

be phased out, recognizing that the regulated community would accept its full responsibility for meeting the performance specification and would be prepared to demonstrate equivalency to any material specification standard anyway.

11. Performance package standards and operations should be introduced and enforced so that the shipper, carrier, or container manufacturer is given the full flexibility under the regulations to meet the criteria that will afford the defined protection for the population at risk under the conditions of transportation for the identified materials.

In summary, what is being suggested is that Title 49 in its present format has served its purpose. Those portions of Title 49 that pertain exclusively to packaging design and manufacture should be supplanted by performance criteria derived from quantifying the conditions normally incident in transportation and for the accident environment. Those portions of the material in engineering specifications should not be lost, but should be retired and viewed as reference materials. The remainder of the hundreds of pages of regulations would be critically examined in a manner so that conditions not normally incident to transportation could also be accommodated by transportation, environmental design, and transportation system operation. It should be further noted that in no way can the task that has been suggested here be accomplished overnight, nor should it be done in a manner to undermine the credible efforts of existing organizations dedicated to assuring the safe transportation of hazardous materials. These purposes and directions for the hazardous materials transportation regulations should be designed as a parallel, non-Federal Register transportation control strategy. It should be developed by the near complete involvement of all levels of government and industry participation. Once completed, or perhaps with significant portions completed, it could then be phased into existing federal and state programs.

PART 2: THE PROCESS OF HAZARDOUS MATERIALS REGULATION (L.W. Bierlein)

The topic is regulation. This includes more than mere issuance of regulations in the Federal Register. It means any government-initiated, implemented, enforced, or inspired action to alter the behavior of people in the hazardous materials transportation community. The regulatory action can take any form, although to date the issuance of regulations has been the primary form used. The following discussion is applicable to all forms of regulatory action, including but not limited to issuance of regulations. It applies to judicial, legislative, educational, and other actions by the regulatory agency.

Many of the recommendations will seem obvious and some people may assume the concepts are already part of the program. They are not.

It Is Important to Define and Publish the Purpose of the Regulatory Agency

There is a strong need for an agency mission statement for the guidance of agency personnel, other regulators, and the public through which the objectives of the agency can be known and measured. No such mission statement exists today. There is no mechanism by which a petition for rulemaking or a specific regulatory project, for example, can be ranked by priority. Since there is no clear state-

ment of the purpose and functions of the agency, there is no way for any person, including federal staff workers, to know whether actions or proposals are appropriate or important. For example, when issues arise involving preemption or the posture of the agency with regard to the growing refusal of common carriers to provide service to hazardous materials shippers, there is no existing mission statement to provide guidance on what to do. This necessarily requires each issue to be examined afresh in a policy vacuum, leading to substantial delay and potential for inconsistency from issue to issue.

Decisionmaking in the absence of an overall policy or mission statement established at higher levels of the agency becomes very subjective and is done in a closed environment without the awareness of higher policy officials. This has several effects. First, selection of goals and priorities at too low an administrative level fails to result in allocation of budgetary and personnel resources necessary to carry out the decision, giving rise to persistent complaints of not enough people to carry out the job. Second, decisionmaking on goals at too low a level perpetuates the view that higher levels are not interested, affecting the general significance of the program both within and without the agency. Third, the low-level, closed determination of goals and priorities leaves no visible record, so there is no measure of whether the decisionmakers have done their job or not, to the detriment of the public interest in the achievement of essential priorities.

The mission statement need not be lengthy to be effective. The following is recommended:

The purpose of the regulating agency is to achieve the greatest level of public and transportation employee safety feasible in the movement of materials in a hazardous quantity and form, while assuring that the flow of regulated materials is not unnecessarily impeded by anyone. In carrying out this function, the agency shall be the lead agency among federal programs and nonfederal programs and shall exercise its authority affirmatively, consistent with that leadership role.

The key points in this recommended mission statement are the following.

1. The safety of people affected by transportation is paramount. Protection of the environment is not the primary or dominant role of the transportation safety agency. It is a subordinate function administered for the sake of convenience by the transportation agency on behalf of the environmental agency, for which it is the primary and dominant role. Any conflict between these functions at the transportation agency must be resolved in favor of the primary safety role of the transportation agency.

3. The quantity and form of materials as related to hazard require assessment of the nature of materials; they assume a greater priority in those posing a greater hazard.

3. Feasibility, i.e., functional and economic practicality, must be considered.

4. The essential flow of materials is recognized as a responsibility of the agency, and unnecessary impediments to the flow of commerce, i.e., those that are not essential to the achievement of feasible safety levels, are to be discouraged by the agency. Agency actions to enhance efficient movement of hazardous materials, through court action or direct intervention in other agency proceedings, are authorized.

5. The primary leadership role rests in the agency and it is the agency's obligation to carry out that role. It is improper for the agency to remain passive in the face of either danger or circumstances disruptive to hazardous materials commerce.

Establish an Agency Guideline on Assignment of Priorities

In creating a priority guideline, it is vital to accept the fact that there will never be adequate resources or personnel to do all things. An effective guideline is necessary by which all agency actions can be judged for priority, on a daily, annual, or multiannual basis. By priority is meant the speed with which an item is considered, the number of people assigned to the task, the quality of those people, the expenditure of contract or research resources, and the adaptation of other program elements to fit this project.

This guideline should be detailed and, to the extent possible, quantitative. It is the practical document by which the basic mission statement is implemented. It must be useful to all agency employees and outsiders, and that means it must be simple. Also, it must be used consistently and constantly. Use of a priority assignment guideline only on occasion invites discrimination, abuse, and inconsistency.

The guideline should be published so that all may know what is important to the agency. A published document serves to dispel the feeling that assignment of priorities is arbitrary. A petitioner for rulemaking will be able to estimate the rank to be assigned to the proposal being made and will understand better why some projects take years and others can be handled immediately.

The guideline can provide an effective management tool by which agency officials and the public can judge the success or failure of the program. This can do much to dispel frequent criticism that the agency is not doing its job, or perhaps it will document the validity of such criticism to facilitate corrective action.

The guideline should be used in both short- and long-term planning by the regulatory agency. It also should be used to effect coordination between projects. It should eliminate current work on projects that do not carry out the basic mission statement or that do not warrant consideration at this time.

Inherent in the assignment of a significant priority to a project is a commitment to complete projects that are begun. Thus, rulemaking actions will not take unnecessary years to complete because of an erratic approach to scheduling.

Another matter inherent in a hazardous materials priority guideline is the determination and weighing of the level of risk posed by the quantity and form of the shipment in question. Obviously, if the level of risk is low on a safety project, then the priority allocated to it should reflect that fact.

The Agency Should Take No Regulatory Action Unless There Is a Real Problem

Pet projects and whimsical thoughts must not find their way into, much less through, the regulatory process. Without an actual, documented transportation safety or efficiency problem, no agency action is warranted. Effective implementation of the mission statement and the priority guideline should serve to eliminate such projects.

There Are Several Sources of Information to Document Problems

Some of the sources of information are briefly explained here.

Applications for exemption highlight areas where beneficial general amendments, as opposed to applicant-specific changes, may be necessary. Exemptions with multiple parties should be converted quickly to rules of general applicability. In an efficient exemption-to-regulation program, renewal of initial two-year exemptions should be unnecessary.

Petitions for rulemaking, like exemption applications, highlight areas where change is necessary or desirable. Traditionally, however, only the regulated industry has been sufficiently cognizant of agency procedures to make use of this communication mechanism. Petitions that seek more restrictive rules because of perceived dangers are rarely received and must be given greater priority. Procedural rules on what must be included in a petition should be eliminated and replaced by a prominent invitation for petitions from all parties (including other government bodies), with only a suggestion of contents that may be helpful.

All petitions should be assigned a priority ranking on receipt, and the petitioner should be advised in writing of that rank. This advice should include a realistic estimate of the time that may be involved in handling the matter, with a caveat that matters of greater priority that are received later will be taken first. To the extent possible, time estimates should be met; they should not be dismissed lightly by agency personnel as an empty statement.

Applications for approvals by their nature are signals of a defect in the system. An approval is a time-consuming alternative to a well-written regulation and is a process without apparent statutory basis. If the approving authority has a standard by which approvals are granted or denied, then that standard can be reduced to writing so regulated parties may meet the standard without direct communication with the agency. Approvals by their nature tend to be inconsistent, arbitrary, and persistently troublesome; they should be eliminated from the system. To the extent anyone seeks approval of anything from the agency, it signals a problem and should be treated as such.

Incident reports and other sources of information on actual dangerous occurrences should be used, not just compiled, and should elevate matters for immediate corrective regulatory consideration. The incident reporting system, in effect for nearly 10 years without significant adjustment until moderate changes late in 1980, demands greater adjustment. There is need to examine the collection of data in light of the uses to which the data might be put in the regulatory process. The current requirement to report any spill of any quantity should be eliminated. It is likely that with more effective use of data-processing methods, the report form could be modified, and probably shortened.

As a source of information, incident reports must be more accessible to everyone than they have been in the past. This means ready availability of current reports.

Public demands in nonpetition form are problem indicators that must be evaluated as if they were requests for agency action. These include public correspondence as well as congressional expressions of opinion and concern as representatives of the public.

Also included among nonpetition descriptions of problems are independent regulatory actions by other agencies, cities, states, carriers, labor groups,

and institutions bypassing the agency that supposedly has the lead responsibility. Many of these actions are clear efforts to enter a perceived regulatory vacuum. If the vacuum is real, it should be filled by the lead agency. If it is only perceived, then education alone may resolve the problem. The important thing is that the lead agency regard these signals as stimuli for action. Problems in the transportation of hazardous materials are agency problems.

Pleas from other safety regulators, at all levels of government, should be encouraged and should receive prompt agency consideration and reply. This should occur whether they take the form of formal petitions for action or not.

Internal investigative conclusions may serve to identify a problem, although to date there has been little such activity. Increase of agency research and data analysis may provide a technical mechanism for anticipatory regulatory action.

Problem Definition Before Action Is Vital and Often Overlooked

The agency must carefully assess indicators of a problem, segregating causes from results and endeavoring to state the problem in writing in the narrowest and most specific terms possible. Few significant problems have single causes, and every effort should be made to identify and isolate multiple causative factors.

In attempting problem definition, the agency should openly and frequently confer with all knowledgeable parties on problem definition. Regulatory problem definition is a public function that should involve everyone affected. It is unlikely that any agency has within its halls all expertise necessary to success; seeking outside advice very early in problem definition should be a required part of the process.

If there is a lack of technical data, spend the money for performance of essential research. In the absence of data, do not guess.

To obtain the broadest involvement in problem resolution, the agency should publish its statement of findings in problem definition.

Only After Satisfactory Problem Definition Should There Be Tentative Selection of Alternative Solutions

In examining and selecting solutions, the following steps should be included:

1. Separate symptoms from causes and list symptoms to be eliminated.
2. Isolate all alternative problem resolutions that would remove those symptoms.
3. Recognize that not all issues can be resolved by regulatory action. Regulation by the agency is not a panacea that necessarily will cure all ills. In addition, not all regulatory action takes the form of issuance of regulations in the Federal Register. Many actions within the lawful authority of the agency can affect the parties in interest, without a single regulation appearing in print. Examination of non-regulation alternatives is essential to a quality regulatory program.
4. Encourage legislation or action by other individuals, organizations, or agencies--particularly by the agency that has defined the problem, even if those others are not within the direct regulatory jurisdiction of the agency.
5. Evaluate the effectiveness of alternative solutions, individually and in combination. This should be done in advance of selection, not as hindsight to justify selections already made.

6. Evaluate the estimated economic and social impact of alternative solutions. Past agency attempts to skip this evaluation or postpone it until later in the process should be avoided.

7. Early in the process, directly solicit views of affected parties, including trade associations, labor groups, and city, state, and regional governments, at early stages in identification of alternative solutions to the defined problem. Solicitation should take more forms than just that of Federal Register publication.

8. Remove the present aura of secrecy surrounding regulatory actions. Secrecy is often a bureaucratic mechanism to hide incompetence from criticism, and it benefits no one.

Alternative Solutions Identified by the Agency Should Be Published

Describe more than one solution if it appears that more than one will work. Seek comment on effectiveness, impact, and timing. Another publication will not hurt, and something might be learned.

Adopt the Chosen Solution

After public discussion of the alternatives, select and propose the chosen solution(s) in the Federal Register for additional comment. Delays caused by several publications are no greater than those already experienced, and the reasons are more sound. Give great detail on why the chosen proposal has been selected over others.

Consider any new ideas and facts that may be submitted, and then adopt and implement the selected solution(s). The process of adoption should give a lengthy and detailed factual explanation of the problem, the alternatives considered, and the rationale supporting the action taken. This detail serves to facilitate interpretation and implementation of the new approach and to provide a mechanism by which to evaluate the intent and success of the measure in the future. Decisions based on claims of agency experience or general impressions are insufficient to support any regulatory action.

Careful Consideration Should Be Given to Selection of Mandatory Effective Dates

In establishing mandatory effective dates, organizational slowness should be considered. Bureaucracy is not limited to government. Time necessary for implementation must include time for thorough government and industry employee training. For example, at most two people in the agency understand the latest massive revisions to hazardous materials regulations well enough to explain them, and effective training for agency personnel is not in sight. No employee who has not been trained on a given matter should be allowed to talk about it outside the agency.

Existing agency training programs are too enforcement- and inspection-oriented; they are inbred to the point that errors and omissions are perpetuated. The agency should contract with professional educators to train its employees and limit the agency to nontraining tasks.

The effective date also must include time necessary for administrative adoption by related regulatory bodies, such as state governments. There is no point in encouraging any state or local government to adopt the federal rules if there is no consideration of that adopting agency when changes are made in the federal rules. Although simple cross-reference of the federal rules can avoid this, the administrative procedure acts of many states prohibit

such shortcuts and demand that specific rules be reprinted in state registers. This reprinting, particularly if it involves revision of existing provisions, is a time factor currently not considered in the federal regulatory scheme. It should be.

The Adopted Solution Should Be Made the Target of Publicity and Training

Although agency-operated training programs are not necessary, government encouragement of effective training or new regulations is essential. This should be done through grants to professional educators, not by federal employees. Grants may be given to universities and others professionally competent to instruct, preferably on a wide regional basis with some consistency between programs.

Enforcement of the Adopted Solution Is Essential to Assure Awareness and Compliance

Enforcement is an essential element in an effective regulatory process, and total, uncommunicating segregation of regulatory and enforcement functions is an error. Close coordination and cooperation between those who select regulatory actions and those who enforce them are vital. If the regulation is properly aimed to solve a safety problem, then enforcement of that regulation is an essential element of its implementation. There is little doubt that requirements highlighted through enforcement are stressed in company compliance efforts, and this energy must be harnessed to achieve the safety intended. Enforcement should be coordinated with regulation and, after a full period to allow for implementation and after enhancement of awareness through education, vigorous enforcement, and publication of enforcement efforts, should be undertaken.

Enforcement programs that are not given subject priorities correlating closely with actual accident experience or regulatory efforts in problem-solving are merely revenue-producing measures that make no improvement in safety. This has been true of much hazardous materials enforcement to date.

On the topic of enforcement generally, it is clear that the current transportation agency program is not working. Centralization of the function, or at least unification of procedures, appears warranted, so that the penalty suffered by a respondent does not vary due to the affiliation of the inspector who makes the charge.

In enforcement, as in other aspects of regulation, some quantitative guideline is essential to preclude arbitrariness and inconsistency. Today penalties vary by mode of transit, by modal affiliation of the inspector, by procedural avenues selected, by the personnel assigned to the case, and by their mood at the moment. The current system is purely subjective with any relation to seriousness of the offense often just coincidence. A specific weight must be assigned to statutory factors such as the nature of the offense and the culpability of the respondent, whether the offense occurs in highway, rail, or the other modes of commerce, and regardless of the attorney assigned to the case or his or her attitudes.

An enforcement program that thrives on cases that are easy to prove, regardless of their correlation with safety, is a disservice to the public. As a revenue-producing measure, it is ridiculously inefficient, and it certainly cannot be justified as a safety program. Selection of minor requirements and assessment of small dollar amounts on the hope the respondent will not undertake the expense of resistance also disserves to the public, for the same reason.

A vigorous enforcement effort that seeks significant penalties to deter future noncompliance with significant requirements by the respondent and others necessarily results in requirements that are more soundly based and more easily understood. The current program, avoiding the hard cases because the regulations are unclear, is not serving one of its vital functions--achievement of greater public safety through improvement of the regulations.

Effectiveness of the Selected Solution Must Be Periodically Assessed

Auditing of the program can be done through independent investigation, analysis of incoming incident reports, agency investigations, and other public processes. It is vital to determine whether the solution that was selected is being successful and, if so, whether some less severe mechanism might also succeed. If not, the process must begin again, with new experience blended with previous considerations to select new solutions. Periodic review of all regulatory efforts should be undertaken to minimize the economic burden on the public and to assure that the best solutions are implemented.

PART 3: COMPLEXITY OF HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS (D.A. Boyd)

For a number of years, perhaps more than 10, numerous suggestions and recommendations have been made by various groups and persons that the hazardous materials transportation regulations should be simplified or made less complex. For example, the 1969 report of panel 3 at the 1969 Airlie conference recommended that "as an initial step, immediate efforts be made to simplify the existing regulations." In the same report, the following statement was made: "The secondary mission consists of simplification and condensation of present regulations to a more realistic and workable document."

In the intervening years it appears that little progress has been made toward achieving the goal of simple concise regulations for the transportation of hazardous materials. The Transportation Research Circular 219 listed the 10 most critical issues in hazardous materials transportation. The circular noted that DOT's hazardous materials regulations are "too complex."

TRB Circular 219 offers two solutions to the problem. The first solution would require publication of digests of the regulations (although it is not clear who would compile them or where they would be published), which would summarize the most pertinent parts and state them in language designed to be as readable as possible. At first blush, this solution appears quite reasonable and simple. On more complete analysis, however, it appears likely that this solution would create problems as confusing as the existing complicated regulations. Any attempt to summarize the present lengthy regulations (some 1200 pages) would require substantial manpower and a great deal of insight and effort. The end result would no doubt be a dual or parallel set of regulations that would duplicate the existing rules. Furthermore, in any controversy or question or even an interpretation it would be necessary to refer to the actual regulations; thus, it is quite possible that summarization of existing regulations would actually compound the problem.

While the initial effort would be substantially greater, it would appear that a broad program for revision and simplification of the existing regulations would be of more benefit to the many people