-thirds of dismissals challenged before the boards of arbitration are upheld. In the other cases, employees are usually reinstated without pay, generally where permanent dismissal is deemed too severe. In a small minority of cases, employees are reinstated with back pay and benefits. These appear to be cases where the railroad has been unable to make a strong case that a violation occurred.

Rehabilitation Programs

Abuse (or misuse) of alcohol and drugs can manifest itself as an occupational problem in a variety of ways. Deterioration of interpersonal relationships, excessive absence from work, and decreased productivity may all become evident, with or without pronounced on-the-job impairment. Employers thus have a clear economic stake in dealing with alcohol and drug problems, independent of safety consequences. Like many other large corporations, most larger railroads have responded to these problems and the safety dimensions of alcohol and drug abuse by establishing formal employee assistance programs (EAPs). Many of the programs (sometimes called "generic programs") offer counseling and other services for a wide range of other personal problems, such as family conflicts and mental health problems, as well as alcohol and drug abuse. In some cases, the EAPs also serve the families of employees.

Formal EAPs are ordinarily run by salaried employees of the railroads. EAP directors and counselors may be treatment professionals (such as social workers or counseling psychologists) or recovering alocholics. Some railroads do not employ in-house staff but instead rely on volunteers to identify problem drinkers. Whether or not the railroad has a formal EAP with salaried counselors, much of the treatment is provided by outside resources. On most railroads, employees diagnosed as alcoholics are referred to hospitals or residential treatment center for 30 days of inpatient therapy, which may include detoxification. Upon successful completion of inpatient treatment, patients may be continued in outpatient treatment or encouraged to join Alcoholics Anonymous. As discussed below, follow-up varies from intensive to essentiallly non-existent.

When viewed from the point of view of accident prevention, the progams perform two distinct roles:

Preventive role. First, EAPs foster prevention of Rule G violations by helping employees to modify their substance abuse behaviors before they result in detected offenses. Most railroads permit the troubled employee to enter the EAP-prescribed treatment program on a confidential basis prior to any disciplinary offense. Supervisors are often told only that the employee is on a leave of absence. Companies are willing to permit employees to return to work as a matter of right, without enhanced supervision, because this policy encourages employees to deal with their problems at a relatively early stage. (Some companies apparently require successful completion of treatment before the employee is returned to service, but many apparently do not.)

Restorative role. As discussed above, many employees enter EAPs only after they have been detected in Rule G violations. Ironically, most such "employees" do not enjoy any employment relationship with the company at the time they seek help, since they have been dismissed. However, most railroads make available the services of the program to dismissed offenders, and some—but not all—make successful completion of counseling or treatment a condition precedent to a leniency reinstatement. A large portion of the cost of treatment is often borne by a negotiated health insurance plan, which typically provides benefits for a period of four months after termination.

Extent of penetration. In reviewing the information submitted to the docket on delivery of EAP services, FRA expected to find that none of the programs was reaching a significant portion of problem drinkers or drug abusers. This was particularly true since none of the railroads claimed major success in this area. In fact, the caseload information suggests that many of the EAPs appear to have made substantial progress in delivery services to their target populations, while others have not. The partial success of some of the programs is a function of their longevity and annual caseload size. It is not clear

whether the inability of the programs to reach all those who need assistance is caused by insufficient program capacity, inadequate awareness and referral systems, lack of program credibility, the reluctance of potential clients to acknowledge their problems and accept help, or other factors. However, it is likely that more than one of these factors are operative with respect to each EAP.

From the point of view of accident prevention, EAPs obviously cannot assist in preventing job-related substance abuse if the affected individuals are not brought into the programs and provided treatment that is successful. However, determining how many individuals "should" be served by any given EAP is very difficult. For instance, the extent of drug abuse among railroad employees can only be estimated. National prevalence rates for use of illicit drugs among the employed population have been estimated to be in the 3 to 7 percent range (including use of marijuana). Rates for males and young adults are substantially higher. (*See* discussion below on pre-employment drug screens, under "Conclusions and Proposals.")

Data for railroad employees affected by alcoholism or problem drinking are somewhat better defined. Based on a 1978 survey of employees of seven railroads that employed more than half of all rail workers, the REAP Report estimated that between 12 and 20 percent of employees were "problem drinkers," depending on the definition employed. Operating employees tended to be somewhat more likely than "exempt" or nonoperating employees to be problem drinkers. The Alcohol, Drug Abuse and Mental Health Administration estimates that the prevalence of problem drinking in the national population to be at least 5 percent, but does not have a current estimate of the adult male prevalence, which may be considerably higher than the estimated incidence among adult women and minors. (Most employees in Hours of Service positions on the railroads are male.) Based on national averages, the views of the railroads, and the REAP Report analysis, FRA believes it is likely that the incidence of problem drinkers (including uncontrolled and recovering alcoholics) among all railroads employees probably varies in the range of 5 to 20 percent, depending on the area in which the railroad operates. The rates for operating employees are probably slightly higher.

Despite a reasonable level of confidence regarding the target population, there is perhaps no more elusive goal than that of accurately estimating the extent EAPs are reducing (or checking the growth) of the population currently affected by job-related substance abuse. The REAP Report concluded that EAPs served between about 2 percent and 17 percent of "problem drinkers" on the seven study railroads during the study year 1978 (Table 6–14, page 177). (This estimate represents a range using two different prevalence rates.) The REAP Report executive summary estimated that the programs served 4 percent of problem drinkers in 1978 (apparently using a prevalence rate of 19 percent). The 1982 White Paper estimated that programs among all Class I railroads reached an average of 6 percent of problem drinkers in 1981 (assuming a 19 percent prevalence rate).

The foregoing estimates did not take into consideration clients previously served who were no longer a part of the case load. Many of the estimates submitted to FRA by the railroads appear to suffer from the same limitation. Although many of the programs report "success rates" of 70 percent or better, and individual problem drinkers are rarely maintained as active clients for more than two years, some of the evaluations of penetration do not take into consideration persons restored to normal functioning (i.e., they fail to subtract persons who have their problems under control from the target population). But it seems reasonable to assume that the better established EAPs have made progress in rehabilitating significant portions of the "target population" since 1978. Rail employment has declined significantly over the past few years, and there has been relatively little new hiring. The programs generally report that substantial portions of the persons served remain in service with their respective railroads. In order to conclude that no substantial progress is being made in helping problem drinkers, one would have to assume that there are an unlimited number of persons at risk or that, among the population at risk, potential cases are maturing at a rate faster than mature cases are being treated. Clearly the former is not plausible and the latter offers only limited insights.

The current number of affected individuals on the respective railroads is not known for a number of reasons: prevalence and "population at risk" estimates vary and rely on a variety of often unstated assumptions; techniques and standards for measuring "rehabilitation" outcomes are not standardized and necessarily involve subjective judgments; employee populations change constantly through attrition and new hiring; long-term follow-up studies on the success of rehabilitation efforts (measured in restoration of job performance or abstinence from alcohol) are generally not available; and, as noted above, a certain number of employees not previously troubled by alcohol or drug abuse become affected for the first time each year. Further complicating matters, client totals for the generic EAPs include persons with problems other than substance abuse. (Delivery of EAP services directed at general mental health problems may reduce episodes where alcohol or another drug is used inappropriately, but the extent of this relationship cannot be determined.) A thorough review of current EAP penetration rates would require virtual replication of the REAP study on a larger scale, with significant modifications in study design. Even then, any conclusions would probably have to be based on a number of assumptions not readily subject to empirical measurement except over an extended period of time.

What can be said is that the older railroad programs that have received active support from other sectors of the railroads' management or from organized labor appear to be making significant inroads into the target populations. That is, given the significant numbers of employees served and the estimated prevalence of problem drinkers in the railroad employee population, *some programs appear to have served a majority of problem drinkers* through at least one treatment cycle. Further, success appears to breed success. That is, there is some evidence that the older programs continue to see increases in referrals even as employee populations decline and cumulative penetration increases. This may reflect growth in program capacity, more effective general awareness efforts, or word-of-month promotion by present and former program clients. In any case, this kind of growth can only auger well for the reduction of uncontrolled problem drinking on the railroads.

On the other hand, other railroads have clearly not made significant inroads to this point. For instance, a railroad that employed over 30,000 persons at the end of 1982 reported that its program had experienced only about 675 referrals since its inception in 1978. Another railroad of similar size said only 200 of its former EAP clients are currently "back at work" out of about 750 referrals (a figure that apparently

includes family members). A third large railroad estimated that from 15–20% of its operating employees need help for alcohol or drug problems but reported that its five-year-old EAP has successfully served only 600 employees since 1977 (2% of 1982 employment or about 10% of the target population, assuming a static work force). A railroad that employed 20,000 persons at the end of 1982 reached under 400 empolyees prior to its recent merger with another railroad. Two Class I railroads estimated very low penetration of the problem population, and another two estimated penetration at or below 25%. Three did not have salaried personnel devoted exclusively to the program, and two of those did not maintain statistics. Another large railroad that responded to the NAPRM did not address this issue, and several smaller Class I railroads did not participate through direct public comments.

Although this information is difficult to interpret, particularly given the geographic and other variables that influence prevalence rates, it does suggest that a significant minority of problem drinkers have been served by EAPs and that institutions are in place on most railroads to continue that progress. Nevertheless, most problem drinkers remain unidentified and unserved after a decade of voluntary efforts. Treatment of drug abusers presents an even more difficult topic of analysis, but a few EAPs are now seeing these clients in sufficient numbers that more may be known in the near future concerning the utility of EAPs in dealing with abuse of other drugs.

Bypass Agreements

The ANPRM described the growing phenomenon of "Rule G bypass agreements" and detailed their recent spread. Bypass agreements are collective bargaining agreements that are intended to encourage employee support for Rule G through a limited substitution of rehabilitation for punishment. The major common element of the agreements is that they permit a Rule G offender to avoid (bypass) disciplinary sanctions for a first offense by entering a program of counseling and/or treatment. An employee deemed not to require treatment is returned to service almost immediately.

Some agreements, such as the ones in effect on the Kansas Division of the Union Pacific Railroad (UP), guarantee the option to bypass only where a co-worker report is the means by which the violation is detected. Others, notably those in effect on the Chessie System, give the employee the option of bypass even if a supervisor detects the violation. In all cases, alleged offenders may demand an investigation and contest the disciplinary charge as an alternative to the bypass. The agreements also differ with respect to the return to service. In some cases, the decision to return the employee to service is exclusively within the discretion of the employee assistance counselor or director. In other cases, a carrier officer makes the determination. Some agreements allow a bypass only once in the employee's career. Others offer a second chance after the expiration of 5 years from the first incident. Most bypass agreements are relatively new, and it can be expected that labor and management will continue to refine the rights and procedures that they embody.

Purpose and effect. Employees often believe that management will assess punishment well in excess of that necessary to deter a second offense and that management cannot be trusted to return the offender to service on a fair and impartial basis. Bypass agreements rest on the premise that employees will "turn in" the Rule G offender only if they are sure the offender will receive help and will not loss his or her livelihood (be dismissed). From the point of view of employees and their representatives, therefore, an agreement is necessary to assure the rights of the offender.

These programs are of recent origin, and there is little evidence at this point to conclusively prove or disprove the theory that bypass agreements actually promote co-worker reporting. However, participants in these agreements appear to share the view that they do unify employee against the use of alcohol or drugs. That is, employees refuse to tolerate abusive conduct and pointedly indicate to the offender that they will report the Rule G offense unless the offender "voluntarily" refers himself for counseling and treatment. Advocates of bypass agreement also contend that peer concern for the alcoholic or drug-dependent person is complemented by intolerance for any Rule G violation by the non-dependent employee. Thus, employee involvement may produce more referrals of chronic abusers to the EAPs and fewer violations by non-addicted employees who are capable of refraining from Rule G violations.

Success of the bypass concept. The ANPRM reported statistics relating to the claimed success of bypass agreements of the UP. The UP/United Transportation Union bypass agreement, which covers over 500 employees in the Transportation Department of Kansas Division, became effective on November 1, 1980 (later replaced with a minor revision). A similar agreement between UTU and the Brotherhood of Locomotive Engineers became effective on the same division on June 1, 1981. Coincident with implementation of these agreements, the UP claimed substantial improvements in injuries, run-through switches, and yard derailments. (The UP statistics are reported in the ANPRM.) These improvements came during a period of declining traffic and employment, and the data were not normalized for these declines. However, FRA has solicited from the UP employee injury data that is normalized on the basis of 200,000 employment hours. The summary below shows the frequency-severity index from those data for transportation employees of the Kansas Division's Transportation Department (bypass agreements in effect, per above) and the entire UP system (including Kansas).

Frequency/severity index	Kansas Transportation	UP system
1978	2.14	3.38
1979	3.41	4.42
1980	1.76	3.91
1981	.56	2.61
1982	.60	1.67
1983 (11 mo.)	.22	1.37

These results are clearly susceptible to varying interpretations. The UP Safety Director specifically cautions that UP began implementing a major new employee safety program across the UP system in March of 1982 and that the new program was implemented on the Kansas Division in the summer of 1982. He believes that most of the further reductions in the frequency and severity of employee injuries in Kansas since that time may be attributable to the new initiative. However, UP continues to believe that the bypass agreements have yielded impressive gains in safety since they were introduced, and the available information appears to be consistent with that belief.

Awareness and Education Programs

Available information on awareness and education programs is not subject to quantification. At various times during the last 15 years the railroads and employee organizations have made limited efforts to go beyond instruction in the requirements of Rule G to more effective educational efforts concerning alcohol and drugs. FRA has played a role in these efforts through five national conferences, Project REAP, and other means. However, it can be confidently said that few awareness and education

programs in the industry have been implemented with much consistency or intensity.

Some education and awareness efforts have been addressed to all employees and others have been targeted at particular groups, such as line supervisors or union representatives. Some such programs have been oriented to the direct support of safety programs, while others have focused on promoting referrals to EAPs. A minority of railroads have begun efforts to educate segments of management and employees to identify the signs of problem drinking and drug use through review of performance, physical manifestations, or increased familiarity with drug slang and paraphernalia.

Efforts directed at the general employee population usually consist of distribution of literature or viewing of a safety film related to alcohol or drugs. There is no way to estimate what proportion of employees have had recent exposure to such efforts, but it is clear that they have generally been sporadic. On the other hand, one major railroad has recently exposed 17,000 employees to a 45-minute awareness presentation. The national union organizations developed an EAP workshop that relied heavily on the Project REAP findings, but it is not known how many employees have participated.

A major western railroad states that over 2,000 supervisors took part in an employee assistance training program during the past year. Two major railroads are providing detailed drug and alcohol information to all of their supervisors through formal training programs and have invited the participation of local union officers. A third railroad plans to institute such a program this year.

Recent Developments

Since the close of the comment period and initial work on the preparation of this notice, several developments have been brought to FRA's attention that should be mentioned as a background for further proceedings in this rulemaking. Ongoing accident investigations are described above under "Safety Consequences of Alcohol and Drug Use," and another development has already been discussed above under "Enforcement of Rule G."

In addition, in April of 1984 the Union Pacific Railroad and its employees announced "Operation: Red Block," a concerted effort to involve all supervisors and employees in the prevention of alcohol and drug use through an informational and education campaign. UP's labor organizations are forming "Action Committees" to refer troubled employees for assistance. The parties have also signed "companion agreements" that permit dismissed first offenders under Rule G to return to service on completion of treatment or a formal education program. Employees are reinstated on a probationary basis for the first 12 months. These agreements are, thus, broader than the bypass agreements described above, but come into play only after the disciplinary process has been completed.

As further discussed below, beginning in November of 1983, FRA redoubled its efforts to improve voluntary prevention programs through joint action with the railroads and the national labor organizations.

It is also worthy of note that on February 27, 1984, the General Assembly of the State of Indiana adopted a concurrent resolution urging FRA "to adopt a rule authorizing random or selective use of blood alcohol detection tests for railroad train crews and making submission to such tests an implied condition of employment."

Review of Regulatory and Other Options

The ANPRM set forth a variety of approaches to the control of alcohol and drug use in railroad operations. Commenters identified additional measures for consideration, and FRA has continued to refine its definition of possible approaches. The discussion in this section reviews the principal options in the light of the comments and other information available to FRA.

1. Federal Prohibition on Alcohol or Drug Use

a. *General Comments and Analysis*

The most basic and obvious option for dealing with alcohol and drug use on the railroads is simply to forbid such conduct. It is an option that has been before FRA since at least 1974, when the National Transportation Safety Board (NTSB) recommended that FRA issue a regulation that would "in effect prohibit the use of narcotics and intoxicants by employees for a specified period prior to their reporting for duty and while they are on duty" (R–74–9). In March of 1983, the NTSB recommended that FRA—

> Immediately promulgate a specific regulation with appropriate penalties prohibiting the use of alcohol and drugs by employees for a specified period before reporting for duty and while on duty (R–83–30).

The ANPRM noted that FRA does not have direct authority to assess "appropriate penalties" against individual employees, but invited comments on three approaches to specific regulation of this subject matter: (i) A Federal rule forbidding certain conduct, backed by sanctions against the railroads ("Federal Rule G"), (ii) a requirement that the railroads have in effect a Rule G conforming to specified standards or minimum criteria and make reasonable efforts to enforce it ("Model Rule G"), or (iii) recommendation for legislation creating civil or criminal sanctions against employees who use alcohol or drugs in connection with safety-sensitive functions. The reaction of the commenters was divided.

NTSB and other Federal agencies. NTSB Members, including the Chairman and Vice Chairman, appeared at three of the public hearings. A senior staff member appeared at the fourth. The NTSB witnesses recognized that FRA has limited authority to take action directly against employees and evidenced no interest in either making a legislative recommendation for direct sanctions or having FRA do so. However, they stressed the importance of establishing a firm Federal policy. NTSB believed that, even without extensive FRA enforcement efforts directed at employees, the articulation of a clear Federal policy would reinforce carrier rules, help to deter noncomplying behaviors, and provide a framework for later, more careful examination of carrier programs.

Although not commenting on the need for specific rule provisions, both the National Institute on Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse stressed the need for meaningful action.

State and local representatives. Several representatives of State or local governments implicitly supported the articulation of a Federal policy. The NARUC survey showed that 8 of 21 States responding said their State had some kind of law or regulation enabling the agency to deal with alcohol or drug abuse, but only 5 States had taken any actions to enforce those provisions. Two States thought FRA should leave the alcohol and drug issue solely to collective bargaining. The transportation director of a public utility commission endorsed criminal sanctions at the State or Federal level. However, 17 of the States responding to NARUC thought first offenders should be required to submit to counseling and treatment without job loss (and, evidently, without other specific sanction).

Private organizations and companies. Several organizations that put emphasis on prevention of drunk driving appeared or provided written comments to express their concern over alcohol and drugs on the railroads. B'Nai B'Rith, Citizens for Safe Drivers, and Mothers Against Drunk Drivers (MADD) all favored some form of Federal regulation. These organizations tended to affirm the importance both of certain sanctions and opportunities for rehabilitation, but generally stopped short of recommending specific criminal penalities at the Federal level. Further support for direct Federal regulation came from the Hazardous Materials Advisory Council (comprised of shippers and carriers), the International Association of Chiefs of Police, the Washington Legal Foundation, and the American Trucking Association.

Railroads. The Association of American Railroads (AAR) and individual freight railroads generally opposed a "Federal Rule G" or the establishment of a Model Rule G formulation that the railroads would have to adopt. The railroad commenters believed that neither was necessary, given existing railroad rules and programs. However, the railroads did not raised serious objections to minimum Federal criteria for railroad rules. Two railroads thought any Federal rule should apply directly to employees, not the railroads. Two commuter authorities also opposed any Federal role.

Management reaction was, however, not uniformly negative. One railroad urged the adoption of minimum criteria to add force and weight to the railroads rules. Another railroad supported a Federal rule, suggesting that the combined efforts of government, labor and management would be required to address the problem. Even the railroads that supported a Federal role, however, believed enforcement would have to be left to the railroads through established disciplinary procedures.

Unions and employees. The national railroad employee organizations opposed direct Federal regulation. They believed that the existing Rule G is a "good rule," but argued that the rule is not uniformly enforced on all railroads. They also said that the sanction of dismissal is usually unfair and perpetuates a cover-up of rule violations. Opposition was also voiced by several local union leaders, one of whom believed that the railroads are not actually enforcing the existing Rule G.

However, one State legislative board chairman appeared to support a Federal rule if it included a right to rehabilitation—rather than dimissal—on a first offense. A local union leader though that if FRA felt compelled to issue a rule, it should be in the form of minimum standards.

Four citizens wrote in to support direct Federal regulations, one saying that "serious consequences" should flow from violations. A Washington, D.C., attorney with detailed knowledge of both the railroad environment and alcoholism treatment programs advocated a "modern Rule G" that would allow addicted employees a one-time right to suspension and treatment. He stressed that FRA must act as a catalyst for change. A member of the Presidential Commission on Drunk Driving also advocating strong and direct action.

FRA conclusions. FRA believes that the problem of alcohol and drug use in railroad operations is sufficiently serious and persistent that regulation is required. The foundation of any regulatory program is the articulation of a policy, together with minimum criteria for private sector action. Since the thrust of FRA regulations in this area would be to establish minimum safety standards, and the railroads may be concerned with a broader range of issues, including general fitness and productivity, FRA believes that it is not appropriate to mandate the adoption of a prescribed or model Rule G. FRA is not unmindful that most of the railroads and their employees will not welcome regulations on this topic. However, FRA believes that employee and public safety can be adequately served only if a higher level of effort is devoted to the prevention of alcohol and drug-related accidents. Therefore, this notice contains proposed rules establishing minimum standards of employee conduct and a duty of care for railroad supervisory efforts to enforce those standards.

b. *Abstinence Period*

The NTSB has recommended that FRA prohibit the use of alcohol or drugs for a "specified period" prior to the time the employee reports for duty. Based on NTSB testimony, it appears that a period of 8 hours is intended.

Comments. An established abstinence period of 8 hours drew support from a State-level union leader, public interest groups, and two railroads. The American Trucking Association favored a 4-hour period of the kind mandated by the Federal Highway Administration. The president of a consulting firm that provides service in the field of occupational durg abuse favored a 12-hour period, which represents the time required for the body to oxidize significant quantities of alcohol. The International Association of Chiefs of Police also supported an (unspecified) abstinence period.

However, there was overwhelming opposition among most railroads and employee organizations to any set abstinence period. Even the railroads that tend to support the concept noted that any such rule would be unenforceable, since the railroads are said to be in no position to police off-duty conduct of their employees.

The industry commenters also contended that set abstinence rule would be impractical for many employees who are not in scheduled service (such as extra board employees) or who are subject to call beyond scheduled duty hours (particularly railroad signalmen). They pointed out that an employee may wait for many hours (or even several days) for a call. The call may require him to report for work in two hours or less. In these circumstance the employee could hardly plan to remain abstinent for 8 hours prior to the beginning of the assignment, unless the employee is willing to remain totally abstinent for the even longer period he is "subject to call."

FRA analysis. It is generally true that the railroads cannot vouch for the off-duty conduct of employees. However, at least some Rule G violations have been charged against employees who have been seen consuming alcoholic beverages while "subject to call." Anecdotal evidence suggests that some drinking by non-addicted employees takes place in common areas of railroad-owned crew quarters and some takes place in public places such as taverns near railroad yards. As a consequence, the problem is subject to some degree of monitoring, but the prospect of effective enforcement is at best conjectural. At worst, an abstinence rule carries with it a significant potential for employee harassment and discriminatory enforcement.

The argument that an 8-hour abstinence rule would be impractical underscores the rigidity of Rule G itself and has already been noted in the discussion of Rule G above. The AAR testified that—

> A Federally prescribed period of abstinence would not be practical and thus not effective. It could also be perceived by employees as unfair and hence be self-defeating because many operating employees are subject to call at any time after their legally required 8-hour rest period. Technically, they could be prohibited from using alcohol at any time while awake. Rule G in force on the railroads is more forceful than a Federally mandated period of abstinence. The rule prohibits any drinking on duty and prohibits reporting for work with

any trace of alcohol no matter how recent or remote in time the ingestion may have been.

Here, the AAR concedes that Rule G is so forceful it effects virtual Prohibition on many employees. In theory, at least, an employee could be disciplined if the employee drank while subject to duty and was detected in the violation, even if the employee was not called for an assignment during the period alcohol remained in the employee's blood.

Nevertheless, the points made by the AAR are well taken. FRA's primary public policy objective is to prevent employees inpaired by alcohol or drug consumption from operating the nation's railroads. A rule that prohibits drinking on duty and prohibits reporting for work impaired by alcohol or drugs accomplishes that objective. In an industry where duty calls are unscheduled and often days apart, any pre-reporting abstinence rule is the functional equivalent of Prohibition, and would likely be no more successful in attracting the level of community support necessary to make it a realistic, enforceable regulation.

Accommodation of the railroad's need for flexibility in scheduling assignments, on the one hand, and the employee's desire to live a more "normal" life, on the other, is a matter best left to collective bargaining. Labor and management could bargain for a system in which employees would be allowed to mark off without penalty when they receive genuinely unexpected calls that involve short notice. Restrictions could be placed on the number of such instances and their use during holiday periods. The hearings developed the fact that union leaders see a clear need for such a "cut system," and the railroads appear willing to entertain the idea. FRA recognizes that such a system would be difficult to implement for employees in signal service, in particular, but believes that agreements could be reached to handle most situations if the parties show flexibility. FRA encourages the parties to address this problem through constructive collective bargaining during 1984.

Under current circumstances, it would not be prudent for FRA either to adopt the fiction of the existing Rule G formulations (that employees will remain abstinent indefinitely) or to go forward with a possibly unworkable abstinence period. Rule G compliance already suffers enough from the lack of credibility created by a very broad rule that is made practical by overlooking violations at the margins. No purpose would be served by adding an abstinence period that itself could not be enforced.

c. *Other Components of a Federal Regulation*

The comments focused primarily on the advisability of a Federal rule, rather than its content. However, comments were received on such issues as whether the rule should include a maximum BAC, what drugs should be proscribed from use, and the personal disqualification of alcoholics and other drug-dependent persons—in addition to the comments on abstinence periods discussed above.

BAC. The AAR and the commenting railroads opposed specification of any BAC level, since it might be seen to undermine the requirements of the present Rule G. The commenter who served on the Presidential Commission on Drunk Driving believed that an FRA rule should not permit any level of blood alcohol. A representative of MADD suggested that a maximum BAC of .05 would be adequate for present purposes, noting that this level is used for traffic safety purposes in Australia. An NTSB witness said that blood alcohol even below .05 degrades performance. A State-level union officer advocated a BAC of .10, as measured at a hospital. A UTU local chairman thought the BAC threshold should be something over .05.

Drugs. The railroads appeared to favor prohibiting the use of any drug that could adversely affect safety. The AAR said that any rule should bar "alcohol or other intoxicants, narcotics, depressant, stimulants, hallucinogens, cannabis or other mind or function altering substances." However, since "individual railroads may be successful in disciplining action without such a broad categorization," the AAR wanted FRA to avoid suggesting that any existing rules are deficient in relation to the proposed standard. One commenter favored barring the use of all "mood changing drugs," and a consulting firm with extensive experience in this field suggested the use of the term "psycho-active drugs." One commenter favored controls on use of over-the-counter drugs, and a major railroad thought FRA should specifically address prescription drugs.

Drug dependence. The American Trucking Association believed that FRA should provide for the medical disqualification of alcoholics and "drug users."(4)

FRA conclusions. FRA believes that, if Federal regulations are to be more than mere exhortations, they must be specific in defining a standard of conduct. That standard of conduct must relate to safety of operations in a direct and meaningful way. In light of this objective, FRA proposes to issue a regulation that contains a maximum blood alcohol concentration and a specific designation of proscribed drugs.

FRA recognizes that the Federal Highway Administration (FHWA) and Federal Aviation Administration (FAA) both bar from safety-sensitive functions persons who are alcohol or drug-dependent, unless it is shown that those individuals have overcome their problems and are living drug-free lives. Certainly drug dependent persons as a class pose a higher safety risk than other employees. However, unlike FHWA and FAA, FRA does not have in place a medical qualifications system capable of monitoring or adjudicating the status of thousands of employees. The railroads, however, do undertake to ascertain the fitness of their employees and, in some cases, make effective use of their medical departments to identify alcohol and drug-dependent employees. Further, in this notice FRA establishes an additional means by which such employees can be identified for complete diagnosis and treatment. As a consequence, FRA does not at the present time propose to issue regulations requiring the disqualification of employees based solely on their status as drug-dependent individuals. However, if the railroads fail to improve their use of existing capabilities, refining their medical standards and procedures to detect initial and recurrent dependence on the part of employees in safety-sensitive functions, it may become necessary for FRA to issue specific regulations on this subject in the future.

d. *Disciplinary Disqualifications and Licensing*

The ANPRM requested comments on whether FRA should require the railroads to disqualify offending employees for specified periods. That is, by regulation employees would be withdrawn from safety-sensitive functions for progressively longer periods based on the number of offenses committed. Such a system could probably be implemented without the issuance of Federal licenses to employees, since the railroad disciplinary system includes negotiated procedural protections and any Federal regulatory requirement would be deemed an implied term of the particular collective bargaining agreement. On the other hand, the system could be implemented through licensing, with FRA responsible for suspending and revoking licenses for cause.

Comments. The NTSB warned that a licensing program might have to be

considered if less onerous measures failed to address the problem. An NTSB witness particularly deplored the "plea bargaining" of multiple grievances that can permit Rule G violators to reclaim their jobs without evidence that they have received treatment or suffered sufficient loss of income to serve as a deterrent to future violations. The American Trucking Association favored rules requiring a one-year suspension on the first offense and 3 years on the second offense (similar to FHWA rules). A local public official responsible for emergency preparedness in his county favored Federal licensing, and an expert on drunk driving stressed the use of summary administrative revocation of licenses as an important deterrent. As noted above, a majority of State public utility commissions favored counseling and treatment on the first offense.

Although not favoring Federal regulations, representatives of the national union organizations agreed that a short suspension might be appropriate on the first offense (for employees who were determined not to require treatment). The unions generally believed second offenders should be dismissed. A local union officer opposed licensing, opposition that was reflective of the overall employee position.

Most of the railroads appeared to favor maintenance of existing policies, which nominally call for dismissal on the first offense. None of the railroads expressed support for licensing.

FRA analysis. FRA believes that licensing and mandatory disqualification periods represent a degree of Federal intrusion that is unnecessary in the railroad context. On the other hand, FRA is concerned that the railroads, in concert with employee representatives, re-evaluate and reform the assumptions underlying current Rule G discipline.

e. *Coverage*

Like other large corporations, the major railroads employ personnel with a wide range of backgrounds to perform administrative, clerical, financial, marketing, supervisory, maintenance, transportation and other tasks. The duties of many of these employees are quite remote, both in distance and in nature, from the railroad operating environment. On the other hand, many non-transportation employees, such as maintenance-of-way employees, car inspectors, signal maintainers, and others, perform their work in the midst of train and switching movements. Other employees, such as dispatchers and block operators, help to control train movements from office-like environments. Determining which employees should be covered by a Federal rule is difficult at best.

Comments. The commenters offered only sparse advice on this subject. A representative of the NTSB indicated that that agency was principally concerned with public safety. He indicated that signal employees should be covered, but had no opinion on a maintenance-of-way laborer whose work would be inspected prior to resumption of operations over the track. That is, the NTSB appeared to have no position with respect to employees other than operating employees who might be exposed to the hazards of moving equipment in the yards.

The AAR and one railroad indicated that, if rules are issued, they should cover employees subject to the Hours of Service Act. Another railroad would add yardmasters whether or not subject to the Hours of Service Act.

The Brotherhood of Raiload Signalmen agreed that its members (who are covered by the Hours of Service Act) would have to be covered by any alcohol and drug rule. A local union officer of the UTU believed that all railroad jobs are safety-sensitive and should be covered, a position also taken by a Brotherhood of Locomotive Engineers (BLE) General Chairman.

FRA position. As further discussed below, FRA believes that initial regulations should cover employees subject to the Hours of Service Act.

2. Breath and Body Fluid Testing

Breath and body fluid testing represent the two most objective means for determining whether employees have alcohol in their blood and, if so, how much. Body fluid testing is the sole means of reliably determining drug use in most cases. However, these techniques are also extremely controversial. FRA believes that most of that controversy and associated resistence to testing techniques is caused by (i) misunderstandings concerning what they are intended to accomplish, (ii) deliberate or negligent misrepresentations concerning the reliabilty of testing, and (iii) attempted applications of the technology that do not take into consideration appropriate safeguards.

To be sure, much of the controversy is also a function of concern for personal privacy and disagreements concerning the obligations of the individual employee to other employees and the public. This concern involves a host of subjective elements, as well as possible legal issues.

a. *Testing Modes and Objectives*

It is important to understand that objective testing techniques can be used in a variety of ways, many of which can mitigate or eliminate objections based on privacy interests, potentially unfair consequences, or supposed unreliability of specific techniques.

Modes. Testing can be done for at least the following distinct purposes: preliminary screening of a population, preliminary determination of presence (use) or impairment, or final determination of presence or impairment. Obviously, testing in one mode may be followed by testing in another mode. For instance, it is common in many States for police officers to use preliminary breath testing devices to confirm suspected intoxication among drivers of motor vehicles. If the preliminary test is positive, the driver is ordinarily transported to a location where an evidential-quality test can be performed. It is also common (and accepted practice) for positive tests of blood or urine samples to be retested by another method, either to confirm presence with specificity or to determine quantity, or both.

Objectives. A government agency or a transportation company may have a wide range of objectives in mind when it enters upon a testing program. The most obvious objective is to identify rule violators so that they can be subjected to sanctions. However, any sanction may itself be meted out for any combination of the following purposes: (i) Retribution of punishment; (ii) special deterrence (to keep the particular person from violating the rule again); or (iii) general deterrence (to keep others from violating the rule). In an occupational environment, the sanctions may be called "discipline." As noted below, discipline need not be punitive.

Testing may also be undertaken with the exclusive objective of identifying persons who are abusing alcohol or drugs and need counseling or treatment.

Test environment. Testing may be done in connection with normal duties ("in-service testing") or during an evaluation outside of normal duty hours.

b. *Testing by Contract or Management Fiat.*

Privately initiated and administered testing does not implicate Federal constitutional protections. That is, a private company may require its employees to submit to testing without thereby raising questions under the Fourth Amendment (searches and seizures) or the Fifth Amendment (due

process). In general, employees have only such protections as may be provided by collective bargaining agreement.

One State (Oregon) has enacted legislation to regulate testing by employers, and certain State constitutional provisions might be construed to protect employees against private action in some circumstances. However, these are the exception rather than the rule.

As discussed in the ANPRM, the First Division of the NRAB has reviewed the history of practice under existing collective bargaining agreements and has concluded that *requiring* employees to submit to breath testing would be a unilateral change in working conditions not permitted under the Railway Labor Act. Award No. 23334; June 25, 1982. Other arbitrators exercising authority under section 3 of the Railway Labor Act are likely to follow this determination, unless the First Division should have occasion to issue an inconsistent award, at least until the *status quo* is changed by agreement, law, or regulation having the force of law.

c. *Public Comments on Testing Options*

This section will discuss the railroads' call for testing authority, reactions of other parties to the test options presented by the NPRM, and related comments of the parties on the uses and abuses of breath and body fluid testing techniques. Public comments on post-accident testing requirements are reserved for a separate section, as are specific kinds of test programs that FRA might require or authorize the railroads to implement.

The railroad proposal. The AAR presented the position of the railroads, who had agreed that FRA should nullify the First Division (NRAB) award, which would in turn permit them to use "state-of-the-art" testing devices. In the view of the railroads, FRA could, under section 202 of the Federal Railroad Safety Act, authorize such testing, without safeguards as to the manner of testing or use of the test results. The AAR included in its formulation of the proposal a regulatory provision that each employee subject to the Hours of Service Act is deemed to have consented "to the administration of chemical, toxicological or other tests for the presence of alcohol or drugs." In the AAR's view, such a regulation would not Federalize tests conducted by the railroads pursuant to FRA's authorization.

Notably, unlike the options envisioned by the ANPRM, the railroads' testing proposal would carry no affirmative burdens. The railroads could test where they saw fit, but would not be required to test at all. The AAR noted that this approach would permit railroads to be "selective," concentrating on areas of known or suspected need.

Rationale. The railroads saw state-of-the-art testing in several different lights, but a general rationale was clearly discernible in each case. Those railroads that wished to use testing devices without specific cause (sometimes referred to as "random" testing) saw testing as a way to better *detect* Rule G violators, thereby increasing the perceived risk of detection among other employees and *deterring* future violations. The AAR envisioned that devices would be used for screening. Once a violator had been detected, supervisors would observe the employee and rely upon indications such as slurred speech, lack of balance and coordination, and the like, to make a case in the disciplinary proceeding.

Individual railroads had different plans and emphases. Several simply endorsed the AAR proposal as a sound way of providing enhanced detection and deterrence capability. The use of metal detection devices at airports was cited by one railroad as precedent for testing without specific cause. The railroad argued that the demands of safety clearly override any privacy interests of employees.

Recognizing the concerns of employees, one railroad proposed to use testing devices under guidelines to be worked out with their labor organizations. This railroad was willing to make resort to the EAP a matter of right for a first offense (in place of punitive discipline) if meaningful testing authority could be made available.

A senior officer of a major railroad testified that his railroad did not wish to burden its employees with mandatory testing done without cause, since it could impair labor-management cooperation. However, clarifying remarks of the railroad's counsel appeared to indicate that the railroad supported the grant of authority to test, even if it did not intend to exercise the full range of that authority. The railroad specifically noted its desire to require employees to submit to tests where there is a reasonable suspicion of impairment, and another large railroad indicated that it would only test on reasonable suspicion.

One railroad favored self-administered tests designed to encourage employees to refer themselves for professional help. Still another railroad believed it should be able to test under procedures "similar to highway safety." The procedures would be part of regulations granting testing authority. (Test administered in furtherance of motor vehicle safety invariably include an element of cause, such as suspected intoxication or the occurrence of an accident.)

A large railroad appeared to limit its call for testing authorization to the use of devices that could be used without the aid of medical personnel. (Such authority would not extend to compulsory testing of blood.)

Two railroads specifically noted that random or selective testing could be used to discover chronic alcoholics who are able to hide their intoxication as a result of increased tolerance for alcohol and through learned behaviors that mask the usual signs of inebriation.

Labor position on testing. Employee organizations expressed vehement opposition to virtually all forms of compulsory testing. Representatives of the RLEA opposed random testing as intrusive and unfair to the 85 to 90 percent of employees who do not violate the rules. They believed that labor and management should concentrate on the use of bypass agreements to detect problem drinkers and eliminate support for volitional rule violators among their co-workers. Use of tests on reasonable suspicion was viewed as unnecessary, since arbitrators regularly uphold discipline based on normal observations. However, an RLEA witness agreed that "plea bargaining" does go on where evidence is weak.

The BLE thought that testing would tend to drive abusers to non-detectable substances and would be used by the railroads as an excuse for not taking other needed action. The BLE also noted the harassment potential associated with unchecked use of the devices (*e.g.*, employees might be tested repeatedly and without reason, or individual employees might be unfairly singled out for reasons unrelated to their current fitness) and contended that "random" testing would offend Federal and State constitutional protections. BLE strongly contended that existing testing devices are not reliable and appended articles from professional journals that BLE believed supported that proposition.

Similar views were expressed by several system and local officers of rail unions and individual employees. However, a UTU member wrote in support of testing to identify persons who should be referred to EAPs. A locomotive engineer thought testing would help if it were done fairly, so long as the employee is provided adequate notice of the subject assignment. A State-level BLE official favored testing for alcohol where a specified BAC was

permitted and testing was done at a hospital. Another local BLE representative endorsed compulsory testing for alcohol or drugs on reasonable suspicion, but thought random testing would be an "affront" to most employees. A UTU local chairman thought testing should be used where a Rule G violation was suspected to protect both the railroad and the employee. Another UTU local chairman thought that testing in conjunction with scheduled physical examinations conducted by independent physicians was acceptable, but believed random testing of employees on the job would be wasteful and unfair.

The EAP director for the Association of Flight Attendants filed comments providing an additional perspective on testing. The Association contended that chemical analysis should not be the sole criterion on which judgment of impairment is based, since some chemically-dependent persons may function better while using the drug (due to increased tolerance) than while not using it (when withdrawal may cause a loss of control). Further, in the view of the Association, testing may cause persons who otherwise could function reasonably well because of increased tolerance to abstain from using the chemical, thereby resulting in withdrawal. The Association also contended that attempts as detection will drive abusers "further underground" and stresses the importance of a rehabilitative approach from the point of view of meaningful detection.

NTSB. The NTSB has formally supported testing only in the context of accident investigations and did not react to the AAR proposal. One NTSB witness expressed "disappointment" at the First Division Award barring testing, and another thought that compulsory testing should be considered by management and employee organizations (*i.e.*, not by FRA).

State and local government. Ten (10) of the States responding to the NARUC survey supported "random breath testing at major facilities and crew change points using breathalizer apparatus," but 6 opposed. Eleven (11) supported testing on suspicion, but 5 opposed. (It should be recalled that most of the commissions responding to NARUC favored treatment, rather than dismissal, for the first offense.)

The Georgia Governor's Highway Safety Representative and a County Traffic Engineer apparently thought employees should be required to submit to testing under conditions similar to those observed on the highways. The Department of Utilities of the City of New Orleans advocated periodic drug screens for a wide range of drugs, similar to existing requirements for New Orleans cab drivers.

Private groups and citizens. Support for compulsory testing came from representatives of B'nai B'rith and MADD, who did not comment specifically on the circumstances in which tests should be done. The Director of the National Public Research Institute introduced new technology offering promise for passive breath screening that he believed could be used to check all employees coming on duty at a particular point. The International Association of Chiefs of Police endorsed a regulation similar to the implied consent laws. The Washington Legal Foundation thought testing should be "encouraged." One consulting firm with experience in this area stressed the use of medical departments to determine fitness for duty, and another expressly endorsed pre-employment screening together with fair and enforceable drug urine screens (on a "random" basis).

One citizen favored testing in a general way, and one specifically favored testing before and after assignments. A witness with expertise in alcohol problems on the highway favored testing of all employees at on-duty points as a deterrent measure. A Washington attorney suggested that "random" testing be tried on Amtrak. He further noted that spot checks of recovering alcoholics could be used in a positive way to strengthen the individual's sobriety and encourage the railroad to return recovering alcoholics to service.

FRA analysis. In FRA's view, the polar positions taken by representatives of management and labor are both unrealistic. Breath and body fluid testing techniques involve varying degrees of perceived "intrusiveness," and it is not plausible to suggest that a Federal regulatory agency should alter the *status quo* with respect to employee consent to testing without specifying safeguards. FRA has an obligation under general principles of administrative law to assure appropriate regulatory balance.

Nor is the position of some employee representatives sustainable. Testing techniques can be used fairly and with precision, providing protection both to the person tested and other employees. Notably, sound use of reliable testing techniques could result in sober employees not being charged with rule violations and could lead to the improved documentation of cases against impaired employees. The availability of testing capability could do much to deter employees from drinking and drug use and to assist in identifying employees who need help for chronic substance abuse problems. In this notice, FRA proposes several specific uses for testing techniques that can help the railroads to detect rule violations and deter future violations.

d. *In-service Testing; Not for Cause*

The use of testing authority most often advocated by the railroads is so-called "random" testing of all employees encountered at a particular point on the railroad (such as a crew change point). This screening of the target population would be done without specific or constructive cause. Such testing would measure the condition of employees while they are in service and subject to Rule G. Employees found to have violated Rule G would be punished by dismissal. Most employees tested would be found sober; the objective would be to find the statistically small group of employees intoxicated on any given day. If one or more such employees were detected, the word would spread, creating a general deterrent effect.

Testing could be done by use of breath testing devices (for alcohol only) or through collection of urine samples (for alcohol or drugs). However, it appears that most of the active support for "random" testing is limited to breath analysis. Accordingly, the discussion below is limited to the use of breath testing devices. Such testing could be done pursuant to a mere authorization by FRA or according to a programmatic procedure mandated by FRA (probably linking frequency of tests to the results of previous efforts).

Non-discriminatory? This "road block"-style testing is attractive because it does not single out any employee and appears to be inconsistent with harassment. The railroads, however, want flexibility to be "selective" in testing, presumably by targeting problem crews or locations. Selectivity could hold down costs and avoid burdening the majority of employees who obey the rules, but it could also facilitate alleged or actual harassment. There can be no doubt that FRA would be called upon to evaluate any such use of testing techniques, putting the Federal Government squarely in the middle of railroad disciplinary cases.

Potentially costly. Assuming testing would be done on a truly non-discriminatory basis (according to the model used by the only railroad that has attempted to do "random" testing), significant questions arise as to the level of resources necessary to achieve the desired deterrent effect. The railroads submitted no analysis or cost estimates providing any assurance that such

testing would be cost-effective, compared to other approaches. Although cost should not be a factor if the railroads are permitted to scale their efforts to a level of results they choose, it would be a factor in a mandated program. Devices must be purchased and maintained, personnel must be trained, ongoing salary costs must be met, and at least some train delays must be factored in. Positive tests using preliminary screening techniques must be followed by evidential quality test in a controlled temperature environment. Further, costs could rise considerably if employees elect to resist testing procedures.

It should be noted that under any interpretation of the REAP Report statistics, most employees comply with Rule G most of the time. Thus, "random" testing will involve much wasted motion. Unless the tests are performed with some regularity, few if any violations will be found and the deterrent effect of the program will be lost. Thus, maintenance of level of effort would be important. (By analogy to highway safety, it is not enough that the drinking driver knows he could be stopped. Rather, he must sense a very real possibility that he will be stopped.) If random or programmatic testing of this kind could produce real safety benefits, and FRA does not doubt that it could, it would nevertheless require a major committment of resources. It is by no means clear that a significant number of railroads would be willing to make such a commitment, even if the requested authority were conferred.

Unprecedented. There is no precedent of which FRA is aware for a system under which a subset of the general civilian population is required to submit to breath testing wholly without cause. Certainly no Federal civilian agency maintains such a program.

State and local police departments are experimenting with sobriety checkpoint programs in which all motorists or randomly selected motorists are stopped and interviewed. However, these motorists are not required to participate in testing unless the interviewing officer has reason to believe that the motorist is impaired. Neither airline pilots nor truck drivers nor any other class of employee is required by Federal regulation to submit to testing without cause.

In FRA's view, the presently documented safety record of the railroads with respect to alcohol and drugs does not warrant making the railroads a testing ground for random breath analysis. FRA does not suggest that the railroads have done all they need to do or that further reductions in alcohol and drug-related accidents are not feasible. To the contrary, much progress appears to be possible using available means and the additional tools discussed below. However, it appears that most railroads are not experiencing the kind of exceptional problems that would warrant wholesale departure from surveillance norms prevailing in other transportation modes.

Labor objections. Employee representatives are adamantly opposed to testing without cause. Although some may dismiss this opposition as near-sighted or unreflective of rank and file opinion, it is important to understand the dimensions of real concern expressed. In the first instance, labor representatives see testing as a tool that could be used to reinforce the existing approach, which relies heavily on punitive discipline. The present opportunity for improvement of employee assistance programs and development of referral systems that include employee participation would, in labor's view, be lost. If testing is perceived by employees as unfair or capricious, a further wedge will be driven between labor and management on Rule G matters and the development of rehabilitative alternatives will continue to lag.

Employee representatives offer as an immediate alternative to testing the adoption of bypass agreements. Such agreements, it is argued, will involve employees in maintaining the sobriety of their co-workers and help produce referrals of chemically-dependent persons for appropriate treatment.

Employee representatives also see testing without cause as inherently flawed. Almost by definition, "random" testing is likely to increase employer discretion while reducing employee confidence in the fairness of the system. As noted above, Rule G technically requires that employees report to work with no alcohol in their blood, regardless of the length of notice provided for the assignment in question. Although railroad management could elect to overlook low BAC readings, an unconditional authorization for testing would certainly place no limits on management discretion. Given the adversarial context of railroad labor-management relations, many employees would fear that the railroads would use a testing authorization or mandate to punish those employees otherwise in disfavor (*e.g.*, for submitting a disputed claim for additional wages or benefits), while excusing other employees.

Provisional conclusion. Further documentation of the human costs of alcohol and drug-related accidents may indicate a need to accept the limitations, costs, and apparent consequences of "random" testing. In particular, such testing may be warranted on particular portions of railroads where a culture of alcohol or drug use has taken root. However, FRA cannot discern a general need to conduct "random" tests, sanctioned by Federal regulations, on a national basis. That is, FRA is not convinced that existing information warrants regulatory action to implement this option, particularly given the availability of other, better targeted measures.

e. *In-service Testing on Reasonable Suspicion*

At the present time, many railroads offer employees suspected of Rule G violations the opportunity to provide blood or urine samples for analysis (or take a breath test). Employees usually refuse such requests, and the refusals are admitted in the disciplinary hearing and considered by the arbitrators.

However, there would be considerable benefit in increased use of testing techniques where there is some reasonable suspicion that the employee may be currently impaired by alcohol or drugs. Testing would help confirm impairment of employees who are skilled at concealing their intoxication, lead to identification of drug users who display marginally unusual behaviors, and dispel suspicion where behaviors are the result of illness, fatigue or other causes that should be addressed on their own merits. Reliable test results would improve the quality of disciplinary hearings and provide much more objective information for review by arbitrators, particularly where they are inclined to question the severity of the sanction applied by the railroad. (*See* Award No. 2347, Fourth Division, NRAB; Dec. 10, 1968 (indicating that carrier should have provided opportunity for sobriety test "before stigmatizing a supervisory employee with many years of service * * * with the serious charge of violating Rule G").) The improved quality of documented evidence in Rule G cases would also reduce the temptation for local union officers and the railroads to settle out Rule G charges for reasons external to the merits of the particular violation. The issues related to testing for cause are further discussed in the section-by-section analysis below.

f. *In-service Testing for Categorical Cause*

There are at least two conditions (not involving a suspicion of current impairment by a specific employee) under which it would be reasonable for the railroads to require employees to submit to tests of limited instrusive

effect, such as analysis of breath or urine. In some of the following cases where a drug urine screen is positive, it may also be reasonable to require that the employee immediately provide a blood sample.

Operational failure. Employees involved in a material operational failure, such as passing a stop signal, excessive speed, a run-through switch, or the like could reasonably be expected to submit to testing, recognizing that supervisors on the scene will not be expert in identifying or evaluating all of the outward manifestations of impairment—particularly where drugs other than alcohol are involved.

Occupational alcohol and drug experts generally contend that the role of the supervisor should be to evaluate performance, not diagnose impairment. However sound, this approach leaves many questions unanswered where employees are on duty in safety-sensitive functions. Supervisors have to make on-the-spot decisions concerning whether to remove employees from service and charge them with rule violations. One partial approach to handling the problem is to administer appropriate tests to confirm or exclude alcohol and drugs as factors in the observed failures. This concept is included in the proposed rules below.

Accident. Obviously, some accidents involve operational failures by employees on the scene and some do not. However, determining whether a given accident was caused by a human failure, equipment defect, or a track defect may take some time. It would therefore be reasonable for a railroad to require employees to submit to testing immediately after the occurrence. As noted below in the discussion of mandatory tests following major accidents, failure to test immediately will result in the loss of valuable information. This approach is also included in the proposed rules.

g. *Mandatory Testing After Major Accidents*

On March 7, 1983, the National Transportation Safety Board recommended for the first time that FRA—

> With the assistance of the Association of American Railroads and the Railway Labor Executives Association, develop and promulgate effective procedures to ensure that timely toxicological tests are performed on all employees responsible for the operation of the train after a railroad accident which involves a fatality, a passenger train, releases of hazardous materials, an injury, or substantial property damage. (R–83–31.)

Although the AAR and RLEA have been very helpful in advancing this review of rulemaking options, it is clear from the comments discussed below that neither has an organizational interest in mandatory post-accident testing. Nevertheless, FRA agrees that this measure is an essential one if the consequences of alcohol and drug use are to be adequately documented and solutions are to be developed and fully implemented.

Public comments. NTSB witnesses advocated post-accident testing to "allow the Board to gather a truly accurate picture" of accident causes and to deter employees from violating regulations concerning alcohol and drug use. This option was supported by 16 of the States responding to the NARUC survey, and only two States opposed. The California PUC endorsed the proposal in a separate submission.

A Washington attorney favored mandatory post-accident testing and contended that the railroads' concern over suits under the Federal Employers Liability Act skewers present reporting. He believed that post-accident testing would assist in (i) providing a factual basis for accident prevention analysis, (ii) identifying problem employees, and (iii) discouraging non-addicted employees from drinking or using drugs on the job. He advocated that the requirement be applied to accidents involving a fatality, injury requiring hospital treatment, or hazardous material evacuation.

Additional support was expressed by Citizens for Safe Drivers and MADD.

The International Association of Chiefs of Police believed that any requirement should be selective, since "a mere accident does not raise a question of probable cause." A consulting firm favored testing " where human error is possible."

Acting through the RLEA, employee representatives indicated a willingness to accept post-accident testing "consistent with Federal policy in other transportation modes." The FRA panel noted to the RLEA witness that testing of surviving crew members is not uniformly required in other transportation modes, and the witness again affirmed that the RLEA favors a consistent policy on this point. A State-level BLE officer believed that tests should be conducted with respect to categories of accidents identified by agreement. Spokesmen for a UTU local favored tests administered by qualified medical personnel, but thought such tests would be insufficient to deal with the problem. A local BLE legislative representative favored post-accident testing, but a BLE General Chairman thought tests should only be conducted where there is "probable cause."

The AAR saw no major problems with post-accident testing, but did not believe it would serve as a deterrent and wanted FRA to avoid becoming entangled in the issue of how to discipline employees who refuse testing. Two major railroads repeated the theme that post-accident testing would not necessarily deter. At least three major railroads thought that tests should be required only where a human factor appeared to be involved in the accident or there was specific concern that an employee was impaired. Outright support for mandatory post-accident testing was expressed by two major railroads and by a third railroad that believed a requirement for testing would relieve the railroads of "civil liberties litigation."

One railroad noted that testing in connection with grade crossing accidents would result in an undue delay of commerce and that consideration should be given to accidents that occur many miles from medical facilities. Another railroad also pointed out the problem of numerous grade crossing accidents.

One railroad thought post-accident testing should be alllowed, but not mandated. Two railroads expressed concern, but not formal opposition. One of them believed the logistical problems associated with testing could be substantial.

FRA conclusions. FRA believes that mandatory post-accident testing after major accidents is essential to defining the full extent of alcohol and drug involvement in the railroad safety problem and can assist in bringing home to employees the seriousness with which the Federal Government views the problem. The need for testing and the issues that it raises are discussed below in connection with the proposed rules.

h. *Drug Screens; Physical Examinations*

Although FRA did not specifically raise the use of drug screens in connection with employee physical examinations in the ANPRM, the public comment cycle and FRA's consultations with the National Institute on Drug Abuse have brought this option very much to the fore. Based on existing information, FRA believes that most railroads require pre-employment physical examinations of virtually all final applicants. Further, most railroads require periodic physical examinations for train and engine employees and certain other employees. Such examinations provide a prime

opportunity for the railroads to detect symptoms of alcohol and drug abuse (including addiction). The context of these examinations is external to the normal work environment. That is, employees are not subject to the threat of punitive discipline; and they generally perceive the examinations as fair and unbiased. Most physicians have diagnosed or treated chemical dependence, although many would not claim to be expert in the field. Some carrier medical departments already have close working relationships with the EAPs.

Purpose. Physical examinations can be used productively to identify alcohol and drug-dependent individuals even without the use of drug screens. Information received in this proceeding suggests that most railroads ask physicians to evaluate employees for alcohol and drug problems, but a significant minority do not. Consistent with that pattern, some EAPs apparently receive numerous referrals from carrier medical departments, but others evidently do not.

FRA understands that the symptoms of alcohol and drug abuse are often ambiguous and that many physicians are particularly reluctant to make a diagnosis of dependence based on the limited data obtainable through most occupationally-oriented examinations. However, failure to use physical examinations as a part of an overall evaluation system represents a major waste of resources. Regular inclusion of drug screens (including a check for alcohol) could powerfully augment the diagnostic tools available to examining physicians and focus the attention of physicians on signs of abuse that, standing alone, might not be adequate to support a diagnosis. That is, a positive test could be used as a part of the overall medical evaluation.

Obviously, drug screens done in connection with physical examinations could not and should not be used as the basis of punitive discipline. However, they could be used by carrier medical departments to help identify persons who are using drugs that present special risks for the employee engaged in rail operations, persons who are using illicit drugs "recreationally" and who may therefore require enhanced supervisory oversight (to assure use does not extend to duty hours), and alcoholics who are unable to abstain from the use of alcohol even for a physical examination.

Practicality. According to the National Institute on Drug Abuse, recently developed drug screening techniques are highly reliable and clearly affordable. Reliable indications of the presence of specific substances can be achieved at costs as low as $10 per urine sample. Many of the physical examination protocols currently in place involve routine or elective urinalysis for other disorders, so drug sereens would not impose any new burden on employees. Nor should they lead to significant objections from employee representatives.

FRA has been able to identify only one major railroad, a western carrier, that routinely submits urine samples to drug screens. The railroad conducts screens in connection with all physical examinations in the following categories:

- Periodic examinations of locomotive engineers.
- Pre-employment (all crafts).
- Return to service (all crafts).

Approximately three percent of tests (including pre-employment) are positive for "amphetamines, opiates, barbituates, various tranquilizing substances [or] various pain medications." The railroad's submission also indicates that the results of company-required physical examinations "identified multiple engine service employees with alcohol and drug dependent problems."

The railroad does not test for alcohol or marijuana at the present time, but is considering adding marijuana to the substances tested. In addition to the testing described above, examining physicians do look for symptoms of both slcohol and drug dependence.

This railroad's urine drug screen program has been in place on the railroad for at least 10 years. All samples are processed at a central laboratory. Positive samples are retested and the quantity of drug present in the urine is determined. The railroad's medical director estimates the cost of a complete test for a positive sample is $8 to $10. Samples are retained for 6 months in case any dispute arises concerning the test results. In addition to screening applicants for employment, the railroad uses the test results to identify employees for appropriate treatment through the railroad's EAP.

Industry status. Four railroads reported that examining physicians use drug screens where indicated, and FRA suspects that this may be the case in other instances, as well. However, serious abuse of many drugs may not be evident upon casual examination, and testing in response to clinical indications is a much different use of the technique than that reported by the railroad that uses urine drug screens as a matter of routine.

FRA is frankly bewildered that a major railroad has utilized this technique with apparent success for an extended period without its having been tried by other Class I railroads. When FRA asked other participating railroads whether they were using drug screens as a part of physical examinations, only one other railroad reported that it intends to incorporate this procedure into its examinations. A second said it has this approach under active consideration. One railroad thought this approach was of "questionable legality," but others indicated there are no legal or contract impediments to this form of testing, apparently because they have retained the ability to set medical standards for employment.

FRA believes that all railroads should carefully consider the implementation of drug screens in connection with periodic physcial examinations. Commenters are correct in noting that this method will not detect all alcohol or drug abusers, particularly many of those able to abstain prior to the examination. However, the experience of companies and other organizations that have used the technique is that many drugs users do not, in fact, abstain, either because they cannot or because they give insufficient thought to the matter. No method will detect all abusers, nor can one extrapolate from presence of many drugs to the conclusion that the drug is being abused. Nevertheless, drug screens can provide significant information that can prove useful in assuring employee fitness and identifying employees who need rehabilitative help.

Pre-employment examinations. FRA believes that there is at least one setting in which a Federal mandate for drug screen is indicated. Specifically, drug screens should be performed in connection with all pre-employment physicals. The rationale for inclusion of this alternative is discussed below in connection with the proposed rules.

3. Criteria for Supervisory Observations

The ANPRM solicited comment on mandatory criteria for supervisory observations of operating employees. As noted above, testimony received at the hearings clearly indicated that Rule G enforcement efforts vary considerably from railroad to railroad, both with respect to level of effort and approach. Further, employee representatives pointed out that Rule G is not consistently enforced. More frequent observations could improve employee awareness of the railroads' commitment to alcohol and drug policies, foster detection, and deter non-addicted persons from violating Rule G. More effective incorporation of Rule G observations into efficiency testing

programs would provide FRA an enhanced capability to monitor carrier programs.

Public comments. NTSB thought that FRA should require railroad management to improve supervision of employees. An NTSB witness suggested that supervisors should, at a minimum, meet train crews where they go on duty; but NTSB also noted that it is not practical to meet every crew every day. NTSB did not propose specific criteria for the number of supervisory checks. A private citizen also endorsed improved supervision.

Eleven (11) States responding to NARUC indicated support for improved operational testing by supervisors, but NARUC did not indicate what form regulations should take.

The spokesman for the International Association of Chiefs of Police noted that alcohol-impaired employees can be detected with a high degree of reliability through use of the horizontal gaze nystagmus procedure now in use by some police departments. (This procedure consists of observing eye movements and is rated as highly accurate by the Department of Transportation's National Highway Traffic Safety Administration.) However, a consultant with expertise in controlling drug use stated that supervisors are not likely to be able to detect use of most kinds of drugs.

The industry parties, labor and management, agreed that effective supervision is a key element in any successful deterrence program. However, the parties did not suggest means for promoting such supervision through regulations. The AAR opposed Federal criteria, and the railroads that addressed the issue opposed requirements that involved abitrary quotas or excessive paperwork. The railroads generally claimed that current supervision is as effective as is practical, that employees are routinely checked for Rule G compliance in conjunction with normal supervisory activities (including efficency tests and inspections), but that records are not kept because it would not be realistic to make entries for every supervisory/employee encounter. A commuter railroad said that supervision on its property was constant and that Federal regulations are not needed. Two railroads have made special efforts to board trains and check crews with the hope of deterring alcohol and drug use. Emphasizing the railroads' call for in-service testing authority, two railroads contended that supervisory checks can detect only obviously intoxicated employees.

One railroad appeared to support Federally-established criteria to reinforce to employees, as well as supervisors, the need for prevention. The railroad said it checks each of its crews at least once a month. (This railroad also has an ambitious management training program devoted to alcohol and drug problems.)

FRA analysis. FRA agrees that improved supervision is a key to better compliance. Even employees who are capable of hiding their intoxication will be less likely to drink if the are closely supervised. Frequent supervisory contacts are necessary to build trust and assure that employees understand the extent of management concern over compliance with all safety and operating rules. However, specifying the manner and frequency of supervision on disparate railroads operating over a 200,000 mile rail system through a single set of criteria is not feasible. Determining the level of supervisory effort that may be warranted at any given place and time is fundamentally a matter of good management, something that cannot be mandated by regulation.

FRA has learned that many railroads do not include Rule G as an integral part of their program of operational tests and inspections, thereby departing from the intent of FRA's Railroad Operating Rules (49 CFR Part 217). FRA expects that all railroads will examine their current practices to ensure that uniform and thorough coverage is provided and that observation results are made an integral part of the operating test program. Accordingly, FRA will be working with the AAR and individual railroads to require better compliance with the requirements of existing railroad rules and Federal regulations. In addition, inclusion of alcohol and drug rules in Part 218 will have the effect, through section 218.11 of the existing rules, of adding specificity to current reporting requirements for operational tests and inspections and provide better data on Rule G violations charged by the railroads.

4. Co-Worker Certification

In the ANPRM FRA requested comment on a requirement that the conductor or engineer observe each member of the crew at the beginning of each tour of duty and certify in writing that, to the best of the observer's knowledge and belieff, none of the members of th crew is in violation of Rule G (or a Federal equivalent). A similar certification could be required at the end of the tour of duty.

Public comments. The railroads, through the AAR, opposed any certification requirement, noting that many employees already advise supervisors of developing problems. Several individual railroads opposed the option because they believed it would be ineffective, or would produce unnecessary paperwork. One railroad cited possible delays associated with required observations. However, one railroad thought the approach would serve the ends of detection and prevention, although it believed certification would be difficult in many operations. A major railroad said that the conductor is already responsible for the fitness of members of the crew, indicating that certification would not add a new dimension to existing requirements.

The only railroad to institute co-worker certification on a voluntary basis said the time and cost associated with the program is "insignificant" and reported some positive effect in "accentuating the importance of Rule G." However, the railroad said that certification does not overcome the problem of concealment. Ironically, the program has resulted in the identification of only one individual who was unfit for duty, but that instance was cited by the NTSB in its list of accidents and incidents involving alcohol and drugs submitted to this docket. It is entirely possible that the program has also resulted in employees being persuaded to "mark off sick" after reporting to work while impaired.

Employee representatives opposed certification for a variety of reasons, including ineffectiveness. The RLEA spokesman said that "it it sheer folly to think that a co-worker and probable friend would turn in a friend and member of his crew." He added—

> The REAP Report has already demonstrated the tendency of a co-worker to protect another. Adding another layer of Federal rules like this will cause even more elaborate protecting of an employee needing treatment and perpetuate the cover up.

Two UTU members suggested that employees are not qualified to ascertain the fitness of their co-workers, and one BLE system-level officer referred to the certification form in effect on one railroad as a "stool pigeon form." The BLE General Chairman for that railroad noted that the organization had gone along with the certification procedure, but thought self-certification was a more appropriate procedure.

The NTSB made no specific comments on this option, except to say that it would not be a "viable program." But the head of a consulting firm with expertise in occupational drug abuse programs endorsed certification as a measure that would increase awareness

among employees; and a Washington, D.C., attorney thought this approach would also act as a deterrent.

FRA analysis. FRA believes co-worker certification would involve significant paperwork burdens and might very well be viewed as a substitute for more meaningful and direct measures. Critically, this approach would seek to attack the conspiracy of silence among employees without providing to employees any assurance that rule violators whom they are asked to identify will be provided the opportunity to participate in rehabilitative or educational programs, in lieu of punitive discipline.

5. Improved Accident Reporting

On March 7, 1983, the NTSB recommended that FRA—

> With the assistance of the Association of American Railroads and the Railway Labor Executives Association, develop and promulgate a requirement that alcohol/drug abuse involvement in accidents/incidents be fully reported to FRA. (R–83–32.)

The ANPRM suggested that FRA could require the railroads to report any evidence of suspected impairment of any employee involved in a train accident or injury. Current train accident reports provide information concerning alcohol or drug involvement only where the railroad believes that impairment was the primary or contributing cause of the accident. Injury reports contain no information at all concerning alcohol or drug involvement.

Public comments. The NTSB stressed the need for improved reporting, but did not indicate what specific requirements NTSB would like to see included in new regulations. Representatives of Citizens for Safe Drivers and MADD endorsed the NTSB recommendation, as did one State public utilities commission.

Employee representatives believed that accident reporting will improve only when employees directly involved in the accidents are able to submit their own view of the events.

The railroads generally did not offer strong views on this option. One railroad opposed as unduely burdensome any requirement that a carrier officer with knowledge of the facts separately certify each rail equipment accident report (used to report train accidents). A commuter railroad thought any further reporting requirements would be redundant. A freight railroad stated that there was no cover-up of alcohol or drug accidents on its property. Another major railroad opposed any expansion of existing requirements, but thought that alcohol and drug cause codes used for train accidents could profitably be included in the existing occurrence codes for injuries.

FRA analysis. FRA agrees with the NTSB that existing reporting mechanisms have proved inadequate. This issue is further discussed below.

6. Promotion of Voluntary Programs

The ANPRM suggested that, as an alternative or complement to regulation, FRA could intensify its promotion of voluntary programs that address the alcohol and drug problem. These efforts include EAPs, bypass agreements, and education or awareness programs, each of which are discussed above from an historical point of view. FRA could issue advisory standards for programs, promote the adoption of standards by industry groups, or simply continue to play the role of a facilitator. This section will discuss the merits of these approaches as seen from the point of view of participants in the rulemaking and the role of FRA in promoting or mandating their adoption.

Public comments on EAPs. Most commenters who addressed this subject, including the National Institute on Alcohol Abuse and Alcoholism, believed EAPs are an important ingredient in an over-all safety program; and some thought the EAPs would benefit from increased resources. NTSB thought that employees should be fully rehabilitated before returning to work, unless they are provided enhanced supervision.

A Washington, D.C., attorney who supports EAPs said the the relapse rate among recovering alcholics after the conclusion of in-patient care is about forty percent. He added that treatment must be continuously reinforced. The EAP must be independent and able to make key decisions, particularly with regard to assuring that the employee goes back to work soon enough, but not too soon. This commenter believed that treatment at company expense should be provided only one time; and employees who experience relapses should not be permitted to return to work for at least one year. He also stressed the importance of volunteers in follow-up efforts, the role of union in assuring that the recovering alcoholic is assigned to work with supportive co-workers, and the utility of alternative housing at away-from-home terminal to assure an alcohol-free environment.

One MADD representative suggested that recovering alcoholics should not be returned to service until the end of a full year. Another MADD representative noted that rehabilitation of railroad employees afflicted by alcoholism will also foster highway safety.

A consultant on occupational drug programs noted that EAPs do not deal directly with recreational drug use, a problem that can be addressed only through a "behavioral modification" approach.

Seventeen (17) States responding to NARUC supported rehabilitation of first offenders, in lieu of punitive discipline, but 2 of the 17 "qualified their responses by noting that employees in rehabilitation, although retaining their jobs, should not be permitted to perform any safety related functions during their rehabilitation period."

The RLEA detailed those elements necessary, in labor's view, to a successful EAP, including (i) a clear choice by the employee whether to accept help or be subject to discipline, (ii) management recognition that alcoholism and drug abuse are health problems requiring treatment, (iii) industry-wide commitment to the program, (iv) integral labor union involvement that begins at the inception of the program, (v) a "rehabilitative attitude" by management (with dismissal reserved for cases where rehabilitation fails), (vi) a clear distinction between the handling of "social drinkers or drug users and the problem employee," (vii) extensive education and publicity concerning the program, (viii) confidentiality of employee participation and EAP records, (ix) adequate insurance coverage to finance treatment, (x) systematic and ongoing program evaluations, (xi) a sufficient number of competently trained counselors, and (xii) effective volunteers as a program resource. The RLEA felt that only about one-third of EAPs are currently adequate when measured against these standards, and some employee representatives indicated that it might eventually be necessary for the unions to establish their own counseling and treatment programs, similar to those operated by unions representing employees of commercial airlines. Reflecting the difficulty associated with eliciting employee confidence, a local chairman on a railroad with a very well established EAP said that the program has no integrity, since it operates as an arm of management.

The AAR did not take any position on the status or function of EAPs, reflecting the divisions among the railroads with respect to the level of attention and resources that they deserve. The growth and newfound maturity of some of the EAPs is discussed above. It may be noted that a railroad that claims a high

penetration rate also said that "even the results of current programs are inconclusive and * * * any expansion must clearly be viewed as experimental for a number of years."

Other railroads are less reserved in their descriptions of their programs. For instance, a major railroad with a program almost 10 years old estimates that it saves $14 in costs for every $1 invested in the EAP. This is based on a 72% reduction in outlays for injuries, sick leave, grievance costs, and the like, among treated employees. The railroad is particularly gratified that it is now getting a much higher percentage of referrals before the subject employees are involved in Rule G violations.

One railroad that operates principally in Canada said that it is willing to finance up to two courses of treatment for a dependent employee, but this assistance is "completely separate and apart from Rule G." This separation of punitive discipline from rehabilitation is characteristic of most railroads that do not have bypass agreements, but one railroad permits alcohol-dependent employees to avoid punishment while dismission non-dependent employees who are found to have violated Rule G.

At least one railroad has a formal labor advisory board for its EAP but does not claim a high penetration rate. Another railroad with a low penetration rate believes that its program could be greatly expanded if union personnel were more deeply involved.

None of the commenters offered clear suggestions as to how EAPs could successfully deal with social drinkers and recreational drug users who are unlikely to require, and are unlikely to respond to, the structured and well known treatments indicated for the chemically or psycologically dependent. In response to an FRA question, and NTSB witness indicated that he believed educational sessions administered by the States for drunk drivers have not been notably successful.

Public comments on bypass agreements. Employee representatives advocate bypass agreements as a means of assuring employee participation in identifying persons who need help. The unions and some railroads believe that these agreements can also deter rule violations by solidifying co-worker resolve not to tolerate conduct that may endanger all members of the crew. The NTSB commented favorably on the emergency of bypass agreements, but again noted the importance of assuring that the employee is rehabilitated. Further support for bypass agreements on the UP model came from a representative of MADD.

However, the success of bypass agreements remained a matter of contention within both management and labor ranks. A representative of the BLE, while asking FRA to defer regulation, took the position that bypass agreements are "experimental." As noted above, the agreements often contain quick cancellation clauses, suggesting reservations on both sides. A UTU local chairman pointed out that the statistics supporting the success of the UP bypass agreements (reported in the ANPRM) are not fairly reflective of normalized trends, and a BLE general chairman on a major railroad referred to the bypass agreements as "snitch agreements."

The railroads took widely varying positions on bypass agreements. The AAR believed that voluntary referral mechanisms of EAP programs already implement the essence of the bypass concept. One railroad expressed a willingness to use the bypass concept if chemical testing is available to increase surveillance of its work force. Another railroad opposed the trend to bypass agreements as "undermining firm discipline," but agreed that it would have less objection if punishment can be avoided only where detection was effected as a result of a co-worker report. The two bypass agreement railroads represented in the hearings noted that the agreements were only a part of an overall prevention, detection, and treatment effort, but both were well satisfied with the results to date. FRA was not able to identify any additional railroads that are actively considering bypass agreements at the present time, but at least one railroad said it had "no problem in considering" the concept; and another said it would react with interest if it ever gets a request from its employees to consider the idea.

Three railroads opposed bypass agreements on the grounds that discipline is an essential element in convincing chemically-dependent employees that they need help, and one railroad thought that such agreements "extend further * * * the number of chances a problem employee receives."

Public comments on education/awareness program. The commenters who addressed education and awareness programs, including MADD representatives, union spokesmen, and a consultant with expertise in occupational drug programs, generally supported an increased level of effort. As discussed above, a minority of the railroads have active education and awareness efforts underway.

Public comments on FRA role. The commenters generally favored FRA promotion of sound EAPs and education/awareness programs, but most offered little guidance concerning what strategies FRA should adopt. The head of a consulting firm with expertise in occupational drug programs stressed that FRA should not try to regulate the details of railroad programs. A State public utilities commission suggested that EAPs and bypass agreements should be mandated by FRA, in order to respond to the concerns of labor that management is only interested in discipline.

The Brotherhood of Railroad Signalmen took the position that, if FRA felt compelled to regulate, the only requirement should be that the industry parties adopt bypass agreements. One UTU spokesman thought that FRA should give the parties a time certain within which to negotiate bypass agreements and thereafter, if agreements are not reached, mandate the bypass concept by regulation. Another thought FRA should provide guidelines and time limits within which the parties could work. However, a third UTU witness (a local officer) disclaimed any interest in a Federal bypass requirement.

The AAR thought there was no basis for FRA either to encourage or discourage adoption of the agreements until more information is available, and it seems clear that none of the participating railroads would favor FRA efforts to require the use of this option. At least two railroads stated outright opposition to any Federal requirement for bypass agreements or policies.

One railroad suggested that FRA could assist smaller railroads in identifying alcohol and drug treatment resources in their areas, and there appeared to be considerable general support for FRA assistance in developing educational materials.

None of the commenters endorsed issuance of national advisory standards for voluntary programs, and none responded to the suggestion of the ANPRM that FRA could promote industry standards for these programs.

FRA analysis. FRA is convinced that safety can be enhanced by EAPs, bypass agreements having the full support of employees, and education and awareness efforts directed at both employees, and supervisors. FRA has been encouraging the establishment and improvement of EAPs for a full decade, and shares a part of the credit for the strides taken by the railroads in reaching problem drinkers. EAPs offer the principal means of reaching troubled employees before their problems manifest themselves in accidents or aggravated rules violations of the kind

that are most likely to be detected and result in disciplinary action. However, the EAPs have not yet shown themselves capable of dealing with the social drinkers and recreational drug users who likely account for most of the instances of on-the-job impairment.

Bypass agreements and policies offer a major hope for uniting employees and employers behind a common fitness policy. The agreements provide powerful leverage for the application of peer concern and should assist in generating referrals to credible EAPs. Further, they promote active disapprobation of alcohol and drug use on the job, thereby fostering prevention.

Properly understood, agreements that offer the bypass option only in the case of a co-worker report present almost no risk that employees will perceive the bypass as a "free bite at the apple," since they leave in place the constant threat of severe punishment in the event a supervisor detects a violation. It is clear that few rail managers understand this point, and it is equally clear that many local and system-level union officers share their confusion.

Education and awareness programs also must play a role in preventing alcohol and drug-related accidents. Employees will not be convinced that the railroads are serious about preventing on-the-job impairment unless they are frequently told that this is the case. Nor will they be convinced that their substance abuse habits endanger safety unless they are educated in the effects of alcohol and drugs and the real-life consequence of abuse on the railroads.

Acceleration of industry trends. The railroad industry has made significant strides in implementing employee assistance programs, and several railroads are experimenting with "bypass" policies or agreements that mitigate or hold in abeyance the sanction of dismissal. However, the pace of progress is unacceptable. Neither labor nor management is seriously pressing for the kind of national solutions that this problem requires. All railroads need to take action now to encourage early referrals of troubled employees and to break the "conspiracy of silence" among employees by making it possible for co-workers to participate in rule enforcement without endangering the offender's livelihood. If employees view the Rule G system as just, they will refuse to work with impaired co-workers, thereby promoting voluntary referrals and deterring volitional rule violations.

Because there is no present indication that these issues will be addressed in national collective bargaining, FRA is proposing specific, mandatory policies to do the job. Those policies are discussed in connection with the proposed rules.

National voluntary program. The development of sound EAPs and education/awareness programs is also an area where FRA involvement is clearly indicated. These measures, which fall under the general rubric of "prevention," are the subject of ongoing voluntary efforts out of the "national Planning Conference on Voluntary Measures to Prevent Alcohol and Drug Use in the Railroad Industry," held in Washington, D.C., on November 14–15, 1983. Since the National Planning Conference, committees and subcommittees consisting of labor, management and FRA representatives have begun to define a national agenda for cooperative action.

At the same time ANPRM is this docket was issued, FRA affirmed its commitment to, and continuing support of, voluntary prevention and treatment programs. Subsequently, FRA announced that it would host a national conference to explore options for maintaining and upgrading voluntary alcohol and drug abuse programs. FRA met with a representative advisory group of railroad EAP directors and officials from three major rail unions to organize and structure the proposed conference. The advisory group agreed to a planning conference format. The goals of the conference were (i) to form a consensus on activities that would upgrade voluntary programs and (ii) to establish a national steering committee to achieve those goals.

The National Planning Conference on Voluntary Programs to Prevent Alcohol and Drug Use in the Railroad Industry was held in Washington, D.C., on November 14 and 15, 1983. Approximately 110 senior officials from the carriers and labor organizations participated.

At the conclusion of the conference the participants formed a two-tiered planning committee. Each participating organization assigned a senior executive as a steering committee member and a resource person, with expertise in alcohol and drug abuse, as a working group member. Twenty railroads and five labor organizations joined the planning committee.

The working group held its first general session in December of 1983, and subcommittees of that group are continuing to meet on a regular basis to develop concrete initiatives. FRA anticipates that the work of the planning committee will produce advances in the quality and effectiveness of EAPs and will assist in the development of improved education and awareness efforts. These efforts will complement the regulatory program proposed in this notice.

FRA stands ready to assist in the establishment of research efforts and demonstration projects that may evolve from the work of the planning committee. Further, FRA will continue to promote emphasis on alcohol and drug initiatives on the regional or local level through the work of labor-management task forces.

Special note on the relationship of rehabilitation and discipline. One commenter expressed a concern that heavy reliance on EAPs in the railroad industry has the potential to undermine rule compliance. It may be, as the commenter suggests, that the implementation of EAPs by some employers outside the railroad industry has sometimes been accompanied by the relaxation of disciplinary policies and has thereby eroded the structures necessary to facilitate confrontation and constructive change among substance-dependent employees. Some employers or arbitrators, lacking proper regard for the fact that lax discipline can actually sabotage treatment and encourage relapses, may have decided to give employees multiple chances at rehabilitation even when performance has failed to show improvement.

However, FRA perceives no danger that the railroad industry is headed down this path. The railroads generally follow the rule of "safety first," withdrawing known problem employees from service and keeping them out of safety-sensitive functions until they have demonstrated that they are competent to resume their duties. Managers and employee representatives alike favor dismissal of second offenders. Further, where employees have committed Rule G offenses and are permitted to enter a treatment program while retaining their employment status (either by agreement or carrier policy), successful completion of the treatment is always a condition of continued employment. That is, the "discipline" of dismissal is not discarded, but merely held in abeyance. These approaches are sound, and FRA agrees with the commenter that they should not be diluted based on the misguided view that "understanding" can take the place of discipline.

Moreover, it is important to understand that there is no radical dicotomy between "discipline," on the one hand, and "treatment," on the other. Both in the dictionary and the occupational environment, discipline

has many meanings; and "punishment" is only one of them. Among the other definitions are "self-control and "control gained by enforcing obedience and order." Occupational discipline can be achieved by many means. In particular, rehabilitation for alcohol or durg dependence is itself a structured process that involves both the acceptance of discipline and the learning of self-discipline. Treatment may involve greater short-term "discomfort" than the mere "punishment" of loss of employment (which can permit the substance abuse pattern to continue). If the discipline of treatment is reinforced by the requirement of consistent job performance, the integrity of the employment relationship is maintained and the employee is encouraged to maintain his or her sobriety.

Bypass mechanisms channel problem drinkers and drug users to the discipline of treatment, while reserving (but not discarding) the ultimate sanction of dismissal. They add progressivity to the Rule G disciplinary process, even if the initial "discipline" is not punitive in purpose or form.

The foregoing discussion also sheds light on the claims of some railroads that dismissal of problem drinkers is a necessary and humane course, since it creates the opportunity for intervention and treatment. FRA can discern no support for the proposition that the "average" individual in need of treatment is more likely to be motivated by the hope of being *reinstated* in a previous job than by the need to *retain* a job not yet lost. The usefulness of dismissal as a spur to successful treatment is particularly dubious where reinstatement is discretionary with management—as it almost always is in the railroad industry—since a dismissed employee must fear not only that the company will not believe he has learned to control his substance abuse problem but also that he will be refused reinstatement for other reasons. There is no reason to suppose that the uncertainty introduced by dismissal improves the prognosis for such employees. There is at least circumstantial evidence that it does not, since "having a job, a stable income, and reliable set of social and personal supports correlate positively with treatment outcomes." L. Saxe, *et al., The Effectiveness and Costs of Alcoholism Treatment* at 15 (Office of Technology Assessment, 1983).

In short, the argument that dependent employees need to be fired in order to be changed is founded on arguments that cannot survive close scrutiny. So long as the problem individual understands that dismissal or another unacceptable consequence will result if treatment is not successfully completed, the requisite structure for confrontation is firmly in place and the incentives for rehabilitation are clearly visible.

Obviously, the railroads' disciplinary policies must also be designed to deter Rule G violations by occasional drinkers and "recreational" drug users. However, in this field, as in the field of law enforcement, certainty of detection appears to be at least as important as the severity of the punishment. A railroad that is confident of its ability to detect a high percentage of rule violations can safely reinforce its Rule G policy by dismissing all offenders—but would have less need to incur the costs associated with doing so. On the other hand, if the REAP Study was correct in concluding that the vast majority of Rule G violations go undetected on most railroads, then those railroads where detection is a problem face a real dilemma. As discussed above, dismissing first offenders will perpetuate the conspiracy of silence among employees and cut down the possibility of detection, assuring that this "ultimate sanction" has limited deterrent effect. Token punishment, on the other hand, will be seen weakening the effect of the rule. What appears to be indicated here is a policy of two-stage, progressive discipline, uniformly applied, with heavy emphasis on measures to detect violations before they result in accidents. Tailoring this kind of policy to the circumstances of the individual railroads is a major challenge that will require the best efforts of employee representatives and managers alike.

7. Other Options

This section discusses options proposed by the commenters that have not been addressed above, together with the option of "no action."

Reporting of Rule G violations. A State public utilities commission suggested that FRA should require the railroads to report all Rule G violations to FRA on a regular schedule. FRA agrees that a program of instruction, testing and reporting is a necessary element in any effect to control alcohol and drug use. As discussed above, FRA already has in place requirements for the filing of operating rules, training of employees, and reporting the results of operational tests and inspections. Inclusion of specific alcohol and drug rules in Part 218 will, through the operation of § 218.11, have the effect of adding specificity to existing reporting requirements and facilitating the collection of the requisite information. Accordingly, a separate data collection system from alcohol and drug violations will not be necessary.

Improvement of railroad life style. Among the options least susceptible to regulation is the improvement of railroad life styles, which was mentioned in one form or another by an NTSB witness, a UTU officer from one railroad, and other commenters. Commenters noted that employees are often away-from-home for long periods and layover at locations where there may be few diversions. Boredom then leads to the use of alcohol or drugs. One BLE general chairman believed that the construction of tennis courts, swimming pools and similar facilities at away-from-home terminals would do more than any regulation to reduce Rule G violations. Another commenter believed that vibration and noise from rail equipment also affects drinking patterns.

FRA does not disagree that some features of the life style of employees in road freight service on line-haul railroads may tend to aggravate, and may in some instances actually prompt, use of alcohol and drugs that affects job performance. However, this life style is a result of both operating requirements and collectively bargaining restrictions in which the industry parties have major investments. Further, substance abuse cannot be eradicated through environmental changes alone, as evidenced by the use of cocaine and other drugs of abuse among many affluent residents of major metropolitan areas.

FRA also agrees that, as pointed out by a BLE member, crew assignment practices on some railroad divisions result in disruptions of sleep patterns and may produce fatigue. Although this problem is addressed in some measure by the Hours of Service Act, it may nevertheless be a source of pressures on employees to consume alcohol or drugs. FRA is not persuaded that a direct linkage has been established between disruption of body rhythms and substance abuse problems that would be sufficient to warrant further regulation directly affecting hours of service.

As noted above, several witnesses also singled out present crew calling practices as promoting uncertainty among employees and making it difficult for employees who may participate in events where alcohol may be served and then get caught by a short call.

FRA can neither alter the necessary exigences of rail service nor require the industry parties to bargain in good faith on these issues. FRA does believe that there are areas of discussion where

significant strides could be made at little cost, if both management and labor demonstrate flexibility. However, in the short term it will be necessary for FRA to address alcohol and drug use through more direct means.

Use of motor vehicle records to identify alcohol and drug abusers. B'nai 'B'rith, MADD representatives, and Citizens for Safe Drivers suggested that the driving records of rail employees should be checked prior to employment and periodically throughout the period of employment to identify persons who require special supervision or treatment. The American Trucking Association also recommended review of driving records, which is effectively required for truck drivers by FHWA regulations.

FRA has two concerns with this proposal that require further examination. First, although it seems likely that there is a correlation between drunk and drugged driving offenses and similar conduct on the railroad, the degree of correlation has not been established by any research or analysis of which FRA is aware. A low correlation might not be sufficient to support the issuance of any regulatory requirements for record checks, while a high correlation might indicate the need for frequent checks. FRA intends to explore the feasibility of research that could determine the relative utility of this approach. Any such research should include a pilot implementation phase on a railroad that has an active EAP. The ultimate test of the approach would be whether it permitted the railroad to identify, for referral to the EAP or for closer supervision, employees who would not otherwise be identified (or who might not be identified until their problems progressed to a crisis stage).

Second, if it appears that the railroads should be required to check the driving records of employees in covered service as a matter of national policy, then the railroads should be permitted to use the most effective and efficient means of discharging that obligation. The National Driver Register maintained by the Department of Transportation is presently being developed into a computerized, interactive system that will be capable of providing current information on drivers in all participating States. This system will permit State licensing officials to identify all other jurisdictions where information is available on the driving record of the applicant or licensee in question. Employers of motor vehicle operators will be able to obtain the same information by having the employee request that the information be provided.

However, the National Driver Register Act of 1982 authorizes access to the Register only for purposes of highway safety. Even information on the driving records of rail vehicle operators may not be released to employers. (See Title II, Pub. L. No. 97-364, sections 202(5), 206(b) (1), (2).) Requiring the railroads to check the driving records of covered employees—while at the same time denying access to the best information system providing access to that data—would create a glaring inconsistency between regulatory and statutory policy.

Although efficient access to driver records of most covered employees appears to be precluded for the present, FRA will continue to explore whether and to what extent driving records may correlate with indicia of job-related alcohol and drug problems among covered employees. If a significantly positive relationship does exists, it may be appropriate to take further regulatory action.

Train control devices. A UTU local chairman suggested that FRA could require installation of devices on locomotives that would halt train movements where the engineer is incapacitated. This issue is outside the scope of the present rulemaking, but it is worthy of comment. The level of investment is overlapping safety systems should be a function of risk and the potential for risk abatement. Present regulations and railroad practices recognize this principle. Train stop devices are already required by Federal regulation for high-speed operations. These systems are extremely expensive to install and maintain and can be used only in signal territory equipped for the purpose. Alerting devices are in service on most intercity passenger locomotives, but these systems are also very costly. "Deadman pedals" have been a traditional means of assuring that the train is stopped in the event of operator incapacitation, but they are easily defeated or disconnected. Significantly, none of the devices that is useful in the case of operator incapacitation—with the limited exception of the train stop device used with a compatible signal system—can assure safety where an employee is conscious but impaired by alcohol and drugs. Even a train stop device cannot assure proper train handling or prompt reaction to unexpected obstacles at grade crossings. Thus, technology is not a true alternative to competent operator performance.

It is should also be noted that existing freight crew consists provide for considerable safety redundancy. Where an engineer becomes incapacitated, operates at excessive speed, or disregards signal indications, it is the responsibility of the train crew to bring the movement to a halt through the use of the emergency brake valves provided for that purpose. The interests of efficient and affordable transportation will be served only if all crew members are encouraged to remain fit and alert to their responsibilities.

Toll free number. A MADD representative supported the establishment of a toll-free number that employees could use to report safety violations on an anonymous basis. FRA, of course, already receives numerous complaints of allegedly unsafe conditions and practices under a policy of confidentiality intended to protect employees from possible retaliation by their employers. FRA offices are located in most areas of the United States, so that calls can often be made on the local exchange or for little cost.

However, it would be more efficient for employees disturbed by drinking or drug use practices to notify responsible railroad supervision directly. Some information is already passed between employees and supervisors on a "not for attribution" basis that assists in the identification of problem drinkers. The railroads might derive even greater benefits from the use of a centralized toll-free number similar to those presently being encouraged in the field of highway safety. Employees calling the number would not have to rely on the promise of anonymity, since they would, in fact, be anonymous. This is yet another area where experimentation and private initiative are indicated.

Caboose off. One railroad suggested that FRA require all employees to ride at the front end of each train movement, since the presence of more crew members would tend to discourage use of alcohol or drugs among crew members formerly isolated in the caboose. FRA knows of no evidence that concentrating all crew members in the head end of a train (which may include multiple locomotive cabs) would, in fact, reduce the use of alcohol or drug. Distribution of employees in two or more locomotive cabs would not necessarily enhance the effects of peer pressure over current manning practices. Further, some railroads still require the use of cabooses for certain types of service. In sum, these considerations offer no firm basis for believing that a "caboose-off" rule could be used to reduce the hazards associated with alcohol and drug use. The "caboose-off" issue is one that deserves to be decided

on its own merits and in light of all relevant circumstances.

No action. FRA was unable to identify any commenter who believed that FRA should take no further action of any kind to address the hazards caused by alcohol and drug use in railroad operations.

FRA Conclusion and Proposals (With Section-by-Section Analysis)

As discussed above, the full extent of accidents and casualties caused by alcohol and drugs on the railroads is not known, but it is likely well in excess of currently documented levels. Current mechanisms for dealing with alcohol and drug use, including the enforcement of Rule G and operation of EAPs, have made positive contributions to safety but have real limitations as presently conceived and implemented. Some railroads do not have effective EAPs, and the use of bypass agreements and other innovative approaches is limited to a minority of the properties. Rule G enforcement continues to be inhibited by the conspiracy of silence among employees. With little threat of detection (at least on some properties), employees are often not deterred by the threat of dismissal. "Dismissed" employees are usually returned to service in any event, and their temporary separation from the employment relationship may not be a positive factor in treatment (for dependent employees). In the worst cases, rule violators are returned to service through a process of "plea bargaining" that may turn more on monetary that safety considerations.

Although not all of these problems are susceptible to solution through regulations, the time has long since past when Government could realistically hope for the emergence of private sector solutions that would be sufficient to meet the problem.

Nor is there any single measure that can bring about an end to alcohol and drug-caused accidents. The most obvious means by which impairment might be detected and deterred—the "random" use of testing devices—is unprecedented as a Federal regulatory strategy, very possible offensive to the majority of employees who obey existing rules, and would require substantial resources to produce significant benefits. On the other hand, there are many measures that could be undertaken at minimal or no expense that offer real hope for preventing alcohol and drug-related accidents.

FRA is persuaded that the time for study is past and the time for making hard choices has arrived. Therefore, FRA proposes a three-part program to deal with alcohol and drug use on the railroads:

First, FRA will continue to work with the leadership of the rail labor organizations and the railroads in promoting the development and refinement of voluntary programs to prevent alcohol and drug use in rail operations. FRA believes that both railroads and labor have yet to make the commitment of resources required to identify and serve problem drinkers and drug abusers. Several railroads have blazed the trail for the industry and can offer much program expertise and technical assistance. FRA can assist by transferring information, facilitating the establishment of programs where none exist, and urging the railroads to undertake regular and searching self-evaluations. Labor, the railroads and FRA can also work together on the establishment of improved training and awareness programs.

Second, FRA proposes to issue basic regulations that will—

- Specifically prohibit the use of alcohol and drugs by employees directly connected with rail operations (Hours of Service employees) and impose on the railroads an obligation to assure compliance with that prohibition;
- Require toxicological testing of employees involved in a major accident and incidents;
- Require more complete reporting of alcohol and drug involvement in train accidents; and
- Require that pre-employment physicals of applicants for employment in Hours of Service positions include a urine drug screen.

Third, FRA proposes to issue regulations authorizing the railroads to test employees for cause and mandating the institution of policies that can break the conspiracy of silence and involve employees in the solution of the problem. These are steps that FRA takes with great reluctance. Issues such as detection and identification of troubled employees can be handled most effectively through collective bargaining. However, it appears clear at this date that meaningful private sector action may not be forthcoming for some time. Federal leadership is required to hasten progress in these areas.

The proposed rules are discussed in detail below, together with a summary of recommendation for complementary private sector action.

General Provisions

FRA proposes to amend Part 218 of Title 49, Code of Federal Regulations, by adding a new subpart devoted to control of alcohol and drug use. This change would be accompanied by redesignation of the Part from "Railroad Operating Rules" to "Railroad Operating Practices," in order to distinguish it from Part 217.

Application (§ 218.3). As a general matter, FRA proposes that these rules shall apply to all railroads in the general system of rail transportation, specifically including commuter rail operations. The only common carrier operation that would not be covered by the proposed rules would be the Port Authority Trans-Hudson (PATH), which is physically separate from the general system. FRA proposes to exclude PATH because it has many characteristics dissimilar from traditional railroad operations (although it has historically been a common carrier by railroad). FRA reserves the right to cover PATH in the final rule, and specifically solicits views on this issue.

FRA proposes to exclude certain small railroads from the application of the requirement for pre-employment drug screens, for reasons discussed below.

Definitions (§ 218.101). Separate definitions would be provided by this subpart, since there are no terms in common with the remainder of the part. The definitions of "covered employee," "drug," and "EAP counselor" are particularly important to understanding the thrust of the operative provisions.

"Covered employee" is defined to mean a railroad employee who has been assigned to perform service subject to the Hours of Service Act during a duty tour. Only covered employees would be subject to the specific prohibitions on alcohol and drug use, post-accident testing, and testing for just cause. Only applicants for positions that involve "covered service" would be required to be checked through a urine drug screen.

FRA is aware that employees such as car inspectors and maintenance-of-way employees also play an important role in maintaining the safety of rail operations and are themselves subject to the hazards of moving equipment. However, alcohol and drug impairment among operating employees is more likely to produce direct and immediate harm. Block operators, dispatchers and signal employees also play safety-sensitive roles warranting their coverage by the Act. The available accident statistics confirm that the biggest part of the alcohol and drug problem (viewed as a railroad safety problem) is concentrated among these crafts that perform "covered service."

Although FRA agrees that non-operating employees and non-agreement employees should also be subject to appropriate fitness rules, including Rule G, it does not follow that the present

regulatory proposals should encompass those classifications. FRA believes that it is appropriate to concentrate on those dimensions of safety that can produce maximum benefits for employees and the public. Extending the coverage of the rules to additional groups would tend to diffuse compliance efforts by the railroads, as well as FRA's own enforcement program.

"Drug". These rules prohibit the use of alcohol or any "drug." The purpose of these rules is to prevent inappropriate drug use, not to punish any particular condition or behavior. FRA believes clarity and definiteness are to be preferred to effect-oriented standards. Accordingly, "drug" is defined to mean any controlled substance, as defined in 21 U.S.C. 802 (a part of the so-called "Controlled Substances Act").

Some controlled substances are not available to the public, except illicitly ("Schedule I" substances). Others are available by prescription for therapeutic purposes, and may be necessary to permit normal functioning for persons with certain disorders. However, all are capable of abuse, and many can produce physical and/or psychological dependence. Controlled substances are grouped in the following categories: narcotics, depressants, stimulants, hallucinogens, and marijuana.

Controlled substances include certain substances named by statute and others added by regulation. This is an "open definition" that will change as new drugs are developed and scheduled by the Congress or the Department of Justice. However, the definition will provide very clear guidance at any particular time as to which substances may not be used in connection with safety-sensitive functions.

The definition avoids overinclusion by excluding from the meaning of "drug" any controlled substance that is being used in accordance with a prescription from a medical practitioner (physician or dentist). The practitioner must have made a good faith judgment, on the basis of available medical history, and with notice of the employee's assigned duties, that use of the substance at the assigned dosage is consistent with the safe performance of the employee's duties. FRA does not intend by this definition to require the railroads to intervene in the doctor/patient relationship or to make the physician the guarantor of safety. However, the railroad would be expected, at a minimum, to put the employee on notice of this Federal policy and requirement, so that the employee can advise the physician that he works with moving equipment. The physician can then determine an appropriate treatment that takes into consideration the safety of the employee and the public. The railroads would remain free to go beyond this minimum requirement.

Obviously, use of an objective definition of the term "drug" may lead to underinclusion. FRA is aware that there are substances, other than those the distribution of which is currently controlled, that can adversely affect human performance. However, FRA is persuaded that they involve a relatively small portion of the drug problem. Further, the railroads would remain at liberty to make appropriate rules in excess of those proposed in this notice.

FRA also reserves the right to employ alternative definitions of the term "drug" such as those which include any "mind or function altering substance" or any substance that can "adversely affect safety." FRA requests further comment on these and other formulations, particularly any formulations that have proved durable over time. Commenters should indicate why particular definitions are preferred and why the definition proposed is not appropriate.

"EAP counselor" is defined as a person qualified by experience or education to counsel persons affected by substance abuse problems and to evaluate their progress in recovering from or controlling such problems. An "EAP counselor" may be a salaried employee of the railroad or a practitioner who contracts with the railroad on a fee-for-service or other basis. The EAP counselor owes a duty to the railroad to evaluate the employee and is vested with the authority to return the employee to service.

Prohibition of Alcohol and Drug Use

Section 218.103 would state the basic Federal policy concerning alcohol and drugs in rail operations. Paragraph (a) would prohibit the use or possession of alcohol or drugs by an employee who is assigned to covered service. An exception is provided for an unopened container of an alcoholic beverage located in the employee's private motor vehicle, which might be intended for off-premises consumption but could otherwise be deemed in the employee's possession simply because the vehicle is parked on railroad property.

Paragraph (b) would provide that no employee may report for covered service, or go or remain on duty in covered service, while under the influence of, or impaired by alcohol or any drug. This provision is self-contained and capable of application without reference to the balance of the section. An employee who was observed to be intoxicated or otherwise impaired by alcohol, or an employee obviously disoriented or disturbed from the effects of durgs, would be considered in violation of this section. This standard is similar to the existing Rule G as applied to the employee who is detected by observation of appearance and demeanor and is charged by the railroad with being intoxicated (without specific evidence of consumption while subject to duty or on duty).

Presumptions. Paragraph (c) would create two "per se" presumptions that FRA believes are appropriate to a prevention-oriented program, providing clear mimimum standards for employees, employers and arbitrators. FRA wishes to stress at the outset that these are not standards of criminal culpability, but proposed regulatory standards for persons who are compensated to provide services in a very dangerous environment.

First, an employee with a BAC of .05 percent or more would be conclusively presumed to be impaired, *i.e.*, to have deviated from the regulatory standard. Blood alcohol levels in the .03 to .05 range may induce relaxation, adversely affect attention, result in partial loss of stability on one's feet, or reduce visual discrimination in some subjects. However, FRA is aware of little evidence suggesting an immediate safety problem associated with BAC's in this range. Most States use .10 percent as the presumptive level of intoxication on the highway, but this is a criminal standard and the American Medical Association has pointed out that "many individuals are under the influence in the .05 percent to .10 percent range." American Medical Association, " Policy Statement" (November 30, 1960). The countries of Norway, Sweden and Denmark and the State of Victoria in Australia have had .05 percent BAC limits for motor vehicle operation with relatively strong punishments. BAC's in the .05 range are associated with reduced close-course driving performance on the part of many drivers. (For a summary of relevant research *see Alcohol and Highway Safety: A Review of the State of Knowledge* (National Highway Traffic Safety Administration 1978), a copy of which has been placed in the docket of this rulemaking.)

FRA believes that these research findings and the general literature on the effects of alcohol on motor functions, perception, and judgment are applicable in the railroad environment, where employees are required to operate, and mount and dismount from, moving equipment in a variety of environmental conditions. Further, the history of

railroad accidents and incidents underscores the adverse effects of elevated blood alcohol levels on employee performance; and the commenters in this proceeding were unanimous in the view that alcohol and drugs are inconsistent with railroad safety.

The limit of .05 percent BAC is a proposal that attempts to recognize the importance of employee fitness. At least some employees are significantly impaired at .05 percent, and the presence of any person so impaired is inconsistent with railroad safety. The choice of .05 percent also reflects the fact that many other employees will not monitor their consumption of alcohol carefully, even if they have basic information concerning the effect of various dosages and their relation to body weight and oxidation over time. That is, it provides at least a small margin of error for most employees. The employee who deliberately decides to drink up to the "Federal limit" despite more strict carrier policies may at least be persuaded to stop short of the .08 percent range (in which most persons are significantly impaired). It should be recalled that an employee who is visibly intoxicated at a BAC below .05 would, nevertheless, be in violation of paragraph (b) of this rule, just as that person would be in violation of existing Rule G formulations. Finally, it should be recognized that nothing in the rule precludes carriers from adopting stricter limitations in the carrier Rule Gs.

There are some who will view this standard as too strict because it does not pay adequate tribute to the defferences in levels of tolerance for alcohol. FRA is well aware that heavier drinkers may acquire a tolerance for alcohol that may permit them to function in more normal ways than occasional drinkers who have consumed similar amounts. However, degrees of tolerance among regular drinkers vary widely, and it is hardly feasible to qualify employees to drink to higher-than-standard blood alcohol levels. Further, the body's tolerance for alcohol is only partial; divided attention skills and other faculties will still be impaired, even in the case of an habituated alcoholic. And even alcoholics may experience a loss of tolerance in the advanced stages of the disease. Most importantly, the rule does not propose the drastic sanctions of loss of liberty and identification as a criminal that are associated with drunk driving laws. That is, what is proposed is a civil standard intended to foster responsible conduct.

There are others who will view this standard as too lax. FRA recognizes that this proposal does not require employees to be alcohol-free when they report to work and, thus, may be viewed by some railroads and others as a step backward. Indeed, it is because Federal safety standards and rules of employee conduct do not easily mesh that FRA has been constrained to withhold regulation in this area for so long. However, any Federal rules based on the Federal Railroad Safety Act must bear a clear relation to safety objectives. Data is not available that would permit FRA to conclude that very low blood alcohol levels pose safety risks that are so demonstrable and material as to merit Federal regulation. Certainly a "no alcohol" rule would tend to have a preventive effect among employees who find it difficult to stop drinking once they have begun. However, the Rule G experience suggests that a minority of employees do drink prior to duty with some frequency, even in the face of a "no drinking" policy.

FRA recognizes that significant arguments could be marshalled in support of a presumptive impairment standard of .03 BAC. For instance, many railroad collisions occur because employees simply fall asleep during early morning hours. Any depressant in the employee's system may contribute to this problem. FRA would welcome the submission of research studies and professional opinion on this point and specifically reserves the right to include a more stringent standard (e.g., .03 or .04 BAC) in the final rule.

FRA wishes to stress that these rules do not require the railroads to weaken existing Rule G formulations. The proposed rules would be minimum standards, and the railroads would be free to maintain standards that are more rigorous, either for the purpose of promoting safety, or for other purposes (such as promoting general fitness and productivity).

Nevertheless, identification of a *per se* level of intoxication could, in concert with the test authorization proposed in this notice, lend greater certainty to the disciplinary process. According to a major railroad, Railway Labor Act arbitrators are increasingly demanding better proof of Rule G violations. There can be little doubt that proving an employee is impaired through the testimony of persons who have not received specialized training is a difficult proposition, at best, except where the employee is "falling down drunk." Recent research findings suggest that social drinkers, bartenders, and even some members of police forces cannot accurately judge levels of intoxication. J. W. Langenbucher and P. E. Nathan, "Psychology, Public Policy, and the Evidence for Alcohol Intoxication," (38 *American Psychologist* 1070 (October 1983). Determination of drug impairment is even more difficult. There are many situations in rail service where employees exhibit unusual behaviors, including situations involving rule violations and accidents, that may give rise to a suspicion of impairment without the usual "slurred speech and bloodshot eyes" so common in the litanys of drunk driving cases and similar proceedings. It is a short step from the premise that better information is required to the conclusion that the employee should expect to cooperate in obtaining that information through proportional and reliable means (*i.e.*, to confirm or *exclude* the inference of alcohol or drug impairment). Hence, the testing authorization discussed below.

This rationale is equally applicable to the second presumption of the rule—that an employee is impaired by a drug (other than a drug used in accordance with a prescription) if the quantity of the drug in the employee's system would be sufficient to affect the perception, mental processes or motor functions of an average person. Again, this presumption would not be necessary where the employee is manifestly disturbed in ways that are obvious to the observer and some logical link can be made to use of alcohol or drugs. (*e.g.*, through breath odors or open possession of drugs). However, the presumption would put employees on notice concerning the use of drugs during periods before service and assist in the evaluation of employees who have exhibited otherwise unexplained behaviors not consistent with safe operations. The point here is that the railroad should be supported by a clear Federal benchmark for employee conduct, and the employee should be on notice concerning that benchmark.

Post-Accident Toxicological Testing

Section 218.105 would require the railroads and their employees to facilitate "toxicological" testing after certain major railroad accidents and incidents. Consent to testing would be a condition of employment in covered service. In the immediate aftermath of an accident, the railroads would be required to transport the employees involved in the accident to a medical facility where they would provide blood and urine samples. The railroad would make available a standard shipping container similar to those already used by Federal agencies that investigate

transportation accidents. The samples would than be shipped by air freight to the Civil Aeromedical Institute (CAMI) laboratory in Oklahoma City (or another facility designated by FRA) where they would be analyzed for alcohol content and a wide range of drugs and drug metabolites. Test results would be provided to the railroad and to employees.

In the case of injured and deceased employees, the railroad would be required to cooperate with FRA and local authorities to assure that the necessary body fluid or tissue samples are obtained for analysis by CAMI.

General need. As discussed above, the extent of alcohol and drug involvement in railroad acidents is not adequately documented. The refinement and full implementation of any regulatory program will be possible only if better information is secured. Mandatory post-accident testing is required to answer this need for the following reasons:

1. Railroad accidents and incidents take place primarily on private railroad rights-of-way, and railroad personnel are usually the first persons on the scene. Local police often do not respond to major accidents or limit their response to securing the area against trespassers. In the absence of loss of life, local authorities often view a railroad accident on private property as a matter solely within the responsibility of the Federal Government or the State rail agency, and will not endeavor to evaluate the fitness of employees. Crew members are often interviewed on the scene by railroad supervisors who have not been trained in the detection of alcohol or drug impairment, and the first concern of supervisors is often the protection of property or restoration of operations—rather than documentation of the condition of the employees involved.

2. The accident scene is not a conductive environment to determine employee fitness. Employees may be visibly shaken by the experience of a bad accident even when they are entirely sober, but this normal phenomenon may also mask underlying problems. Release of lading may make detection of breath odors more difficult. Many accidents occur at night or in inclement weather, and observation of appearance and demeanor may be difficult, at best. Thus, even if local authorities respond to the scene, only the most alert personnel are likely to detect alcohol impairment. Impairment by other drugs is unlikely to be detected at all, except where drugs or paraphernalia are found on the person of a deceased or injured employee.

3. Neither FRA nor NTSB is capable of responding to the scene of most major accidents within the period employees should be evaluated and tested.

4. The railroads may have reasons to overlook or not adequately document suspected impairment. Although the railroads will normally be found liable for injury to third persons and non-railroad property, that does not mean that they always bear the entire economic burden of accident losses. Some accidents do not involve negligence by the railroad, and some may involve two or more contributing factors, each of which was necessary to produce the resulting damage or loss of life. If the railroad can establish that another person (such as the owner of a freight car with a defective wheel or a tank car with a defective tank) was at least partly responsible for the losses, the railroad may be able to transfer a share of the losses to the "joint tortfeasor." Clear evidence of negligence by the operating railroad's employees may limit the ability of the railroad to shift that burden.

5. Employees will always be under pressure not to reveal alcohol or drug involvement. Fit employees who have failed to take action in reponse to know impairment may themselves be subject to discipline. Impaired employees will naturally fear dismissal. All employees will be cognizant of the fault-based compensation arrangements embodied in the Federal Employers Liability Act (FELA).An employee shown to have been injured exclusively by his own negligence would not be able to recover under the FELA, and any showing of negligence would reduce the employee's recovery proportionally. In FRA's experience these factors very often compel employees to omit any reference to alcohol and drug use in their descriptions of accident scenarios.

6. Ironically, even the railroads may be chilled by the FELA. For instance, the size of a jury award to an injured employee (actual or projected in settlement negotiations) could be influenced by the fact that a co-worker was inpaired, particularly if the railroad was allegedly on notice of the employee's problem. Further, in the case of an FELA action brought on a wrongful death theory, the representatives of the deceased might actually benefit from documentation of impairment if the employee was a "known alcoholic," the railroad had failed to get the employee into a treatment program, and the particular court recognized a duty on the part of the employer to safeguard the employee from foreseeable consequences of his disease.

Across-the-board testing. Some commenters have suggested that tests be required only where alcohol involvement is suspected or, at least, where a human factor appears to have been involved in the accident cause. However, the determinations that would permit this selectivity would have to be made by the railroads, and such reliance is inappropriate for the reasons already discussed.

Further, in the case of accident cause determination, FRA is not persuaded that the issue is as clear as is perceived by some commenters. Accident causes are not always immediately apparent, and initial clues may later prove misleading. Even where it appears clear that an accident was caused by a track or equipment failure, subsequently obtained information may establish that train handling, overspeed operation, or other oprational failures were contributing causes.

Failure to test employees immediately after major accidents, as a matter of routine, will inevitably lead to the loss of valuable information that can confirm or exclude the involvement of alcohol or drugs.

Deterrent effect. FRA is aware that employees do not expect to have serious accidents. However, the routine use of post-accident testing will serve to reinforce in the minds of employees the Federal commitment to detecting alcohol and drug use. Execution of the consent form described below will itself bring home the seriousness with which alcohol and drugs are viewed by Federal policy. As more and more employees are tested, word of mouth will carry the news of employees identified as impaired through this method and highlight the hazards of alcohol and drugs in rail operations. In combination with other measures, post-accident testing should contibute to the general deterrence of alcohol and drug use. It may well, in addition, identify and weed out dependent employees in small occurrences before they become involved in potentially catastrophic accidents.

Criteria for fashioning the proposed rule. In fashioning the post-accident testing requirement, FRA has taken into consideration the following factors:

1. Testing should be required by Federal regulation only where the accident involved is of the life-endangering kind, but some life-endangering accidents result only in property damage. Failure to test where property damage is significant would result in review of an insufficient number of accidents to provide a reliable picture of alcohol and drug

involvement. Failure to test after train incidents where there is loss of life (but often little or no property damage) would ignore the principal dimension of the alcohol and drug problem as expressed in currently available data. As discussed below, FRA has selected a relatively small and manageable group of accidents that can provide representative data on the role of alcohol and drugs in precisely those kinds of accidents that are the most costly in human and economic terms.

2. Testing should be done by reliable methods and by a party independent of both the railroads and the subject employee.

3. The testing method should be capable of determining both presence and quantity of alcohol and drugs, with the objective of identifying both use and (to the extent possible) degree of impairment.

Post-accident testing program. The proposed rule would be the foundation of a post-accident testing program administered by FRA with the cooperation of the railroads and their employees, in consultation and cooperation with NTSB. As stated in paragraph (b) of the rule provision, testing would be required after —

- Any reportable train accident that involves a fatality, reportable injury, damage to railroad property of $150,000 or more, or release of hazardous materials (other than *de minimis* release); and
- Any train incident that involves a fatality or loss of eye or limb (arm or leg).

Rail-highway grade crossing accidents and incidents and incidents involving trespassers would be excluded from the testing requirement. Inclusion of these categories would dramatically increase the scope and cost of testing and could occasion unnecessary delays in the provision of transportation services. Most of these accidents result from negligence on the part of persons other than railroad employees. Trespasser injuries and fatalities commonly result from persons placing themselves in position of danger on, or immediately adjacent to, the track structure, or on rolling stock.

The vast majority of rail-highway grade crossing accidents result from inattention or recklessness by motor vehicle operators. Motorists are on notice, both under state law and as a result of posted signs and warning devices, that rail movements have the right of way at these crossings. Stopping a heavy train within the short distance available at the point the danger of a collision materializes is simply not possible in the great preponderance of cases. FRA is unaware of any instance in which impairment of a railroad employee has been implicated as a factor in any grade crossing accident, but would welcome any submission on this subject.

Obviously, some situations do exist in which train crew members can mitigate the effects of negligence by motorists. Proper use of warning devices can sometimes alert inattentive drivers; and prompt brake applications can sometimes provide the fraction of a second necessary for motorists to escape from situations of peril brought on by their actions. The general reductions in alcohol and drug impairment that would result from these proposed rules would also contribute to effective crew member performance at grade crossings.

Should there be reason to suspect impairment on the part of an employee in a grade crossing accident or incident involving a trespasser, the railroad will be authorized to require employees to cooperate in testing under section 218.109.

The categories of accidents and incidents selected for this proposal accounted for approximately 550 occurrences during 1982, the latest year for which complete data are available. FRA believes that this categorization is responsive to the NTSB proposal on this subject, but drawn with sufficient precision to avoid excessive burdens on the railroads and their employees. FRA has not included all reportable accidents involving passenger trains. Some reportable accidents involving passenger trains result in only minor equipment damage and would not warrant the potential delays in passenger service that a testing requirement would occasion. However, passenger accidents would trigger the testing requirement if they involved a fatality, reportable injury or property damage in excess of $150,000.

The testing proposal also limits the types of injuries resulting from train incidents for which tests would be required. Tests would be required only after fatalities or injuries involving the loss of a limb or an eye. There were over 5,000 injuries to on-duty employees alone in train incidents during 1982, only a small number of which resulted in fatalities or loss of limb or eye. Many involved slight burns, flying objects, strained backs and similar events that hardly warrant the response of mandatory Federal testing. Although it would be desirable to sample a larger portion of train incidents resulting in injuries, FRA cannot identify a useful means of delineating between serious and non-serious occurrences. For instance, it might be wise to test when an employee receives non-fatal internal injuries while coupling cars. However, it would be difficult for the railroad supervisor on the scene to determine whether a particular injury was severe or slight. Similarly, an accident producing permanent paralysis might warrant testing; but diagnosis of paralysis on the accident scene might be difficult or even impossible. FRA thus proposes objective criteria normally capable of ready determination.

FRA would welcome further suggestions for defining the types of accident consequences that should trigger the toxicological testing requirement. As with each proposal in this notice, FRA reserves the right to make appropriate adjustments in the final rule in response to comments received.

Employees tested. Paragraph (a) requires that the railroad "take all practical steps to assure that all covered employees * * * directly involved in the accident or incident provide blood and urine samples for analysis." FRA intends that, at a minimum all crew members of the train or trains (or switching or yard crew members associated with the movement) be tested. If the train is occupying a portion of the railroad where it should not be at the time of the accident and there is any possibility of error by a dispatcher or operator, it is intended that these individuals also be tested. Similarly, in the case of an apparent false clear in territory where a signal maintainer is currently working on the controlling circuits, the signal maintainer would also be tested. In the vast majority of cases FRA expects that only testing of the crew directly responsible for the movement will be indicated.

Employee role. Employees would be expected to consent in writing to post-accident testing as a condition of employment and would be deemed by regulation to have consented. Each employee would complete a consent form that would be retained on file for the duration of the employee's service with the railroad. All employees would be required to provide blood and urine samples, with the exception of hemophiliacs (and other persons with medical conditions inconsistent with drawing blood), who would be expected to provide a urine sample only.

FRA is, or course, reluctant to propose that employees be required to provide blood samples. However, FRA believes that this approach is far superior to conceding the continuation of accident patterns that portend more useless

shedding of blood by other employees and potential members of the public, as well. The sample required for comprehensive drug screen and confirmation test is only 20 milliliters, roughly 5% of one pint. The procedure is simple and without hazard to the employee's health.

Samples of choice. FRA has given serious consideration to the issue of what method of testing is appropriate. Breath testing is useful only with respect to the detection of alcohol and, accordingly, does not appear to be the most productive method for these purposes. Blood is the only available body fluid that can be drawn from the living subject that can provide a clear indication not only of the presence of alcohol and drugs but also their current impairment effects. Accordingly, FRA proposes to place primary reliance on analysis of blood samples. Urine is not an adequate substitute for blood for present purposes, since the quantity of a drug or drug metabolite in the urine does not necessarily correlate with the quantity of the substance in the blood at any given time.

On the other hand, in some cases it may take a matter of several hours to get employees from an accident site to a medical facility to obtain a blood sample. This will be a particularly serious problem where employees are needed to provide information and move equipment on the accident scene. In these cases, the interval between the accident and time blood is drawn may be greater than the time required for certain drugs to be eliminated from the blood. Accordingly, a urine sample will be required to ascertain whether certain substances have been used by the employee. A positive urine test, taken with specific information on the pattern of elimination for the particular drug and other information on the behavior of the employee and the circumstances of the accident, may be crucial to the determination of probable cause. Consequently, FRA proposes to require that both blood and urine samples be provided by surviving employees for analysis.

Where employee fatalities result from accidents, the sample(s) of choice will be dictated by the circumstances, including potential contamination of samples by fuel or lading, loss of blood, and other factors. With the cooperation of the railroads, FRA will endeavor to enlist local medical examiners and other authorities in obtaining the appropriate samples for analysis by FRA's designated laboratory.

Railroad role. As set out in paragraph (a) of the proposed rule, after the accident the railroad would be required to gather the subject employees as quickly as possible and provide them transportation to a medical facility where samples can be obtained. The railroad would be responsible for explaining to the medical facility the undertaking of the employees and responsibility of the railroad to cooperate in the testing procedure. In conjunction with the medical facility, the railroad would also assure that the samples are properly marked as to identity of the subject and time of the test and shipped to FRA's designated laboratory in a standardized shipping kit, units of which would be maintained by the railroads at key points on their systems. (As noted above, FRA intends to hold a technical conference to explore the logistics of post-accident testing, solicit the coopertion of the railroads and the medical community, and explain the proposed procedures for handling samples and how they will be analyzed.)

Injured and deceased employees. FRA recognizes that injured employees and employees killed in these accidents and incidents present special considerations. In general, FRA proposes that the railroads make every reasonable effort to see that samples are obtained from injured employees, consistent with sound medical practice, and to assure that FRA is provided timely information to facilitate obtaining samples from deceased employees. Obviously, among injured employees those who are conscious will be able to affirm that they have consented to testing. If an employee endeavors to withdraw consent after an accident but before the sample is provided, the employee would suffer the consequences specified in paragraph (g). FRA does not intend that force should be used in any case to obtain a sample.

Should the employee be unconscious and the treating physician decline to draw the blood sample, the railroad would be expected to (i) make the consent form available to the appropriate authority of the hospital, renewing the request that the sample be obtained (again, only if consistent with sound medical practice) and (ii) notify FRA of the problem. FRA could then assist, to the extent necessary and practical, in obtaining the sample.

In the case of a fatality to an employee, the railroad would be expected to immediately notify FRA, advising FRA concerning who took custody of the body of the deceased and providing the consent form to FRA. FRA would then contact the custodian and seek production of the requisite samples.

Administrative guidance. FRA proposes to specify the technical standards for post-accident testing by administrative action, under the authority of the proposed rule. This would permit revision of procedures in response to technical advances and accumulated experience, without the requirement of further rulemaking. By example, it might be appropriate at some point to alter the type of test tube used to collect the sample or specify different shipping procedures. FRA would not use this authority to alter the overall regulatory burdens imposed by the proposal.

Notification. Paragraph (d) provides that FRA will notify the railroad, the tested employee, and NTSB of the results of the test. Since FRA does not have a data bank on the home addresses of rail employees and it would not be practical to maintian one, comment is requested on procedures for ensuring that employees receive actual notice of test results.

Preservation of samples. Paragraph (e) provides that samples will be retained for at least six months and describes the circumstances under which samples may be made available to NTSB (on request) and parties involved in litigation arising out of the accident (by subpoena). Although the purpose of this proposed rule is not to gather evidence for collateral proceedings, FRA recognizes the inevitability of demands for the production of the samples in civil and criminal proceedings. FRA expects to oppose production of samples unless adequate notice is given prior to the return date of any compulsory process, and would reserve the right to resist production under other appropriate circumstances.

Railroad reports. In some cases the railroads will not be able to assure that all requisite samples are obtained (e.g., where an attending physician declines to draw a blood sample and the railroad is unable to reach FRA field personnel or where the employee revokes his consent to testing). In order to assure faithful implementation of the intent of the proposed rules and evaluate those circumstances that intervene to prevent testing, subsection (f) of the proposed rule would require the railroad to report, in brief narrative format, the circumstances that prevented compliance with the intent of the rule.

Faliure to Consent to Testing. Paragraph (g) would address the problem of applicants and employees who fail to comply with testing requirements. FRA does not have available any direct sanctions that can be used to compel compliance with these proposed rules as they apply to employee conduct. Consequently, the

rules would require the railroads to take appropriate actions.

The provision would bar employees from covered service if they decline to sign the consent form for post-accident testing. The railroad would be required to withdraw from covered service, for a period of at least six months, any employee who refuses to cooperate in mandatory testing after a major accident. The withdrawal from service would be required to be followed by a hearing convened within the period specified in the applicable collective bargaining agreement or, in the absence of an agreement provisions, within 10 calendar days (or such longer period as might be agreed to by the employee).

FRA recognizes that the industry parties do not favor FRA involvement in disciplinary matters, and FRA is reluctant to address this problem through regulations. However, failure to clarify the nature of appropriate responsive action could lead to widely differing treatment of similarly situated employees. That is, different railroads might consture their obligations under these rules in different ways. Some railroads might deem a very short suspension an adequate response for an offending employee, while others might feel compelled to dismiss such employees permanently in order to avoid the charge that they failed to faithfully implement the internt of the proposed rules. The use of a fixed manimum period will put employees on notice concerning the consequences of refusals—thereby deterring noncooperation—while providing clear guidelines to the railroads concerning their obligations to enforce the Federal requirement.

Clearly, some railroads will elect to mete out more severe punishment under some circumstances, particularly where the employee has failed to cooperate in the railroad's own investigation of the accident or rules violations have been established. Thus, the six-month period is a minimum period; and the railroads will be free to justify more severe sanctions on their own merits.

Pre-Employment Drug Screens

Section 218.107 would require that applicants for positions that involve covered service be tested for the presence of alcohol and other drugs. As expressed in paragraph (a), it is the intent of the proposal that the drug screen be conducted as a part of the pre-employment physical examinations used by most railroads to ascertain the fitness of applicants for employment. In many cases, urine samples are already obtained as a part of such examinations. Testing the samples for drugs will require little additional expense and no additional incovenience to most applicants.

Objectives. As noted above, one railroad has already demonstrated the usefulness of this technique in identifying drug users, including users of illicit substances. "Recreational" users could obviously avoid detection by abstaining for a sufficient period before the examination (up to 30 days for marijuana). However, FRA is advised by the National Institute on Drug Abuse that urine testing programs in other industries often result in the identification of many recreational users, even though prior notice is given that tests will be made.

FRA believes that such tests would be useful in identifying alcohol-dependent persons, as well. Examining physicians should be able, through careful examination and a follow-up test, to discount the presence of alcohol in the urine of an applicant who is not a substance dependent. Where the applicant is alcohol-dependent, a positive test for alcohol would aid in diagnosis; and abstention from use prior to the physical could give rise with withdrawal symptoms that would also be useful in evaluating the individual.

There are sound administrative and demographic reasons for focusing mandatory drug urine screen requirements on new applicants for railroad employment. First, it would be difficult to require a uniform national pattern of drug urine testing for current covered employees. The frequency and applicability of railroad medical examination procedures varies widely from one company to another. For instance, some railroads require periodic examinations only for train and engine employees but not for operators, dispatchers or signal maintainers. One railroad examines only engineers. Most railroads appear to examine younger employees only about every four years, while certain older employees may be examined annually. Requiring drug urine screens apart from periodic medical examinations is certainly feasible, but such a requirement would be more costly on a per unit basis and would tend to create the impression among employees that the tests were being conducted for reasons other than determining fitness.

Second, focusing attention on final applicants for employment is more likely to prove highly cost effective than testing current employees. Drug abusers who have been employed for a more or less extended period are more likely to have been identified as problem employees, if not as drug abusers, and can often (though by no means always) be targeted for special attention. Abusers with chronic or acute problems may actually be dismissed for performance-related reasons, whether before or after involvement in an accident or on-the-job injury. Applicants for employment, by contrast, are subject to evaluation only "on paper" in the absence of candid reporting by a former employer (often the exception rather than the rule).

Third, applicants for rail employment are, on the average, younger than current employees. In recent years roughly half of new hires have been under age 25. Young adults (age 18–25) are more likely than persons in any other age group to abuse drugs. As reflected by accident statistics on drunk driving, persons in this age group are also more likely to lack the maturity and sense of responsibility to others that can mitigate at least some of the effects of drug use.

The 1982 survey of drug use prevalence conducted by the National Institute on Drug Abuse (INIDA) shows a slight moderating of drug use by young adults in comparison with the peak periods of the late 1970's. However, the survey's results for "current use" (use within month prior to the interview) still show striking disparities between the age groups. For instance, 27.4 percent of young adults reported current use of marijuana, compared to 6.6 percent of older adults. Current use of cocaine was reported by about 6.8 percent of young adults and only 1.2 percent of older adults, and a nearly identical distribution obtained with respect to nonmedical use of psychotherapeutic drugs such as stimulants, sedatives, tranquilizers and analgesics. About 1.7 percent of young adults reported current use of hallucinogens, but older adults reporting such use totalled less than .5 percent of that population. This survey may be particularly relevant to the population from which new rail employees are drawn, since it covered only persons living in "households." Persons living in military installations, college dormitories, other group quarters and institutions such as hospitals and jails were not covered.

The NIDA survey shows that use of particular drug groups may vary by region, education level, sex and other factors. These variations provide little comfort. For instance, applicants and new hires for covered service are predominately males, but more males than females reported current use of drugs in all categories for which data were available. Regional statistics on current use of marijuana by young adults ranged as high as 31 percent, but

no region showed current use prevalence below 26 percent. Current use of cocaine was highest in the Northeast (13 percent) and West (9 percent), but the North Central region "led" in current nonmedical use of psychotherapeutic drugs by young adults (11 percent), and the South (7 percent) actually experienced a higher prevalence of the latter than the West (5 percent).

In short, testing in connection with pre-employment physical examinations is a logical starting point in a broader effort to assure that all covered employees are fit to perform their duties without undue hazard to themselves, their co-workers or the public. FRA believes that the experience of routine drug screens in this context will persuade the railroads to undertake appropriate further steps to implement drug screens as a part of their overall fitness programs. Those steps can be adapted to regional patterns of drug and alcohol use and to the differing physical examination programs on the various railroads.

Uses of test results. FRA does not intend to specify what action the railroads shall take with respect to applicants who test positive for particular substances. There are simply too many combinations of pertinent circumstances to lay down rigid rules. Carrier medical departments, consulting physicians, and railroad personnel officers are clearly capable of making the requisite decisions once they have adequate information. Based on current carrier medical standards, FRA believes that the railroads will not employ substance-dependent persons in safety-sensitive functions until those persons have demonstrated that they have overcome their problems.

The issue of recreational usage is more complicated. A substantial portion of young Americans use illicit drugs at least on occasion, and many in some regions use certain drugs with some regularity. The applicant who brings his habit to work in rail operations is a safety problem of the first order. But it is not clear that all recreational drug users permit their habits to affect their job performance.

What can be said is that the railroads would be well served by the availability of more drug use information. The drug user whose past employment history is marked by injuries and absences would often be a poor risk for covered employment. Users of some "hard drugs" may be essentially unemployable in covered service.

Without doubt, the availability of drug use information through testing will present the railroads with difficult choices, and some companies may elect to exclude anyone who tests positive rather than face those choices. The alternative is the current policy of most railroads—*i.e.*, to accept unquestioningly the representations of applicants for positions in safety-sensitive functions concerning their own drug use habits.

The institution of pre-employment drug screens should have one other salutary effect. At least for the first few years of the program, the results of these tests will produce data that can provide management an order-of-magnitude look at the number of drug abusers who have been hired in recent years prior to the institution of the program. While many individuals put such habits behind them as they mature, many do not. The existence of data on the incidence of drug use in the population from which new employees have been drawn should further encourage the intelligent use of periodic physical examinations, awareness efforts and other tools.

Prior warning of test. Section 218.107 requires that applicants be notified at least seven (7) days prior to the physical examination that the urine sample will be tested for alcohol and other drugs. This will avoid any invasion of the privacy of applicants. Applicants who continue to pursue employment with the railroads waive any privacy interest (as between themselves and the prospective employer) with regard to their physical condition. This is done as a matter of private contract, and the notification requirement of rule merely assures that the waiver represents informed consent.

Drugs tested. Paragraph (c) of the rule specifies certain commonly abused drugs for which tests are to be conducted but permits the railroads to add other drugs of abuse, including synthetic drugs that may come into use subsequent to the issuance of any final rule in this docket.

NIDA data show that drug use patterns shift from year to year as drugs go in and out of fashion and availability varies. It is therefore critical that the railroads monitor applicants for use of a broad range of drugs. Prevalence surveys, emergency room reports and other data compiled by NIDA can be used to assist railroad medical officers in identifying new drugs of abuse for which testing is indicated.

Confirmation. Paragraph (d) requires that positive samples be retested by another laboratory or by another method. FRA intends that confirmation tests shall be specific as to the drug or drug metabolite suspected.

Notification of results. Paragraph (e) requires that the applicant be provided notice of any positive test result and be provided an opportunity to explain the presence of the substance detected (*e.g.*, by reference to ingestion of prescription medicine containing the substance in question). FRA intends only that the railroad have a regular procedure, that actual notification be made where results are positive, and that there be an effective opportunity for an oral or written response.

Retention of records. Paragraph (f) would require that test records be retained for two (2) years and make them available to FRA for review. Names of applicants not hired could be expunged. Each railroad would be required to submit an annual report summarizing the results of the urine drug screens conducted under this rule. These reports will assist FRA in evaluating the utility of the program, identify substances for which railroads should be encouraged to test, and determine whether the railroads are undertaking appropriate follow-up with regard to drug users they may have elected to employ in covered service.

Condition of hiring. Paragraph (g) would bar the employment of a person who fails to submit to a pre-employment drug screen.

Small railroad exclusion. Paragraph (h) would exclude from the pre-employment drug screen requirement any railroad that employs fewer than 15 persons in covered service. Many such railroads are located in rural communities where applicants are well known to the railroad managers. These smaller railroads usually enjoy closer supervision, carry lighter volumes of hazardous materials, and engage in low-speed operations that pose less threat to public safety. A disproportionate number of alcohol and drug-related accidents involve collisions between two trains, and the smaller railroads generally have lower traffic densities that (in combination with lower speeds) make serious collisions quite rare. None of the railroads in this group has experienced a documented alcohol or drug accident since 1975.

The costs of testing for these railroads on a per-unit basis would likely be higher than those for larger railroads, since they hire only infrequently and would not enjoy the economies of scales available to larger railroads. It is likely that many do not have formal physical examination procedures, a difference that would also drive up marginal costs. This exclusion will also avoid the imposition of new paperwork burdens on small business entities that are ill-equipped to handle them.

Some of these small railroads do carry passengers in excursion service. FRA

specifically welcome comments as to whether the proposed exclusion from the pre-employment drug screen requirement should apply to small railroads that provide such service.

Authority To Test for Cause

Section 218.109 would authorize the railroads to require employees to cooperate in breath and urine testing in certain situations involving "just cause." The railroads are involved in a hazardous business. They transport passengers and hazardous materials through the center of communities across the nation. Even a unit coal train is potentially a powerful instrument of destruction because of the kinetic force associated with high tonnage and considerable speed. It is unthinkable that the railroads should continue to be denied appropriate tools to determine whether their employees are fit to do their jobs.

The fact is that but for the decision of the NRAB, discussed above, which relegated this issue to collective bargaining and the procedures of the Railway Labor Act, the railroads would be free to test without restriction in most states today. Private employers may generally require employees to cooperate in appropriate testing as a matter of contract. Such testing clearly does not implicate Federal constitutional guarantees.

FRA proposes to remove any barrier such as the one posed by the NRAB decision, or one posed by State or local law, to testing for those situations where it is reasonable, in FRA's judgment, to require employees to provide breath and body fluid samples. Because regulatory action is necessary to remove these barriers, FRA is constrained to do so in a measured way. FRA is not prepared to permit unrestricted testing authority, because such a grant could result in individual employees carrying an undue burden of compliance under these proposed rules. Further, such a grant could undermine the spirit of mutual confidence that must be engendered if the railroads and their employees are to bring this problem under control.

Paragraph (a) of this section establishes the basic permission to test. The rule would both supersede collective bargaining restrictions and preempt any provisions of State law that are inconsistent. Employees would be deemed to have consented to testing under the section as a condition of employment (implied consent rule).

Categorical cause. Paragraph (b) outlines those circumstances presenting just cause for testing. The first is "reasonable suspicion" that a particular employee is presently impaired by alcohol or drugs. The railroad supervisor would have to be able to articulate the basis of the suspicion. It is expected that supervisors will be alert for the common signs of inebriation, such as slurred speech, unsteadiness, odor of alcoholic beverage on the breath, and the like. Similarly, some supervisors may be alert to indications of drug use, in addition to those indications also associated with the alcohol (itself a depressant drug, albeit not regulated as such).

FRA does not believe it is practical to include a checklist of symptoms in the regulations. Not all persons under the influence of alcohol have an "unsteady gait," nor are all persons whose breath smells of "alcohol" impaired. Even an employee whose face is not ordinarily "flushed", might appear flushed after climbing several freight cars to set hand brakes. As in the case in Rule G enforcement today, the supervisor will need to evaluate the employee on the basis of all available circumstances and indications. However, the supervisor will not be compelled to commit the resources of the company by immediately charging a Rule G violation. Rather, where the matter is susceptible to doubt or corroborative evidence is desired, the supervisor can require that an appropriate test be administered to confirm or exclude the presence of alcohol or drugs. If some tests prove to be negative, as they undoubtedly will, it is also likely that some employees who might otherwise be charged under Rule G will be proven sober and afforded more appropriate treatment.

Critically, the availability of testing authority will enable supervisors to pursue the cause of unusual behaviors in many marginal cases where evidence would not otherwise be sufficient to proceed under Rule G. Habituated alcoholics, for instance, often drink beverages that do not have noticeable aromas and have sufficient tolerance for given quantities of alcohol so that they can walk and talk in a near-normal manner. Drug users often display signs of impairment that are much subtler than those associated with alcohol, rendering normal detection in the occupational environment difficult or even impossible. However, careful observation may disclose less obvious physical manifestations or behaviors that would warrant further action. Clearly, "reasonable suspicion" testing is not a complete answer to these problems. But it does provide a tool where the appearance or behavior of the user is sufficiently affected to give notice to the observer.

Obviously, whether suspicion is "reasonable" in any case will turn both on the supervisor's level of training in identification of impaired employees and the supervisor's familiarity with the employee in question.

Note that the proposed rule requires that the observations in question be personal to the individual who forms a "reasonable suspicion." A supervisor would not be entitled to rely upon information provided by an anonymous informant to make the requisite determination. On the other hand, information provided by a third party might suggest the occasion for the supervisor's observations.

Second, under the proposed rule any covered employee directly involved in an accident or incident reportable to FRA under Part 225 of Title 49 would be subject to testing. Roughly one-third of train accidents are due in large part to human error on the part of covered employees. A vey high percentage of train incidents and non-train incidents among covered employees involve possible human failure, although many other factors may be involved, as well. It is seldom possible in the immediate wake of an accident or incident either to confirm or exclude the possibility of human failure as a factor, yet if testing is not done quickly important information is lost forever. The discussion above (under "Train Incidents") has pointed out that significant levels of alcohol have been found in one out of six railroad employee fatalities for which autopsies were performed—a rate far in excess of the estimated incidence of alcohol use among all employees (for any working day). This finding is obviously consistent with other safety data that show alcohol-impaired persons are much more likely than non-impaired persons to become involved in life-threatening situations.

Providing the railroads with the authority to test after reportable accidents and incidents will enhance their ability to identify the underlying causes of human failure, particularly in the case of "accident-prone" employees who have failed to respond to training. Investigations of alcohol and drug-related train accidents often show that the employment records of the persons involved were marred by occurrences (accidents, health problems, or rule violations) that were indicative of possible long-term use of alcohol. Such persons should be identified as soon as possible, and the basis of their problems should be determined.

Many persons impaired by alcohol or drugs may not display noticeable outward signs of their impairment. Testing for categorical cause is appropriate to detect impairment in

those situations where the employee's behaviors suggest the need for further evaluation.

Third, the rule would authorize testing of any employee who was directly involved in a serious operating rule violation involving the potential for a train accident. Specific violations are identified by example, in order to illustrate the type of failures that would allow testing. FRA welcomes suggestions for additional concrete examples in which testing should be authorized, as well as suggestions for situations in which testing would not be indicated.

The rationale for this permission is similar to that for testing after an accident or incident. It is not enough for the railroad to take action against employees after there has been loss of life or property. Nor is the interest of safety adequately served by suspending or dismissing impaired employees for violations of rules unrelated to their impairment, since reinstatement may occur in the absence of action to address the underlying cause of the individual's behaviors.

Permissive. This section is, and is intended to be, permissive only; no particular test or series or program of testing is required or compelled by this section, and any such test or tests actually undertaken by the railroad are done at its initiative and not directly or indirectly at the instance of FRA.

Limit on number of tests. Paragraph (c) sets limitations on the number of test procedures an employee can be required to participate in. FRA proposes to limit those procedures to three in any year and two in any month, except where a previous test was positive. The rule defines "test procedure" to include the provision of breath and urine samples. A railroad could require up to two breath samples per procedure (one to screen, the other to confirm) and two urine samples per procedure (the first to detect presence of drugs and metabolites and the second to indicate approximate level of alcohol still in the blood).

Safeguards. Paragraph (d) sets forth relatively standard safeguards for breath and urine testing. Very low readings (under .02 BAC) would be required to be disregarded for all purposes, to avoid controversies over the presence of alcohol in patent medications, mouthwash, and the like. FRA is aware that it may be necessary to consider relatively low blood alcohol readings in situations where employees have been on duty for 8 or 10 hours and would welcome any suggestions concerning rule provisions that could both (i) exclude *de minimis* results with regard to determinations of current rule violations and (ii) permit consideration of the same levels for appropriate purposes.

The principal testing safeguard is applicable to both breath and urine testing. That is, the employee would be provided the prompt opportunity to provide a blood sample at an independent medical facility for testing by that facility or an independent laboratory. This right would provide assurance to employees that the railroad will not mishandle samples or misinterpret test results. Further, the provision of a blood sample would assure the availability of the best information on the present impairment effects, if any, of any substance that might be detected in the breath or urine. Obviously, the railroad would not be required to facilitate taking of the blood test if the breath test was negative. Since urine test results would seldom be available immediately, employees would enjoy the right to demand blood tests in all such instances.

Where the employee declined the opportunity to provide a blood sample and the urine test is positive for alcohol or a drug, the rule would establish a presumption that the employee was, in fact, impaired by the substance detected. This presumption is necessary because substances can remain in the urine for some time after they are eliminated from the blood stream. Use of the unintrusive urine test is plausible only if impairment can be inferred from presence of the identified substance.

Identification of Troubled Employees

Section 218.111 requires each railroad to adopt, publish and implement two policies that are designed to achieve allied objectives. First, the policies are intended to facilitate the identification of employees who are troubled by substance abuse problems and would benefit from treatment of some kind (detoxification, counseling, or other therapies). Although management has many tools to identify such individuals, the railroads historically have failed to identify many employees at a sufficiently early stage of their disorders. Co-workers have the best opportunity to spot developing problems and to trigger early intervention, but they often fear that the affected employee's livelihood may be threatened.

The troubled employees themselves usually deny their diseases and often must be confronted in order to bring them into an EAP or similar program. Most larger railroads have endeavored to deal with this problem through their EAPs and related outreach efforts, and those efforts have met with mixed success. FRA believes that all railroads should adopt clear policies meeting minimum standards that are designed to ensure employee confidence in the railroad's commitment to rehabilitation of employees afflicted by alcohol and drug abuse problems.

The second objective of these policies is to strike at the heart of the conspiracy of silence that has permitted most Rule G violations to go undetected. Employees are overwhelmingly opposed to alcohol and drug use on the job, but many employees look the other way in order to avoid endangering their co-workers' jobs. The majority of rule-abiding employees will say "no" to alcohol and drug use on the job if they are given the opportunity. These policies are intended to provide that opportunity.

The achievement of both of these objectives will serve the goal of improved railroad safety in direct and material ways, although other, laudable purposes will also be served. FRA wishes to stress that these policies are proposed to be incorporated in safety regulations solely for the purpose of improving safety. Although it is possible to imagine a strategy that would emphasize only "catching" and "firing" (or disqualifying) those who use alcohol or drugs in railroad operations, such a strategy would be sadly lacking in realism. Few railroads are prepared to make the investments required to "find" substance abusers, even if authority for random testing were to be made available. Further, even where violators are "fired," most ordinarily end up back on the railroad's employment rolls, sooner or later. By contrast, the policies proposed in this notice seek to prevent the kind of accidents, injuries, and serious rule violations that may eventually form the basis for disciplinary action. They stress early intervention, and offer mechanisms by which employee attitudes can be changed.

Voluntary referral policy. Paragraph (b) of the rule would mandate a "voluntary referral policy" similar to those policies in effect on most Class I railroads. Inclusion of this requirement would emphasize the importance of rehabilitation as a safety strategy and would assure that all railroads have such a policy in force. Any covered employee who requested assistance or who was referred for assistance by his or her union would be extended the cooperation of the railroad in effecting a recovery. Obviously, the railroad is not a treatment provider. However, the railroad can provide a point of contact (whether salaried or retained on a fee-

for-service basis) who can direct the employee to appropriate resources. The railroad can also grant any leave of absence that the employee may require in order to participate in treatment. (The rule indicates that a leave of at least 45 days must be granted, as requested. A longer period might be reasonable in some cases.) Grant of the leave of absence is in the railroad's interest, since it may remove an uncontrolled alcoholic or drug addict from the work environment.

The section requires that the employee be returned to work when the "EAP counselor" employed or retained by the railroad determines that the employee can resume his or her duties safely. Confidentiality would be maintained concerning the referral unless the employee failed to cooperate in treatment. Should this occur, the employee's treatment records could be made a part of the regular personnel and medical files; and the employee would be subject to adverse action under the railroad's normal policies and agreements.

FRA is aware that many EPAs promise absolute confidentiality for employees who enter the programs under "voluntary" referrals. FRA does not intend to disturb those policies or indicate any disapproval of them. The proposed rules would be "minimum standards" and would be consistent with many existing railroad programs.

FRA specifically solicits comments on the extent to which the policy should permit an "EAP counselor" to require follow-up treatment after the employee is returned to service. FRA is concerned that, as presently framed, the rule might actually discourage some counselors from returning employees to service until all treatment had been completed. Since some railroad programs emphasize outpatient treatment and early return to service, and since follow-up treatment, is normally indicated after primary residential treatment, it may be that the rule should specifically address these points. On the other hand, it may not be reasonable as a matter of regulatory policy to permit the counselor's "hold" over the employee to continue indefinitely. As with other issues, FRA reserves the right to make appropriate adjustments in the rule in response to public comments.

It is important to note that the voluntary referral policy is critical to the structure of the proposed rule, even if it is accepted that progress in the railroad industry in developing and implementing employee assistance programs has been substantial. In particular, the co-worker report policy (or bypass) cannot function in the absence of a clearly mandated system by which employees can seek treatment.

Co-worker bypass. Paragraph (c) would mandate a "co-worker report policy" similar to the procedures embodied in some bypass agreements. The rule would permit a covered employee to maintain an employment relationship with the railroad following an alleged first offense under Rule G (or these proposed rules) under certain limited conditions:

1. The violation must come to the attention of the railroad as a result of a report by a co-worker.

2. The employee must waive the disciplinary hearing and report for evaluation by the "EAP counselor."

3. If the employee is determined to be affected by psychological or chemical dependence or another treatable disorder, the employee must abide by the treatment recommendations of the counselor and the railroad must grant leave to permit completion of treatment. If the EAP counselor determines that the employee has successfully completed treatment, the employee must be returned to service (on successful completion of the return-to-service physical).

4. If the EAP counselor determines that the employee would not benefit from formal treatment, the employee must be returned to work within 15 days, but the employee must also complete an education or awareness program specified by the railroad.

The rule also contains several declarations intended to guard against erroneous or overbroad interpretations.

The co-worker report policy provides the majority of responsible railroad employees with leverage to stop overt drinking and drugging by other employees who are threatening their safety, taxing their patience, and causing them to default on formal obligations to their employer. This mechanism can force the referral of the substance-dependent employee under the voluntary referral policy (by the troubled employee, after confrontation, or by the employee's union). Similarly, the plausible threat that other employees will follow-through with their threat to report the volitional drinker or drug user may be sufficient to convince that person to leave alcohol and drugs at home.

The chief theoretical objection to this "bypass" proposal is that it will permit employees "one more bite at the apple," in addition to informal warnings, treatment, leniency reinstatements, and arbitration awards. This is an empty concern. By definition, the co-worker report policy would apply only in those situations where the railroad would not otherwise have detected the violation in question. The conspiracy of silence is real on most, if not all, railroads. If the policy is applied to the employee who can benefit from treatment, then the railroad will benefit through early identification of the problem. If the policy is applied to an employee who violated the rule volitionally, the railroad will have identified an employee who requires closer supervision. In either case, the railroad will have obtained safety-related benefits not available except on those railroads where bypass agreements are in effect.

Responsibility for Compliance

Unfortunately, FRA cannot simply command the railroads to root out alcohol and drug use and expect that, even with best efforts, this will be done in every case. The safety problems posed by alcohol and drug abuse are present in every transportation mode and in most occupational settings, as well. The rules set forth in this notice will be effective only if employees and the railroads alike recognize that they are necessary to safety. Nevertheless, the Federal Railroad Safety Act contemplates an aggressive role for FRA in enforcing minimum safety requirements and the recognition of safety imperatives sometimes requires persuasion. Therefore, section 218.113 approaches the problem of alcohol and drug use from the point of view that what can be done ought to be done. First, the section prohibits any railroad from knowingly permitting any employee to go or remain on duty in covered service while in violation of § 218,103. Knowledge of noncomplying conduct on the part of the covered employee's immediate co-workers would *not* be imputed to the railroad, but knowledge by any other railroad employee would be imputed to the company.

Second, the section requires each railroad to exercise "due diligence" to assure compliance by its covered employees with the requirements of the entire subpart. The term "due diligence" is derived from judicial decisions, including some interpreting exceptions to the Hours of Service Act. As used in this context it is intended to denote a high standard of care to safeguard the public from the life-threatening consequences of alcohol and drug-caused accidents. However, it recognizes that individual employees may sometimes offend company policy, and places on the Government (or other party seeking to rely upon the standard) the burden of establishing that "due

diligence" was not exercised in the situation at hand.

Third, it prohibits any railroad from knowingly and willfully requiring an employee to submit to testing in reliance on the proposed rules without observance of the conditions and safeguards set forth in these rules. Although good faith errors in test procedures would not offend the purposes of these rules, any egregious or repeated violation of safeguards would diminish employee confidence in the integrity of the Federal alcohol and drug and program and, inevitably, reduce their support for this policy.

Fourth, the railroads would be prohibited from disregarding the requirements of § 218.111 (identification of troubled employees). Again, good faith errors in implementing these policies would not be deemed to offend the Federal Railroad Safety Act, but knowing and willful deviations would be punishable.

Fifth, the railroads would be made strictly liable for other deviations from the requirements of the subpart (such as failure to conduct pre-employment tests or discharge their obligations to facilitate post-accident testing, maintain records or submit reports).

At the suggestion of the Association of American Railroads, a draft schedule of civil penalties has been included in this notice. Comments are requested on the schedule, which will constitute an integral part of any final rule.

Improved Accident Reporting

FRA is not persuaded by those who have argued that the existing accident reporting system is sufficient to document the involvement of alcohol and drugs in train accidents. To the contrary, change is clearly in order. For instance, of the fifteen (15) significant accidents listed in Table 2 that FRA or NTSB found to have involved alcohol or drugs, the railroads used FRA's alcohol/drug cause code to indicate primary or contributing cause in only six (6) cases. In none of the other nine (9) cases did the railroad's report to FRA indicate alcohol or drug involvment, despite the fact the railroad knew that FRA or NTSB had found evidence to that effect.

The problems with the present system are both internal and external. First, the system is presently structured to elicit only the "primary cause" and one "contributing cause" of each accident. Thus, a railroad whose impaired employees caused an accident by operating too fast on the curve of a poorly-maintained branch line might very well report that the causes of the accident were excessive speed (*e.g.*, code 555) and track geometry (*e.g.*, code 110). Such a report might be filed without the slightest intent to deceive and in full compliance with the reporting system as now conceived.

However, external factors also operate. As discussed above, the railroads may have reasons either to ovelook or underplay the role of alcohol or drugs in certain accidents. More critically, FRA is convinced from its own investigations and knowledge of accident investigation practices that many railroads fail to specifically consider alcohol or drugs as potential factors in accident scenarios except where an employee exhibits behaviors so clearly out of the ordinary as to seize the attention of a carrier officer. Although FRA recognizes that investigators should not fixate on any particular aspect of an accident investigation to the exclusion of other relevant factors, greater attention to the causes of human failure is clearly required.

Therefore, FRA proposes to amend the Accident/Incident Reporting requirements (§ 225.17 of Part 225, title 49, Code of Federal Regulations) to require that the railroads make such specific inquiry as may be reasonable into the possible involvement of alcohol or drug use in train accidents. This requirement is intended to prompt conscious efforts to exclude or establish impairment as a factor in those accidents that, in the judgment of the railroad, involve human factors.

In any case where the railroad obtains information suggesting that an employee was impaired by alcohol or drugs at the time of the accident, whether or not this information is confirmed, and whether or not it is deemed relevant to the accident cause, the railroad would be required to so indicate through use of a special new reporting code. Where this code is used but impairment is not considered a causal factor, the railroad would be required to include in the narrative statement at the bottom of the reporting form a brief explanation of why the information of impairment was not deemed reliable or material to the cause.

Preliminary Recommendations for Private Sector Action

In addition to issuing the basic regulatory requirements set forth above, FRA proposes to issue recommendations for private sector action in support of the regulatory policies. These recommendations would offer specific concepts and techniques for potential action by the railroads, both singly and in concert with other railroads and the rail labor organizations. FRA will request the National Planning Committee on voluntary programs for the prevention of alcohol and drug use to evaluate, refine, and assist in the implementation of these recommendations. FRA welcomes public comment on the following preliminary recommendations.

FRA recommends that each Class I railroad:

(A–1) Develop and implement procedures for the periodic review of the personnel records of each covered employee, including attendance records, injury and claim files, disciplinary records, and periodic physical examinations, to identify employees whose performance may be affected by alcohol or drug abuse.

(A–2) Establish and maintain an employee assistance program capable of competently serving all problem drinkers and drug users in the employ of the railroad through primary counseling and treatment and effective long-term follow-up.

(A–3) Establish and maintain education and awareness programs with the objective of preventing alcohol and drug use in covered service.

(A–4) Strengthen periodic medical examination procedures to assure that physicians look for sympotms of alcohol and drug abuse and analyze urine samples for alcohol and other drugs.

(A–5) In cooperation with FRA, explore the feasibility of including a motor vehicle records check in the pre-employement evaluation of applicants for positions in covered service.

FRA recommends that all railroads:

(A–6) In order to emphasize company commitment to employee fitness, prohibit on-duty alcohol and drug use by all officers and employees of the railroad who are involved in railroad operations, regardless of rank.

FRA recommends that the railroads are recognized collective bargaining representatives of employees:

(B–1) Establish permanent liaison relationships between the employee assistance programs and the union organizations with a view toward encouraging increased referrals of potential clients and better evaluation of program effectiveness. Encourage the use of volunteers, including recovered problem drinkers and problem drug users, to provide follow-up support for active EAP clients and former clients.

(B–2) Negotiate agreements permitting employees in non-scheduled service to decline calls under appropriate limitations and restrictions.

(B–3) Negotiate agreement provisions declaring that disputes related to disciplinary action for violations of Rule G shall be handled on their individual

merits and that neither party will seek to gain advantage in the handling of such a dispute by offering or accepting any consideration not related to any such dispute.

(B–4) Negotiate agreement provisions permitting the special assignment of recovering problem drinkers, problem drug users, and volitional Rule G offenders involving deviations, as necessary, from normal seniority rules and bidding procedures. In drafting the agreement, recognize the needs of recovering employees for regular duty hours and association with other employees who will affirm their sobriety and encourage the recovery process. Recognize the need of management to provide special supervision of Rule G violators who have been reinstated or who have been permitted to return to service without termination.

State Participation

The National Association of State Regulatory Utility Commissioners (NARUC) indicated that 12 of 21 commissions responding would be interested in participating in investigative and surveillance activities under any alcohol and drug rules issued by FRA. FRA's State Safety Participation Regulations (49 CFR Part 212) already provide appropriate mechanism to facilitate such participation. Any State providing investigative and surveillance activities in the area of operating practices would be free to participate in the application of these rules as soon as (i) its personnel have received the requisite training in the requirements of the rules and procedures for implementation of the rules (§ 212.223) and (ii) the State agency and FRA have developed an appropriate element for inclusion in the annual inspection plan (§ 212.109).

Preemption of State Law

The proposed rules woulds preempt any State laws or regulations that regulate the use of alcohol and drugs by employees engaged in railroad operations. *See* section 205 of the Federal Railroad Safety Act of 1970, 45 U.S.C. 434. However, the proposed rules set forth a civil regulatory scheme going principally to the obligations of railroads and do not specify sanctions running directly to individuals. FRA would not intend to preempt provisions of State criminal law that do not regulate alcohol and drug use by railroad employees, *per se*, but rather regulate alcohol and drug use generally or life-endangering conduct generally. FRA would expect to provide an opinion letter at the request of any State regarding the intended preemptive effect of any final rules.

Section 218.109 would also preempt the application to the railroad industry of any provision of State law dealing with the testing of employees for alcohol or drug impairment as a part of the employment relationship.

Comment is requested concerning any problems or issues raised by the potential preemptive effect of the proposed rules.

Regulatory Impact

E.O. 12291 and DOT Regulatory Policies and Procedures

These proposed regulations have been evaluated in accordance with existing regulatory policies and are considered to be non-major under Executive Order 12291. However, they are considered to be significant under the DOT policies and procedures (44 FR 11034; February 26, 1979) because they initiate a substantial regulatory program.

Consequently, FRA has prepared and placed in the rulemaking docket a draft regulatory evaluation addressing the economic impact of the proposed rules. It may be inspected or copied at Room 5101, 400 Seventh Street, SW., Washingtion, D.C. 20590. Copies may also be obtained from the Docket Clerk, FRA, at the foregoing address.

The economic evaluation identifies total estimated benefits from avoidance of accidents and incidents of $2,398,681 per year. The total first-year costs of the proposed rules, a substantial portion of which would be attributable to execution of consent forms by covered employees, are estimated at $1,309,277. The benefit to cost ratio for the first year is 1.83:1. Costs for subsequent years are estimated at $706,111, producing a benefit to cost ratio of 3.16:1.

These ratios are conservative for a number of reasons. For instance, the estimated benefits rely upon the documented data base, which is known to be incomplete, rather than on extrapolations. The estimated benefits do not include projections for avoidance of the following consequences of alcohol and drug-related accidents and incidents: costs of personal injuries in train accidents and incidents; non-railroad property damage in train accidents, including lading and improvements to adjacent property; emergency response costs; environmental clean-up costs; and incidental railroad costs such as wreck clearance, train delays, and higher crew costs. Further, FRA's benefit estimates do not include the indirect societal benefits that would be derived from early identification of problem drinkers and drugs users.

An evaluation of alternatives to the proposed regulations is contained in the text of this notice.

Regulatory Flexibility Act

FRA certifies that this proposal will not have a significant economic impact on a substantial number of small entities. The proposed rules will apply only to railroads, and accordingly will have no direct impact on small units of government, businesses and other organizations. (As noted above, State rail agencies will be free to participate in administration of the proposed rules under streamlined administrative procedures, but will not be required to do so.) Although a substantial number of small railroads would be subject to these regulations, if adopted, the economic impact of the proposed rules would not be significant for several reasons. Only a very few accidents occur each year on small railroads that would require compliance with the post-accident testing provision of the rule. FRA proposes to except very small railroads from the requirement for pre-employment drug screens, and remaining small railroads would experience little impact because of the small number of new hires and the low per-unit cost of testing. The impact of the voluntary referral and co-worker report policies on small railroads is also projected to be insignificant. Small railroads are well situated to satisfy the requirements of the rules because of their small employee populations, geographically more compact operations, and greater capacity to provide close supervision.

FRA specifically requests comment on the impact of these rules on small entities and welcomes any suggestions for incorporating further appropriate exclusions in the final rules.

Paperwork Reduction Act

This proposed rulemaking contains information collection requirements in the following sections: §§ 218.105 and 218.107 of Part 218; § 225.17 of Part 225. They have been submitted to the Office of Management and Budget for approval under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). Persons desiring to comment on these information collection requirements should submit their comments to: Office of Regulatory Policy, Office of Management and Budget, 726 Jackson Place, NW., Washington, D.C. 20543, ATTN: Desk Officer, FRA. Persons submitting

comments to FRA as indicated under "ADDRESSES."

Environmental Impact

FRA has evaluated these proposed regulations in accordance with its procedures for ensuring full consideration of the environmental impacts of FRA actions as required by the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*), other environmental statutes, Executive Orders and DOT Order 5610.1c. These proposed regulations meet the criteria that establish this as a non-major action for environmental purposes.

List of Subjects

49 CFR Part 218

Railroad safety, Control of alcohol and Drugs.

49 CFR Part 225

Railroad safety, Accident/incident reporting.

Request for Public Comment

FRA proposes to amend Parts 218 and 225 of Title 49, Code of Federal Regulations, as set forth below. FRA solicits comments on all aspects of the proposed rules and the data and analysis advanced in explanation of the proposed rules, whether through written submissions, or participation at the public hearings, or both. FRA may make changes in the final rules based on comments received in response to this notice.

Authority: Sections 202, 208 and 209 of the Federal Railroad Safety Act of 1970, as amended (45 U.S.C. 431, 437, 438) and § 1.49 of the Regulations of the Office of the Secretary of Transportation (49 CFR 1.49).

Issued in Washington, D.C., on June 5, 1984.

John H. Riley,

Federal Railroad Administrator.

Notes

(*1*) FRA has *excluded* from Table 1 two significant accidents in which alcohol and another drug may have played a role. In an accident at Angora, Nebraska, on the Burlington Northern, on February 16, 1980, the deceased employee found to have had a BAC of .074 was an engineer of helper locomotives. Although the movement involved was under the control of the engineer of the train that the units were being dispatched to assist, the sequence of events leading up to the accident may have proceeded differently if the impaired engineer had participated in decision making concerning the movement. The Angora accident resulted in 2 fatalities, 3 nonfatal injuries, and property damage in excess of $1.5 million.

FRA recently investigated another accident in which circumstances strongly suggested use of illicit drugs by one or two crew members. That accident involved injuries and substantial property damage. However, drug use could not be documented because adequate body fluid samples were not available.

(*2*) The railroad damage estimates used in this analysis are generally those compiled by FRA on the basis of information provided by the railroads during accident investigations. In three cases, they are the same as reported by the railroads on Form 6180–54. In others the railroad-reported total is lower or higher, a difference that usually results from revisions by the railroad in estimated repair and replacement costs as the carrier investigation continues and actual expenditures are made. Consistent use of the railroad-reported amounts would produce a net *increase* approximately $.4 million in the total damage estimates (uninflated).

(*3*) Numbers of employees used in this discussion are year-end totals for 1982, as reported to the Interstate Commerce Commission. Most available Rule G data relates to the period 1978 through 1982, and rail employment was in decline over that period.

(*4*) The Brotherhood of Locomotive Engineers appeared to contend that FRA could not issue regulations applying sanctions against alcoholics who are intoxicated on the job because "current federal law and policy recognize alcoholism as a handicap." The implication of the comment was that employers (and thus FRA) may not discriminate against uncontrolled alcoholics with respect to employment in safety-sensitive functions. Such is not the case. The Congress has made quite clear that the antidiscrimination provisions of the Rehabilitation Act of 1973 do not limit the discretion of employers to take action against uncontrolled alcoholics or drug abusers whose job performance is materially affected by the employee's condition or who, by reason of . . . current alcohol or drug abuse, would constitute a direct threat to property or the safety of others." 29 U.S.C. 706(7)(B), as amended by Pub. L. No. 95–601. *See 6 U.S. Code Congressional and Administrative News*, 95th Cong., 2d Sess. (1978) at 7333, 7352, 7413 (reprinting committee reports).

PART 218—[AMENDED]

In consideration of the foregoing FRA proposes to amend Chapter II, Subtitle B, of Title 49, Code of Federal Regulations as follows:

1. By amending Part 218 as follows:

a. Revise the title of the Part to read "Railroad Operating Practices."

b. Amend the table of contents to add new references as follows:

PART 218—RAILROAD OPERATING PRACTICES

* * * * *

Subpart D—Control of Alcohol and Drug Use

Sec.

218.101 Definitions.
218.103 Alcohol and drug use by covered employees.
218.105 Post-accident toxicological tests.
218.107 Pre-employment drug screens.
218.109 Authority to test for cause.
218.211 Identification of troubled employees.
218.113 Responsibility for compliance.

* * * * *

Appendix B—Consent form.

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c. *Revise the introductory text of paragraph (b) of § 218.3 as follows:*

§ 218.3 Application.

* * * * *

(b) Subparts B and C of this part do not apply to—

* * * * *

d. *Add a new Subpart D to read as follows:*

Subpart D—Control of Alcohol and Drug Use

§ 218.101 Definitions.

As used in this subpart—

(a) "Alcohol" means ethyl alcohol (ethanol). References to use or possession of alcohol include use or possession of any beverage, mixture or preparation containing ethyl alcohol.

(b) "Covered employee" means a railroad employee who has been assigned to perform service subject to the Hours of Service Act (45 U.S.C. 61–64b) during a duty tour, whether or not the employee has performed or is currently performing such service.

(c) "Covered service" means service for a railroad that is subject to the Hours of Service Act (45 U.S.C. 61–64b).

(d) "Co-worker" means another employee of the railroad, including a working supervisor directly associated with a yard or train crew, such as a conductor or yard foreman, but not including any other railroad supervisor, special agent or officer.

(e) "Drug" means any controlled substance (as defined by 21 U.S.C. 802), with the exception of a controlled substance prescribed by a medical practitioner, if—

(1) the treating medical practitioner or a physician designated by the railroad has made a good faith judgment, with notice of the the employee's assigned duties and on the basis of the available medical history, that use of the substance by the employee at the prescribed dosage level is consistent with the safe performance of the employee's duties; and

(2) the substance is used at the dosage prescribed.

(f) "EAP counselor" means a person qualified by experience, education, or training to counsel persons affected by substance abuse problems and to evaluate their progress in recovering

from or controlling such problems. An "EAP counselor" may be a full-time salaried employee of the railroad or a practitioner who contracts with the railroad on a fee-for-service or other basis. As used in these rules, an EAP counselor is one who owes a duty to the railroad to make an honest and fully informed evaluation of the condition and progress of the employee and who is vested with the authority to determine when the employee has achieved sufficient progress in recovery to warrant the employee's resumption of normal duties.

(g) "Medical practitioner" means a physician or dentist licensed or otherwise authorized to practice by the state.

(h) "Possess" means to have on one's person or in one's personal effects or under one's control.

(i) "Supervisory employee" means an officer or employee of the railroad who is not a co-worker and who is responsible for supervising or monitoring the conduct or performance of one or more employees.

§ 218.103 Alcohol and drug use by covered employees.

(a) No employee may use or posses alcohol or any other drug while assigned by a railroad to perform covered service. However, this rule shall not be construed to prohibit the presence of an unopened container of an alcoholic beverage in the employee's personal motor vehicle.

(b) No employee may report for covered service, or go or remain on duty in covered service, while under the influence of or impaired by alcohol or any other drug.

(c) An employee shall be conclusively presumed to be impaired—

(1) By alcohol, if the employee has a blood alcohol concentration of .05 percent (weight/volume) or more, as establish by a method that is reliable within a known margin of error; and

(2) By any other drug, if the quantity of the drug in the employee's body fluids would be sufficient to affect the perception, mental processes or motor functions of an average person.

For the purpose of determining blood alcohol concentration through an analysis of the breath, the amount of alcohol in one part of blood shall be presumed to equal the amount of alcohol in 2100 parts of an expired breath sample (by volume).

§ 218.105 Post-accident toxicological testing.

(a) *Mandatory testing procedures.* (1) Following each accident and incident described in paragraph (b) of this section, the railroad (or railroads) shall take all practical steps to assure that all covered employees of the railroad directly involved in the accident or incident provide blood and urine samples for toxicological analysis by FRA. Such employees shall specifically include the operating employees responsible for any train or switching movement involved in the accident or incident.

(2) Every reasonable effort shall be made to assure that samples are provided as soon as possible after the accident or incident. This paragraph shall not be construed to inhibit the employees required to be tested from performing, in the immediate aftermath of the accident or incident, any duties that may be necessary for the preservation of life or property. However, where practical, the railroad shall utilize other employees to perform such duties.

(3) Samples shall be obtained, preserved, marked, handled, and made available to FRA under such procedures (consistent with this subpart) as the Associate Administrator for Safety, FRA, shall prescribe.

(4) Where practical, employees shall be transported to a health care facility independent of the railroad company, such as a hospital, clinic, or physician's office, where the samples shall be obtained. In all cases blood shall be drawn only by a qualified medical professional or by qualified technician subject to the supervision of a qualified medical professional. In seeking the cooperation of a medical facility in obtaining a sample under this subpart, the railroad shall, as necessary, make specific reference to the requirements of this subpart.

(5)(i) In the case of an injured employee, the railroad shall request the treating medical facility to obtain the samples. If the employee is unconscious or otherwise unable to affirm consent to the procedure and the treating medical facility declines to draw the sample, the railroad shall immediately make available to the facility the consent form required by paragraph (c) of this section and request that a blood sample be drawn. In the event the medical facility initially declines to cooperate in obtaining the required samples from an injured employee, the railroad shall immediately notify the Office of Safety, FRA, by telephone, through the appropriate FRA regional office or field office. FRA will then take appropriate measures to assist in obtaining the required samples.

(ii) Nothing in this subpart shall be construed to limit the discretion of a physician to determine whether drawing a blood sample is consistent with the health of an injured employee or an employee afflicted by any other condition that may preclude drawing the specified quantity of blood.

(6) (i) In the case of an employee fatality the railroad shall immediately notify the appropriate local authority (such as a coroner's office) of the fatality and the requirements of this subpart, requesting the local authority to assist in obtaining the necessary body fluid or tissue samples.

(ii) If the local authority takes custody of the deceased for the purpose of conducting an autopsy or toxicological tests, the railroad shall immediately notify the Office of Safety, FRA, by telephone, through the appropriate FRA regional office and shall immediately deliver to such authority the consent form required by paragraph (c) of this section. The FRA will contact the local authority to obtain appropriate body fluid or tissue samples for testing.

(iii) If the local authority does not immediately take custody of the deceased, the railroad shall notify the Office of Safety, FRA, by telephone, through the appropriate FRA regional office, immediately making available to FRA the consent form required by paragraph (c) of this section. FRA will then take appropriate measures to obtain the necessary samples.

(b) *Accidents covered.* Post-accident toxicological tests shall be conducted for—

(1) Any passenger, freight, or work train accident described in § 225.19(c) of this title ("Rail equipment accident") that involves one or more of the following:

(i) A fatality;

(ii) A reportable injury to an employee or other person, as defined in § 225.5 of this title;

(iii) Damage to railroad property of $150,000 or more; or

(iv) Release of hazardous materials, other than a release of a small quantity of product from the valves or fittings of a single tank car where—

(A) The tank remains upright;

(B) There is no damage to the tank; and

(C) The release does not occasion an evacuation.

(2) Any train incident that involves one or more of the following:

(i) A fatality; or

(ii) Loss of an arm, leg, or eye.

However, no test shall be required in the case of a collision between railroad rolling stock and a motor vehicle or other conveyance at a rail/highway grade crossing or in the case of a train

incident consisting solely of a fatality or injury to a trespasser.

(c) *Consent requirement.* (1) Each railroad shall require as a condition of employment in covered service that each of its employees consent to testing under this subpart, and each employee engaged in covered service after the effective date of this subpart shall be deemed to have so consented.

(2) In order to assure that employees are made aware of the requirements of this subpart and to provide a record of consent of the employee to tests under this subpart, each employee in covered service shall execute a consent form containing the statements contained in Appendix B to this part. The writing shall be witnessed by at least one person familiar with the identity of the employee and shall be retained for the duration of the employee's service with the railroad, or until a replacement form is executed, in an office of the railroad as close as practical to the territory where the employee is assigned.

(d) *Notification of results.* FRA notifies the railroad and the tested employee of the results of the toxicological analysis and permits the employee to respond in writing to the results of the test prior to preparing any final investigation report concerning the accident or incident. Results of the toxicological analysis and any response from the employee are also promptly made available to the National Transportation Safety Board on request.

(e) *Sample retained.* Each sample provided under this subpart is retained for not less than six months following the date of the accident or incident and may be made available to the National Transportation Safety Board (on request) or to a party in litigation upon service of appropriate compulsory process on the custodian of the sample at least ten (10) days prior to the return date of such process. It is the policy of FRA to request the Attorney General to oppose production of the sample to a party in litigation unless a copy of the subpoena, order or other process is contemporaneously served on the Chief Counsel, FRA, Washington, D.C.

(f) *Report.* If the railroad is unable, as a result of noncooperation of an employee or any other reason, to obtain a sample and cause it to be provided to FRA as required by this section, the railroad shall make a concise narrative report of the reason for such failure and any responsive action taken to the cause of such failure (if appropriate). This report shall be appended to the report of the accident/incident required to be submitted under part 225 of this subchapter. In any case where FRA has been provided telephonic notice of any problem in obtaining a sample (*e.g.*, in the case of a fatality or injury requiring medical attention), the report required by this paragraph shall make reference to the date and time of such notification and the FRA representative who received the notice.

(g) *Condition on employment in covered service; sanction.* (1) An employee who declines to affirm consent to testing by executing the form required by this section shall not be assigned to or continued in covered service until the employee agrees to provide such consent.

(2) (i) An employee who refuses to cooperate in providing a blood or urine sample following an accident or incident specified in this section shall immediately be withdrawn from covered service for a period of at least six months following such accident or incident.

(ii) After withdrawing the employee from covered service under this paragraph, the railroad shall provide an opportunity for hearing before a carrier official other than the charging official. The hearing shall be convened within the period specified for post-suspension hearings in the applicable collective bargaining agreement. In the absence of an agreement provision, the employee may demand that the hearing be convened within 10 calendar days of suspension or, in the case of an employee who is unavailable due to injury, illness, or other sufficient cause, within 10 days of the date the charged employee becomes available for hearing. For purposes of this subpart, the only issue at such a hearing shall be whether the employee refused to submit to testing, having been requested to submit, under authority of this subpart, by a representative of the railroad or attending medical personnel.

§ 218.107 Pre-employment Drug screens.

(a) On and after [the effective date of this subpart], each applicant for a position with a railroad that involves the performance of covered service shall be tested for the presence of alcohol and drugs. The test shall be accomplished through analysis of a urine sample or other reliable method. Whenever feasible, the sample shall be obtained in connection with a pre-employment physical examination.

(b) An applicant shall be advised as soon as practical, but not less than 7 days prior to the examination, that the applicant will be required to provide a urine or other body fluid sample for testing and that the sample will be tested for the presence of alcohol and drugs. In the case of an applicant who declines to be tested and withdraws the application for employment, no record shall be maintained of the declination.

(c) The railroad shall cause the samples obtained under this section to be identified, preserved, and tested by a competent laboratory for the presence of drugs, including, at a minimum, the following substances: alcohol, opiates (narcotics), cocaine, barbiturates, amphetamines, cannabis, hallucinogens, and any other drug(s) identified by the carrier medical officer as in frequent use in the locality.

(d) If the first test of a sample is positive for any drug, the sample shall be tested a second time by another laboratory, or by another method, to confirm the finding.

(e) The railroad shall notify the applicant of the results of the test(s) and shall, in the case of a positive result, provide the applicant with an opportunity to explain the presence of the identified substance prior to taking any action on the application for employment.

(f)(1) Each railroad shall retain records of tests conducted under this section for at least 2 years and make them available to FRA for review. Such records need not reflect the identity of any applicant not employed in covered service.

(2) Not later than March 1 of each year the railroad shall report to FRA concerning pre-employment tests conducted in the previous calendar year. The report shall indicate the number of tests conducted and the number of those tests that were positive, inconclusive, and negative, respectively. With respect to positive tests, the report shall identify the substances detected (by generic name) and the number of tests with respect to which each such substance was detected. The report shall also contain a short narrative summary describing the current policy and practice of the railroad with respect to employment, and subsequent handling, of applicants whose tests were positive.

(g) An applicant who has refused to submit to pre-employment testing under this section shall not be employed in covered service during any period such refusal may continue.

(h) The requirements of this section shall not apply to any railroad that employs a total of not more than 15 employees who perform covered service.

§ 218.109 Authority to test for cause.

(a) *Grant.* A railroad subject to this subpart may, upon just cause, and consistent with the provisions of this section, require any covered employee, as a condition of employment in covered

service, to cooperate in breath testing, urine testing, or both, to determine compliance with § 218.103 of this subpart or a railroad rule implementing the requirements of § 218.103. This authority is limited to duty hours (including any period of overtime or emergency service). Each covered employee shall be deemed to have consented to such testing. The provisions of this section apply only where, and to the extent that, the test in question is conducted in reliance upon the authority conferred by this section.

(b) *Just cause.* (1) The following circumstances constitute just cause for testing an employee under this section:

(i) A supervisory employee of the railroad has a reasonable suspicion that the employee is currently impaired by alcohol or any drug, based upon specific, personal observations that the supervisory employee can articulate concerning the appearance, behavior, speech or body odors of the employee;

(ii) The employee has been directly involved in an accident or incident reportable under Part 225 of this title; or

(iii) The employee has been directly involved in one of the following operating rule violations or errors:

(A) Occupancy of a block to which entry was not authorized;

(B) Failure to observe clearance limitations when setting out of rolling stock (on completion of a switching operation);

(C) Failure to protect a train as required by a rule consistent with § 218.37 of this part;

(D) Operation of on-track equipment at a speed at least 10 miles per hour greater than the maximum authorized speed prescribed by the railroad;

(E) Alignment of a switch in violation of a railroad rule or operation of a switch under a train or switching movement; or

(F) Violation of any other operating rule, timetable instruction, special instruction, general order, bulletin order, or other written directive of the kind which directly affects safe movement of a train, switching movement or lite engine in a way that could result in a train accident (including any such violation detected in an operational or efficiency test).

(2) Nothing in this paragraph shall authorize testing of an employee after the expiration of a 12-hour period from the time of the observations or other events described in this paragraph.

(c) *Limitation on number of tests.* (1) No employee shall be required to cooperate in more than three test procedures in any 12-month period, or more than two test procedures in any 30-day period under paragraph (b) of this section, except where a previous test of the employee during the previous 12 months was positive. Tests required by § 218.105 of this subpart shall not be counted toward these limitations.

(2) As used in this paragraph, a single "test procedure" may include the provision of both breath and urine samples. A single breath test procedure may include a follow-up test after a positive reading and may also include the provision of a breath sample for the purpose of preliminary screening. A urine test procedure may include the provision of not more than two samples from the same employee.

(3) If an employee is required to submit to a preliminary screening test the results of which are negative, the employee shall not be required to provide another breath sample during that duty tour.

(d) *Test safeguards.* (1) *Breath testing.* The following conditions apply to breath testing authorized by this section, other than tests the results of which are not used for disciplinary purposes:

(i) Testing devices shall be of evidential quality, as determined in accordance with standards or guidelines issued by the Department of Transportation, and shall be maintained and calibrated in accordance with the manufacturer's instructions;

(ii) Tests shall be conducted by a qualified operator in accordance with procedures specified by the manufacturer of the testing device, consistent with sound technical judgment, and shall include appropriate restrictions on ambient air temperature;

(iii) If an initial test is positive, the employee shall be tested again after the expiration of a period of not less than 20 minutes, in order to confirm that the test has properly measured the alcohol content of deep lung air; and

(iv) Any test result of less than .02 BAC shall be deemed a negative test.

(2) *Urine testing.* The following conditions apply to urine testing authorized by this section, other than tests the results of which are not used for disciplinary purposes:

(i) The sample(s) shall be collected at a place of reasonable privacy on the railroad (subject to the presence of one representative of the railroad of the same sex) or at an independent medical facility;

(ii) In the case of a sample obtained by a railroad representative, the sample shall be marked and sealed in the presence of the employee and the railroad shall maintain a controlled chain of custody of the sample and shall take reasonable precautions to maintain sample quality;

(iii) The sample(s) shall be analyzed by a reliable method and, if positive for a substance other than alcohol, shall be retested by a second laboratory or by another method; and

(iv) Any test result convertible to an estimated BAC below .02 shall be deemed a negative test for alcohol.

(3) Employee option.

(i) In any case where a breath test is intended for use in the disciplinary process and the result is positive, the employee shall be given the prompt opportunity to provide a blood sample at an independent medical facility for analysis by that facility or another independent laboratory. The railroad shall provide the required transportation to facilitate the blood test.

(ii) In any case where a urine test is intended for use in the disciplinary process, the employee shall also be given the prompt opportunity to provide a blood sample at an independent medical facility for analysis by that facility or another independent laboratory. This paragraph (d)(3)(ii) shall not apply in a case where the railroad utilizes a portable or other on-site urine testing method and the result of the urine test is negative.

(e) *Presumption.* If an employee has tested positive for a material quantity of alcohol or a drug in a urine test and the employee was afforded and declined the opportunity to provide a blood sample, the railroad (or a board of arbitration) may presume from the presence of alcohol or the identified drug that the employee was impaired by that substance within the meaning of § 218.103 of this subpart.

§ 218.111 Identification of troubled employees.

(a) *Purpose.* The purpose of this section is to prevent the use of alcohol and drugs in connection with covered service by (1) identifying for treatment those employees who abuse alcohol or drugs as a part of a treatable condition and (2) eliciting the assistance of co-workers in enforcing this subpart and railroad alcohol and drug rules consistent with this subpart.

(b) *Voluntary referral policy.* (1) Each railroad shall adopt, publish and implement a policy conforming to the requirements of this paragraph.

(2) A covered employee who is affected by alcohol or drug abuse may retain an employment relationship with the railroad if, before the employee is charged with conduct deemed by the railroad sufficient to warrant dismissal, the employee (i) seeks assistance through the railroad for the employee's alcohol or drug abuse problem or is

referred for such assistance by a representative of the employee's collective bargaining unit, and (ii) agrees to undertake and successfully completes a course of treatment deemed acceptable by the EAP counselor. The policy shall further assure that the railroad treats the referral and treatment as confidential, except to the extent that the failure of an employee to complete the prescribed treatment necessitates action against the employee under the railroad's medical standards or is directly relevant to the disposition of an alcohol or drug-related disciplinary charge growing out of a subsequent transaction.

(3) The railroad shall, to the extent necessary for treatment and rehabilitation, grant the employee a leave of absence from the railroad for the period necessary to complete primary treatment and establish control over the employee's alcohol or drug problem, but not less than 45 days.

(4) The employee shall be returned to service on the recommendation of the EAP counselor.

(5) Nothing in this section shall be construed to require the application of this voluntary referral policy to any employee who has previously been assisted by the railroad under a policy or program substantially consistent with this pargraph or who has previously elected to waive investigation under paragraph (c) of this section.

(6) In order to obtain the benefit of the policy set forth in this paragraph, the employee must report to the EAP counselor or other contact designated by the railroad either (i) during non-duty hours or (ii) while unimpaired and otherwise in compliance with the railroad's alcohol and drug rules consistent with this subpart.

(c) *Co-worker report policy.* (1) Each railroad shall adopt, publish and implement a policy conforming to the requirements of this paragraph.

(2) A covered employee may retain an employment relationship with the railroad following an alleged first offense under these rules or the railroad's alcohol and drug rules, subject to following conditions:

(i) The alleged violation must come to the attention of the railroad as a result of a report by a co-worker that the employee was apparently unsafe to work with or was, or appeared to be, in violation of this subpart or the railroad's alcohol and drug rules.

(ii) If the railroad representative determines that the employee is in violation, the railroad may immediately remove the employee from service in accordance with its existing policies and procedures.

(iii) The employee must elect to waive investigation on the rule charge and report, within 5 days, for evaluation by an EAP counselor.

(iv) If the EAP counselor determines that the employee is affected by psychological or chemical dependence on alcohol or a drug or by another identifiable and treatable mental or physical disorder involving the abuse of alcohol or drugs as a primary manifestation—

(A) The railroad shall, to the extent necessary for treatment and rehabilitation, grant the employee a leave of absence from the railroad for the period necessary to complete primary treatment and establish control over the employee's alcohol or drug problem, but not less than 45 days.

(B) The employee must agree to undertake and successfully complete a course of treatment deemed acceptable by the EAP counselor.

(C) Subject to paragraph (c)(2)(iv)(D) of this section, the railroad shall promptly return the employee to service when the EAP counselor determines that the employee has established control over the substance abuse problem and is prepared to discharge the employee's responsibilities in a safe manner.

(D) The railroad may also require that the employee have successfully completed a return-to-service physical of the kind customarily required by the railroad.

(v) If the EAP counselor determines that the employee is not affected by an identifiable and treatable mental or physical disorder—

(A) The railroad shall return the employee to service within 15 days.

(B) During or following the out-of-service period, the railroad may require the employee to participate in a program of education and training concerning the effects of alcohol and drugs on occupational or transportation safety.

(d) *Construction.* (1) Nothing in this section shall be construed to—

(i) Require payment of compensation for any period an employee is out of service under a voluntary referral or co-worker report policy required by this section;

(ii) Require a railroad to adhere to a voluntary referral or co-worker report policy in a case where the referral or co-worker report policy in a case where the referral or report is made for the purpose or with the effect, of anticipating the imminent and probable detection of a rule violation by a railroad representative; or

(iii) Limit the discretion of the railroad to adopt any policy or enter into any agreement with respect to alcohol or drug-related discipline or treatment consistent with the minimum requirements of this section.

(e) *Other conduct.* Nothing in this section shall be construed to limit the discretion of a railroad to dismiss or otherwise discipline an employee for—

(1) Specific rule violations other than violations of alcohol or drug rules or for other prohibited conduct, except as provided in paragraph (c) of this section; or

(2) The commission of a criminal offense on railroad property or during duty hours.

§ 218.113 Responsibility for compliance.

(a) A railroad that—

(1) Knowingly requires or permits an employee to go or remain on duty in covered service in violation of § 218.103;

(2) Fails to exercise due diligence to assure compliance with this subpart by a covered employee;

(3) Knowingly and willfully requires an employee to submit to breath or body fluid testing in reliance on this subpart without observance of the conditions and safeguards contained in this subpart;

(4) Fails to adopt or publish, or knowingly and willfully fails to implement, a policy required by § 218.111 of this subpart; or

(5) Fails to comply with any other requirement of this subpart;

shall be deemed to have violated this subpart and shall be subject to a civil penalty as provided in Appendix A.

(b) For purposes of paragraph (a)(1) of this section, the knowledge of a covered employee or that employee's co-workers shall not be imputed to the railroad.

e. *In Appendix A, revise the column heading line and add entries for §§ 218.103, 218.105, 218.107, 218.109, and 218.111 as follows:*

APPENDIX A.—SCHEDULE OF CIVIL PENALTIES

Section		Violation	Intentional violation[1]
*	* * * *	*	
218.103.....	Employee required or permitted to go or remain on duty while impaired:.		
	Knowing (negligent).....	$2,000	.....
	Knowing and willful.....	.....	$2,500
	Failure to exercise due diligence to prevent violation of section.	1,750	2,500
218.105.....	Failure to take action to obtain samples for testing and promptly forward samples to FRA.	1,000	2,000
	Failure to notify FRA of employee injury or death requiring FRA intervention.	1,000	2,000
	Failure to see that consent form is executed (any employee).	250	1,000
	Failure to report with respect to any accident for which requisite samples were not obtained.	750	1,500

APPENDIX A.—SCHEDULE OF CIVIL PENALTIES—Continued

Section		Violation	Intentional violation[1]
	Failure to take action against employee who refuses to execute consent or provide samples.	1,000	2,000
	Failure to observe other requirements (e.g., labeling of samples, obtaining samples at medical facility, etc.).	750	1,250
218.107.....	Failure to perform pre-employment drug screen; applicant employed in covered service.	500	1,000
	Failure to observe other requirements.	250	750
218.109.....	Testing in reliance on this section without observance of conditions and safeguards.	.....	2,000
218.111.....	Failure to adopt or publish policy.	.....	2,500
	Wholesale failure to implement policy.	.....	2,500
	Failure to implement as to individual employee.	1,000	2,000

f. *Add a new Appendix B, to read as follows:*

Appendix B—Consent Form

The consent required by § 218.105(c) shall be executed substantially in the following form:

Consent To Post-Accident Toxicological Tests

I hereby consent to cooperate in the program of post-accident toxicological testing required by regulations of the Federal Railroad Administration (FRA) by providing body fluid samples (including breath, blood, and urine, as requested) in the event I am involved in an accident or incident specified in those regulations, as currently in force or hereafter modified. This consent extends to, and includes, the extraction of such samples, if necessary, while I am unconscious or otherwise unable to communicate as a result of injuries sustained in the accident or incident, consistent with the judgment of the attending physician that the procedure is not materially detrimental to my health. I further consent to the extraction of necessary body fluid samples or tissue samples, or both, from my remains in the event that I suffer fatal injuries during such an accident or incident.

I understand that cooperating in post-accident tests required by FRA and executing this consent is required of me as a condition of continued employment in service subject to the Hours of Service Act and that any failure to cooperate in post-accident testing as required by FRA regulations would result in disciplinary action against me. I further understand that this consent is revocable only upon my resignation from employment in service subject to the provisions of the Hours of Service Act, as amended.

Signed by: _____

(Type employee's name under signature)

Date signed: _____

Railroad name: _____

[May be preprinted anywhere on form]

Employee's regular work location (headquarters or reporting point):

Subscribed before me by the person known to me as _____ on the date shown above at (enter location _____.

(Witness) _____

(Witness) _____

PART 225—[AMENDED]

2. *By revising paragraph (d) of § 225.17 as follows:*

§ 225.17 Doubtful cases; alleged alcohol or drug involvement.

* * * * *

(d) In preparing a Rail Equipment Accident/Incident Report under this part, the railroad shall make such specific inquiry as may be reasonable under the circumstances into the possible involvement of alcohol or drug use or impairment in the circumstances of such accident or incident. If the railroad comes into possession of any information whatsoever, whether or not confirmed, concerning alleged alcohol or drug use or impairment by an employee who was involved in, or arguably could be said to have been involved in, the accident/incident, the railroad shall report such alleged use or impairment as provided in the current FRA Guide for Preparing Accident/Incident Reports. If the railroad is in possession of such information but does not report alcohol or drug impairment as the primary or contributing cause of the accident/incident, then the railroad shall include in the narrative statement of such report a brief explanation of the basis of such determination.

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Part III

Department of Transportation

Research and Special Programs Administration

49 CFR Parts 171, 172, 173, 176, 178, and 179

Cryogenic Liquids, Revisions; Final Rule; Petitions for Reconsideration

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 171, 172, 173, 176, 178, and 179

[Docket No. HM-115, Amdt. Nos. 171-74, 172-82, 173-166, 176-17, 178-77, 179-32]

Cryogenic Liquids, Revisions

AGENCY: Materials Transportation Bureau (MTB), Research and Special Programs Administration, Department of Transportation.

ACTION: Final rule; petitions for reconsideration.

SUMMARY: This document makes additional revisions to a final rule published under Docket HM-115 (48 FR 27674; June 16, 1983), which amended the Hazardous Materials Regulation (HMR) (49 CFR Parts 171-179) by establishing requirements for the transportation of certain cryogenic liquids. These revisions are made in response to 18 petitions for reconsideration to the final rule.

Some significant changes to the rule are provisions—

1. To allow the installation of rubbing or abrading, anodized aluminum parts in cylinders and cargo tanks in cryogenic oxygen service;
2. To allow the installation of an aluminum valve, pipe or fitting external to the jacket of a cargo tank provided that no lading is retained in these parts during transportation;
3. To exclude cargo tanks in atmospheric gas (except oxygen) service and helium service from the requirement of a primary and a secondary pressure relief device system of equal capacities;
4. To allow a secondary system of frangible discs or pressure relief valves on cargo tanks in other than carbon monoxide service;
5. To authorize additional pressure control valve settings for DOT-4L cylinders;
6. To authorize construction of a 22 gauge stainless steel non-evacuated jacket on MC-338 cargo tanks;
7. To authorize evacuated jackets constructed of materials meeting ASME or ASTM specifications on MC-338 cargo tanks;
8. To authorize a minimum steel thickness of 0.110-inch for the tank of vacuum insulated MC-338 cargo tanks; and
9. To authorize alternate procedures for determining the heat transfer rate and holding time of MC-338 cargo tanks used in nonflammable cryogenic liquid service.

EFFECTIVE DATE: October 1, 1984. However, compliance with the regulations as amended herein is authorized on and after June 12, 1984. The incorporation by reference was approved by the Director of the Federal Register effective on June 12, 1984.

FOR FURTHER INFORMATION CONTACT: Jose Pena, (202) 755-4906 or Hattie Mitchell, (202) 426-2075, Office of Hazardous Materials Regulation, 400 Seventh Street, S.W., Washington, D.C. 20590. Office hours are 8:30 a.m. to 5:00 p.m., Monday through Friday, except holidays.

SUPPLEMENTARY INFORMATION: On June 16, 1983, MTB published a final rule in the **Federal Register** under Docket No. HM-115 (48 FR 27674). MTB received 18 petitions for reconsideration to certain provisions of the final rule. A majority of the requested changes were contained in a petition submitted by the Compressed Gas Association (CGA).

Several petitioners objected, among other issues, to changes to proper shipping names and identification number prefixes to certain entries of the Hazardous Materials Table (the Table), in § 172.101, and requested the effective date of the final rule be postponed. MTB believed those issues warranted immediate handling so that changes could be included in the 1983 edition of Title 49, Code of Federal Regulations, Parts 100-199. Therefore, MTB separated those issues from other issues raised in the petitions and handled them in a document which was published in the **Federal Register** on November 1, 1983 (48 FR 50440). In that document, MTB postponed the mandatory effective date of the final rule until October 1, 1984. MTB also revised the proper shipping names for the cryogenic liquids and cold form gases to include the international descriptor, "refrigerated liquid" and the identification number prefix was changed from "NA" to "UN". Entries for cryogenic liquid were designated *"(cryogenic liquid)"*, in the Table, to distinguish those gases from cold form gases such as carbon dioxide, nitrous oxide, and hydrogen chloride. For compressed gases, MTB provided for continued use of the descriptions as presently found in the HMR as well as for the optional use of the international descriptions which include the word "compressed". For example, "Argon, compressed" and, for domestic transportation only, "Argon" are acceptable descriptions. Other substantive issues raised in the petitions are addressed in this document.

Several issues raised by the petitioners are addressed in earlier preamble discussions. For additional information, readers are referred to preamble discussions which appeared in the notice of proposed rulemaking (NPRM) (44 FR 12826, March 8, 1979), and related correction documents (44 FR 20461, April 5, 1979; 44 FR 36211, June 21, 1979), the final rule (48 FR 27674, June 16, 1983) and the correction and revision document of November 1, 1983 (48 FR 50440).

Tanks Operating Under DOT Exemptions

Under the final rule, the owner or person using a cargo tank or tank car under, "and in compliance with," a DOT exemption issued before October 1, 1984, if required to remove the DOT exemption number stenciled on the cargo tank or tank car and stamp the identification plate, as specified by § 173.31(a)(8) or § 173.33(b)(2), with the proper specification.

Several petitioners pointed out that the phrasing of §§ 173.31(a)(8) and 173.33(b)(2) implies that tank cars and cargo tanks must continue to be used in conformance with the terms of the exemptions. This is not MTB's intention. Tank cars and cargo tanks which are remarked as specification packagings cease to be governed by their previous exemption. Instead, they are subject to the applicable requirements, conditions, and limitations prescribed in the HMR. Sections 173.31(a)(8) and 173.33(b)(2) are revised for clarity. Section 173.33(b)(2) is revised for consistency with §§ 173.31(a)(8) and 173.33(b)(3).

Sections 173.31(a)(8), 173.33 (b)(2) and (b)(3) require the owner or the operator, if not the owner, to retain a copy of the exemption that was in effect on September 30, 1984. It is not MTB's intention to require renewal of an exemption for the purpose of having a valid exemption on September 30, 1984. Also MTB did not specify where the exemption must be retained. The rule is revised to require that the exemption in effect at the time a tank car or cargo tank is remarked as a DOT specification packaging be retained on file during the period the tank car or cargo tank is in service. MTB does not agree with a petitioner who suggested that it is necessary for a copy of the exemption to be carried with each cargo tank as was required under the exemption. However, this does not prevent any person from carrying a copy of the exemption on a cargo tank.

After October 1, 1984, an exemption affecting a cargo tank or tank car of a type covered by the final rule will not be renewed unless the holder of the exemption submits information to the Associate Director for Hazardous

Materials Regulation stating the reason why the tank does not qualify for remarking as a specification packaging.

All applicable DOT exemptions are listed in the preamble on page 27678 of the final rule. Other exemptions affected by the rule are as follows:

Exemptions—MC–338 type Cargo Tanks

E–7227
E–8602 (Model HL 1920M)
E–8644

Exemptions—Class DOT–105 Tank Cars

E–3992

Exemptions—MC–330 or MC–331 Cargo Tanks

E–6215
E–8199

Pressure Relief Device Systems

CGA and several other petitioners took exception to the requirement for a primary system of one or more spring loaded pressure relief valves and, except for tanks in carbon monoxide service, a secondary system of one or more frangible discs. CGA requested that the requirement be revised to permit cargo tanks to be equipped with a primary system consisting of spring loaded *or pilot-operated pressure relief valves* and a secondary system consisting of frangible discs *or pressure relief valves*. CGA mantains that a complete blowdown of certain ladings may present a greater hazard than controlled relief of the hazardous material through a spring loaded pressure relief valve. After further consideration, MTB agrees, in part, with CGA and other petitioners. MTB has revised § 173.318(b)(1)(i) to provide for a primary consisting of one or more pressure relief valves and a secondary system of one or more frangible discs or pressure relief valves. The pressure relief valves of the primary and secondary systems may be any type of pressure relief valve designed to automatically open and close at predetermined pressure. This option on use of frangible discs does not apply to the secondary system on cargo tanks in carbon monoxide service which are required to be equipped only with pressure relief valves.

CGA and other petitioners requested revision of subparagraph 173.318(b)(1)(viii) which contains a requirement that any shut-off valve or device that interferes with the proper operation of a pressure control valve must be designed and installed so that the cargo tank may not be operated for transportation purposes when the pressure control valve operation is impeded.

In its comments to the requirement, CGA stated:

> The present wording would require an interlock so that the vehicle could not be operated if the pressure control operation is impeded. This would lead to an unsafe condition at the time of final unloading of a flammable refrigerated liquid. Even though the liquid has been completely drained and the gas pressure has been reduced to atmospheric pressure on the return trip, there is the hazard of venting flammable gas if the pressure is controlled by the low pressure road valve rather than by the higher set pressure relief valve. This is because the refrigeration heat sink of liquid is no longer present to absorb the constant incoming steady heat leak. The heat leak instead goes into warming the residual cold gas, and the gas pressure can rise quite rapidly as a result, possibly exceeding the road relief valve setting before the return is completed. Current industry practice is usually to transfer from the road relief valve to the pressure relief valve on the return trip.
>
> The present wording also precludes the provision for multiple deliveries at increasingly higher pressure levels between deliveries without venting gas to the lowest pressure level at which the cargo tank was loaded. This is contrary to a number of present exemptions that allow this type of operation. Such exemptions include E–2708, E–4490 and E–7192.
>
> In addition to this revision to Section 173.318(b)(1)(viii), corresponding revisions should be made to Section 173.318(g), 173.318(g)(3), 177.840(i), 177.840(j), 177.840(k), 177.840(k)(3), 178.338–9(a), 178.338–9(a)(1), 178.338–9(b)(1), 178.338–9(b)(2), and 178.338–18(b)(9).

On further consideration, MTB agrees that the provision in subparagraph 173.318(b)(1)(viii) may require that the residual lading be reduced to impracticable levels at final unloading in order to prevent venting when pressure is controlled (limited) by the pressure control valve. MTB also agrees that the interlock requirement would preclude multiple deliveries without venting appreciable quantities of lading at each delivery point. Accordingly, subparagraph (b)(1)(viii) is removed. Remaining subparagraphs (ix) and (x) are renumbered as subparagraphs (viii) and (ix), respectively. Paragraph (g)(3) is removed and a revision is made to the introductory text of paragrapnh 173.318(g) to permit the display of more than one one-way-travel-time (OWTT) marking on a cargo tank. CGA's other requests for reconsideration are denied since they are not necessary with the removal of subparagraph 173.318(b)(1)(viii).

CGA requested a revision to § 173.318(b)(2)(i) to exclude cargo tanks in atmospheric gas (except oxygen) service and helium service from the requirement of primary and secondary pressure relief device systems of equal capacities. CGA maintained that MTB made distinctions in other sections between nonflammable ladings versus flammable and oxygen ladings based on the fact that atmospheric gases (except oxygen) and helium do not intensify a fire in fire exposure incidents. Thus, CGA asserts that it is unnecessary to apply the redundancy for flow capacity based on fire conditions for both the primary and secondary systems for atmospheric gases (except oxygen) and helium. MTB agrees and grants the request for reconsideration by revising subparagraph (b)(2)(i) to allow cargo tanks used in atmospheric gas (except oxygen) and helium service to be equipped with the primary system only.

CGA requested that the secondary system have a minimum total capacity at a pressure not to exceed 120% of the tank design pressure in place of 150% as prescribed by § 173.318(b)(2)(iii). CGA maintained that the change in the setting would provide a greater margin of safety. MTB believes the change is unnecessary and the request for reconsideration is denied. Section 173.318(b)(2)(iii) specifies that the pressure of the secondary system may not exceed 150 percent of the tank design pressure. Therefore, a pressure at 120 percent of the tank design pressure is permitted. MTB specified the secondary system at a minimum total capacity of 150 percent to allow the secondary system to function after the primary system which relieves at a pressure of 120% of the tank design pressure. MTB believes these systems should operate in sequence to provide for a controlled release of the lading.

CGA requested revision of the requirement that the primary system of pressure relief valves must have a liquid flow capacity equal to or exceeding the maximum rate at which the tank is to be filled at a pressure not to exceed 120% of the tank design pressure in subparagraph (b)(2)(iv). CGA maintained that a tank filled by pumping equipment which is capable of producing pressures in excess of the design pressure of the tank may be equipped with a by-pass on the pump discharge or other suitable method to prevent accumulation of pressures in the tank in excess of 120% of the tank design pressure. MTB does not agree and the request for reconsideration is denied. MTB believes that the design and construction of the primary pressure relief valves should be capable of sustaining a flow capacity at pressures not to exceed 120% of the tank design pressure during filling operations. CGA provided no information on the adequacy or fail-safe function of a by-

pass on a discharge pump or other special controls that will prevent excessive pressure build-up in tanks used for cryogenic liquids. Therefore, no change is being made to the provision.

Section 171.7. MTB is adding in paragraph (d)(5) certain ASTM Standards which are referenced in §§ 173.316(a)(4), 173.318(a)(4) and 178.338–2(a).

Section 171.8. A petitioner requested that the temperature reference in the definition of "SCF" (Standard Cubic Foot) be changed from 60°F. to 70°F. for consistency with the U.S. industry standard contained in CGA Pamphlet P–11, "Metric Practice Guide" and the temperature used to define a compressed gas in § 173.300. MTB does not agree and the request for reconsideration is denied. The term "SCF" defines the standard conditions used to determine the relieving capacity of pressure relief devices. These standard conditions of 60°F. and 14.7 psia are presently contained in the HMR and are consistent with those used by CGA for determining and sizing pressure relief devices in CGA Pamphlets S–1.1 and S–1.2. No change is made in the definition.

Section 172.101. A petitioner stated that the provision for ethylene, refrigerated liquid to be stowed "below deck" on cargo vessels is unsafe and is inconsistent with stowage requirements applicable to other flammable cryogenic liquids. MTB agrees with the petitioner and grants the request for reconsideration by removing the "3" in column 7(a) of the Table.

A petitioner objected to the provision prohibiting the transportation of hydrogen, refrigerated liquid on a cargo vessel. The petitioner argued that the prohibition on hydrogen, refrigerated liquid is inconsistent with requirements that apply to other flammable cryogenic liquids, such as natural gas and carbon monoxide, and that the "light density of hydrogen vapor and up-and-away venting provide an adequate margin of safety." The petitioner argued that there is exemption experience to support transporting cargo tanks and portable tanks containing hydrogen, refrigerated liquid on a cargo vessel "on deck". MTB and Coast Guard, which assisted MTB in the preparation of the final rule, maintain that because of its very wide flammability range and the fact that it burns with an invisible flame, hydrogen poses a greater potential hazard than other flammable cryogenic liquids. MTB considers it necessary to apply special safety controls for hydrogen when transported on board a cargo vessel or a case-by-case basis by exemption. To allow transportation fo hydrogen under regulations of general applicability would not assure adequate safety and, therefore, the request for consideration is denied.

A petitioner requested that the quantity limitation in one package of argon, refrigerated liquid be increased from 300 pounds to 1,100 pounds by cargo aircraft for consistency with the quantity limitation authorized for nitrogen, neon, and helium, and for consistency with the quantity limitation for argon, refrigerated liquid adopted by the Dangerous Goods Panel of the International Civil Aviation Organization (ICAO). MTB agrees with the petitioner that the quantity limitation should be consistent with that recommended by ICAO. MTB is granting the request for reconsideration by revising the Table to provide for 1,100 pounds of argon, refrigerated liquid to be transported by cargo aircraft.

Section 173.23. A petitioner correctly pointed out that cylinders meeting the DOT–4L specification are not required to be retested and, therefore, the schedule for remarking cylinders manufactured under DOT E–6668 or E–8404 should be changed. MTB grants the request for reconsideration by revising paragraph (e) to require the cylinders be remarked "DOT–4L" by January 1, 1986. (This requirement appeared as paragraph (d) in the rule and was redesignated paragraph (e) under Docket HM–189 which was published in the **Federal Register** on November 1, 1983; 48 FR 50444.)

Section 173.31. Two petitioners took exception to the prohibition in paragraph (a)(9) against new construction of DOT–113D120W tank cars made with nickel alloy steel inner tanks which are authorized under DOT exemption. One of the petitioners maintained that there is no technical reason or unsatisfactory exemption experience to support prohibiting new construction of DOT–113D120W tank cars. The other petitioner alleged that MTB based its decision on disallowing new construction of DOT–113D120W tank cars merely on the fact that there has been no new construction of the tank car since 1973. MTB agrees, in part, with both petitioners. MTB conducts continuing reviews of packagings authorized for use in the HMR to remove specifications which are no longer being manufactured. MTB does not believe these efforts would be well-served by providing for new construction of a tank car in the HMR when there is no evidence of demand for its construction. Therefore, the petitioner's request for reconsideration is denied. However, because of the satisfactory safety record of existing DOT–113D120W tank cars, MTB believes continued use of existing tank cars should be authorized.

The Association of American Railroads (AAR) pointed out that requirements for the retest of the alternate pressure relief valve on DOT–113D120W tank cars were omitted in the final rule. MTB is revising subparagraph (c)(13)(v) to correct this oversight and specify the same test procedure as is required for DOT–113C120W tank cars.

Three petitioners pointed out that new § 173.314(c) authorizes DOT–105A600W tank cars for hydrogen chloride service, but does not provide for DOT–105 tank cars in hydrogen chloride service that are authorized under DOT E–3992. MTB agrees with the petitioners. Omission of existing tank cars, built with ASTM a 212B steel to low temperature ASTM A300 testing qualifications, under DOT E–3992 was an oversight. MTB grants the petitioners' request for reconsideration by adding a new paragraph (a)(10) to authorize continued use of these tank cars.

Section 173.33. Changes to this section are addressed earlier in this preamble under the heading "Tanks Operating Under DOT Exemptions".

Section 173.300. CGA requested that the definition of "cryogenic liquid" in paragraph (f) be removed and a new definition for "refrigerated liquid" be added to read: "A refrigerated liquid is a cold liquefied gas which, when charged into an insulated transport container, cannot be held indefinitely due to vaporization or pressure rise caused by heat transfer from the surroundings." CGA also requested that the descriptor "cryogenic liquid" be changed to "refrigerated liquid" each time it appears in the HMR. MTB is denying the request for reconsideration because CGA's suggested definition provides no distinction between the so-called "cold form gases", such as carbon dioxide, nitrous oxide, hydrogen chloride and vinyl chloride, which are not regulated as cryogenic liquids.

CGA also suggested a second alternative to adding the above definition of "refrigerated liquid". The alternative provided for adding a sentence at the end of the present definition of "cryogenic liquid" to read: "A material meeting this definition is described as a 'Refrigerated liquid' in Part 172 of this subchapter". MTB agrees and grants the request for reconsideration. In the November 1 correction document, MTB authorized the international descriptor, "refrigerated liquid", to be a part of the proper shipping name for cryogenic liquids and the cold form gases. The cryogenic liquid descriptions were

specifically identified in italics in the Table to distinguish the cryogenic gases from the cold form gases. Therefore, at the end of the definition for cryogenic liquid, MTB is adding a clarification that materials meeting the definition are described, in part, as "* * *, refrigerated liquid (*cryogenic liquid*)" in the Table.

MTB is revising the definition of a cryogenic liquid to clarify that these materials may not meet the definition of a compressed gas in paragraph (a).

Section 173.314. MTB is revising the entry for vinyl fluoride in the table in § 173.314(c) to continue the applicability of Note 23. Note 23, as amended under Docket HM–175 (49 FR 3468, January 27, 1984), requires each class 105 tank car built after August 31, 1981, to conform to specification 105J. Tank cars built before September 1, 1981, with a capacity exceeding 18,500 gallons and used to transport flammable gases are required to be retrofitted by December 3, 1986, to conform to specification 105J.

The AAR and another petitioner requested that paragraph (g)(2) be revised by adding a provision that appears in DOT E–3992 that requires tank cars in hydrogen chloride service to be weighed when full and when empty. Prior to offering an empty tank car for transportation, the car must be emptied below three percent of weight of the original load. The requirement is similar to Rule 35 of the Uniform Freight Classification. MTB is considering addressing tank cars containing a residue of a hazardous material in a proposed rule in the future and, therefore, the request for reconsideration is denied. Upon consideration, MTB also believes the requirement that the pressure in a empty tank car may not exceed 70 psig is unnecessary in view of requirements in § 173.29(c). Accordingly, paragraph (g)(2) is removed and paragraph (g)(3) is redesignated paragraph (g)(2).

Section 173.316. Two petitioners objected to a provision in paragraph (a)(4) prohibiting cylinders in oxygen service from having aluminum valves or fittings with internal rubbing or abrading aluminum parts which may come in contact with cryogenic oxygen. One petitioner believed it was MTB's intention to apply the provision prohibiting rubbing or abrading aluminum parts to cargo tanks in oxygen service and not to cylinders in oxygen service. Both petitioners maintained that safety experience has been satisfactory in using "* * * an anodized aluminum body with an internal anodized aluminum piston * * *."

MTB believes that internal rubbing or abrading aluminum parts which may come in contact with cryogenic oxygen must not be used in any cylinder used to transport cryogenic oxygen. The prohibition is needed because of the potential for ignition and subsequent rapid burning of aluminum when subject to fire engulfment temperatures, to friction heat from abrasion, or high oxygen flow velocities over surfaces with sharp projections or abrupt directional changes. However, MTB agrees with the petitioners that anodized aluminum has a lower friction coefficient than non-anodized aluminum. Therefore, MTB is granting the request for reconsideration by revising paragraph (a)(4) to allow the use of rubbing or abrading aluminum parts that have been anodized in conformance with ASTM Standard B 580 in cylinders used in oxygen service. A similar change is made to § 173.318(a)(4) for cargo tanks in oxygen service.

A petitioner requested that paragraph (b) be revised by referencing § 173.304(b)(2) for requirements on pressure control valves. MTB agrees with the petitioner that the paragraph should be clarified. However, MTB would be in error to reference paragraph 173.304(b)(2) since it was removed in the final rule. The requirements pertaining to pressure control valves on cylinders which appeared in paragraph 173.304(b)(2) are contained in CGA Pamphlet S–1.1. These requirements are made applicable by § 173.34(d), which incorporates CGA Pamphlet S–1.1. For clarity, MTB is revising paragraph (b) by replacing the words "pressure control valve" with the words "pressure control system" in the paragraph heading and text.

MTB is revising the introductory text of paragraph (c) to clarify that DOT–4L cylinders containing a cryogenic liquid must be transported in the vertical position.

Two petitioners requested that the table in paragraph (c)(2) be amended by adding additional filling densities to allow for pressure control valve settings at 1¼ times a marked service pressure of 500 psi for DOT–4L cylinders. MTB received data supporting filling densities at settings of 450, 540, and 625 psig from one petitioner. The petitioner argued against reducing pressure control valve settings on DOT–4L cylinders by 15 psi. The petitioner contends: "The control valve pressure settings in the table represent ranges of pressure. Thus, if a control valve setting of 235 psig for a vacuum insulated DOT–4L200 cylinder were required ($200 \times 1.25 = 250 - 15 = 235$), the value of the filling density of 295 psig would be used because an entry for 235 psig does not exist." Also, the petitioner argued that "[i]t is possible to have a cryogenic 4L cylinder without a vacuum jacket in which case the control valve setting, as per paragraph 173.304(b)(2), is one and one-fourth times the service pressure without subtracting the 15 psi." MTB agrees and grants the request for reconsideration by revising the table to add additional pressure control valve settings. The settings must be in conformance with paragraph 173.316(c)(2) for the named gases and § 173.34(d), which incorporates CGA Pamphlet S–1.1. Paragraph 5.9.3 of CGA Pamphlet S–1.1 specifies that a pressure control valve setting must be set 15 psi lower than 1¼ times the marked service pressure on DOT–4L cylinders insulated by a vacuum.

Petitioners requested that the filling density entry for nitrogen at a pressure control valve setting at "295" be revised by removing "69" and adding "68". MTB agrees and grants the request for reconsideration.

Section 173.318. Two petitioners urged MTB to reconsider the requirement in paragraph (a)(3)(i) which prohibits the use of aluminum outer jackets on cargo tanks in oxygen service. The petitioners argued that MTB's position on this matter for cargo tanks is inconsistent with action taken by MTB in allowing aluminum jackets on oxygen cylinders, that the reasons used by MTB to justify allowing aluminum jackets on cylinders can be used also to support aluminum jackets on cargo tanks, and that the operating experience of aluminum jacketed non-specification cargo tanks in oxygen service has been excellent for over 50 years. Neither petitioner submitted any test data on cargo tanks demonstrating the survivability of aluminum in a fire environment which was a significant factor in MTB's decision to allow aluminum jackets on cylinders in oxygen service. MTB strongly believes that aluminum as a material of construction for the cargo tank jacket must not be used because it loses strength and melts at much lower temperatures than steel in a fire situation. Increase influx of heat and the attendant pressure buildup resulting from loss of jacket integrity would accelerate the rate of oxygen release and intensify the fire. A steel jacketed tank's relative survival time in fire engulfment is over two times that of an aluminum jacketed tank, as was discussed by MTB in the preamble of the final rule under the heading "Use of Aluminum" (48 FR 27674). The request for reconsideration is denied. However, as discussed above under § 173.316, MTB is revising paragraph (a)(4) to

allow the use of aluminum parts that have been anodized in accordance with ASTM Standard B 580 on cargo tanks in oxygen service.

MTB is relaxing the provision in paragraph (a)(5) to allow use of aluminum valves, pipes and fittings external to the jacket provided no lading is retained in these parts during transportation.

See preamble discussion in this document under the heading "Pressure Relief Device Systems" for changes made to the provisions on pressure relief valves in paragraph (b).

A petitioner requested that the words "pressure control valve" be deleted in subparagraph (b)(1)(iii) because a pressure control valve is not a pressure relief device. The petitioner's request for reconsideration is denied. MTB believes that when a cargo tank is filled to the pressure setting of the pressure control valve, the pressure control valve acts as a pressure relief device to relieve pressure. The paragraph is revised for clarity. Also, subparagraph (b)(1)(iii) is revised to reference requirements in flow capacities in subparagraph (b)(2)(i).

A petitioner requested that subparagraph (b)(5)(ii) be revised by deleting the word "actual" preceding the words "discharge rate" and that the words "of free air" be added immediately following "(SCFM)". The petitioner stated that the changes would permit the flow capacity to be marked using the standard flow rating method. MTB agrees and grants the petitioner's request for reconsideration.

A petitioner requested that paragraph (g) be revised to allow for the display of more than one one-way-travel-time (OWTT) marking on the tank when it is used to transport a cryogenic liquid at different pressure levels. MTB agrees and grants the request for reconsideration by revising the introductory text of paragraph (g) and paragraph (g)(3) to allow more than one OWTT marking on a cargo tank.

Section 173.319. AAR recommended that the word "flammable" be deleted in paragraph (a)(4) thereby making the requirements applicable to all cryogenic liquids transported by rail. AAR did not explain why it believed atmospheric gases and helium which are transported by rail at pressures less than 25.3 psig should be regulated to an extent greater than specified in § 173.320. MTB is denying the request for reconsideration because it is outside the scope of this rulemaking. Further consideration will be given to the matter upon receipt of a petition for rulemaking.

Section 173.320. A petitioner requested that MTB add a provision requiring Dewar flasks be equipped with a suitable pressure relief device when used for helium or neon, refrigerated liquid at pressures below 25.3 psig. The petitioner maintained that the neck of the Dewar flask may freeze with solid air thereby allowing internal pressure buildup and rupture of the packaging. MTB is denying the request for reconsideration because it is outside the scope of this rulemaking. Further consideration will be given to the matter upon receipt of a petition for rulemaking. Further, shippers are reminded that it is their responsibility to determine the suitability of packagings in conformance with § 173.24.

Paragraph (b) is removed and redesignated paragraph (g) in § 176.11. MTB takes this opportunity to clarify in a new paragraph (b) that atmospheric gases and helium at pressure below 25.3 psig may be offered for carriage aboard an aircraft in conformance with § 171.11.

Section 176.11. Paragraph 173.320(b) which excepts atmospheric gases used in a refrigeration system from regulation by vessel is redesignation paragraph 176.11(g).

Section 176.76. A petitioner requested that paragraph (h)(2) be revised for clarification by adding the words "during transportation" immediately after the words "cryogenic liquid". The petitioner's request for reconsideration is denied because the introductory text to paragraph (h) makes it clear that the regulations apply to cryogenic liquids transported by vessel.

Section 178.57–2. Two petitioners requested that the maximum authorized service pressure on DOT 4L cylinders be continued at 500 psi in place of 360 psi as specified in the final rule. MTB agrees and grants the request for reconsideration by specifying a pressure at 500 psi to correspond with the additional filling densities authorized in the table in § 173.316(c)(2).

Section 178.57–13. A petitioner requested revison of this section to reference § 173.304(b)(2) for requirements on pressure control valves. The request for reconsideration is denied because § 173.304(b)(2) which contained requirements on pressure control valves on DOT–4L cylinders was removed under the final rule. The requirements previously contained in § 173.304(b)(2) are contained in CGA Pamphlet S–1–1, which is incorported by reference in § 173.34(d). The last sentence in § 173.57–13 containing an incorrect reference to CGA Pamphlet S–1.1 for requirements on flow capacity of relief devices is removed.

Section 178.57–20. A petitioner requested revision of paragraph (a)(9) to allow the letters "AL" to be added immediately following the specification markings in place of stamping the words, "ALUMINUM JACKET", on the jacket. The petitioner maintained that the two-letter marking appropriately identifies aluminum jacketed cylinders and is less expensive. The petitioner also contended that the material of construction of the jacket may not be known at the time of manufacture of the inner containment vessel (cylinder) and, therefore, marking the jacket material designation on the cylinder should not be required under paragraph (b). MTB agrees and grants the request for reconsideration by revising paragraphs (a)(9) and (b) accordingly.

Section 178.57–22. A petitioner requested a revisions of the information required in the inspector's report to clarify that the materials of construction of the inner container must conform to paragraph (a) of § 178.57–21. MTB agrees and grants the request for reconsideration.

Section 178.337–11. The National LP-Gas Association and another petitioner objected to the requirement in paragraph (c) permitting liquid or vapor discharge openings sized at 1¼ NPT to be equipped with an excess flow valve and a manually operated external valve. The petitioners maintain discharge openings sized at 1¼ inches are better protected by a remotely controlled internal shut-off valve. MTB revised the paragraph under the final rule due to claims of limited availability of internal valves sized at 1¼ inches. However, MTB has since confirmed that the 1¼ NPT internal valve is readily available. MTB is granting the petitioners' request for reconsideration by revising paragraph (c) to require that MC–331 cargo tanks must be equipped with internal valves on vapor or liquid discharge openings that are 1¼ NPT or larger in size after September 30, 1984.

Section 178.338–1. A petitioner requested that 22 gauge stainless steel in place of 20 gauge stainless steel be allowed for construction of non-evacuated jackets. The petitioner stated that 22 gauge steel offers the same protection as 20 gauge steel, is less costly and adds less weight. A review of exemptions reveals that many of the older exemptions authorized 22 gauge stainless steel jacket and MTB has no record of incidents caused by puncture or the influx of moisture. Therefore, MTB is granting the request for reconsideration by authorizing stainless steel jackets having a minimum thickness of 22 gauge.

A petitioner agreed to the requirement, in pargraph (f)(1), of a 30 psi critical collapsing pressure for evacuated jackets but took exception to

the requirement that jacket heads, shell and stiffening rings must be designed in accordance with the ASME Code. The petitioner maintained that the ASME does not provide a minimum collapsing pressure format and, therefore, references to the ASME Code should be deleted. MTB agrees and grants the request reconsideration by removing the references.

Section 178.338–2. A petitioner objected to the requirement that the jacket material of a MC–338 cargo tank be in conformance with the ASME Code as being too restrictive and that it eliminates presently used materials. The petitioner argued that ASME materials are intended primarily for pressure vessels subjected to internal pressure and that the availability of the sheet materials is extremely limited. The petitioner requested that paragraph (a) be revised to allow evacuated jackets to be constructed of ASME materials or materials meeting ASTM specifications A 242, A 441, A 514, A 572, A 588, A 606, A 607, A 633, A 715. MTB agrees with the petitioner's request for reconsideration and has made the change.

Two petitioners objected to the requirement, in paragraph (c), for impact testing of all tank material, except aluminum. One petitioner stated that impact testing is not necessary on materials when not required by the ASME Code, especially for stainless steels, such as Type 304 stainless steel. MTB does not agree. The ASME Code basically establishes standards for stationary pressure vessels and it does not consider the dynamic forces encountered in the transportation environment. In order to assure adequate strength and toughness of the materials throughout the range of service temperatures encountered, the petitioner's request for reconsideration is denied.

Section 178.338–3. A petitioner requested that paragraph (a) be revised to specify a minimum thickness of not less than 0.090-inch for the tank. The petitioner contends that 0.090-inch thick stainless steel permits a tank design pressure of 40 psi and is approximately 40 percent thicker than the ASME minimum thickness for stainless steel. The present requirement specifies a thickness of not less than ⅛ or 0.125-inch.

Several exemptions for vacuum insulated cryogenic cargo tanks authorize the use of a stainless steel inner tank of 0.110-inch thickness. These tanks with pressure control valves set below 25 psig are used for atmospheric gasses and, therefore, are not specification regulated except when transported by vessel. There has been no adverse experience reported on the operation of these tanks.

There is a thickness threshold, particularly in large diameter tanks, below which distortions from welding and handling are likely to occur, and where reasonable shape rigidity is compromised. Even though reinforcing members are attached to provide rigidity in thin wall vessels, a point is reached where any attachment disturbs the ideal tank contours and provides a source for fatigue stresses. MTB has not been provided an analysis of these factors and, therefore, a minimum thickness threshold has not been convincingly established. MTB must assume, lacking an engineering and safety analysis, that the minimum thickness should be in the vicinity of 0.125-inch based on experience in this thickness. Considering the experience with 0.110-inch thickness, the fact that the inner tank is well protected and is not subjected to any corrosive atmosphere, and the fact that the strength must meet the dynamic force requirements of § 178.338–3(b), the petitioner's request for a minimum thickness of 0.090-inch is denied. However, MTB believes 0.110-inch minimum thickness for the inner tank of a vacuum insulated cargo tank is acceptable and is revising paragraph (a) accordingly.

Section 178.338–4. A petitioner requested revision of paragraphs (a) and (f) to remove the requirement that welds in evacuated jackets be in conformance with the ASME Code. MTB takes the position that the evacuated jacket is a load bearing member and should have acceptable welds. Therefore, MTB believes these welds should meet recognized standards in the ASME Code and MTB is denying the petitioner's request for reconsideration. However, MTB is revising paragraph (a) to remove a duplicative requirement that all undercutting in shell and head material must be repaired as specified in the ASME Code. Paragraph (f) is revised to remove the duplicative requirement to paragraph (a) that all joints must be in accordance with the ASME Code.

Section 178.338–6. A petitioner requested that paragraph (c) be revised to allow location of a welded manhole on the front head of an MC–338 cargo tank. The petitioner argued that no strength reduction would occur due to required reinforcement of openings in the tank. In light of the petitioner's comment and upon further consideration, MTB agrees and grants the petitioner's request for reconsideration. The rationale for the original requirement, developed from a detailed study of an accident involving an MC–331 cargo tank, was that the design and location of the bolted manhole cover assembly in the front tank head allowed the manhole assembly to transmit accident impact loadings that caused failures in the tank head and shell. Most manholes used in MC–338 cargo tank are *welded* manholes fabricated nearly flush with the tank shell and located beneath the insulation jacket. Because such designs are unlikely to transmit and concentrate accident impact loads as occurred in the MC–331 cargo tank failure, MTB has decided that it is not necessary to restrict the location of such manholes. However, a manhole with a *bolted* closure when impacted is likely to transmit and concentrate accident loads into the tank. For this reason, MTB continues to prohibit manholes with *bolted* closures on the front head of MC–338 cargo tanks.

Section 178.338–9. A petitioner requested that MTB add a procedure for determining heat transfer rate and hold time requirements similar to that used for class DOT–113 tank cars. MTB agrees and grants the request for reconsideration by adding a new paragraph (c)(3) containing alternate procedures for determining the heat transfer rate and holding time of cargo tanks used in nonflammable cryogenic liquid service.

Section 178.338–10. A petitioner stated that the term "ultimate strength" is obsolete and should be replaced with the term "tensile strength". MTB agrees and grants the petitioner's request for reconsideration by revising paragraphs (b) and (c) accordingly. Similar changes are made in § 178.338–13.

Section 178.338–12. A petitioner stated that a shear section may be of questionable value outboard of valves located forward of the tandem, but has no useful purpose if the valves are within a rear cabinet forward of, and protected by, the bumper. MTB agrees that protection of valves provided by the bumper arrangements should be recognized and MTB is granting the request for reconsideration by revising the section, as suggested by the petitioner.

Section 178.338–13. In comments on paragraph (c), a petitioner stated that increased tensile strengths of materials at operating temperatures should be defined using values contained in the ASME Code. The petitioner also pointed out that the higher strength that materials have at low temperatures should not be recognized in applications where the material may not be at the low temperature. MTB agrees and grants the petitioner's request for

reconsideration by revising paragraph (c) accordingly.

Section 178.338–14. A petitioner requested revision of the last sentence in paragraph (a)(3) by replacing the parenthetical words "(percent outage)" with the words "(water capacity in pounds)". The petitioner stated that a setting expressed as a percentage does not reflect the actual outage for loading conditions and may be misleading. It is MTB's position that if a fix-length dip tube or trycock line gauging device is used to establish the maximum permitted liquid level at the loading pressure, it must be designed to assure conformance with the maximum permitted filling density prescribed in § 173.318. Therefore, after further consideration, MTB believes the requirement specifying the type of setting is unnecessary and it is removed. Accordingly, the petitioner's request for reconsideration is denied since it is unnecessary with the removal of paragraph (a)(3).

One petitioner objected to the placement of the pressure gauge on the tank jacket but provided no substantive data to justify removal of this requirement from paragraph (b). Therefore, the request for reconsideration is denied.

Also, a petitioner requested that the requirement on orifices in paragraph (c) be revised to limit applicability to tanks in flammable cryogenic liquid service, and to remove trycock lines from the restriction of openings not greater than 0.060 inch diameter. The petitioner maintained that larger openings are needed for trycock lines to ensure proper operation. MTB agrees with the petitioner in both cases and the requests for reconsideration are granted. The requirements are limited to tanks in flammable cryogenic service, and openings for trycock lines, if provided, may be no larger than ½-inch nominal pipe size.

Section 178.338–16. Paragraph (a) is revised to remove the requirement that the material of construction for the evacuated jacket must be in conformance with the ASME Code. This revision is consistent with the changes in § 178.388–2(a) to allow ASTM materials, as requested by a petitioner.

Section 178.338–18. A petitioner requested that the requirement in paragraph (a) be revised to permit ⅛-inch lettering in place of ⅜-inch lettering on nameplates. MTB believes ⅜-inch letters provide more legible markings at negligible cost. The petitioner's request for reconsideration is denied.

A petitioner stated that in paragraphs (b) (1) and (2) the abbreviation "veh." is unnecessary and should be removed, in paragraph (b)(5) the "certificate date" is unnecessary as the "date of manufacture" is sufficient, in paragraph (b)(8) the correct abbreviation for weight is "wt." and not "wgt.", and in paragraph (b)(9) the word "cryogen" is not defined.

The petitioner's first two requests for reconsideration are denied. MTB believes the abbreviation "veh." is needed to clarify that the vehicle manufacturer is the final manufacturer of a portion of the vehicle, such as the tank or jacket. The "certificate date" is the date that the completed cargo tank is certified as conforming to all applicable requirements of the MC–338 specification as prescribed in § 178.338–19(a), and because it may differ from the manufacture date, it is retained. Relative to the petitioner's latter two requests for reconsideration, MTB agrees "wt." is the acceptable abbreviation for weight and revises paragraph (b)(8) accordingly. In paragraph (b)(9), the term "cryogen" is replaced with the term "cryogenic liquid".

Section 179.102–1. In response to petitioners' request for reconsideration, MTB is revising paragraph (a)(6) to remove the requirement that the tank anchor-to-tank shell fillet welds must be examined by radioscopy. A similar revision is made to §§ 179.102–(l) and 179.102–17(m).

Sections 179.102–4 and 179.102–17. MTB is revising paragraph 179.102–4(a) to incorporate an amendment adopted under Docket HM–175 (49 FR 3468, January 27, 1984 which requires that each specification 105 tank car built after August 31, 1981, be in conformance with specification 105J.

Three petitioners requested revisions to paragraphs 179.102–4(b) and 179.102–17(b) to clarify that stainless steel is not authorized for use as the material of construction for the tank. MTB agrees and grants the requests for reconsideration by revising the two paragraphs.

Several petitioners objected to the requirement, in paragraphs 179.102–4(g) and 179.102–17(g), permitting the installation on a tank car of a gaging device if it is a fixed length dip tube. The petitioners pointed out that most tank cars are equipped with a closed magnetic level gaging device and the use of these gaging devices should be continued as they are also authorized under DOT E–3992. MTB agrees and grants the petitioners' request for reconsideration by revising the paragraphs to permit gaging devices that are approved by the AAR Committee on Tank Cars. The term "gaging device" is used in place of the term "gauging device" for consistency with the usage of this term in Part 179.

A petitioner requested that, in paragraphs 179.102–17 (d) and (i), the term "fluorinated hydrocarbon polymer" be removed and replaced with the more specific term "PTFE". MTB agrees and grants the petitioner's request for reconsideration. However, the term "polytetrafluoroethylene" is used in place of its abbreviation.

Another petitioner objected to the restriction in paragraph 179.102–4(i) that precludes use of steels containing certain elements in tank cars used in vinyl fluoride service. Of principal concern is the restriction against aluminum and copper because of their presence in the type of steel used in the construction of valves. The petitioners' request for reconsideration is denied. MTB will not change the restriction until compatability data that specifically relates to vinyl fluoride are developed and reviewed since vinyl fluoride is known to be reactive with certain alloys.

Petitioners took exception to the requirement, in paragraphs 179.102–4(j) and 179.102–17(k), that the jacket of a tank car be stenciled with the words, "COLDEST LADING TEMPERATURE". The petitioners requested that the present wording of "MINIMUM OPERATING TEMPERATURE" continue to be authorized. One petitioner stated that "MINIMUM OPERATING TEMPERATURE" is more meaningful for the design and operating condition of the tank; whereas, "COLDEST LADING TEMPERATURE" may be misunderstood as being the temperature to the lading at any given time. MTB agrees and grants the petitioners' request for reconsideration by revising the paragraphs to permit continued use of the present marking.

Petitioners requested removal of the requirement, in paragraphs 179.102–4(1) and 179.102–17(m), that tank anchor-to-tank shell fillet welds must be examined by radioscopy. The petitioners maintained that radioscopy is not used to examine tank car fillet welds. MTB agrees and grants the petitioners' request for reconsideration by revising the paragraphs. A similar change is made in § 179.102–1(a)(6) for tanks in carbon dioxide, refrigerated liquid service.

Section 179.400–4. A petitioner requested revision of paragraph (a)(1) and the expression "q" in paragraph (a)(5) by adding "of water capacity" immediately following "Btu/day/lb." MTB agrees and grants the request for reconsideration.

Section 179.400–8. A petitioner indicated that in paragraph (c) the formula for minimum thickness should read "$t=PL/8SE(3+\sqrt{L/r})$. MTB disagrees with the petitioner. In the November 1 publication, MTB corrected the formula to read "$t=[PL(3+\sqrt{(L/r)})]/(8SE)$". In the corrected formula, only the term "(8SE)" is the denominator and the term "(L/r)" is the square root expression.

A petitioner requested revision of paragraph (d) to allow the minimum wall thickness of the outer jacket head to be ½ inch "before forming" in place of the required ½ inch "after forming". The requirement that jacket heads be at least ½ inch thick is intended to provide head puncture resistance and is equivalent to the requirement for head shields on certain other classes of tank cars which are used to transport flammable gases. Therefore, the petitioner's request for reconsideration is denied.

Section 179.401–1. Editorial changes have been made to certain entries in the table to § 179.401–1.

This document does not impose additional requirements and has the net result of reducing costs imposed under the final rule published in the **Federal Register** on June 16, 1983 (48 FR 27674). A regulatory evaluation and environmental assessment of the final rule is available for review in the docket. The regulatory evaluation was not modified to include the changes made under this document.

List of Subjects

49 CFR Part 171

Hazardous materials transportation, Incorporation by reference.

49 CFR Part 172

Hazardous materials transportation.

§ 172.101 Hazardous materials table.

49 CFR Part 173

Gases, Hazardous materials transportation, Packaging and containers, Reporting and recordkeeping requirements.

49 CFR Part 176

Hazardous materials transportation, Maritime carriers, Cargo vessels.

49 CFR Part 178

Hazardous materials transportation, Packaging and containers.

49 CFR Part 179

Hazardous materials transportation, Packaging and containers.

In consideration of the foregoing, Parts 171, 172, 173, 176, 178 and 179 of Title 49 Code of Federal Regulations are amended as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

1. In § 171.7, paragraphs (d)(5) (xxiv) through (xxxiii) are added to read as follows:

§ 171.7 Matter incorporated by reference.

* * * * *

(d) * * *

(5) * * *

(xxiv) ASTM A 242–81 is titled "Standard Specification for High-Strength Low-Alloy Structural Steel," 1981 edition.

(xxv) ASTM A 441–81 is titled "Standard Specification for High-Strength Low-Alloy Structural Manganese Vanadium Steel," 1981 edition.

(xxvi) ASTM A 514–81 is titled "Standard Specification for High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding," 1981 edition.

(xxvii) ASTM A 572–82 is titled "Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Steels of Structural Quality," 1982 edition.

(xxviii) ASTM A 588–81 is titled "Standard Specification for High-Strength Low-Alloy Structural Steel with 50 ksi Minimum Yield Point to 4 in. Thick," 1981 edition.

(xxix) ASTM A 606–75 (Reapproved 1981) "Standard Specification for Steel Sheet and Strip, Hot-Rolled and Cold-Rolled, High Strength, Low-Alloy, with Improved Atmospheric Corrosion Resistance," 1981 edition.

(xxx) ASTM A 607–75 is titled "Standard Specification for Sheet and Strip, Hot-Rolled and Cold-Rolled, High-Strength, Low-Alloy Columbium and/or Vanadium," 1975 edition.

(xxxi) ASTM A 633–79a is titled "Standard Specification for Normalized High-Strength Low-Alloy Structural Steel," 1979 edition.

(xxxii) ASTM A 715–81 is titled "Standard Specification for Steel Sheet and Strip, Hot-Rolled, High-Strength, Low-Alloy, with improved Formability," 1981 edition.

(xxxiii) ASTM B 580–79 is titled "Standard Specification for Anodic Oxide Coatings on Aluminum," 1979 edition.

* * * * *

PART 172—HAZARDOUS MATERIALS TABLES AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS

2. In § 172.101, the Hazardous Materials Table is amended by revising entries, in alphabetical sequence, to read as follows:

+EAW	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	Packaging		Maximum net quantity in one package		Water shipments		
					Exceptions	Specific requirements	Passenger carrying aircraft or railcar	Cargo aircraft only	Cargo vessel	Passenger vessel	Other requirements
(1)	(2)	(3)	3(a)	(4)	5(a)	5(b)	6(a)	6(b)	7(a)	7(b)	7(c)
	• • •										
	Argon, refrigerated liquid (*cryogenic liquid*).	Nonflammable gas.	UN 1951	Nonflammable gas.	173.320	173.316 173.318	100 pounds	1,100 pounds.	1,3	1,3	
	• • •										
	Ethylene, refrigerated liquid (*cryogenic liquid*).	Flammable gas	UN 1038	Flammable gas	None	173.318 173.319	Forbidden	Forbidden	1	5	Stow away from living quarters.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

3. In § 173.23, paragraph (e) is revised to read as follows:

§ 173.23 Previously authorized packaging.

* * * * *

(e) After October 1, 1984, cylinders manufactured for use under exemptions DOT E–6668 or E–8404 may be continued in use, and must be marked "DOT–4L" in compliance with Specification 4L (§ 178.57 of this subchapter) on or before January 1, 1986. The "DOT–4L" marking must appear in proximity to other required specification markings.

4. In § 173.31, paragraphs (a)(8) and (c)(13)(v) are revised and paragraph (a)(10) is added to read as follows:

§ 173.31 Qualification, maintenance, and use of tank cars.

(a) * * *

(8) For each tank car conforming to and used under an exemption issued before October 1, 1984, which authorized the transportation of a cryogenic liquid in a tank car, the owner or operator, if not the owner, shall remove the exemption number stenciled on the car and stamp the tank car with the appropriate Class DOT–113 Specification followed by the applicable exemption number, for example, "DOT–113D60W–E * * * *". (Asterisks to be replaced by the exemption number.) The owner or operator, if not the owner, of a tank car that is remarked in this manner shall retain on file a copy of the last exemption in effect during the period the tank car is in service. No modification of a tank car remarked under this paragraph is authorized unless made in conformance with an applicable requirement or provision of this subchapter.

(9) * * *

(10) Class DOT 105A and 105S tank cars, constructed of ASTM A212B steel to ASTM A300 low temperature requirements, that were authorized under DOT E–3992 may continue in service but new construction is not authorized.

* * * * *

(c) * * *

(13) * * *

(v) An alternate pressure relief valve must be retested at the same time interval prescribed for the required pressure relief valve. The start-to-discharge pressure and vapor tight pressure requirements for the alternate pressure relief valve must be as specified in § 179.401–1 of this subchapter. The alternate pressure relief valve values specified in § 179.401–1 of this subchapter for the DOT–113C120W tank car apply to the DOT–113D120W tank car.

* * * * *

5. In § 173.33, the introduction text of paragraph (b)(2) and paragraph (b)(3) are revised to read as follows:

§ 173.33 Qualification, maintenance, and use of cargo tanks.

(b) * * *

(2) For each cargo tank conforming to and used under an exemption issued before October 1, 1984, which authorized the transportation of a cryogenic liquid in a cargo tank, the owner or operator, if not the owner, shall remove the exemption number stenciled on the cargo tank and stamp the specification plate (or a placed adjacent to the specification plate) "DOT MC–338" followed by the applicable exemption number, for example, "DOT MC–338–E * * * *". (Asterisks to be replaced by the exemption number.) The owner or operator, if not the owner, of a cargo tank that is remarked in this manner shall retain on file a copy of the last exemption in effect during the period the cargo tank is in service. No modification of a cargo tank remarked under this paragraph is authorized unless made in conformance with an applicable requirement of provision of this subchapter. No new construction of such cargo tanks may be initiated after September 30, 1984.

* * * * *

(3) For each MC–331 cargo tank (§ 178.337 of this subchapter) conforming to and used under an exemption issued before October 1, 1984, which authorized the transportation of ethane, refrigerated liquid, ethane-propane mixture, refrigerated liquid, or hydrogen chloride, refrigerated liquid, the owner or operator, if not the owner, shall remove the exemption number stenciled on the cargo tank and stamp the exemption number on the specification plate immediately after the DOT Specification, for example, "DOT MC–331–E * * * *". (Asterisks to be replaced by the exemption number.) If there is not adequate room on the specification plate, the exemption number must be stamped on a plate placed adjacent to the specification plate. The owner or operator, if not the owner, of a cargo tank that is remarked in this manner shall retain on file a copy of the last exemption in effect during the period the cargo tank is in service.

* * * * *

6. The heading to subpart G and paragraph (f) in § 173.300 are revised to read as follows:

* * * * *

Subpart G—Gases; Definition and Preparation

* * * * *

§ 173.300 Definitions.

* * * * *

(f) *Cryogenic liquid.* A "cryogenic liquid" is a refrigerated liquefied gas having a boiling point colder than −130°F. (−90°C.) at one atmosphere, absolute. A material meeting this definition is subject to requirements of this subchapter without regard to whether it meets the definition of a compressed gas in paragraph (a) of this section. The material is partially described as "* * *, refrigerated liquid (*cryogenic liquid*)" in § 172.101 of this subchapter.

* * * * *

7. In § 173.314, paragraph (g)(2) is removed and paragraph (g)(3) is redesignated paragraph (g)(2), and the entry for "vinyl fluoride, inhibited" in the table in paragraph (c) is revised to read as follows:

§ 173.314 Requirements for compressed gases in tank cars.

* * * * *

(c) * * *

Kind of gas	Maximum permitted filling density, Note 1	Required tank car see § 173.31(a) (2) and (3)
(Revise) Vinyl fluoride, inhibited.	59.6 maximum to 53.6 minimum at maximum 105 psig, when offered for transportation.	DOT–105A600W, Notes 17 and 23.

* * * * *

8. In § 173.316, paragraphs (a)(4) and (b), the introductory text of paragraph (c) and the table in paragraph (c)(2) are revised to read as follows:

§ 173.316 Cryogenic liquids in cylinders.

(a) * * *

(4) A valve or fitting made of aluminum with internal rubbing or abrading aluminum parts that may come in contact with oxygen in the cryogenic liquid form may not be installed on any cylinder used to transport oxygen, cryogenic liquid unless the parts are anodized in accordance with ASTM Standard B 580.

* * * * *

(b) *Pressure control systems.* Each cylinder containing a cryogenic liquid must have a pressure control system that conforms to § 173.34(d) and is

designed and installed so that it will prevent the cylinder from becoming liquid full.

(c) *Specification cylinder requirements and filling limits.* Specification DOT–4L cylinders (§ 178.57 of this subchapter) are authorized for the transportation of cryogenic liquids when carried in the vertical position as follows:

* * * * *

2 * * *

Pressure control valve setting (maximum start-to-discharge pressure, psig)	Maximum permitted filling density (percent by weight)				
	Argon	Nitrogen	Oxygen	Helium	Neon
45	133	76	108	12.5	109
75	130	74	105	12.5	104
105	127	72	103	12.5	100
170	122	70	100	12.5	92
295	115	68	96	12.5	77
360	113	65	93	12.5	.....
450	111	61	91	12.5	.....
540	107	58	88	12.5	.....
625	104	55	86	12.5	.....
Design service temperature (°F)	−320	−320	−452	−452	−411

* * * * *

9. In § 173.318, paragraph (b)(1)(viii) is removed and paragraphs (ix) and (x) are redesignated paragraphs (viii) and (ix), respectively; paragraph (g)(3) is removed; paragraphs (a)(3)(i), (a)(4), (a)(5), (b)(1)(i), (b)(1)(iii), (b)(2)(i), (b)(5)(ii), and the introductory text of paragraph (g) are revised to read as follows:

§ 173.318 Cryogenic liquids in cargo tanks.

(a) * * *

(3) * * *

(i) Is to be transported by vessel (see § 176.76(h)(1) of this subchapter); or

(ii) * * *

(4) A valve or fitting made of aluminum with internal rubbing or abrading aluminum parts that may come in contact with oxygen in the cryogenic liquid form may not be installed on any cargo tank used to transport oxygen, cryogenic liquid unless the parts are anodized in accordance with ASTM Standard B 580.

(5) An aluminum valve, pipe or fitting, external to the jacket that retains lading during transportation may not be installed on any cargo tank used to transport oxygen, cryogenic liquid or any flammable cryogenic liquid.

* * * * *

(b) * * *

(1) * * *

(i) Each tank must be protected by a primary system of one or more pressure relief valves. Except for tanks in carbon monoxide, atmospheric gas (excluding oxygen) or helium service, each tank must be protected by a secondary system of one or more frangible discs or pressure relief valves arranged to discharge upward and unobstructed to the outside of the protective housing in such a manner as to prevent impingement of gas upon the jacket or any structural part of the vehicle. The primary and secondary systems of pressure relief valves must be the type that automatically open and close at predetermined pressures. For a tank in carbon monoxide service, the secondary system must be comprised of one or more pressure relief valves instead of frangible discs. A secondary system is not required on tank in atmospheric gas (excluding oxygen) or helium service.

(ii) * * *

(iii) The rated relieving capacity for each pressure relief valve, pressure control valve when used as a pressure relief valve, and frangible disc must be as determined by the flow formulas contained in paragraph (b)(2)(i) of this section.

* * * * *

(2) * * *

(i) The primary system of pressure relief valves for a tank in atmospheric gas (except oxygen) and helium, cryogenic liquid service must have a flow capacity equal to or greater than that calculated by the applicable formula in 5.3.2 or 5.3.3 of CGA Pamphlet S–1.2. The primary system of pressure relief valves for a tank in oxygen, cryogenic liquid or flammable cryogenic liquid service, and the secondary system of relief devices (when required for any cryogenic liquid) must each have a flow capacity equal to or greater than that calculated by the applicable formula in 5.3.2. or 5.3.3. of CGA Pamphlet S–1.2.

* * * * *

(5) * * *

(ii) Each pressure relief valve must be plainly and permanently marked with the pressure, in psig, at which it is set-to-discharge, the discharge rate of the device in SCF per minute (SCFM) of free air, and the manufacturer's name or trade name and catalog number. The marked set-to-discharge pressure value must be visible with the valve in its installed position. The rated discharge capacity of the device must be determined at a pressure of 120 percent of the design pressure of the tank.

* * * * *

(g) *One-way travel time; marking.* The jacket of a cargo tank used to transport a flammable cryogenic liquid must be marked on its right side near the front, in letters and numbers at least two inches high, "One-Way Travel Time —— hrs. —— psig to —— psig at —— percent filling density," with the first blank filled in with a number indicating the one-way travel time (OWTT), in hours, of the cargo tank for the flammable cryogenic liquid to be transported, the second and third blanks with the pressures used to determine the marked rated holding time corresponding to the filling density used, and the fourth blank with the actual filling density. Multiple OWTT markings for different pressure levels are permitted.

* * * * *

10. In § 173.320, paragraph (b) is revised to read as follows:

§ 173.320 Cryogenic liquids; exceptions.

* * * * *

(b) For transportation aboard aircraft, see § 171.11 of this subchapter.

PART 176—CARRIAGE BY VESSEL

11. In § 176.11, a new paragraph (g) is added to read as follows:

§ 176.11 Exceptions.

* * * * *

(g) The requirements of this subchapter do not apply to atmospheric gases used in a refrigeration system.

PART 178—SHIPPING CONTAINER SPECIFICATIONS

12. In § 178.57–2, paragraph (b) is revised to read as follows:

§ 178.57–2 Type, size, service pressure, and design service temperature.

* * * * *

(b) The service pressure must be at least 40 and not more than 500 pounds per square inch. The service pressure limits the use of the cylinder and is shown by markings on the cylinder. For example, DOT–4L200 indicates the authorized pressure is 200 pounds per square inch.

* * * * *

13. Section 178.57–13 is revised to read as follows:

§ 178.57–13 Pressure relief devices and pressure control valves.

Each cylinder must be equipped with pressure relief devices and pressure control valves as prescribed in §§ 173.34(d) and 173.316 of this subchapter.

14. In § 178.57–20, paragraph (a)(9) and (b) are revised to read as follows:

§ 178.57-20 Marking.

(a) * * *

(9) If the jacket of the cylinder is constructed of aluminum, add "AL" after the service pressure marking. Example: DOT-4L150 AL.

(b) Except for serial number and jacket material designation, each marking prescribed in paragraph (a) of this section must be duplicated on each cylinder by any suitable means.

§ 178.57-22 [Amended]

15. In § 178.57-22, paragraph (a) is amended by changing the reference to "§ 178.57-21" to read "§ 178.57-21(a)".

16. In § 178.337-11, paragraph (c) is revised to read as follows:

§ 178.337-11 Emergency discharge control.

* * * * *

(c) *Liquid or vapor discharge openings.* Each liquid or vapor discharge opening in a tank intended to be used for a flammable liquid; flammable compressed gas; hydrogen chloride, refrigerated liquid; or anhydrous ammonia, must be equipped with a remotely controlled internal shut-off valve. However, on any liquid or vapor discharge opening of less than 1¼ inches NPT, an excess flow valve together with a manually operated external valve may be used in place of a remotely controlled internal shut-off valve. The requirements of this paragraph do not apply to a liquid or vapor discharge opening 1¼ inch NPT equipped with an excess flow valve together with a manually operated external valve before October 1, 1984, or to an engine fuel line on a truck-mounted tank of not over ¾ inch NPT and equipped with a valve having an integral excess flow valve. Each remotely controlled internal valve must comply with the following requirements:

17. In § 178.338-1, the table in paragraph (e), and paragraph (f)(1) are revised to read as follows:

§ 178.338-1 General requirements.

* * * * *

(e) * * *

Type metal	Jacket evacuated		Jacket not evacuated	
	Gauge	Inches	Gauge	Inches
Stainless steel	18	0.0428	22	0.0269
Low carbon mild steel	12	0.0946	14	0.0677
Aluminum		0.125		0.1000

(f) * * *

(1) The jacket must be designed to sustain a minimum critical collapsing pressure of 30 psi.

* * * * *

18. In § 178.338-2, paragraph (a) is revised to read as follows:

§ 178.338-2 Material.

(a) All material used in the construction of a tank and its appurtenances that may come in contact with the lading must be compatible with the lading to be transported. All material used for tank pressure parts must conform to the requirements of the ASME Code. All material used for evacuated jacket pressure parts must conform to the chemistry and steelmaking practices of one of the material specifications of Section II of the ASME Code or the following ASTM Specifications: A 242, A 441, A 514, A 572, A 588, A 606, A 607, A 633, A 715.

* * * * *

19. In § 178.338-3, paragraph (a) is revised to read as follows:

§ 178.338-3 Metal thickness.

(a) The metal thickness of the tank must be as prescribed in the ASME Code and paragraph (b) of this section. Metal less than 0.187 inch thick may not be used for the shell or heads of a tank unless the tank is enclosed in an evacuated or load-bearing jacket. Metal less than 0.110 inch thick may not be used for the shell or heads of the tank under any circumstances.

* * * * *

20. In § 178.338-4, paragraphs (a) and (f) are revised to read as follows:

§ 178.338-4 Joints.

(a) All joints in the tank, and in the jacket if evacuated, must be as prescribed in the ASME Code, except that a butt weld with one plate edge offset is not authorized.

* * * * *

(f) All tank nozzle-to-shell and nozzle-to-head welds must be full penetration welds.

21. In § 178.338-6, paragraph (c) is revised to read as follows:

§ 178.338-6 Manholes.

* * * * *

(c) A manhole with a bolted closure may not be located on the front head of the tank.

22. In § 178.338-9, a new paragraph (c)(3) is added to read as follows:

§ 178.338-9 Holding time.

* * * * *

(c) * * *

(3) For a cargo tank used in nonflammable cryogenic liquid service, in place of the holding time tests prescribed in paragraph (b) of this section, the marked rated holding time (MRHT) may be determined as follows:

(i) While the cargo tank is stationary, the heat transfer rate must be determined by measuring the normal evaporation rate (NER) of the test cryogenic liquid (preferably the lading, where feasible) maintained at approximately one atmosphere. The calculated heat transfer rate must be determined from:

$$q=[n(\Delta h)(85=t_l)]/[t_s t_f]$$

Where:

q = calculated heat transfer rate to cargo tank with lading, Btu/hr.

n = normal evaporation rate (NER), which is the rate of evaporation, determined by the test of a test cryogenic liquid in a cargo tank maintained at a pressure of approximately one atmosphere, absolute, lb/hr.

Δh = latent heat of vaporization of test fluid at test pressure, Btu/lb.

t_s = average temperature of outer shell during test, °F.

t_l = equilibrium temperature of lading at maximum loading pressure, °F.

t_f = equilibrium temperature of test fluid at one atmosphere, °F.

(ii) The rated holding time (RHT) must be calculated as follows:

$$RHT=[(U_2-U_1)\ W]/q$$

Where:

RHT = rated holding time, in hours

U_1 and U_2 = internal energy for the combined liquid and vapor lading at the pressure offered for transportation, and the set pressure of the applicable pressure control valve or pressure relief valve, respectively, Btu/lb.

W = total weight of the combined liquid and vapor lading in the cargo tank, pounds.

q = calculated heat transfer rate to cargo tank with lading, Btu/hr.

(iii) The MRHT (see § 178.338-18(b)(9) of this subchapter) may not exceed the RHT.

§ 178.338-10 [Amended]

23. In § 178.338-10, paragraphs (b) and (c) are amended by revising the words "ultimate strength" each time they appear to read "tensile strength."

24. In § 178.338-12 is revised to read:

§ 178.338-12 Shear section.

Unless the valve is located in a rear cabinet forward of and protected by the bumper (see § 178.338-10(c)), the design and installation of each valve, damage to which could result in loss of liquid or vapor, must incorporate a shear section or breakage groove adjacent to, and outboard of, the valve. The shear section or breakage groove must yield or break under strain without damage to the valve that would allow the loss of liquid

or vapor. The protection specified in § 178.338–10 is not a substitute for a shear section or breakage groove.

25. In § 178.338–13, the fourth sentence in paragraph (b) is amended by revising "ultimate strength" to read "tensile strength"; and paragraph (c) is revised to read as follows:

§ 178.338–13 Supports and anchoring.

* * * * *

(c) When a loaded tank is supported within the vacuum jacket by structural members, the design calculations for the tank and its structural members must be based on a safety factor of four and the tensile strength of the material at ambient temperature. The enhanced tensile strength of the material at actual operating temperature may be substituted for the tensile strength at ambient temperature to the extent recognized in the ASME Code for static loadings. Static loadings must take into consideration the weight of the tank and the structural members when the tank is filled to the design weight of lading (see Appendix G of the ASME Code). When load rings in the jacket are used for supporting the tank, they must be designed to carry the fully loaded tank at the specified static loadings, plus external pressure. Minimum static loadings must be as follows:

(1) Vertically downward of 2;

(2) Vertically upward of 1½;

(3) Longitudinally of 1½; and,

(4) Laterally of 1½.

26. In § 178.338–14, paragraph (a)(3) is amended by removing the last sentence which reads "The setting (percent outage) must be indicated in a visible location at or adjacent to the valve."; paragraph (c) is revised to read as follows:

§ 178.338–14 Gauging devices.

* * * * *

(c) *Orifices.* All openings for dip tube gauging devices and pressure gauges in flammable cryogenic liquid service must be restricted at or inside the jacket by orifices no larger than 0.060-inch diameter. Trycock lines, if provided, may not be greater than ½-inch nominal pipe size.

27. In § 178.338–16, paragraph (a) is revised to read as follows:

§ 178.338–16 Inspection and testing.

(a) *General.* The material of construction of a cargo tank and its appurtenances must be inspected for conformance to the ASME Code. The tank must be subjected to either a hydrostatic or pneumatic test. The test pressure must be one and one-half times the sum of the design pressure, plus static head of lading, plus 14.7 psi if subjected to external vacuum, except that for tanks constructed in accordance with Part UHT of the ASME Code the test pressure must be twice the design pressure.

* * * * *

28. In § 178.338–18, paragraphs (b)(8) and (b)(9) are revised to read as follows:

§ 178.338–18 Marking.

* * * * *

(b) * * *

(8) Maximum weight of lading for which the cargo tank is designed, in pounds (Max. Net Wt. —— lbs.);

(9) Marked rated holding time for at least one cryogenic liquid, in hours, and the name of that cryogenic liquid (MRHT —— hrs, name of cryogenic liquid). MRHT markings for additional cryogenic liquids may be displayed on or adjacent to the specification plate.

* * * * *

PART 179—SPECIFICATIONS FOR TANK CARS

29. In § 179.102–1, paragraph (a)(6) is revised to read as follows:

§ 179.102–1 Carbon dioxide, refrigerated liquid.

(a) * * *

(6) Tank anchor-to-tank shell fillet welds must be examined by non-destructive testing techniques and must meet the acceptance standards of AAR Specifications for Tank Cars, Appendix W, paragraph W11.06.

30. In § 179.102–4, the introductory text of paragraph (b) and, paragraphs (a), (b)(2)(ii), (g), (j) and (l) are revised to read as follows:

§ 179.102–4 Vinyl fluoride, inhibited.

* * * * *

(a) The tank must conform with specification DOT–105A600W and must be designed for loading at minus 50°F. or colder. After December 31, 1986, each tank built before September 1, 1981, having a water capacity (shell full volume, including manways) exceeding 18,500 U.S. gallons and used for the transportation of vinyl fluoride, inhibited must conform to class DOT–105J.

(b) All plates for the tank must be fabricated of material listed in paragraph (b)(2) of this section, and appurtenances must be fabricated of material listed in paragraph (b)(1) or (b)(2) of this section.

(1) * * *

(2) * * *

(i) * * *

(ii) AAR Specification TC128 material must meet the Charpy V-notch test requirements, in longitudinal direction of rolling, of 15 ft.-lb. minimum average for 3 specimens, with a 10 ft.-lb. minimum for any one specimen, at minus 50°F. or colder, in accordance with ASTM Specification A 370.

* * * * *

(g) Only an approved gaging device may be installed.

* * * * *

(j) The jacket must be stenciled, adjacent to the water capacity stencil, "MINIMUM OPERATING TEMPERATURE —— °F."

* * * * *

(l) Tank anchor-to-tank shell fillet welds must be examined by non-destructive testing technique and must meet the acceptance standards of AAR Specifications for Tank Cars, Appendix W, paragraph W11.06.

31. In § 179.102–17, the introductory text to paragraph (b), and paragraphs (b)(2)(ii), (d), (g), (i), (k) and (m) are revised to read as follows:

§ 179.102–17 Hydrogen chloride, refrigerated liquid.

* * * * *

(b) All plates for the tank must be fabricated of material listed in paragraph (b)(2) of this section, and appurtenances must be fabricated of material listed in paragraph (b)(1) or (b)(2) of this section.

(1) * * *

(2) * * *

(i) * * *

(ii) AAR Specification TC128 material must meet the Charpy V-notch test requirements, in longitudinal direction of rolling of 15 ft.-lb. minimum average for 3 specimens, with a 10 ft.-lb. minimum for any one specimen, at minus 50°F. or colder, in accordance with ASTM Specification A 370.

* * * * *

(d) Safety relief valves must be trimmed with monel or other approved material and equipped with a frangible disc of silver, polytetrafluoroethylene coated monel., or tantalum. Each safety relief device shall have the space between the frangible disc and the relief valve vented with a suitable auxiliary valve. The discharge from each safety relief valve must be directed outside the protective housing.

* * * * *

(g) Only an approved gaging device may be installed.

* * * * *

(i) All gaskets must be made of, or coated with, polytetrafluoroethylene or other approved material.

* * * * *

(k) The jacket must be stenciled, adjacent to the water capacity stencil,

"MINIMUM OPERATING TEMPERATURE——°F."

* * * * *

(m) Tank anchor-to-tank shell fillet welds must be examined by non-destructive testing techniques and must meet the acceptance standards of AAR Specifications for Tank Cars, Appendix W, paragraph W11.06.

32. In § 179.400–4, paragraphs (a)(1), (d) and the expression "q" in paragraph (a)(5) are revised to read as follows:

§ 179.400–4 Insulation system and performance standard.

(a) * * *

(1) *Standard Heat Transfer Rate* (SHTR), expressed in Btu/day/lb of water capacity, means the rate of heat transfer used for determining the satisfactory performance of the insulation system of a cryogenic tank car tank in cryogenic liquid service (see § 179.401–1 Table).

* * * * *

(5) * * *

q = CHTR, in Btu/day/lb., of water capacity;

* * * * *

(d) Insulating materials must be approved.

* * * * *

33. In § 179.400–8(c), the formula is revised to read "$t=[PL\,3+\sqrt{(L/r)})]/(8SE)$".

34. In the table in § 179.401–1, the last four entries are revised to read as follows:

§ 179.401–1 Individual specification requirements.

DOT specification	113A60W	113C120W
*	*	*
Alternate pressure relief valve flow rating pressure, max. psi.		100.
Pressure control valve Start-to-vent, max. psi (see § 179.400–20(c)(4)).	17	Not required.
Relief device discharge restrictions.	§ 179.400–20	179.400–20.
Transfer line insulation	§ 179.400–17	Not required.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53 and App. A to Part 1)

Note.—The Materials Transportation Bureau has determined that this document 1) will not result in a "major rule" under the terms of Executive Order 12291, 2) is not a significant regulation under DOT's regulatory policy and procedures (44 FR 11034), and 3) does not require an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 et seq.). The regulatory evaluation and environmental assessment is available for review in the docket.

Issued in Washington, D.C., on May 29, 1984.

L. D. Santman,

Director, Materials Transportation Bureau.

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