



REPORT OF THE
MINNESOTA PACKAGING ADVISORY COMMITTEE

June, 1982

**MINNESOTA
POLLUTION CONTROL
AGENCY**

1935 West County Road B2
Roseville, Minnesota 55113

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MINNESOTA PACKAGING ADVISORY COMMITTEE

June, 1982

MINNESOTA PACKAGING
ADVISORY COMMITTEE

1. Donald Barnes, Group Manager, Technology and Packaging Division, Champion International Corporation, St. Paul
2. Richard Eide, Clean Air, Clean Water, Minneapolis
3. Michael Flanagan, Attorney at Law, Moss, Flaherty, Clarkson and Fletcher, Minneapolis. Counsel for Minnesota Association of Commerce and Industry.
4. John T. Grabowski, Chief Engineer, Apache Control Systems, Inc., St. Paul
5. Dan Krivit, Recycling Coordinator, City of Minneapolis
6. Linda Peck, League of Women Voters, St. Cloud
7. William W. Petryk, Director of Packaging, The 3M Company, St. Paul
8. Ruth Saari, Secretary, Izaak Walton League, Minneapolis
9. Harold Samtur, Environmental Consultant, Minneapolis
10. Judy Schwingler, Minnesota AFC-CIO, Prior Lake
11. Charles H. Turpin, The Pillsbury Company, Minneapolis
12. Karl S. Willson, Packaging Instructor, Inver Hills Community College, Inver Grove Heights

STAFF MEMBERS
SERVING COMMITTEE

1. Curtis Sparks, Chief, Waste Management Assistance Section (WMAS), Minnesota Pollution Control Agency
2. Donald Kyser, WMAS, Minnesota Pollution Control Agency
3. Samuel Hasson, WMAS, Minnesota Pollution Control Agency
4. Cathy Berg, WMAS, Minnesota Pollution Control Agency
5. Peter Erhardt (Resigned: November 5, 1980), WMAS, Minnesota Pollution Control Agency

June 4, 1982

Mr. Louis J. Breimhurst
Executive Director
Minnesota Pollution Control Agency
1935 West County Road B2
Roseville, Minnesota 55113

Dear Mr. Breimhurst:

It is our pleasure to submit the report of the Minnesota Pollution Control Agency Packaging Advisory Committee. We have been working with the MPCA staff since September 1980 to assist in establishing a program to implement State policies on packaging in the solid waste stream. This is our final report, including some revisions since presentation of the draft report to you April 14, 1982.

The consensus of the Committee is that the package review process as developed under the 1974 MPCA Guidelines is impractical as an enforcement tool, and that its exercise would uselessly tie up MPCA resources. We do see value in the Public Education and Industry Information programs.

The program proposals included with this report are revisions of drafts originally prepared by staff members of the Waste Management Assistance Section of the MPCA. Each proposal has been revised several times through joint efforts of the staff and this committee. We would like to recognize the work of the WMAS staff in the program development process and also in facilitation of the activities of this committee.

Primary efforts of this committee have been focused on careful review of the evolving program proposals, and detailed critiques through eleven committee meetings. Attendance and participation by individual committee members has ranged from minimal to extensive involvement, so all viewpoints may not be equally represented. Because of the intentionally broad composition of the committee, we have not agreed on all of the program segments. There are significant individual comments appended to all of the consensus programs.

The Packaging Advisory Committee believes that continued staffing and funding by MPCA are essential to achieving any success with the programs developed. We stand ready to present our viewpoint to the MPCA Board, Legislative Commission on Waste Management, and other governmental or non-governmental bodies.

Sincerely,

Karl S. Willson

Karl S. Willson
for the Packaging Advisory Committee

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Report of the Packaging Advisory Committee

I. Introduction: History and Development of the Packaging Program

In 1973, the Minnesota Legislature passed Chapter 116F, The Recycling of Solid Waste Act. Section 6 of that Act directed the Minnesota Pollution Control Agency (Agency) to review new or revised packages or containers sold at retail in Minnesota to determine whether the package would constitute a solid waste disposal problem or be inconsistent with the environmental policies of the state. The state policies were derived primarily from the Minnesota State Environmental Policy Act (Minn. Stat. 116D.02, Subd. 2, 1974).

The statutory scheme contained in Section 6 entailed the following procedures. If the Agency determined that a particular package or container constituted an environmental problem, it could, after a public hearing, issue an order prohibiting the sale of the package or container in the state. This prohibition would last only until the last day of the next legislative session, unless extended by the Legislature.

The Agency was also directed by Section 6 to adopt guidelines which would identify those types of new or revised packages which would be subject to its review. Additionally, the law stated that any person could submit a sample package to the Agency and that the Agency could require additional information on the package in order to conduct an adequate review.

The review period was statutorily limited to 120 days. If the Agency failed to act during this period, it could not

thereafter prohibit the package.

The Agency was also required to advise and assist industry in developing packages consistent with state environmental policies, and to initiate a public education and assistance program.

In 1974, the Agency's Regulations for Packaging Review were promulgated. These regulations were designed to contain criteria which industry could utilize in making preliminary judgements as to the environmental acceptability of a prepared package or container, establish a review procedure, and obtain the information needed by the staff to adequately review packages and containers. The regulations also narrowed the Agency's authority to review packages by limiting the review chiefly to packaging used for food, cosmetics, and cleaners.

Agency enforcement of these regulations and the statute was prevented by an injunction and lawsuit brought in behalf of the affected industries. In September, 1979, the Minnesota Supreme Court upheld the statute declaring that it did not impose an undue burden on interstate commerce and that it was not overly vague or imprecise. However, the regulations were determined to be guidelines without the force and effect of law.

The Agency has consistently interpreted this decision to mean that it may proceed to carry out the packaging program as authorized by statute. The Agency believes, however, that the packaging regulations are purely advisory; that is, they provide guidance to the packaging industry but are not binding upon the

industry. No person may be penalized for violating the regulations. On the other hand, the Agency has declared its intent to adhere to its own regulations and retains the authority to review and ban packages.

In accordance with this interpretation, the Agency, in 1980, began to plan for the initiation of the packaging program.

In September of 1980, an Advisory Committee was formed to assist the Agency in establishing the packaging program. Members were drawn from the ranks of labor, industry, and consumer-environmental groups.

The need for an Advisory Committee arose from the controversial nature of some aspects of the packaging program, particularly the packaging review process. The Agency believed that the ideas and suggestions of interested persons would help the Agency determine how to best allocate resources for the program and how to best administer the program.

While the Advisory Committee was encouraged to examine any aspect of the packaging program that it wished to, the Advisory Committee does not represent the Agency in any way. All recommendations made by the Advisory Committee will be considered by the Agency (along with Agency staff recommendations) in determining how best to conduct the packaging program.

The Agency has final authority to accept, reject, or alter any recommendation(s) made by the Advisory Committee. On the other hand, the Agency believes that because the members of the

Advisory Committee are highly qualified and represent the constituency of the packaging program, their recommendations will be very influential in shaping the packaging program. It is for this reason that the Agency staff has encouraged frank and open discussion even though the Advisory Committee should bear in mind that it is the Agency that has the mandate to carry out the packaging program, and that it can do so only in a workable and reasonable manner.

During the 11 meetings that have occurred since September of 1980, the Advisory Committee has considered and attempted to resolve a number of issues related to the program, some which were anticipated and some which were not. The primary issues encountered by the Advisory Committee were the following:

- A. Should government involve itself in market place decisions, involving packaging?
- B. What kind of public education programs should and can the Agency undertake?
- C. What kind of industry technical assistance and education programs should and can the Agency undertake?
- D. What possible amendments to the packaging statutes and guidelines, if any, should be recommended?
- E. What additional research efforts in the packaging area should be recommended?
- F. What should be the scope and nature of the package review process (including definitions, rating, ranking, criteria, etc.) under the Minnesota packaging statute and the packaging guidelines?
- G. What should be the future role of the Advisory Committee?

II. Summary of Meetings

The following is a brief summary of each meeting held since September, 1980.

September 30, 1980. The meeting was largely devoted to organizational activities and adopting rules and schedules. Budget considerations were deferred. The Advisory Committee did undertake a preliminary discussion of the industry and public education memorandums prepared by Mr. Erhardt. Some members expressed doubts about the usefulness of Advisory Committee activities in this area given the possible low level of funds available. Advisory Committee members also felt that they could not contribute much to a discussion of techniques of education and wished to discuss content of educational materials in greater detail.

October 21, 1980. Time lines and Advisory Committee tasks were considered. The Agency's legal staff was present to define the legal status of the packaging program, including the Agency's interpretation of the Minnesota Supreme Court decision. The Advisory Committee asked for a legal opinion concerning review of packages after contents have changed. The Committee also heard a history of the packaging programs from a former staff person assigned to the program and a brief summary of the Metropolitan Council's activity in this area. The Advisory Committee began a more detailed discussion of the memorandums on industry and public education written by Mr. Erhardt but time ran out before the discussion was completed.

November 21, 1980. The Advisory Committee is told that further budget staff support for the packaging program will be not undertaken by the Agency. The Advisory Committee then requested that the staff prepare a revised budget to reflect these reductions. There was a brief discussion on what these additional cuts meant in terms of the Advisory Committee's roles. The Advisory Committee was then told that the Agency's legal staff had ruled that the change of contents did not permit the Agency to review a package. The Advisory Committee deferred any further discussions on recommending additional research in new packaging developments by the Agency staff. The Committee discussed in detail the memorandums on assistance to industry and voted to retain or delete a number of techniques contained in the document. The Advisory Committee then requested the Agency staff to revise the industry memorandums and incorporate the recommended changes.

January 6, 1981. The Advisory Committee discussed the revised industry assistance memorandum prepared by the staff and took note of the revisions incorporated into the new document. Some

discussion followed on the degree of emphasis which should be placed on the engineering and marketing aspects of packaging as opposed to the consumer and environmental requirements of packaging. The revised packaging program development effort was not considered at the meeting, but the Advisory Committee did agree that before any kind of packaging review mechanism was developed, the Agency would have to develop unambiguous and thorough guidelines and information data bases. Discussion then focused on the Preliminary Public Education Memorandum prepared earlier by Mr. Erhardt. The Advisory Committee then voted to strike or retain various techniques contained in the document.

February 17, 1981. Advisory Committee members devoted the entirety of the meeting to considering the packaging review method contained in SR1-6 and an alternative method submitted to the Agency by the 3M Company. With regard to SR1-6 quantifiers that were related to measuring the potential for environmental contamination, the Advisory Committee identified five major issues that needed resolution before the quantifiers could be used. With regard to SR1-6 quantifiers related to total system energy costs, the Advisory Committee identified two major issues that needed resolution before the quantifiers could be used. The Advisory Committee then considered the 3M packaging review approach. While noting the defects in this approach, the Advisory Committee also took note of the positive features in this approach, namely that this approach took into consideration the idea of marketing, product protection, and convenience in the function of a package.

March 24, 1981. At this meeting, the Advisory Committee undertook a discussion and review of the entire criteria (1-10), but time permitted only a consideration of the first five criteria. The Advisory Committee then made specific recommendations for each criterion (1-5) toward the end of improving the validity and reliability of the criterion under consideration.

April 22, 1981. At this meeting, the Advisory Committee undertook a discussion and review of the remaining criteria: 6, 7, 8, 9, and 10. The Advisory Committee then made specific recommendations for each of these criterion toward the end of improving the validity and reliability of the criterion under consideration. The Advisory Committee declined to rank the criteria but requested that the Agency staff prepare a ranking priority for its review.

July 28, 1981. The Advisory Committee conducted a second and more comprehensive discussion and review of criteria 1-10 based on new rankings, tests, data bases and methodologies prepared by the

staff and mailed earlier to the Advisory Committee members. The major changes that resulted from this review and discussions were scheduled to appear in a revised version of the criteria. Also undergoing review and change was the questionnaire which would be mailed to manufacturers or distributors of packages/containers.

December 15, 1981. The Advisory Committee viewed and heard a practical demonstration of how the revised criteria might work in an actual comparison between a steel container and a plastic container containing the same product. Throughout the review and as problems and/or inconsistencies with any of the criteria appeared, the Advisory Committee made specific recommendations for their improvement. The staff took note of the changes and stated its intention to incorporate these changes into another final version of the criteria. Similarly, the questionnaire would also be revised to reflect the Advisory Committee's suggested changes.

January 19, 1982. The Advisory Committee noted the changes that were made in the criteria and questionnaire as they appeared in a new revised edition. These changes resulted from the Committee's earlier recommendations. The Committee revised public education documents and three memorandums dealing with the Agency's strategy for putting the industry and public education programs into effect. The Committee did decide to submit written recommendations to the Agency staff by February 2, 1982 on the staff's work to date. The recommendations will appear in summary form or verbatim form in Part III of the issues paper.

March 16, 1982. The Advisory Committee reviewed the draft committee report containing previously submitted written recommendations of members. In addition, proposed letters for use in the industry information program were reviewed by the Committee. Changes to the report and the letters will be made in a final report to be submitted to Lou Breimhurst. The Committee elected Karl Willson as chairman for the purpose of presenting the report to Mr. Breimhurst on Wednesday, April 14, 1982 at 3:30-5:00 p.m.

April 14, 1982. The Advisory Committee and staff met with Mr. Breimhurst, the MPCA Executive Director, to review the report and answer any questions that Mr. Breimhurst raised. From the review and discussion that followed, some minor changes were agreed upon. These changes will appear in the final report.

III. Advisory Committee Recommendations

It is the consensus of the Committee that the Public Education and Industry Information programs, as described in the

report, are needed, though further discussion of their content is suggested. Most importantly, we see the package review process as impractical. It does not meet the objectives of the legislature and would divert Agency resources which are needed elsewhere.

Following the January 19 meeting, some individual Committee members submitted their comments and recommendations on the work to date. These comments, which cover a full range of issues, are included below in summary form. The verbatim statements, and further comments received after this report was drafted, are appended to this report.

A. Recommendations on Government's Role in Market Place Decisions Involving Packaging

There were no Committee recommendations as such. However, these individual comments were submitted:

1. Government is least efficient at doing the sort of job handed to Agency by the Legislature and the courts. Government can be effective when exercising power but not when attempting persuasion.
2. Whether or not we accept Agency involvement, it is a reality.
3. The government should not involve itself in marketplace decisions involving packaging. The real issue is whether marketing, product protection, and product safety issues should be a part of the review criteria.
4. Government should involve itself only to the extent that serious product or physical hazard might occur, and this eventuality is already covered by the federal laws (such as the Pure Food and Drug Act). From an economic point of view, no government involvement is needed or desirable; people should make their own decisions and not have their choices forced on them.

5. The Legislature erred when it enacted the review process; a mandatory deposit bill should have been enacted.

6. The real issue is container deposit, and this issue can't be disguised, concealed, or deferred to a Packaging Advisory Committee. Container deposit is a social/political issue that must be dealt with openly in the social and political arenas.

B. Public Education Recommendations

In general, the Committee supports the public education efforts and staff activities outlined in the memorandum of July 7, 1980. Specifically listed and recommended were these activities:

1. Coordination with other agencies
2. Community interaction
3. Press releases and news articles
4. Radio and talk shows
5. Public interest center
6. Small group meetings and workshops
7. Educational tools

A further description of this activity is contained on pages 17 and 18 entitled, "Public Education Activities."

Large group meetings, public hearings, and the creation of ombudsmen or community interest advocates were not recommended.

Other comments by individual Committee members are as follows:

1. Staff efforts should attempt to counter the emotional appeal of mass national and media advertising. This advertising causes consumers to make packaging/container choices which are costly and environmentally harmful.
2. Agency public education efforts should be focused on the poor and less affluent segments of our society since they are most vulnerable and susceptible to advertising.
3. Any public education effort undertaken should deal with the various aspects of human motivation.

4. Although a public education effort is an uphill battle, the Agency should attempt some kind of program in this area.

5. The Agency should request additional funding to put into effect whatever public education program is finally adopted.

6. Positions should be extended to accomplish the tasks defined by the Committee.

7. The Agency should set up a special public education program for state legislators.

8. The Agency public education program should concentrate on the costs, space availability, and other problems created by solid waste.

9. In general, the most effective public-education techniques are those that require direct person-to-person contact such as the following: slide presentations, community interaction, curriculum guides, and extensive coordination between the Agency, other governmental bodies, schools, and community groups.

10. Government at all levels should set an example to the citizenry by engaging in sound waste reduction practices.

C. Industry Information Recommendations

The Committee assisted the staff in developing a review process to better inform industry about how the Agency intended to review a package/container and to assist industry so that it could assess the environmental considerations in its packages.

In general, the Committee supports the Industry Information Program and staff activities outlined in an internal staff memorandum dated July, 1981 and discussed by the Committee. Specifically listed and recommended were the following activities:

1. Industry interaction
2. Coordination with other agencies and organizations

3. Assistance tools (information brochures, pamphlets, reports, etc.)

A further description of this activity, is contained in Table B, "Industry Assistance Activities" (page 19).

Other comments by individual Committee members are as follows:

1. The Agency's effort should stress the point that marketing concerns can be subject to compromise with other concerns such as package cost and disposal costs.
2. The Agency's efforts should be minimal and directed at the inexperienced and less knowledgeable engineer(s).
3. The Agency should request additional funding to put into effect whatever industry information program is finally adopted (including extending the Pollution Control Specialist position to September 30, 1983).
4. The most effective program that could be undertaken by the Agency would be to encourage "package optimization programs" with top management in Minnesota corporations with a goal of reducing the mass of packaging material consumed set at 5% or even 10%.

D. Recommendations on Amendments or Revisions to the Packaging Statutes and Guidelines

The Agency staff had recommended no revisions. The committee requested that "feasible alternative" be defined and become a part of the industry information packet. Other comments by individual Committee members are as follows:

1. The statutes and guidelines should not be amended unless the need for amendments becomes obvious.
2. The areas associated with packaging review should be repealed outright.
3. An area of ambiguity could be cleared up by revisions to SR2 relating to the definition of feasible alternatives.

E. Recommendations on the Need for Additional Research in Packaging

The Agency staff believes that it should continually update and revise the review guidelines as new information and technology requires. The Committee concurs with the Agency staff in this regard. The comments by individual committee members are as follows:

1. The Agency should consider preparation of a bibliography of written sources and publications for use by packaging engineers.
2. The Agency should continue to at least monitor existing and new research and keep current about developments in the following areas:
 - a. Research to determine what percentages or amount of the waste stream is packaging.
 - b. Research on recycling, recovery, and disposal systems.
 - c. Research that will enable packaging scientists to know what effect their alternatives may have on the solid waste stream and its disposal.

F. Recommendations on the Review Process

In the process of working with the package review process, as developed pursuant to Minnesota Statutes Chapter 116F, the Committee came to a general consensus that:

1. If, through the review process, a ban of a particular package was made and sustained by the legislature, only very limited solid waste reduction would occur.
2. The staff resources required for a formal package review would be significant.
3. The legislature and the Agency need to find a new approach to the package review process because the Committee believes the process is impractical, cumbersome and difficult to administer, but is the only influence the Agency now has in the area of packaging as it relates to solid waste.

There were discussions but there was no consensus on two basic options for future program actions. Some members felt that the package review and ban authority of 116F should be repealed because they believe it is unworkable. The packaging industry information efforts and public education efforts were seen as worthwhile. Other members believe it is important that the review process not be repealed until such time as a better process or approach to solid waste reduction is available. Their rationale was that while the review process is recognized as being cumbersome and difficult to administer, the key to success with the packaging program's first two legislative mandates -- public education and industry cooperation -- are greatly influenced by the existence of the third mandate -- packaging regulation. Their view was that without the power to ban packages, however unlikely it would be, less attention will be given by consumers to educational programs and less consideration will be given by packaging manufacturers to incorporate environmental impacts into their package designs. Several members of the Committee at the last meeting voiced the opinion that a mandatory deposit law should have been passed in place of the packaging review process and that any repeal of the law should be done in concert with enactment of deposit legislation.

Notwithstanding the differences of opinion expressed by individual Committee members, the Committee assisted the staff in establishing procedures to perform the review process. The result of the Committee's review of the packaging program was the

development of a quantitative method for evaluating each of the ten package review criteria contained in the packaging guidelines. This quantitative review mechanism included the development of the following documents as a guide to the review process:

- a. Criteria ranking and justification (Appendix A).
- b. Package review criteria (Appendix B).
- c. Package information form (Appendix D).

The quantitative review mechanism provides a tool to the packaging designer which can now be considered in the development of new packaging systems. This review process will be the basis for the industry information effort which stresses the value analysis process to packaging design.

Individual comments received relating to the review process are listed below:

1. The submission form and criteria packet are in pretty good shape.
2. Agency should put together a "packet" describing the whole review process for all interested parties, including those who might be submitting packages/containers.
3. The review process will probably never be used, and even if it is used, the resulting waste reduction would be very small, if measurable at all.
4. Staff time and work in perfecting the review process has been commendable, but to no avail -- the process will probably never be used.
5. The review process is too broad in scope to be effective. It is hard to understand how packaging price, effect on labor force, or effect on industry and energy is related to disposal problems or environment.
6. Questions regarding feasible alternatives need to be resolved. For example, how do issues such as existing

capital equipment, product shelf life, and the distribution system affect the definition of feasible alternative?

7. The review system rates one package against another. But industry must know what criteria constitutes an environmentally sound package before development begins -- not how it compares to other packages.

8. An effective public education program, an effective technical assistance program, and the competitive nature of the packaging industry could, in combination, give us the most economical and efficient solid waste system and possibly make a costly review process unnecessary.

9. The guidelines, as presently constituted, leave out one key element -- that of consumer acceptance of marketability. Without this key element, it is unlikely that the people responsible for a package being reviewed would accept the outcome of the review.

10. The review process envisioned in the Minnesota package review law is not a good expenditure of state resources and should be repealed.

11. Even though the Agency does have the power to ban a package, this power is really a standby authority which probably would not be used unless a package appeared that would constitute a major environmental threat. If such a threat appeared, the Agency could request legislation dealing directly with the problem.

G. Recommendations on the Future Role of the Packaging Advisory Committee

The Agency's staff position is that the role of the Committee terminates upon completion and submission of its recommendations. Two comments supported the staff position and went on to say that unless the Agency were to consider further refinements of the program, the Committee should be dissolved and that its work was done for now. Other comments by individual Committee members are as follows:

1. The Committee should go on record with some statement which ranks the relative effectiveness of all waste

management alternatives to land disposal, including (but not limited to) container deposit and packaging review.

2. Because of the importance of funding for the industry and education aspects of the packaging program, it is appropriate for the Committee to comment on the most appropriate methods for the state to fund related Agency activities (for example, the concept of a landfill surcharge with some funds possibly going to the packaging program). Without continued funding, the work already done by the staff in this area will be wasted.

TABLE A
PUBLIC EDUCATION ACTIVITIES*

Activity	Status	Effect
1. Coordination with local offices of other organizations and agencies	On-going Activity	<ol style="list-style-type: none"> 1. Facilitate distribution of information about the MPCA packaging activities. 2. Possibly increase participated action in packaging waste reduction activities.
2. Community Interaction	On-going Activity	Increased public awareness, public participation and wider audience. Minimizes staff time. Requires public to initiate contact and, therefore, somewhat limited.
3. Press releases, Special features articles, newsletters, etc.	On-going Currently managed by PIO	<ol style="list-style-type: none"> 1. Increases public awareness of packaging as a solid waste problem. 2. May be used to increase public participation in waste reduction activities. 3. Minimizes staff time.
4. Radio and talk shows 7-10 in six months	On-going (in that we have always accepted invitations)	<ol style="list-style-type: none"> 1. Reaches and informs a wide array of the public. 2. Encourages greater public participation in packaging waste reduction activities. 3. Rapid way to disperse information and diminish or negate controversy.
5. Public Interest Center	On-going Function performed by Public Information Office.	<ol style="list-style-type: none"> 1. Improve the public awareness and perception of program. 2. Increase consumer activities in packaging waste reduction.
6. Small group meetings; 5-6 meetings/year	New Activity	<ol style="list-style-type: none"> 1. Staff would meet with leaders of various environmental and citizen groups to suggest activities in which their constituents may be involved. 2. Leaders would go back to groups promoting the package program thus maximizing public exposure while minimizing staff time and expenses.

TABLE A (cont.)

7. Educational tool-fact sheets pamphlets, and other information items for public distribution and curriculum guides	New Activity	1. Increase flow of information to public leading to: a) Increased public awareness and acceptance of packaging program b) Promotes sound buying habits in the next generation c) Curricula reaches a wide audience, i.e., when students share ideas with peers and parents.
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*More information about the committee-staff deliberations on appropriate public education activities is contained in the document entitled, Public Education Preliminary Report, September, 1980, available from the Minnesota Pollution Control Agency.

TABLE B
INDUSTRY INFORMATION ACTIVITIES*

Activity	Status	Effect
1. Industry Interaction	On-going	<ol style="list-style-type: none">1. Increased industry awareness of packaging standards, and wider audience.2. Requires industry to initiate contact and therefore somewhat limited.
2. Coordination with other agencies and organizations	On-going	<ol style="list-style-type: none">1. Facilitate distribution of information about the MPCA packaging activities.2. Gauge industry interest.3. Possibly increase participation.
3. Information tools (information brochures, pamphlets, summary report etc.) At least one new item every month	New Activity	<ol style="list-style-type: none">1. Provides industry with ideas on what MPCA considers a good package to be.2. Give industry information on what MPCA is distributing to consumers to anticipate consumer demand.

*More information about the Committee-staff deliberations on appropriate industry information activities is contained in the document entitled, Industry Technical Assistance Memorandum, Revised Report, January 6, 1981, available from the Minnesota Pollution Control Agency.

Appendix A

CRITERIA RANKING AND JUSTIFICATION

The staff recommends that the SR-2 review criteria be ranked as follows:

Criterion	1	(Hazardous Materials)
Criterion	7	(Solid Waste)
Criterion	5	(Virgin Materials)
Criterion	4	(Scarce and Nonrenewable Materials)
Criterion	6	(Recycling)
Criterion	3	(Energy)
Criterion	2	(Litter)
Criterion	8	(Effect on Consumer)
Criterion	10	(Effect on Industry)
Criterion	9	(Effect on Labor)

JUSTIFICATION

1. The MPCA's number one priority is addressing problems associated with preventing environmental damage resulting from leaching, incineration, and toxic and hazardous wastes. We believe that the criteria should reflect this fact and be in accordance with this item, the Agency's top priority. Therefore, criterion one should be ranked as number one.
2. The stated goal and top priority of the Solid and Hazardous Waste Division after preventing environmental damage is the reduction of solid waste. We think criterion seven accomplishes this goal and, therefore, should be ranked as number two.
3. and 4. Because of its overall impact on society and the environment, the Agency has the responsibility, along with all other elements in society, to perform its functions in such a way as to minimize reliance on virgin materials and nonrenewable resources. We believe both criterion 5 and criterion 4 contribute to this goal, and we have ranked them three and four respectively.
5. Recycling remains an important goal of the Division, but the staff strongly believes that source reduction goals must take precedence over recycling goals. Therefore, criterion six is rated number five.
6. Criterion 3 and criterion 2 are important considerations in the overall solid waste process. But the staff believes that they should be ranked in the number 6 and 7 spots with energy considerations (criterion 3) being more important than litter considerations.

7. The staff believes that criteria 8, 9, and 10 are essentially economic, social, and political considerations whereas criteria 1-7 largely deal with the utilization of environmental impacts. We have rated criterion 8 higher than 9 and 10 because of our belief that we have an ultimate and primary responsibility to the consumer over any other group in society. We are all consumers. Therefore, criterion 8 is ranked as number eight. Criterion 10 should be ranked higher than criterion 9, in our view, because any impact on industry will almost immediately effect the labor force.

POINT ASSIGNMENT

Consistent with our ranking of the criteria and the accompanying justification, the staff, using a plus and minus system, has distributed the pluses and minuses as follows:

Criterion one = X4 (except for trace elements in leaching & incineration)
Criterion seven = X3
Criterion five = X2
Criterion four = X2
Criterion six = X2
Criterion three = X2
Criterion two = X2
Criterion eight = neutral (X1)
Criterion ten = neutral (X1)
Criterion nine = neutral (X1)

For each plus or minus earned by criterion 1, this figure is multiplied by four (except trace elements). For each plus or minus earned by criterion seven, this figure is multiplied by three. For each plus or minus earned by criteria 5, 4, 6, 3, and 2, this figure is multiplied by two. And for criteria 8, 10, and 9, each plus or minus earned is multiplied by one.

Appendix B

PACKAGE REVIEW CRITERIA

Criterion 1

"Contains greater or lesser quantities of metal, hydrocarbons, organic or inorganic chemicals, or other substances which upon release into the environment through incineration, leaching, or littering have or may have potential for biological harm when compared with the existing package/container and/or feasible alternatives submitted pursuant to SR-5."

I. Leaching

Either of two methods may be used to assess the ranking for this criterion. Empirical data is used in the first method, and the second method requires testing by established leach test methods.

Method 1

In the first method, the manufacturer will be given a list of elements (primarily chemicals and metals) which may be leached and will be asked to provide information about the chemical constituents of the package/container. To discern potentially harmful trace contaminants, the manufacturer will be asked to indicate which trace (less than 1% by package weight) elements are present in the package/container. The staff will rate reported elements by degree of toxicity: highly toxic, toxic, moderately toxic, and least toxic. One index used (Table 1) will be Schroeder's* "Calculation of Potential Toxicity Index for Leaching."

* H.A. Schroeder, Pollution Profits and Progress, Stephan Green Press, Battleboro, 1971.

Ranking

- (1) For each highly toxic or toxic element reported, two minuses will be awarded.
- (2) For each trace (less than 1% by package weight) highly toxic element, one minus will be awarded. This element of the review process will not be multiplied by four in the ranking process.
- (3) For each moderately toxic element reported, one minus (-) will be awarded.
- (4) For each element which is least toxic, no pluses or minuses will be awarded.

Method 2

In the second method, the manufacturer will provide leaching test data in accordance with EPA's "Representative Sampling Methods and Toxicity Test Procedure" as described in the May 19, 1980, Federal Register. The staff will compare the submitted data to the EPA drinking water standard (Table 1).

Ranking

- (1) If the amount and type of leachate from the package is less than 100 times the drinking water standards, the package will receive a neutral.
- (2) If the amount and type of leachate from the package is more than 100 times the drinking water standard, the package will receive a minus for each element.

II. Incineration

In this part of criterion 1, empirical and actual testing can be used to determine ranking of a package/container as follows.

Method 1

In the first method, the manufacturer will be asked to report whether the package/container contains any of the compounds and

metals appearing on the staff's (Table 2), "Calculation of Potential Toxicity Index for Incineration." Other information may be used if necessary. The manufacturer will also be asked to report any trace contaminants which are considered to have a high or moderate toxic residue and emissions potential.

Ranking

- (1) Compounds and metals which are difficult to burn, leaving toxic residue emissions or noncombustibles, (listed as high toxic residue and emission potential) will be awarded two minuses.
- (2) For each trace highly toxic residue and emissions compound, one minus would be awarded. This element of the review process will not be multiplied by four in the ranking process.
- (3) Compounds and metals which are moderately difficult to burn, leaving moderately toxic residues, will be awarded a single minus (listed as moderate toxic residue and emissions potential).
- (4) Compounds and metals which are easy to burn, leaving the least toxic or no toxic residues, are considered neutral (listed as low toxic residue and emissions potential).

Method 2

For the second method, the staff has adapted another index for the measurement entitled, "Threshold Limit Values for Substances in Workroom Air," (Table 3). This index is published by the American Conference of Governmental Industrial Hygienists as threshold limit values for chemical substance and physical changes in an attempt to define threshold limit values for chemical substances and physical agents in workroom environment.

If this formula is used, manufacturers would be asked to report what combustion products their package/container emits in

burning (in units of mg/cubic meter). Anything reported which is above the threshold limit values for chemical substances in workroom air would receive a minus for each reported item.

TABLE 1

Material	Degree of Toxicity	Drinking Water Standard mg/l	Degree of Toxicity Source (if other than Schroeder)
Ammonia	Highly Toxic	.02	(1) (2)
Arsenic	Highly Toxic	.01	(1)
Boron	Highly Toxic	.75	
Cadmium	Highly Toxic	.01	
Cyanide	Highly Toxic	.01	
Lead	Highly Toxic	.05	
Mercury	Highly Toxic	.002	
Phenol	Highly Toxic	.001	
Selenium	Highly Toxic	.01	
Silver	Highly Toxic	.05	
Antimony	Toxic	-	
Beryllium	Toxic	-	
Chlorine	Toxic	.01	(1) (2)
Iron	Toxic	.3	
Bismuth	Moderately Toxic	-	
Calcium	Moderately Toxic	-	
Lithium	Moderately Toxic	-	
Potassium	Moderately Toxic	-	(1)
Sodium	Moderately Toxic	-	(1)
Zinc	Moderately Toxic	5.0	
Barium	Least Toxic	1.	
Chlorides	Least Toxic	250.	
Copper	Least Toxic	1.	
Fluorides	Least Toxic	1.5	
Magnesium	Least Toxic	-	(1)
Manganese	Least Toxic	.05	(1)
Nickel	Least Toxic	-	
Nitrate	Least Toxic	.10	
Silicon	Least Toxic	-	(1)
Sulfate	Least Toxic	250.	

- (1) Toxic Substances Control Source Book, The Center for Compliance Information, Aspen Systems Corporation, 1978.
- (2) Quality Criteria for Water, U.S. Environmental Protection Agency, July, 1976, (The Red Book).

TABLE 2

Calculation of Potential
Toxicity Index for Incineration

<u>Material</u>	<u>Toxic Residue And Emissions Potential</u>
1. Chlorine Organic Compounds Fluorine Organic Compounds Bromine Organic Compounds Iodine Organic Compounds	high toxic residue and emissions potential
2. Urethanes	high toxic residue and emissions potential
3. Sulfur Organic Compounds (such as methyl mercaptan)	high toxic residue and emissions potential
4. Organic Nitrogen Compounds	high toxic residue and emissions potential
5. Organic Phosphorous Compounds	high toxic residue and emissions potential
6. Metal Organic Compounds	high toxic residue and emissions potential
7. Lead Chromium Nickel Nickel salts, nickel oxides, and nickel carbonyl Mercury Arsenic Cadmium Antimony Selenium Zinc Beryllium Copper	high toxic residue and emissions potential
8. Asbestos	high toxic residue and emissions potential
9. Silicones	high toxic residue and emissions potential
10. Hydrofluoric Acid	moderate toxic residue and emissions potential

<u>Material</u>	<u>Toxic Residue Potential</u>
11. Aromatics	moderate toxic residues and emissions potential
12. Nitrites	moderate toxic residue and emissions potential
13. Pesticides	moderate toxic residue and emissions potential
14. Hydrochloric Acid	low toxic residue and emissions potential
15. Hydrocarbons -Hexane -Pentane -Octane	low toxic residue and emissions potential
16. Carbon Black: Particulate	low toxic residue and emissions potential
17. Chlorine	low toxic residue and emissions potential
18. Ammonia	low toxic residue and emissions potential
19. Nitrogen Oxides	low toxic residue and emissions potential
20. Sulfur Dioxide	low toxic residue and emissions potential
21. Hydrocarbons (such as paraffin wax, polyethylene, polypropylene)	low toxic residue and emissions potential
22. Cellulose, starch and fats	low toxic residue and emissions potential

TABLE 3

Threshold Limit Values for Substances in Workroom Air*

Chemical Substance	Milligrams per Cubic meter
Ammonia	18
Nitrogen Oxides	9
Sulfur Dioxide	13
Carbon Monoxide	55
Lead	0.15
Hydrofluoric Acid	2
Mercury	.05
Chlorine	3
Arsenic	0.5
Cadmium	0.2
Selenium	0.2
Particulate (carbon black)	3.5
Hydrocarbons	
-Hexane	1800
-Pentane	1500
-Octane	1900
Hydrochloric Acid	7
Asbestos	5 fibers/cc > 5 micro meters in length
Nickel	1
Chromium	--
Silicon	10
Zinc	10
Beryllium	0.002
Antimony	0.5
Chlorine Organic Compounds	0.3
Fluorine Organic Compounds	2
Bromine Organic Compounds	0.7
Iodine Organic Compounds	1
Organic Phosphorous Compounds	1

*Threshold Limit Values for Chemical Substances in Workroom and Physical Agents in the Workroom Environment with Intended Changes for 1983, American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio.

Criterion 2

"Has a potential for creating an environmental problem as litter, which is higher or lower than the existing package/container and/or feasible alternatives submitted pursuant to SR-5."

Method

- (1) Staff will examine packages with regard to composition of litter. Preferred package/containers are those not commonly littered. (Refer to Table 4).
- (2) Staff will examine packages with regard to litter which causes environmental problems due to rate of decomposition. (Refer to Table 5).
- (3) Staff will determine whether there is any way by which the packaging litter can be reduced from a list of possible solutions (Table 6).

Ranking

- (1) Commonly littered, high potential litter items receive a single minus.
- (2) For rates of decomposition, awarding of pluses and minuses is as follows:

(a) Excellent	=	+
(b) Good	=	+
(c) Fair	=	neutral
(d) Poor	=	-
(e) Unsatisfactory	=	-
- (3) If there is a means by which packaging litter is to be reduced (see Table 6), the package receives a single plus.
- (4) Not commonly littered, low potential litter items receive a neutral status and are not considered further for this criterion.

TABLE 4

Commonly Littered Items

Taken from California Litter: A Comprehensive Analysis and Plan for Abatement, Daniel B. Syrek, Institute for Applied Research, May, 1975, and Hawaii Litter: 1981, Daniel B. Syrek, Institute for Applied Research, May, 1981.

Soft Drinks: cans, non-returnable bottles, crowns, carriers
 Beer: cans, bottles (non returnable), crowns, carriers
 Wine: bottles, caps
 Juice: cans, bottles, cartons
 Candy wrappers
 Chewing gum wrappers
 Ice cream, frozen juice bars wrappers
 Nut, chips, cookies packaging
 Take-out food packaging
 Milk containers
 Plastic bottles
 Plastic tubs and lids
 Metal food cans
 Metal foil
 Cups, lids, straws
 Toiletries
 Automobile supplies
 Photographic supplies
 Tobacco product packaging

TABLE 5

Rates Of Decomposition For Littered Items

Adapted from The Role of Packaging in Solid Waste Management 1966-1976, Midwest Research Institute

<u>Metals</u>	Non-Ferrous	-- unsatisfactory
	Ferrous	-- poor
<u>Glass</u>	All	-- unsatisfactory
<u>Paper</u>	Containerboard	-- fair
	Folding boxboard	-- good
	Foodboard	-- good
	Molded pulp	-- excellent
	All others	-- good
<u>Plastic</u>	All	-- unsatisfactory

TABLE 6

Means By Which Package Litter Is Reduced

1. Deposit value on packaging
2. High scrap resale value
3. Packaging is not a "convenience" item
4. No detachable parts
5. Industry-established post-consumer recycling program

Criterion 3

"Requires more or less Btu/kg of product than the existing package/container and/or feasible alternatives submitted pursuant to SR-5 for the same package/container size."

Method

- (1) From the composition of the package, staff will determine energy consumption of raw materials by referring to information contained on list compiled by staff (list of comparative energy consumption Table 7, or other sources).
- (2) Manufacturer will report the energy consumption used in manufacturing process.

Ranking

- (1) If the package/container requires more BTU/package than the package/container alternative in the raw materials process, then it is given a single minus.
- (2) If the package/container requires more BTU/package than the package/container alternative in the manufacturing process, then it is given a single minus.
- (3) If, as a result of the manufacturer's information, staff determines that the package/container uses at least 10% post-consumer recycled material, a single plus is awarded.

TABLE 7
ENERGY REQUIREMENTS FOR RAW MATERIALS

<u>MM BTU/TON Product</u>		<u>Source</u>
Glass	18.2	(1)
Aluminum	175.36	(4)
Iron and Steel	22.0	(5)
Copper	112.0	(3)(1)
Folding Boxboard	21.9	(1)
LDPE	99.0	(2)
HDPE	88.6	(1)
Polystyrene	117.0	(1)
Polyvinyl Chloride	82.9	(1)
Corrugated Containers	21.4	(1)

(1) Federal Energy Administration, Project Independence Report, November, 1974

(2) Improving the Energy Productivity of the American Economy, Christopher Hill, 1980

(3) Battelle Memorial-Institute Report PB-245 759, Energy Use Patterns in Metallurgical and Non-Metallic Mineral Processing, 1975

(4) Oak Ridge National Laboratory, Energy Expenditures Associated with the Production and Recycle of Metals. J.C. Bravard, et al ORNL-NSF-EP-24, November 1972

(5) U.S. EPA, Report to Congress on Resource Recovery, 1972

Criterion 4

"Requires more or less scarce or non-renewable resources than the existing package/container and/or feasible alternatives submitted pursuant to SR-5 for the same package/container size."

Method

Packages will be compared to the list of Scarce and Non-Renewable Resource (Table 8).

Ranking

If the package/container contains any of the listed scarce or non-renewable materials, greater than 1% by weight, as reported by the manufacturer, a single minus will be awarded for each item listed.

TABLE 8

Energy

Petroleum derivatives
Natural gas derivatives

Nonfuel Minerals

- Manganese
- Bauxite (from which aluminum is made)
- Copper
- Lead
- Zinc

Ferroalloys

- Chromium
- Nickel
- Tungsten
- Cobalt
- Vanadium

Nonferrous Metals

- Tin
- Magnesium
- Titanium

List is derived from Resources in America's Future: Patterns of Requirements and Availabilities, 1960-2000. By Hans H. Landsberg, Leonard J. Fischman and Joseph L. Fisher. Published for Resources For the Future, Inc. by John Hopkins Press.

Minor Metals

- Lithium
- Beryllium
- Columbium (niobium)

Non-Metallic Non-fuel Minerals

- Sulfur

Criterion 5

"Has a higher or lower virgin materials content than the existing package/container and/or feasible alternatives submitted pursuant to SR-5."

Method

Manufacturer will list amount of post consumer recycled materials greater than 1% by weight in the package/container.

Ranking

- (1) The package/container which uses 1-10% recycled material receives a neutral; 10-50% recycled materials, a single plus; 51-100% recycled materials, a double plus; and no recycled material, a single minus.

Criterion 6

"Has more or less current potential for recycling than the existing package/container and/or feasible alternatives submitted pursuant to SR-5."

Method

- (1) From the components and volume of sales provided by the manufacturer, staff will determine availability of secondary material markets if package/container is introduced into Minnesota. Or the manufacturer may provide proof there is a market for that secondary material.
- (2) From a list developed by the MPCA, staff will determine whether package/container components can be or are currently being recycled in Minnesota, and at what levels, so that we may determine if market development must occur (refer to Table 9).

Ranking

- (1) If 3-10% of the package/container's volume of sales is recycled in Minnesota and more than five scrap brokers pays \$25/ton, the package/container will receive a single plus.
- (2) If 10% or more of the volume of sales of the package/container is recycled and more than five scrap brokers pay \$25/ton for a the secondary material, the package/container will receive two pluses.
- (3) If industry provides a recycling opportunity, the package/container is awarded a single plus.
- (4) If the package/container is not being recycled due to the presence of any non-detachable components (for example: dyes, adhesives, labels, attached metal rings, different plastics, etc.) or mixed materials, it is awarded a single minus.

TABLE 9

Markets for Recyclable Packaging Material
In Minnesota

Metals

ferrous metals

lead

copper

brass

aluminum

other non-ferrous

aluminum foil laminated with paper

No Market:

"tin" cans

bi-metal cans

Glass

clear

flint

amber

Paper

corrugated

kraft

No Market:

chipboard

Plastics

At this time, little or no plastics are being recycled; therefore, essentially no market exists.

Criterion 7

"Results in an increase or decrease in the volume of solid waste in comparison to the existing package/container and/or feasible alternatives submitted pursuant to SR-5."

Method

- (1) Manufacturer will list volume of original package and the package's compaction in landfill assuming 750 lbs. per cubic yard, or
- (2) Staff will compare packages to list of compactability factors (Table 10), or
- (3) The manufacturer may conduct a laboratory test to determine how much space each package/container would take in the landfill given average landfill compaction.
- (4) Manufacturer should provide information on components of shipping materials and specify whether these items are being recycled or disposed of in some other way.
- (5) Manufacturer will be asked whether any hazardous wastes, as defined by MPCA, are generated during the package/container manufacturing process.
- (6) Staff will determine whether hazardous waste is generated in the raw materials extraction process. (See attached list Table 11.)

Ranking

- (1) If hazardous waste is generated in the raw materials process, a single minus is earned.
- (2) If hazardous waste is generated in the manufacturing process, a single minus is earned.
- (3) If manufacturer provides information requested in #1 or #3 of method, staff will compare packages for total compacted landfill volume per package. If the package is 10-25% more voluminous than the feasible alternative, it earns a single minus; 26-50%--two minuses; 51-75%, three minuses; and over 75%, four minuses.

- (4) If alternative #2 under method is chosen, each package/container will receive one plus if it has excellent compactability; a neutral if it has good compactability; and one minus if it has fair compactability (Table 10).
- (5) If package/container and shipping materials are currently recycled in Minnesota to the extent of 3-10% of production recycled a single plus is awarded; 10% + of production recycled a double plus is awarded.

TABLE 10

MATERIAL	COMPACTABILITY
Shopping bags	Good
Cellulose bags	
Aluminum foil	Excellent
Polyvinyl chloride plastic film	Good
Polyester plastic sheet	Good
Polyethylene polypropylene sheet	Good
Fiberboard boxes	Good (some spring back)
Fiberboard cans (metal ends)	Good
Metal cans (aluminum, steel, tin-plate, bi-metal)	Excellent
Fiber-laminated plastic film	Good
Metal Tubes (tin, tin-lead, tin-copper, aluminum)	Excellent
Plastic	Fair
Plastic containers	Fair
Glass containers	Excellent
Wax-impregnated paper	Good

TABLE 10 (continued)

Rating System

RATING	Retained compacted form after release of compaction pressure	Density of compacted form after release of compaction pressure
EXCELLENT	Retained almost 100%	Relatively high
GOOD	Minor spring back from compacted form	Intermediate
FAIR	Considerable resiliency springback from compacted form	Relatively low

Pollution Abatement Disposability Ratings of Packaging Materials
Used Aboard U.S. Naval Ships: Vol. I, Vol. II, Harold E.
Achilles, January 1974.

TABLE 11

Those Materials Which Produce Hazardous Waste
In The Raw Materials Refining Process (1, 2)

<u>Metals</u>	<u>Glass</u> --None in literature survey
Copper ores	
Zinc and Lead ores	<u>Paper</u> --None in literature survey
Steel and Iron ores	
Aluminum (bauxite) (red mud)	
<u>Plastics</u>	
All plastics including:	
SBR	
Polyethylene (HDPE, LDPE)	
PVC, Polyvinyl Acetate	
Polystyrene (ABS and SAN)	
Polybutadiene	
Neoprene	
EPM-EPDM Rubbers	
Polybutenes and Copolymers	

¹Assessment of Industrial Hazardous Waste Practices: Rubber and Plastics Industry, Chapter II, Plastics & Synthetics. Feb., 1976, EPA.

²The Report to Congress: Waste Disposal Practices & Their Effects on Groundwater. Jan., 1977.

Criterion 8

"Has a beneficial or adverse economic effect on the consumer, in comparison to the existing package/container and/or feasible alternatives submitted pursuant to SR-5."

Method

- (1) Manufacturer is asked the market price (shelf cost per unit) of his package/container and its contents.
- (2) If the package/container is littered according to Criterion 2 and has no mitigating measure according to Criterion 2, staff will assume consumer must pay for litter pick-up.
- (3) Staff will use criterion 7 to determine total landfill volume. Staff will assume landfill costs are paid by the consumer.

Ranking

- (1) If the market price is less per unit of product than the alternative, one plus is awarded.
- (2) If the package is littered and has no mitigating measure according to criterion 2, one minus is awarded.
- (3) The package which has more landfill volume, as determined by criterion 7, will receive one minus.

Criterion 9

"Has a beneficial or adverse economic effect on the labor force, in comparison to the existing package/container and/or feasible alternatives submitted pursuant to SR-5."

Method

- (1) Manufacturer will be asked to list where the package/container is made and where the package/container is filled with the product, be it in Minnesota or outside of Minnesota.
- (2) From this information, staff will determine the impact on the labor force.

Ranking

- (1) If the package/container is manufactured and filled in Minnesota and the feasible alternative is manufactured and filled out of state, the package receives a single plus.
- (2) If the package/container is manufactured and filled in Minnesota and the feasible alternative is manufactured and filled in Minnesota, the package receives a neutral.
- (3) If the package/container is manufactured outside of Minnesota, but the package/container is filled in Minnesota, the package gets a neutral rating.
- (4) If the package/container is manufactured and filled outside of Minnesota and the feasible alternative is manufactured and filled outside of Minnesota, the package gets a neutral rating.
- (5) If the package/container is manufactured in Minnesota, but the package/container is filled outside of Minnesota, the package receives a neutral rating.
- (6) If the package/container is manufactured and filled outside of Minnesota, and the feasible alternative is manufactured and filled in Minnesota, the package/container receives a minus.

Criterion 10

"Has a beneficial or adverse economic effect on industry, in comparison to the existing package/container and/or feasible alternatives submitted pursuant to SR-5."

Method

- (1) Manufacturer will be asked to list where the package/container is made and where the package/container is filled with the product, be it in Minnesota or outside of Minnesota.
- (2) From this information, staff will determine the impact on Minnesota industry.

Ranking

- (1) If the package/container is manufactured and filled in Minnesota and the feasible alternative is manufactured and filled out of state, the package receives a single plus.
- (2) If the package/container is manufactured and filled in Minnesota and the feasible alternative is manufactured and filled in Minnesota, the package receives a neutral.
- (3) If the package/container is manufactured outside of Minnesota, but the package/container is filled in Minnesota, the package gets a neutral rating.
- (4) If the package/container is manufactured and filled outside of Minnesota and the feasible alternative is manufactured and filled outside of Minnesota, the package gets a neutral rating.
- (5) If the package/container is manufactured in Minnesota but the package/container is filled outside of Minnesota, the package receives a neutral rating.
- (6) If the package/container is manufactured and filled outside of Minnesota and the feasible alternative is manufactured and filled in Minnesota, the package/container receives a minus.

Appendix C

Interpretation of the term Feasible Alternative

1. The feasible alternative should be capable of containing the same product as the package being reviewed.
2. The feasible alternative package must contain the same or near the same amount of product as the package being reviewed.
3. When there is more than one feasible alternative, they shall be identified to the MPCA, who will decide on which package(s) will be considered the alternative(s).
4. The alternative package should be composed of materials in common use (i.e., used in 20 percent or more of the packages containing that particular product).
5. If the package is revision of a previous package, the old version shall be considered to be one of the feasible alternatives.

APPENDIX D

Minnesota Pollution Control Agency
Package Information Form

Please fill out one form for each proposed new package and each alternative(s) and label the forms clearly by writing the package name and "new" or "alternative" in the upper right hand corner

Company Name _____

Address _____

City _____ State _____ Zip _____

Person to Contact _____ Phone _____

A. Sample submitted with this form? Yes _____ No _____

Engineering drawing submitted with this form? Yes _____ No _____

If "yes" to either, please label sample and/or drawing to correspond with either original package/container, revised package/container or alternative package/container.

B. Product to be retailed in subject package/container.

Five digit product group, of the Numerical Lists of Manufactured Products (SIC Basis). _____

Brief description of the product.

C. What are expected volume of sales of product/container in Minnesota per calendar year after the introductory period?

_____/yr. 198_____

D. Is the package/container manufactured in Minnesota? ____Yes ____No

Is the package/container filled in Minnesota? ____Yes ____No

This package/container will be (was) introduced into the Minnesota retail market on or about _____.

E. Package/container is composed of ____ (no.) different materials and ____ (no.) components (or subassemblies) including closure.

(1) What is the volume of this package, exclusive of contents?

(2) What is the weight of this package, exclusive of contents?

(3) Package:

[illegible]

(4) Shipping materials are composed of _____(no.) different materials and _____(no.) components:

[illegible]

F. Package/container constituents (greater than 1%). Please attach calculations used to determine the percentage of recycled material.

Component _____	(a)	(b)	(c)	(d)
Constituent(s)	_____	_____	_____	_____
Chemical Name	_____	_____	_____	_____
Trade Name	_____	_____	_____	_____
Common Name	_____	_____	_____	_____
% of Constituent	_____	_____	_____	_____
Grams of Constituent	_____	_____	_____	_____
% of Constituent Recycled from Post- Consumer Waste	_____	_____	_____	_____

Component _____	(a)	(b)	(c)	(d)
Constituent	_____	_____	_____	_____
Chemical Name	_____	_____	_____	_____
Trade Name	_____	_____	_____	_____
Common Name	_____	_____	_____	_____
% of Constituent	_____	_____	_____	_____
Grams of Constituent	_____	_____	_____	_____
% of Constituent Recycled from Post- Consumer Waste	_____	_____	_____	_____

Component _____

	(a)	(b)	(c)	(d)
Constituent(s)	_____	_____	_____	_____
Chemical Name	_____	_____	_____	_____
Trade Name	_____	_____	_____	_____
Common Name	_____	_____	_____	_____
% of Constituent	_____	_____	_____	_____
Grams of Constituent	_____	_____	_____	_____
% of Constituent Recycled from Post- Consumer Waste	_____	_____	_____	_____

Component _____

	(a)	(b)	(c)	(d)
Constituent	_____	_____	_____	_____
Chemical Name	_____	_____	_____	_____
Trade Name	_____	_____	_____	_____
Common Name	_____	_____	_____	_____
% of Constituent	_____	_____	_____	_____
Grams of Constituent	_____	_____	_____	_____
% of Constituent Recycled from Post- Consumer Waste	_____	_____	_____	_____

Please answer question G or submit the data requested in question H for leaching; and answer question G or submit the data requested in question I for incineration.

G. Does the package/container contain any of the following elements?

greater than
1%

less than
1%

_____	_____	Aluminum
_____	_____	Ammonia
_____	_____	Antimony
_____	_____	Aromatics
_____	_____	Arsenic
_____	_____	Asbestos
_____	_____	Barium
_____	_____	Beryllium
_____	_____	Bismuth
_____	_____	Boron
_____	_____	Bromine
_____	_____	Cadmium
_____	_____	Calcium
_____	_____	Carbon Black (Particulate)
_____	_____	Cellulose, starch and fats
_____	_____	Chloride
_____	_____	Chlorine
_____	_____	Chlorine Organic Compounds
_____	_____	Chromium
_____	_____	Cobalt
_____	_____	Columbium (Niobium)
_____	_____	Cyanide
_____	_____	Fluorides
_____	_____	Fluorine Organic Compounds
_____	_____	Hexane
_____	_____	Hydrocarbons (such as paraffin wax)
_____	_____	Hydrochloric Acid
_____	_____	Hydrofluoric Acid
_____	_____	Iodine Organic Compounds
_____	_____	Iron
_____	_____	Lead
_____	_____	Lithium
_____	_____	Magnesium
_____	_____	Mercury
_____	_____	Metal Organic Compounds
_____	_____	Natural gas derivatives
_____	_____	Nickel
_____	_____	Nickel salts, nickel oxides and nickel carbonyl
_____	_____	Nitrates
_____	_____	Nitrites
_____	_____	Nitrogen Oxides

_____	_____	Octane
_____	_____	Organic Nitrogen Compounds
_____	_____	Organic Phosphorus Compounds
_____	_____	Organic Sulfur Compounds (such as methyl mercaptan)
_____	_____	Pentane
_____	_____	Petroleum derivatives
_____	_____	Phenol
_____	_____	Potassium
_____	_____	Selenium
_____	_____	Silicones
_____	_____	Silver
_____	_____	Sodium
_____	_____	Sulfates
_____	_____	Sulfur
_____	_____	Titanium
_____	_____	Tungsten
_____	_____	Urethanes
_____	_____	Vanadium
_____	_____	Zinc

H. Please submit leaching test data in accordance with EPA's "Representative Sampling Methods and Toxicity Test Procedure" as described in the May 19, 1980 Federal Register.

I. For each of the components listed in "F," state the products of degradation when incinerated in mg/cu meter.

Component _____

Products of Degradation _____
when Incinerated _____

Component _____

Products of Degradation _____
when Incinerated _____

Component _____

Products of Degradation _____
when Incinerated _____

Component _____

Products of Degradation _____
when Incinerated _____

-
- J. Please estimate the energy requirements for conversion or fabrication of the package/container and closure. (Not including raw materials.) Please list the assumptions used to make this calculation.

Please answer question K or question L.

- K. Estimate the volume of the original package/container and the package's volume after 750 lbs/cu yd. compaction is removed. Please list assumptions used to make this calculation.

- L. Provide laboratory data which will determine how much space each package/container takes after 750 lbs/cu. yd. compaction is removed. State laboratory and method used.

- M. Are shipping materials recycled at some point:

_____ Yes _____ No _____ Do not know

If "yes," do you estimate 3-10% of materials used are recycled? _____?

10% + of materials used are recycled? _____?

- N. List any hazardous wastes as defined by MPCA rule 6 MCAR §§ 4.9001-4.9002) generated during the conversion or fabrication of a package/container and closure.

0. Please list estimated market price of product sold at retail
in the subject package/container. _____

APPENDIX E

STATEMENTS OF COMMITTEE MEMBERS



February 18, 1982

RECEIVED

FEB 22 1982

MINN. POLLUTION
CONTROL AGENCY.

Mr. Samuel Hasson
State of Minnesota
Pollution Control Agency
Solid Waste Division
1935 W County Road B-2
Roseville, MN 55113

Dear Sam:

Listed below are my views on the seven issues you asked the committee members to respond to:

1. Should government involve itself in marketplace decisions involving packaging?

The government should not involve itself in marketplace decisions involving packaging. To my knowledge this was never considered an issue. The question was asked - should marketing issues, product protection issues and product safety issues be part of the review criteria. The question was never resolved to my knowledge.

2. What kind of public education program should and can the Agency undertake?

The following methods are considered to be the most effective public education programs:

- a. Citizens Advisory Council
- b. Educational tools
- c. Radio and talk shows
- d. Press releases and newsletters
- e. Curriculum guides

A sincere effort should be made in all of these programs to: stick to the issue of packaging; assure accuracy of statements; and minimize use of personal opinion. It was also discussed and generally felt that a reward system would be an effective tool; i.e., discount rate for trash volume and separation.

3. What kind of industry technical assistance and education programs should and can the Agency undertake?

The following methods are considered to be the most effective

Mr. Samuel Hasson
Page 2
February 18, 1982

industry technical assistance programs:

- a. Workshops and seminars
- b. Industry Advisory Council
- c. Information pamphlets and brochures

It is also felt that a MPCA award for "good packaging" would have a positive effect on industry's efforts.

4. What possible amendments to the packaging status and guidelines, if any, should be recommended?

Do not feel that amendments are necessary at this time. As the MPCA has experience implementing its programs, the need for amendments may become obvious.

5. What additional research efforts in the packaging area should be recommended?

Research efforts and decisions are needed in the areas of recycling, recovery and disposal systems. This would help guide industry in the development of packages that are compatible with the total system.

6. What should be the scope and nature of the package review process (including definitions, rating, ranking, criteria, etc.) under the Minnesota Packaging statute and the packaging guidelines?

It is felt that the review process needs further refinement before it will be effective. Some of the major problem areas are listed below:

- a. It is too broad in scope to be effective. It is hard to understand how package price, effect on labor force, or effect on industry and even energy is related to disposal problems or environment.
- b. There are still questions regarding feasible alternatives. What effect are issues such as existing capital equipment, required product shelf life, ability to go through distribution system, etc. going to have on feasible alternatives.
- c. The review system rates one package against another. Industry must know what criteria constitutes an environmentally sound package before development begins - not how does it compare to other packages.

It is felt that an effective public education program, an active technical assistance program and the competitive nature of the packaging business could be the ingredients that would result in the most cost effective and efficient solid waste program. It is hoped that positive results in these areas would make a potentially costly review process unnecessary.


Mr. Samuel Hasson
Page 3
February 18, 1982

7. What should be the future role of the Advisory Council?

The future of the advisory committee really depends on the direction of the MPCA. If they are not considering further refinement of the program, the advisory committee should be dissolved.

I am looking forward to the meeting to review the opinions of the other members of the advisory committee. Please let me know if you need additional information.

Sincerely yours,

A handwritten signature in cursive script that reads "Don Barnes".

Donald E. Barnes
Director, Development
and Quality Assurance

RECEIVED

JAN 25 1982

MINN. POLLUTION
CONTROL AGENCY

COMMENTS ON PUBLIC EDUCATION - PACKAGING

I believe this is the area that has the most potential for solid waste reduction.

The awesome power of advertising which will continue to cause people to act to their own disadvantage must be opposed effectively. This advertising succeeds by emotional appeals which generally boil down to "use our product and you will be _____". Substitute any of dozens of adjectives in the blank - more beautiful, sexier, healthier, thinner, more successful. Or, on the other side, will be free from headaches, itching, arthritis pain, poverty, loneliness, rejection.

In reality these products cost too much, expose the user to doubtful, if not dangerous substances, promote tooth decay and other health problems, and fill up our landfills.

The segments of society most vulnerable to this pressure are the poor, the insecure, the less educated, those poorly adapted to our materialistic society. They should be the focus of the public education effort.

To be successful, the education effort must deal with the various aspects of people's motivations. For example, concern for saving money could be dealt with by some simple comparisons. But go beyond pop in several kinds of packages. Instead, compare Sugar Pops with oatmeal, or potato chips with home-cooked potatoes, or a pot roast with wieners. Including a comparison of nutritional values could be dynamite!

There is also the question of what's "cool" or accepted by one's peers. For example, is it cool to let yourself be ripped off by BIG FOOD?

I wish I knew how to deal with convenience. Maybe appealing to a mother's pride in do-it-yourself or traditional cooking. This may be hard to sell to someone who has real problems coping with job, kids and housekeeping.

RE
1-20-82

COMMENTS ON INDUSTRY EDUCATION - PACKAGING

I suggest that this effort be minimal and directed at the less competent packaging engineers.

For example, it could consist of some simple statements such as:

1. The best package will cost least to perform its functions.
2. The best package will use the least materials to perform its functions.
3. If a package's failure rate is near zero it is probably overdesigned.
4. Costs per year for an overdesigned package can be huge.
5. The costs of improving a package occur only once, while excess costs for an over-designed product go on and on.

Secondly, it could include a bibliography of some useful publications to assist the packaging engineer, where available, cost, how to order.

Third, it should make the point that marketing concerns can be subject to compromise with other concerns such as package cost and disposal costs.

April 14, 1982

MINORITY REPORT OF PACKAGING ADVISORY COMMITTEE

When the PCA appointed the Packaging Advisory Committee in 1980, we thought that the Committee might be able to make some real progress in resolving some of the packaging industry problems with the guidelines and therefore facilitate practical implementation of the 1973 act. Unfortunately the final report of the Committee reflects very little, if any, progress toward that goal.

The Committee was faced with two basic impediments to meaningful progress. First of all, the Committee was structured so that it consisted "of twelve voting members, six of whom shall be industry representatives and six of whom shall be representatives of environmental, government and consumer interests." This may be an ideal balance, but by its very nature it ties the hands of the body. For example, the Committee never did elect a Chairperson basically because it would have been difficult if not impossible to agree on such a person. Often major issues were avoided or sidestepped because a consensus could not be achieved. The report is essentially a work product of Agency staff.

The second factor that blocked progress was the charge to the Committee made orally and in writing at our first meeting held in October of 1980. We were advised that with respect to any objections we had to the "guidelines" or "rules"

"these issues were fully discussed and a compromise reached when the Agency promulgated the guidelines in 1974. To reopen these issues and to consider amending the guidelines and statute without further justification is not advisable. Such a course would disrupt the initiation of the program, could possibly be illegal, and could result in a suit against the Agency by State environmental groups." (PCA staff memo to Committee dated October 30, 1980.)

The fundamental issue over the past nine years since the law was passed and the guidelines were adopted involves the ten criteria contained in the

guidelines to be used by the Agency in determining whether or not a package should be banned. The ten criteria are subjective and for all practical purposes are meaningless as a guide to packaging engineers in determining whether or not a package will be acceptable to the Agency.

The bulk of the Committee report attempts to rank the criteria in order of importance and to quantify the criteria by assigning a point system to individual aspects of the criteria. The proposed point system raises more questions than it answers. This is not the fault of the Committee because they seriously attempted to evaluate the specific criteria. However, there is no practical way to work with the existing criteria. For example, criteria 2 calls for the Agency to determine whether a new or revised package has a potential for creating more or less litter than the package it replaces. A criteria such as this makes little or no sense and it clearly cannot be quantified.

The solution to this problem is apparent. The criteria should be redrafted and simplified.

We do not agree with ranking of the SR-2 (C) criteria and the justification for same set forth in the Committee report. In view of the current high unemployment and economic problems facing the State of Minnesota, we believe that if a package is to be banned the impact on the business and labor force must be given a higher priority than the ninth and tenth place rating recommended in the report.

A second major problem area involves the scope of the guidelines. In their present form, the guidelines cover a wide spectrum of the packaging field. Even minor changes in a package such as a change in the materials used in the container cap or a change in container labels may subject the package to review by the Agency. The guidelines also provide that the new container

must be compared not only with the old container but also with all feasible alternatives.

It is conceded by all parties familiar with the law and guidelines that each year the packaging industry makes at least several thousand changes in containers that could result in those containers being subject to review by the Agency. The Agency staff and former Director have acknowledged that it can review no more than a few hundred packages each year; however, they are reluctant to limit the scope of the guidelines to reflect this reality.

A few simple changes in the law and guidelines could reduce the scope of the program and focus it on the few really significant changes in packaging that will have a long-term impact on the environment. Let's stop worrying about container lids and labels and deal with the major packaging changes.

In order to make this a workable program, we recommend the following changes in the guidelines and the law:

- 1) In SR-1 B(3), the definition of "New or Revised Container" should be amended to limit review to new packaging concepts and substantial or major changes in constituent materials of existing packages. This would limit the application of the guidelines to several hundred packages a year.
- 2) In SR-2 (B), we must compare the new container with the old and also with all packaging alternatives. We suggest eliminating the requirement that the new package be compared with all "packaging alternatives" referred to elsewhere in the guidelines as "feasible alternatives." What is a feasible alternative? This question alone will create major controversy. Even if agreement could be found as to what constitutes a "feasible alternative," this will broaden the process and in some cases give rise to comparing five to ten alternatives each time a new package

is reviewed. The cost to industry and the Agency in implementation of this provision would be staggering.

3) In SR-2 (C)(1) through (10), the criteria for evaluating a new or revised container should be entirely rewritten to simplify the standards. It is imperative that these criteria be worded in an objective manner capable of being understood and interpreted by the packaging industry. If this change is not made, the Agency and the packaging industry will remain at odds and each package review will give rise to a contested case under the APA and possibly end up in litigation.

The statute itself should be amended as follows:

1) In 116F.06 (Subd. 2), the statute grandfathers in packages sold at retail prior to the enactment of the act, namely May 25, 1973. This should be updated to the date the program is implemented. If not, extensive confusion and constant dispute will develop over whether or not a package is subject to review.

2) In 116F.06 (Subd. 3), the statute should be amended to eliminate the provision that any member of the public can submit a package and hence trigger the package review process. The power to initiate review should be limited to the Agency and its staff. If the Agency has no control over the trigger, they could be forced to conduct needless reviews.

Nine years have gone by since the statute was passed and eight years since the guidelines were adopted. If the statute and the guidelines are implemented in their present form and a package is subsequently banned under this system, we are certain to see another round of court cases and further delay. The Minnesota Supreme Court in the case of the Can Manufacturers Institute Inc. vs. State of Minnesota in 1977 upheld the statute but found

that questions involving the guidelines were not ripe until such time as the guidelines are applied to a package.

The act and guidelines envision a unique concept which goes far beyond anything attempted in any other state or by the Federal Government. The cost of fully implementing the program is certain to be substantial. The budget proposal by the staff for fiscal years 1982 and 1983 was \$216,008; however, we think that figure is extremely conservative and that the eventual budget cost will run into the millions. We urge you to accept the foregoing positive suggestions and then possibly we may be able to make progress in resolving this decade-old dispute. Let's not waste more time and money attempting to implement an unworkable set of guidelines.

We respectfully request that this be made a part of the official Committee record and that it be included as a part of the Committee Report. If it cannot be made a part of the record and report, then in the alternative we request that our names be stricken from the official report.

Respectfully submitted,

Michael S. Flanagan

John T. Gubak

Daniel Krivit
3033 Oakland Av. South
Minneapolis, MN 55407

May 13, 1982

Louis Breimhurst, Director
Minnesota Pollution Control Agency
1935 West County Road B2
Roseville, MN 55113

Dear Mr. Breimhurst:

I am writing this letter for two reasons. The first is to offer my interpretation of the "consensus" developed at the last meeting of the PCA Packaging Advisory Committee on April 14, 1982, concerning the review process.

It is not well known that this packaging review process was presented by industry representatives to the Minnesota Legislature in 1973 as an alternative to mandatory container deposits. In effect, the packaging review process was the resulting "compromise". Therefore, my second reason for writing is to clearly state my objections to the use of this review process as an exclusive alternative to the much more practical and proven strategy of mandatory container deposits.

It is my understanding at this time that the Committee's recommendation on the review process will state something to the effect:

In the process of working with the package review documents, the Advisory Committee came to recognize that the review process is impractical from all viewpoints as a review process. It may have value as a component of the Industry Information Program. The Legislature and MPCA need to find a new approach, since this impractical review process is the only influence the Agency now has in the area of packaging as it relates to solid waste.

I am confident in stating that this recommendation does not represent a "consensus" unless it is interpreted to mean that the review process and MPCA's authority to ban packages should remain in place until such time as the Legislature enacts a more effective solid waste reduction strategy.

As a professional in the field of solid waste management, my opinion is that because of the societal burden of landfills, the Minnesota Legislature should move swiftly to enact the most cost-effective waste reduction strategy known.....mandatory container deposits. I will attempt to support this position by distinguishing between a few of the facts and opinions about the issue.

Louis Breimhurst
Page Two

Fact: Eight states have now enacted container deposits systems.

Opinion: Crude estimates of the solid waste impact of deposits vary from less than one percent to as much as six percent.

Fact: The majority of people in Minnesota support mandatory container deposits as both a litter and waste reduction strategy. In an opinion survey of voting age adults commissioned by affected industries in 1977, 61 percent of the Minnesotans interviewed were in favor of a 10 cent deposit on disposables.

Opinion: When considering all costs and benefits of deposits, people in general are willing to pay a slightly higher price at the store for the benefit of a more efficient and environmentally sound waste management system.

Fact: In all deposit states with available data, there has been a net increase in jobs.

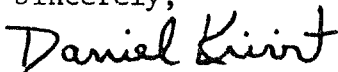
Opinion: Tobey Lapakko (Director of Consumer Affairs for the Minnesota AFL-CIO) stated at the Energy and Jobs Conference in July, 1981, "Many of labor's objections would be resolved if adequate funds were provided for retraining and retooling, to help those hurt by a changeover to use of refillable containers".

Opinion: Effective deposit legislation should recognize the increased costs to the retailers or recycling centers that handle the returned material. A portion of the deposit should be dedicated to help pay for these added handling costs.

Opinion: Mandatory deposit systems will have an overall positive impact on existing recycling networks because of efficiencies of scale brought on by the increased volumes of secondary materials. In other words, new equipment can be purchased because of significantly increased recycling rates.

Please include this letter in the appendix of the report of the Advisory Committee as was discussed at the April 14th meeting. Thank you for your thoughtful consideration of these comments and of the recommendations of the Committee as a whole.

Sincerely,



Daniel Krivit

cc: Curtis Sparks, Director of MPCA's Waste Management Assistance Section
Karl Wilson, Convener of the April 14th Packaging Advisory Committee meeting

Comments regarding the Report of the Minnesota Packaging Advisory Committee
Submitted by Linda Peck, Advisory Committee Member
April, 1982

Introductory Remarks:

As a member of the Packaging Advisory Committee, I originally felt that submitting my personal comments about the committee's work was not necessary. After all, there was a Committee Report which I had participated in formulating. This report, which took 2 years of effort, represented compromise with consensus by people with varied approaches to dealing with the solid waste dilemma. I was satisfied that the report was fair to these interests and should stand on its own merits. However, after attending the April 14, 1982, meeting when the Committee Report was presented to the MPCA Director, I feel that some members of the committee are no longer representing two years of committee effort. The intent of the report is being challenged, and for this reason I feel compelled to submit the following remarks.

In 1973, the Minnesota Legislature passed a bill (Section 6 of The Recycling and Solid Waste Act) that directed the MPCA to devise a system for reviewing the environmental impact of new or revised packages introduced into the state. Included in this mandate was the development of education programs for the public and advice and assistance programs for industry. Section 6 was passed as the result of heavy lobbying pressure by those opposed to deposit legislation in Minnesota. It was passed in place of a deposit bill in a year that such a bill was coming too close to being successful. In essence, Section 6 was a sidetracking measure - it was a bone flung to the public in place of a deposit bill. For all intents and purposes this bone was supposed to be buried.

The first mounds of dirt piled on the packaging review process came by way of a court challenge as to its constitutionality. This challenge lasted six years, but in 1979 the Minnesota Supreme Court upheld the state's right to review packages and the MPCA was able to get on with its mandate. A citizens' Advisory Committee was appointed to assist the MPCA in developing the program. The composition of the committee members is reminiscent of the legislative battle: it is composed of people who have worked hard and diligently for and against deposit legislation in Minnesota. After two years of effort, the MPCA staff members and the committee have succeeded in complying with the mandate.

Public Education and Industry Information Programs have been developed. These are not astounding accomplishments. What is astounding, however, is the fact that a process could be devised to review packages - that criteria could be identified and methods to quantify these criteria defined. Such a process defied being accomplished. The bone wasn't buried as intended; it actually has had meat put on it. It is through this process that the MPCA has the power to ban packages, if necessary.

X Now I sense that attempts are afoot to try and bury the bone a third time. It is imperative that the review process not be scuttled. I agree that the process is cumbersome, and hopefully the need to use it will not arise. However, the key to any success in the packaging review program requires that all three areas in the legislative mandate be present and available: education, cooperation and regulation. Without the power to ban packages, less attention will be given by consumers to the educational programs and less consideration will be given by package manufacturers to incorporate environmental impacts into their package designs. Until such time as a better process or approach to solid waste reduction is designed, the review criteria and ranking for packages as described in the committee's report should stand.

Specific Comments on the Report:

Public Education-----

Varied approaches to public education are vital. The seven recommended activities described in the report try to provide this. Because public education programs are designed to present information in a factual manner, they attract the attention of people who already have some awareness, interest or concern. They can not compete with advertising campaigns that often times use human insecurities to encourage sales. Commonly, people must leave their homes and attend a meeting to learn about a specific issue. This takes motivation. Ads, on the contrary, interrupt another, non-related program that people have decided to participate in. This takes no motivation on the part of the public. They are exposed whether they make a concerted effort or not. Thus, I feel short, ad-like pieces on television, radio, billboards, etc. that address solid waste reduction (recycling, buying habits, packaging, returnables, etc) may ultimately reach more people more effectively than programs that rely on people leaving their homes and attending a meeting.

People, organizations and agencies involved in public education about waste reduction should be setting an example by using sound waste reduction practices. This is not always easy to accomplish as our society has institutionalized wasteful practices and reasons for continuing them. By trying to "practice what one is preaching", one often discovers the barriers to change. For example, a school teacher may suggest that students buy pop in returnable containers only to find that pop will only be offered to students in the school in cans. The administration has decided that bottles are either unsafe or too messy. Perhaps no one has asked the question, "Why do we sell pop at school in the first place?" Another example is to look at the number of organizations that promote the recycling of paper but do not use recycled paper. Is this due to ignorance? Probably not. Chances are good that the option to buy recycled paper is not available or not possible under the present bid system. So, changes that may seem obvious and not too difficult to accomplish in one situation may not be so obvious or easy to accomplish in another. The reasons behind why a person, organization or agency is not using a certain waste reduction measure may have as much educational value as why they are using a certain measure.

Industry Information-----

I believe the most valuable informational tool for industry is the existence of the packaging review criteria and their respective rankings. As mentioned previously, the power to ban a package that this process provides for the MPCA is critical.

Review Process-----

The review process is cumbersome and ultimately will not impact to any great degree the package explosion. It is valuable in that it is all the state has at this point. I am sorry that so many people spent so much time developing a process that was never meant to amount to anything. Deposit legislation opponents have cost the state and the people of Minnesota a great deal - they have wasted valuable land; they have preyed on the dedicated efforts of MPCA staff members; they continue to waste resources, to treat them as if they are infinite; they rob from future generations; they look at the short term gain at the expense of options for the future. The process must stand, however, until something better is designed to replace it.

Linda Peck

Purchasing/3M

3M Center
PO Box 33327
St. Paul, Minnesota 55133
612/733 1110
Telex 29 7023
TWX 910 563 3712



April 14, 1982

Mr. Samuel Hasson
State of Minnesota
Pollution Control Agency
Solid Waste Division
1935 W. County Road B-2

Dear Mr. Hasson,

Through an apparent oversight, I did not receive a copy of the seven question list sent by the MPCA staff to other members of the Advisory Committee. Fortunately, I was able to obtain a copy of the questions from another member of the committee. I hope my response to the seven questions, contained herein, will not be too late for consideration along with the views of the other members of the Advisory Committee.

I did, however, receive by mail a copy of the Report, which will be presented on April 14, 1982 to the Executive Director of the MPCA. I also would like to comment on the Report later in this letter.

Regarding the seven questions:

1. Should government involve itself in marketplace decisions involving packaging?

State government should not involve itself in marketplace decisions involving packaging unless there is a demonstrated need not being met at the federal level to protect the public health, safety or welfare. Although the marketplace admittedly is an imperfect mechanism, it tends to be self-correcting in time. State government controls also are imperfect, but are not as self correcting and result in increased product costs and possible inconvenience to the consumer at the retail level.

2. What kind of public education program should and can the Agency undertake?

The MPCA has a powerful tool for public education through its access to the media. I believe the following are viable means of public education.

- a. Talk shows - radio and television.
- b. Press releases.
- c. Articles and columns in newspapers and magazines.
- d. Spot announcements - use public service time.
- e. Materials made available to schools.
- f. Materials furnished to industry.
- g. Furnishing speakers to organization meetings.

Any such program should be factual and objective - not attacks or criticisms of one segment or another of society.

3. What kind of industry technical assistance and education programs should and can the Agency undertake?

The limited budget of the program would preclude much activity here. However, the Agency should introduce the guidelines in a careful and thorough manner through correspondence to trade literature, MACI, trade associations, professional packaging organizations as well as conventional public announcements. Also the staff should announce and, in fact, make itself available to help interpret and use the guidelines when so requested by industry.

4. What possible amendments to the packaging statute and guidelines, if any, should be recommended?

It is common knowledge that the statute was passed rather hastily after a ban-the-can bill was defeated. As such it is not well written. The fact that nine years have passed without implementation is good evidence of its shortcomings.

The guidelines themselves are extremely complex and cumbersome. The review process is based on data that is debatable, as to its validity and accuracy. Some of the criteria for rating are not quantifiable in any objective sense.

Since the courts have ruled that the guidelines do not have the force of law, the statute should at least be amended to remove the power of the Agency to ban a package. The two legal positions are not compatible, but the enforcement power exists with no rational basis for its exercise.

5. What additional research efforts in the packaging area should be recommended?

Research efforts should be directed toward the politics and technology of recovery and reuse of the materials that are in the solid waste stream including packaging.

6. What should be the scope and nature of the package review process (including definitions, rating, criteria, etc.) under the Minnesota Packaging statute and the packaging guidelines?

The review process should be limited to issues that can be objectively measured. Criteria 2, 8, 9 and 10 (litter, effect on consumer, industry and labor) though laudable in their intent must all be measured very subjectively. They should be removed from the review process.

The concept of comparing a package against feasible alternative(s) should be replaced by a standard or guide that a proposed package can be compared to. This would enable a package designer to perform a self review as the design is developed thereby avoiding an unsatisfactory package.

7. What should be the future role of the Advisory Council?

I believe the Advisory Council has served its purpose and should be dissolved.

As to the report to be submitted by the Staff, I do not wish my participation on the Advisory Committee to be construed as endorsement of the report itself. Though the committee met several times to discuss the issues, the report is primarily the creation of the Staff. I do not feel that it adequately takes into account many of the statements and reflections of industry members of the committee. It is true that we on the committee were told early in our meeting series that we would have no authority to change the guidelines. But it's disappointing that the basic concept and structure of the guidelines have not changed except to grow more restrictive and difficult to use in spite of extensive comments regarding their difficulties.

In conclusion, I would like my name removed from the report lest its presence be construed as an endorsement of its content.

Thank you for the opportunity to participate nevertheless. It was an enjoyable and enlightening experience.

Sincerely,



William W. Petryk
Director of Packaging
(612) 733-0587

January 30, 1982

To: Curtis J. Sparks, P.E.
Chief, Waste Management Assistance Section
Solid and Hazardous Waste Division

RECEIVED

From: Ruth M. Saari
Member Citizens Packaging Advisory Committee

FEB 2 1982
MINN. POLLUTION
CONTROL AGENCY

Subject: Comments on Packaging Review Process, Public
Education and Industry Education.

Before beginning my comments on the above mentioned subjects, I want to express my appreciation for the fantastic amount and quality of work the staff members have done on this process. The Review Process especially has taken an inordinate amount of work and time.

Review Process

I believe it has been equally frustrating for staff and committee members to spend so much time on this process realizing it may never have to be used (hopefully). However it was necessary (mandated) to go through the exercise. Even if it should be used, the resulting waste reduction would be so infinitesimal it would seem to be ridiculous to use staff time to go through the process. It is my opinion the legislature that mandated this process was way off base and could have written a much more effective law (mandatory deposit and refund) which would save energy, resources, land area etc, etc not to mention taxpayer's money to fund this nearly useless process.

Public Education

After years of endeavor in the area of public education I had come to the conclusion this affluent society is more interested in convenience than in saving money, conservation of resources or wise land use. However, the current state of the economy and the realization of at least some of the citizenry that resources and land are finite should make public education about packaging a more worthwhile effort at this time. Consideration of the listed activities, staff needs and costs of each leads me to comment as follows:

12 Large group meetings and public hearings in my opinion not worth the staff time and cost.

13 Tape recorded information network - unless additional information should change my mind, I believe this activity would not be worth the staff time and cost.

8 Formal Attitude Survey - if this could be implemented by use of a student intern or U. class as suggested, it may prove worthwhile.

1,3,5,6 & 7 - all on-going activities should, in my opinion, be continued.

Of the new activities I would urge the implementation of:

2. Educational tools

11. Slide presentation
4. Small group meetings and workshops.

Questionable would be:

9. Citizen Advisory Council and workshops and
10. Ombudsman and community interest advocate.

I would not presume to suggest staff positions to be added except to urge the Director of the MPC~~A~~ to request whatever funds are needed to implement the programs which will best do the job of Public Information and Education in Packaging; extend the PCS position to September 30, 198~~2~~ and set up an education program on packaging for the State Legislature. The latter a tongue in cheek suggestion.

Industry Education

At the last meeting (Jan. 19) of the Advisory Committee it seemed a productive dialogue between staff members and industry representatives gave the staff some workable direction for communicating the purposes of the Review Process to selected industries. I would hope this could be pursued successfully.

The on-going activities should of course be continued.

Two new activities should be initiated in my opinion:

3. Assistance tools and
6. Good and/or bad packaging awards.

Here again the the PCS position needs to be extended at least until September 30, 1982

Respectfully submitted,

Ruth Saari
Ruth Saari

C. H. Turpin
311 Second Street SE
Minneapolis, MN 55414

February 19, 1982

Minnesota Pollution Control Agency
Solid and Hazardous Waste Division
1935 West County Road B
Minneapolis, MN 55113

Attn: Curtis Sparks
Chief, Waste Management Assistance Section

Dear Curt:

This is in response to your request that the members of the Packaging Program Advisory Committee respond with their views with respect to the three general areas covered by the Minnesota Packaging Law.

First, I would like to say that during my rather extended involvement with the MPCA staff that I was consistently impressed with the quality, effort and attitudes of the people I came in contact with. This feeling includes the Public and Industry representatives as well as the MPCA staff people.

The fact is, where we stand now represents the best efforts of a number of capable people over a number of years - that this should be kept in mind when we assess where we are and what should be done next.


After considerable thought, I concluded that the best way to organize my comments was to respond directly to the questions asked at the end of your memo "Packaging Issues".

You should understand that these responses are my personal opinions as a working Packaging Scientist and not an official response of my employer.

However, I did review these responses with others involved in similar duties - i.e. - people daily and directly involved in the selection and development of consumer packages and do feel that the responses represent a reasonable consensus of such people.

Attached is a detailed response to your questions which I feel cover the issues quite well.

Needless-to-say, if I can be of any further assistance, please let me know.



Charles H. Turpin

ebs

Attachment

February 19, 1982

Responses to questions asked in Packaging Issues memo received January 19, 1982:

- (1) Should the government involve itself in marketplace decisions involving Packaging?

Yes, to the extent that serious product or physical hazards might occur.

I feel this is already well covered by existing Federal Law, such as the Food and Drug Act of 1958.

No, to the extent economic questions are involved. People should have the right to choose, rather than have their choices forced upon them when dealing with economic choices.

- (2) What kind of public education programs should and can the Agency undertake?

Education, especially public education paid for with tax dollars, assumes that an agreed "Body of Knowledge" exists to be communicated.

Issues such as plastics vs. paper vs. glass for a given package are not simple; nor is the choice of large vs. small packages. Each is best at various times and the market has a way of sorting this out.

I suggest that public education programs be concentrated on the costs, space availability and other problems created by solid waste.

After all, one of the basic assumptions of our Society is that an informed public will make the right choices - and each of us can easily know what we are putting into our garbage cans.

- (3) What kind of industry assistance and education programs should and can the Agency undertake?

The most effective action that the Agency could take, in my opinion, would be to encourage, through contact with the very top people in Minnesota Corporations, "Package Optimization Programs".

The easiest and most efficient means of reducing solid waste is simply to do what you are already doing more efficiently.

Responses to questions asked in Packaging Issues memo received January 19, 1982
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My personal observation is that any package system that has not been analyzed by a skilled Packaging Scientist in several years can be expected to yield at least a 5% to 10% reduction when subjected to a rigorous value analysis.

There are difficult human as well as technical problems involved in such work since you must propose changes to a system that is currently functional at least at an acceptable level and people are concerned, sometimes rightly, about the affect of the changes proposed.

Consequently, success with such work often requires overt support from the very top people in an organization.

The Agency has access to such people and could encourage "Package Optimization" programs. The beauty of such programs is that they are both moral and generally highly profitable.

A goal of reduction of the mass of package material consumed of 5% would be quite reasonable, with 10% a good "reach" objective.

- (4) What possible amendments to the packaging statutes and guidelines, if any, should be recommended?

The areas associated with package review should be repealed. See item 6 for detailed comments.

- (5) What additional research efforts in the packaging area should be recommended?

Packaging Scientists need to know, with the confidence level and depth of information needed for technical decisions, what effect their alternatives may have on the solid waste stream and its disposal.

Such information is not presently available beyond the observation that all current package materials can be acceptably handled by existing land-fill and incineration procedures and that cost determines the use of scarce materials.

The standard of "Confidence Level and Depth of Information Needed for Technical Decisions" is a very high one. For example, the information included in the copy of Worksheets of Package Review received January 19, 1982 is interesting, but really does not meet this standard.

Responses to questions asked in Packaging Issues memo received January 19, 1982
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I do not see how an Agency of a single state could deal with such research.

The type of knowledge needed is clear. How to get it, I just do not know.

(6) What should be the scope and nature of the package review process?

Any review process, in order to be meaningful, must result in decisions that will be implemented.

(Otherwise, why conduct the review?)

Consequently, any review process must include all of the key elements that will determine such a decision.

The "Guidelines for Package Review" from their very first draft have excluded effective consideration of at least one key element of package design - that of Consumer Acceptance or Marketability. With such key elements not considered, it is unlikely that the people responsible for a package being reviewed would accept the outcome of the review.

While the Agency does have the power to ban a package, this power cannot be used without commitment of major agency resources. There appears to be agreement that this power would not be used unless a package appeared that would constitute a major "environmental insult". No one has been able to identify such a package or even describe the characteristics of such a package which could reasonably be expected to be marketed by anyone.

The power to ban is thus a standby authority. I have a real problem with authority of the undefined "I will know it if I see it" sort.

Should such a beast as a package that represents a major environmental insult appear, then the agency could request legislation dealing directly with the problem.

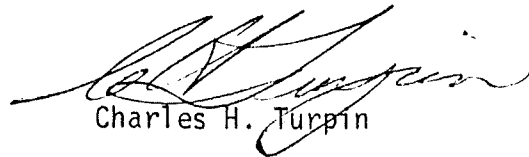
I feel enough effort and experience has been achieved over the past eight years to conclude that the Review Process envisioned in the Minnesota Package Review Law is not a good expenditure of state resources.

Consequently, I feel that the elements in the law dealing with package review should be repealed.

Responses to questions asked in Packaging Issues memo received January 19, 1982
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(7) What should be the future role of the Advisory Committee?

I think our job is done for now. Resources needed for accomplishing something substantial, with respect to public education or industry technical assistance, are unlikely to be available for the visible future. Should such resources become available, then perhaps the committee should be reassembled.



Charles H. Turpin

ebs

GENERAL COMMENTS

The final report should include the agency proposals developed with the assistance of this committee. The final report must comment, however lightly, on all the issues mentioned.

The MPCA has an uphill battle to educate and assist in any significant way. (My personal opinion is that government is least efficient at doing the sort of job handed to MPCA by the legislature and the courts. Government can be effective when exercising power, but not when attempting persuasion.)

We have assisted in devising a program which might have some impact if executed fully, but we recognize that chances of success are severely restricted by lack of funds.

A separate internal staffing memo might be included to put the budget limitations in perspective. (But this really does not belong in the committee report.)

ISSUES

Government involvement: I think we ended up saying that whether or not we accept MPCA involvement, it is a reality.

Public education, industry assistance, and the review process are covered in some detail.

We should reexamine the 10/80 preliminary report on possible amendments to the statutes and guidelines. This might be a place to put the definition of "feasible alternative".

Did we ever look at additional research?

Now is the time for discussion of the future role of the committee. Does the committee see a future role? Does MPCA need or want us?

REVIEW PROCESS

I believe the submission form and criteria packet are in pretty good shape by now.

We need to put together a "package" outlining the review process for guidance of interested parties, including those considering submission:

1. Introduction and statutory authority
2. Definition of reviewable packages
3. Definition of feasible alternatives
4. Criteria
5. Rankings
7. Submission forms

Karl Willson 1/26/82

PUBLIC EDUCATION

Curt Sparks' memo of 7-6-81 is not a good presentation on public education to be included in the final committee report. It is good as the internal document it was designed to be, but it is slanted heavily toward staffing needs rather than presenting the public education program.

The memo is also outdated and needs to reflect the situation as of the date of the final committee report.

Let's clarify the error in the first paragraph of the memo; the amount of packaging in the solid waste stream must surely be close to the 13% stated in the MRI report "The Role of Packaging in Solid Waste Management-1966 to 1976"

Back in Sept, 1980, we had a preliminary report on public education. I don't have a copy of the report as revised, but feel that such would be a much better way to report the advice of this committee to MPCA. My recollection is that we got into the Industry Advisory and Review programs and never completed the efforts on Public Education.

INDUSTRY ASSISTANCE

We used this title rather than Industry Education.

Again, the 7-6-81 memo is focused on staffing and is not a good presentation of the IA program developed with the advice of this committee.

We have the revised Industry Technical Assistance Memorandum of 1-6-81 which is a good vehicle to present the program.

Further on the 7-6-81 memo:

The first paragraph seems to do a good job of justifying the Public Education program rather than IA. Part of this is due to the premise that industry change must wait to follow consumer demand. We should recognize and encourage industry initiative.

I'm also curious about the statement that the WMAS has "knowledgeable staff available to implement an effective packaging program." It looks to me like those working on the program are still learning, as are we on the committee.

Karl Willson 1/26/82

CHAPTER 116F

RECYCLING OF SOLID WASTE

Sec.		Sec.	
116F.01	Statement of policy	116F.03	Powers and duties
116F.02	Definitions	116F.06	Packages and containers; assistance; orders; report
116F.03	State aid to regions, municipalities, institutions	116F.08	Penalties
116F.04	Rules		

116F.01 STATEMENT OF POLICY. The legislature seeks to encourage both the reduction of the amount and type of material entering the solid waste stream and the reuse and recycling of materials. Solid waste represents discarded material and energy resources, and it also represents an economic burden to the people of the state. The recycling of solid waste materials is one alternative for the conservation of material and energy resources, but it is also in the public interest to reduce the amount of materials requiring recycling or disposal.

The legislature also seeks to encourage the design and implementation of regional programs for materials conservation which take into account the variations in solid waste generation throughout the state.

[1973 c 748 s 1]

116F.02 DEFINITIONS. Subdivision 1. As used in sections 116F.01 to 116F.08, the terms defined in this section have the meanings given to them.

Subd. 2. "Agency" means the Minnesota pollution control agency.

Subd. 3. "Institution" means an incorporated private organization.

Subd. 4. "Municipality" means any city, or any designated agency thereof.

Subd. 5. "Region" means any county, group of counties, group of municipalities, any special district, or any designated agency thereof.

Subd. 6. "Resource recovery system" means any system used for (a) the recovery of materials or energy from solid waste, or for (b) the collection, transportation, separation, sorting, processing or storage of solid materials which aids in the recovery of materials or energy from solid waste.

Subd. 7. "Solid waste generation" means that a solid material in its final configuration has fulfilled the purpose for which it was created, cannot be reused in its final configuration, and must be disposed of or recycled into a new or different product.

[1973 c 123 art 5 s 7; 1973 c 748 s 2]

116F.03 STATE AID TO REGIONS, MUNICIPALITIES, INSTITUTIONS. The agency may, in the name of the state and within the limit of appropriations provided herein, make or contract to make grants-in-aid to any region, municipality, or institution for:

(1) The development of feasibility studies for resource recovery systems or facilities;

(2) The construction of a resource recovery facility or implementation of a resource recovery system; and

(3) The development of programs to encourage solid materials conservation and the reduction of environmental impact from solid waste, including but not limited to, public education and encouragement of market demand for reusable or recyclable materials.

[1973 c 748 s 3]

116F.04 RULES. Subdivision 1. The agency shall promulgate rules for the administration of grants authorized in section 116F.03. The rules shall establish and contain as a minimum:

(a) Procedures for grant applications by regions, municipalities, or institutions;

(b) Conditions and procedures for the administration of such grants;

(c) Criteria of eligibility for grants including, but not limited to, those specified in subdivision 2; and

(d) other matters as the agency may find necessary to the proper administration of the grant program.

Subd. 2. The rules of the agency shall provide that a high priority be given to applications for projects and programs designed to service more than one county or designed to service areas of the state where natural geologic conditions make sanitary landfills undesirable. The rules shall contain criteria relating to:

- (a) The technological feasibility of a project;
- (b) The availability of other sources of financing; and
- (c) The adequacy of provisions to assure proper, efficient and economical operation and maintenance of a resource recovery project after the construction is completed or the resource recovery system is implemented.

Subd. 3. Grant-in-aid payments made by the agency pursuant to section 116F.03, shall not exceed 50 percent of the total costs of the projects or programs funded.

Subd. 4. Funding under section 116F.03 shall not be made available to any resource recovery facility which accepts solid waste material which is transported to the facility primarily in motor vehicles with a load capacity of less than ten cubic yards.

[1973 c 748 s 4]

116F.05 POWERS AND DUTIES. Subdivision 1. **State powers.** In administering and enforcing sections 116F.01 to 116F.08, the agency may:

- (a) Initiate and conduct public education programs which encourage the conservation of solid materials, the reduction of solid waste generation, and the reduction of environmental impact of solid waste;
- (b) Encourage the development of markets for reusable or recyclable solid materials;
- (c) Conduct studies of the environmental, resource and economic impact, and of the relative advisability or preference of use, of various material components which enter the solid waste stream;
- (d) Develop recommendations to encourage redesign and the standardization of material composition and configuration, in order to facilitate material reuse or recyclability;
- (e) Assist in the planning and development of resource recovery systems; and
- (f) Encourage the extension of the useful lives of products, and the reduction of both solid waste generation and solid waste management costs.

Subd. 2. **Powers of grantees.** A region, municipality, or institution may apply to and contract with the agency for state aid, but may expend aid money's received from the agency pursuant to 116F.01 to 116F.08 only for purposes which are consistent with sections 116F.01 to 116F.06.

Subd. 3. **Limitation.** In exercising its powers under this section, the agency shall seek those alternatives which maximize the conservation of energy and materials while minimizing the environmental impact and the cost to the people of the state. Consideration shall be given to economic factors, including but not limited to, effects on the labor force.

[1973 c 748 s 5]

116F.06 PACKAGES AND CONTAINERS; ASSISTANCE; ORDERS; REPORT. Subdivision 1. The agency shall advise and assist industry and business within the state in providing and developing packaging and containers consistent with environmental policies of the state.

Subd. 2. The agency shall review new or revised packages or containers except when such changes involve only color, size, shape or printing. The agency shall review innovations including, but not limited to, changes in constituent materials or combinations thereof and changes in closures. When the agency determines that any new or revised package or container would constitute a solid waste disposal problem or be inconsistent with state environmental policies, the manufacturer of the product may withdraw it from further consideration until such time as the manufacturer may resubmit such product to the agency, or, the agency may, by order made after notice and hearing as provided in chapter 15, and following an additional period not to exceed 30 days during which the environmental quality council may review the proposed action, prohibit the sale of the package or container in the

state. Any such prohibition shall continue in effect until revoked by the agency or until the last legislative day of the next following legislative session, whichever occurs first, unless extended by law. This subdivision shall not apply to any package or container sold at retail in this state prior to final enactment of sections 116F.01 to 116F.08.

Subd. 3. The agency shall adopt and may amend or rescind guidelines identifying the types of new or revised containers and packaging that are subject to its review after notice and hearing as provided in section 15.0412, subdivision 4. Any person may submit to the agency a sample of a package or container for agency review. The agency shall review the sample, and may require the person to furnish such additional samples and information as may be necessary for it to determine the environmental or solid waste disposal problems that the container or packaging would cause. Except as may be necessary in connection with any public hearing, the agency shall keep the samples and information confidential if the person submitting them certifies that disclosure of said samples and information would affect the competitive position of the person. If the agency fails to issue an order prohibiting sale of a package or container within 120 days after the sample was submitted, the agency shall not prohibit it thereafter. The agency may, however, for good cause, order the 120 day period to be extended for an additional period not to exceed 30 days.

Subd. 4. The agency's report to the legislature on progress on abatement of land pollution required by section 116.10, shall be supplemented by annual recommendations concerning problems relating to solid waste generation and suggested remedies, including but not limited to the prohibition of the sale or use of any package or container.

Subd. 5. The provisions of this section shall not be severable. If any provision of this section is found to be void for any reason, the remaining provisions of the section shall be void also.

[1973 c 748 s 6]

116F.08 PENALTIES. Any person, corporation, partnership, firm, association, political subdivision or body corporate and politic which violates any provision of sections 116F.01 to 116F.07, or any regulation or rule promulgated thereunder, shall be guilty of a misdemeanor; and each day that a violation occurs or continues may be deemed a separate offense. In addition, the agency may revoke the grant of any grantee violating the provisions of sections 116F.01 to 116F.07, or may seek other equitable or legal relief.

[1973 c 748 s 8]

MINNESOTA POLLUTION CONTROL AGENCY
DIVISION OF SPECIAL SERVICES
REGULATIONS FOR PACKAGING REVIEW

DECEMBER 20, 1974

SR-1 APPLICABILITY AND DEFINITION

(A) Scope

These regulations and criteria govern the review of new or revised packages/containers sold at retail within the State of Minnesota after May 25, 1973, in accordance with Minn. Stat. Chapter 116F (Supp. 1973).

The purpose of these regulations is to:

- (1) Identify the types of new or revised packages/containers which may be subject to Agency review;
- (2) Set forth the criteria which the Agency will use in evaluating the new or revised packages/containers;
- (3) Establish the types of samples and information that shall be requested or required by the Agency for evaluation of new or revised packages/containers;
- (4) Establish a procedure for the manner in which samples and information shall be submitted and reviewed;
- (5) Establish exemptions for some new or revised packages/containers.

(B) Definitions

- (1) Agency. "Agency" means the Minnesota Pollution Control Agency, its agent or representative;
- (2) Closure. "Closure" means any article, device, or contrivance made in whole or in part of paper, paper-board, fiber, wood, ceramic, glass, metal, plastic or any combination of such materials, including, but not limited to caps, clips, covers, lids, tabs or seals for the purpose of closing or fastening a package/container, but not including staples, metal tacks, nails, glues and adhesives;
- (3) New or Revised. "New or Revised" means either a new packaging concept not previously sold at retail in Minnesota or any change in a package/container sold at retail before May 25, 1973, or approved for sale at retail under these regulations. Such changes include: change from one product to another product (different five-digit product codes of the Numerical List of Manufactured Products (New (1972) SIC Basis)) contained in the package/container; change in the chemical formulation of any constituent material; substitution of one or more constituent materials; substitution of closure; substitution of label; changes in design; and all other changes, except any changes in size, color, printing, or shape. Changes from one product to another within the same five-digit product code of the

Numerical List of Manufactured Products (New (1972) SIC Basis) shall not be considered a change of product for purposes of this definition.

- (4) Package/Container. "Package/Container" means any article, receptacle, device or contrivance made in whole or in part of paper, fiber, wood, ceramic, glass, metal, plastic or any combination of such materials, including but not limited to bags, baskets, bottles, boxes, cans, cartons, carrying cases, cups, cylinders, envelopes, glasses, jars, jugs, pails, tubs, sacks, trays, tubes, tumblers, and vessels intended for use in conveying any product for sale at retail. Such term does not include any shipping carton not intended to be sold at retail;
- (5) Person. "Person" means any human being, any municipality or other governmental or political subdivision, or any other public agency, any public or private corporation, any partnership, firm, association or other organization, any receiver, trustee, assignee, agent or other legal representative of any of the foregoing, or any other legal entity, but does not include the Minnesota Pollution Control Agency;
- (6) Review Period. "Review Period" means the one hundred and twenty (120) day time period in which the Agency may review submitted samples and the accompanying information. The Agency may, for good cause shown, order the one hundred and twenty (120) day period to be extended for an additional period not to exceed thirty (30) days;
- (7) Sold at Retail. "Sold at Retail" means sale or other transfer to the household of the ultimate consumer;
- (8) User. "User" means an industry which combines packages/containers and products to create a unit intended for sale at retail.

(C) Severability

If any provision of any packaging regulation or the application thereof to any person or circumstances is held to be invalid, such invalidity shall not affect other provisions or application of any other part of such regulation or any other regulation which can be given effect without the invalid provision or application; and to this end all provisions of all packaging regulations and the various applications thereof are declared to be severable.

SR-2 CRITERIA

(A) In determining whether a package/container is consistent with state environmental policy, the Agency shall place emphasis upon state responsibilities and policies established by the Environmental Policy Act, Minn. Stat. 116D.02 subd. 2 (Supp. 1973), and by Minn. Stat. 116F.01

(B) The Agency staff will compare a new or revised package/container with packaging alternatives. The object of this comparison will be to encourage those alternatives which maximize material and energy conservation while minimizing adverse environmental impact and increased economic costs to the people of the state. The staff will assess the relative merits of alternatives and encourage those alternatives which:

- (1) Minimize the potential for environmental contamination, including but not limited to the release of metals or substances with the potential for biological harm;
- (2) Minimize the total system energy costs;
- (3) Minimize the use of scarce or non-renewable resources;
- (4) Minimize the use of virgin materials;
- (5) Are most recyclable where recyclability is consistent with (1) and (2) above;
- (6) Minimize adverse economic effects on the consumer, the labor force, and industry, consistent with (1) and (2) above.

(C) In reviewing a new or revised package/container the Agency shall compare it to the existing package/container and/or all feasible alternatives submitted pursuant to SR-5. The decision to approve a new or revised package/container shall be based on a finding that the total positive impacts of the new or revised package/container outweigh the total negative impacts in comparison to the existing package/container and/or all feasible alternatives submitted pursuant to SR-5. The agency shall assess whether the new or revised package/container:

- (1) Contains greater or lesser quantities of metals, hydrocarbons, organic or inorganic chemicals, or other substances which upon release into the environment through incineration, leaching, or littering have or may have potential for biological harm when compared with the existing package/container and/or feasible alternatives submitted pursuant to SR-5;
- (2) Has a potential for creating an environmental problem as litter, which is higher or lower than the existing package/container and/or feasible alternatives submitted pursuant to SR-5;
- (3) Requires more or less Btu/kg of product than the existing package/container and/or feasible alternatives submitted pursuant to SR-5 for the same

package/container size;

- (4) Requires more or less scarce or non-renewable resources than the existing package/container and/or feasible alternatives submitted pursuant to SR-5, for the same package/container size;
- (5) Has a higher or lower virgin materials content than the existing package/container and/or feasible alternatives submitted pursuant to SR-5;
- (6) Has more or less current potential for recycling than the existing package/container and/or feasible alternatives submitted pursuant to SR-5;
- (7) Results in an increase or decrease in the volume of solid waste in comparison to the existing package/container and/or feasible alternatives submitted pursuant to SR-5;
- (8) Has a beneficial or adverse economic effect on the consumer, in comparison to the existing package/container and/or feasible alternatives submitted pursuant to SR-5;
- (9) Has a beneficial or adverse economic effect on the labor force, in comparison to the existing package/container and/or feasible alternatives submitted pursuant to SR-5; and
- (10) Has a beneficial or adverse economic effect on industry in comparison to the existing package/container and/or feasible alternatives submitted pursuant to SR-5.

SR-3 REVIEW PROCEDURE

(A) Package/container review by the Agency may be initiated in any of the following ways:

- (1) A package/container user may submit the information and samples described in SR-5. While such submission for review is not mandatory, any package/container user wishing to initiate the review process must submit all the information requested in SR-5;
- (2) The Agency itself may identify a package/container which it believes is subject to its review and shall proceed according to SR-3(C);
- (3) Any other person may submit to the Agency a package/container for review, and if the Agency determines that such package/container is subject to its

review, the Agency shall proceed according to SR-3(C).

(B) Once the review process is initiated, the Agency shall review the new or revised package/container during the review period. If the Agency determines that the package/container constitutes a solid waste disposal problem or is inconsistent with state environmental policies, as manifested in the criteria of SR-2, the Agency may by order made after notice and hearing as provided in Chapter 15, Minn. Stat. (1971), and following an additional period not to exceed thirty (30) days during which the Minnesota Environmental Quality Council may review the proposed action, prohibit the sale of the package/container within the state. Any such prohibition shall continue in effect until revoked by the Agency or until the last legislative day of the next following legislative session, whichever occurs first, unless extended by action of the legislature. If the Agency fails to issue an order prohibiting a package/container by the end of the review period or to provide written notice of its acceptability, the Agency may not thereafter prohibit it, pursuant to Minn. Stat. Chapter 116F (Supp. 1973). If it is determined that the package/container is acceptable, the Agency will so notify the submitting user. Any package/container approved by the Agency may subsequently be used to enclose or convey other products within the same five-digit product group of the Numerical List of Manufactured Products (New (1972) SIC Basis), as the product in the approved package/container without further review by the Agency, but use of a package/container to enclose or convey products within other product groups may subject package/container to review initiated pursuant to SR-3(A).

(C) Where the Agency or any other person initiates the review process by identification or submission of a package/container, a Notice of Intention to Review shall be sent to the user of the package/container within ten (10) days of identification or receipt of the package/container. Upon receipt of such Notice, the package/container user shall have thirty (30) days to submit the information required by SR-5. The review period shall begin upon the date of identification or submission of a package/container.

SR-4 EXEMPTIONS

(A) A new or revised package/container, will not be reviewed by the Agency if:

- (1) It is marketed with a deposit of five (5) cents or more to encourage its return to the distribution system for reuse;
- (2) It has a capacity of over two (2) gallons by volume or twenty-five (25) pounds by weight;
- (3) It is required by federal laws and regulations

relating to health or safety. Any modification of a package ostensibly intended to achieve compliance with federal law, which involves changes of a kind different than those required for compliance with the law or regulation shall negate the exempt status of the package;

- (4) It conveys products which are subject to the regulation of the U.S. Department of Agriculture pursuant to the Federal Meat Inspection Act, 21 U.S.C. 601-691;
- (5) It conveys products other than those which come within Industry Numbers 20111 - 20999 inclusive, 28412 - 28424 inclusive, 28441 - 28445 inclusive of the Numerical List of Manufactured Products (New (1972) SIC Basis).

(B) A new or revised package/container, will not be reviewed by the Agency;

- (1) When a package/container is made substantially of glass, and the change is of the following nature:
 - (a) Any change in the chemical formulation of the glass or its coloring agents; or
 - (b) Any change in enamels or coatings which are for color or identification; or
 - (c) Any change in coatings or surface treatments used to facilitate lubricity in manufacture or handling as long as such coating is not a structural portion of the package/container.
- (2) When a package/container is made substantially of aluminum or steel, and the change is of the following nature:
 - (a) Any change in the alloy chemistry or temper thereof within the same metal type; or
 - (b) Any gauge change; or
 - (c) Any change in seam construction or solders or adhesives; or
 - (d) Any change in the inside coatings of metal packages/containers as long as such materials were in use for any steel or aluminum package/container coatings prior to May 25, 1973, or are approved by the United States Food and Drug Administration for contact with food surfaces and provided that such coatings do not exceed .0025 inch in gauge.
- (3) When a package/container is made substantially of

paper or paper products and the change is of the following nature:

- (a) Any change in board or paper coatings of clay, waxes, lacquers, or polyolefin compounds as long as such substitute materials were in use as board or paper coatings prior to May 25, 1973, or are approved for contact with food surfaces by the United States Food and Drug Administration; or
 - (b) Any change of foil laminates which do not exceed .0005 inch in gauge in those cases where scientific or engineering data substantiate the need for a functional barrier; or
 - (c) Any change in caliper or basis weight; or
 - (d) Any change in board or paper furnish where such change does not represent a specification change by the user with the effect of reducing recycled content.
- (4) When a package/container is made substantially of plastic-type materials and the change is of the following nature:
- (a) For rigid wall containers:
 - (1) Any change in density; or
 - (2) Any substitution of standard formulations within the same monomer group.
 - (b) For pouches, liners, chubs, and other film packaging including laminates with a wall thickness not exceeding .010 inch:
 - (1) Any substitution within or between the following groups:
 - a. Nylons
 - b. Polyester
 - c. PVDC
 - d. Polyethelene
 - e. Polypropylene
 - f. Ionomers
 - g. Polyethelene terephthalate; or
 - (2) Any change in density or caliper of any material constituents so long as the total gauge does not exceed .010 inches; or
 - (3) Any substitution individually or in combination of substrate materials of paper,

glass, nylon or cotton fabric.

- (c) A new or revised package/container otherwise exempt from review pursuant to SR-4 (B) (4) may be reviewed by the Agency if the revision involves the use of any foamed resins.

(C) Notwithstanding any other provisions of these regulations, no package/container shall be reviewed if:

- (1) It is identical in all ways to a package/container sold at retail in Minnesota before May 25, 1973, or if any changes do not bring it within the definition of "new or revised" contained in SR-1, and
- (2) The product to be packaged in the package/container is within the same product group as a product sold at retail before May 25, 1973, in such identical container. For products within the Numerical List of Manufactured Products (New (1972) SIC Basis) subject to review the five-digit product code shall be used to determine whether the products are within the same product group.

(D) If the user certifies that the package/container has been introduced into the Minnesota retail market for test marketing, seasonal, or promotional purposes, and further certifies the period of time necessary to complete such test marketing, seasonal or promotional purpose, the Agency may, upon request of the user defer review for that period of time equal to the test marketing, seasonal and promotional time period so certified by the user; provided, however, that in no event shall such deferral extend for longer than one hundred and eighty (180) days. In addition, the Agency may defer review for a fixed period of time (not to exceed one hundred and eighty (180) days where the user certifies that an emergency situation has arisen; the term "emergency situation" includes specifically, but is not limited to, any change made in a package which is temporary and caused by an inability to obtain supplies.

(E) Notwithstanding any other provisions of SR-4, the user or manufacturer of any package/container who believes the package/container to be exempt under SR-4 (A), (B) or (C) may, but is not required to:

- (1) Submit to the Agency a request for Certification of Exemption which identifies the subdivision of SR-4 that the user, or manufacturer believes is applicable and which contains appropriate documentation. The Agency may request the submission of additional information necessary to determine whether such Certification of Exemption is appropriate.
- (2) Initiate the review process, pursuant to SR-3 (A) (1), by submitting the information and samples

described in SR-5.

SR-5 INFORMATION REQUIRED FOR REVIEW

(A) Where the package/container review process has been initiated pursuant to SR-3, the package/container user may, but is not required to, submit a sample of the new or revised package/container. The sample may, but need not, contain the product retailed in it. Such samples and products will not be returned to the submitting party.

(B) The package/container user who initiates the review process pursuant to SR-3 (A) (1) or who receives a Notice of Intention to Review issued pursuant to SR-3 (C) shall submit to the Agency the following information on the new or revised package/container:

- (1) A brief description of the package/container and closure including its appearance, weight (in grams of each sub-assembly), volume of package/container and weight of product to be contained therein;
- (2) In the event a sample is not submitted, an engineering drawing of the package/container with closure must accompany the application for review;
- (3) A brief description of the product to be retailed in the new or revised package/container and the five-digit product group of the Numerical List of Manufactured Products (New (1972) SIC Basis) thereof;
- (4) The trade name and/or common names of all components present in quantities greater than 1% by weight in the package/container and closure;
- (5) The chemical name (following the nomenclature of Chemical Abstracts) of all components present in quantities greater than 1% by weight in the package/container and closure including but not limited to resins, catalysts, plasticizers, stabilizers, coatings, coloring agents, metals and preservatives. The total mass of each such constituent shall be listed in grams. However other chemical constituents or contaminants constituting less than 1% by weight should be reported if known;
- (6) The percent of recycled content from post-consumer waste of each component if known;
- (7) A brief statement as to whether the user's specifications for the package/container specifically

discriminate against the use of recycled materials from post-consumer waste in cases where the United States Food and Drug Administration does not prohibit such reuse;

- (8) The best estimate of energy requirements for fabrication or conversion of the package/container and closure;
- (9) Any specifications for the package/container and closure which limit total heavy metals and which specifically limit any undesirable impurities such as unreacted monomer, catalysts or reaction-by-products to lowest levels consistent with good manufacturing practices;
- (10) An estimate by the package/container user of effects on the labor force of acceptance or prohibition of the package/container. This estimate shall include both positive and negative effects;
- (11) An estimate by the package/container user of effects on industry of acceptance or prohibition of the package/container. This estimate shall include both positive and negative effects;
- (12) An estimate by the package/container user of unit price per ounce of product sold at retail for the same package/container size;
- (13) The approximate date the package/container will be introduced into the Minnesota retail market;
- (14) A listing of assumptions and methods of computation used to determine the calculated data required by SR55 (B) (6), (8), (10), (11) and (12).
- (15) The name and address of the user of the package/container, including the name of a person within the company who may be contacted for additional information.

(C) The package/container user who initiates the review process, pursuant to SR-3(A) (1) or who receives a Notice of Intention to Review issued pursuant to SR-3(C) shall submit to the Agency for purposes of comparison the following information on any original package/container:

- (1) A brief description of the original package/container and closure including its appearance, weight (in grams of each sub-assembly), volume of package/container and volume of product to be contained therein;
- (2) In the event a sample is not submitted, an engineer-

ing drawing of the package/container with closure shall accompany the other information;

- (3) A brief description of the product retailed in the original package/container and the five-digit product group of the Numerical List of Manufactured Products (New (1972) SIC Basis) thereof;
- (4) The trade name and/or common names of all components in the package/container and closure;
- (5) The chemical name (following the nomenclature of Chemical Abstracts) of all components present in quantities greater than 1% by weight in the package/container and closure including but not limited to resins, catalysts, plasticizers, stabilizers, coatings, coloring agents, metals and preservatives. The total mass of each constituent shall be listed in grams. However other chemical constituents or contaminants constituting less than 1% by weight should be reported if known;
- (6) The percent of recycled content from post-consumer waste of each component if known;
- (7) The best estimate of energy requirements for fabrication or conversion of the package/container and closure;
- (8) Any specifications for the package/container and closure which limit total heavy metals and which specifically limit any undesirable impurities such as unreacted monomer, catalysts or reaction-by-product to lowest levels consistent with good manufacturing practice;
- (9) An estimate by the package/container user on unit price per ounce of product at retail for the same package/container size.

(D) In the case of a new or revised package/container the user shall evaluate the merits of feasible alternative packages/containers. The user shall submit to the Agency all information required pursuant to SR-5 (B) on all feasible alternatives so considered.

SR-6 CONFIDENTIALITY

(A) If the manufacturer and/or user of a new or revised package/container certifies at the time of submission of any sample and required information that disclosure of any of the information will affect the company's competitive position the Agency shall keep such sample and information confidential except as may be necessary for public hearings as requested by the user required under SR-3.