

Interoffice
Communication

TO: Distribution

FROM: T. G. Grumbles

DATE: May 25, 1990

SUBJ: RESPONSIBLE CARE WASTE AND RELEASE REDUCTION (WARR) CODE

VISTA

The WARR Code has been finalized and approved by the CMA Board of Directors. The initial self-evaluation form is now due on August 10. The self-evaluation form is attached. This will need to be completed and returned to me in Houston by August 1 so I can combine our responses and send to CMA.

In order to facilitate the self-assessment and gain some internal consistency in the plants evaluations, the following guidelines are being developed. These are draft guidelines and will be reviewed on Thursday morning in Austin. Please review before the meeting.

General Issues

1. The definition of waste in the CMA program versus our internal waste definition must be considered when evaluating our efforts vs. the WARR Code. The CMA definition is in the Glossary of Terms attached to the Code.

Specific issues to be resolved before developing waste inventories include:

1. How to count low value or negative netback materials?
2. Do we count stormwater?
3. Do we include products of combustion?

Items 2 and 3 have been addressed in our waste minimization program and at this time the answer is no.

2. Documentation for your evaluation should be provided with the form when sent back to me. This can be a simple listing of activities or projects done or in-progress that demonstrates why you believe your plant is at the stage you indicated.

Comments on Specific Elements

1. For Item I, Senior Management should be considered to be headquarters, or Houston management. We should all have the same answer. I propose Level IV based on:
 - a. establishment of environmental policy;
 - b. establishment of waste minimization programs; and
 - c. Plant Manager goal setting in waste reaction areas.

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2. For this item, the CMA waste definition must be considered. If an inventory has been completed for our defined wastes, and it isn't as complete as CMA's, then Level II, or maybe III, should be indicated.
3. The definition of "evaluation" is the key to this element. Evaluation includes activities such as:

- | | |
|--------------------------------|----------------------------|
| a) regulatory requirements | e) Volume and toxicity |
| b) odors or nuisance criteria | f) release pathways |
| c) employee or public feedback | g) modeling and monitoring |

This element is tied to the results of element 2, and we can't score higher on this one than on element 2.

4. This element is also tied to element 2. Also, if you've communicated with your employees but not the public, then stage III is probably most descriptive of your status.
5. No specific comments. Once again this one is related to Items 2 through 4.
6. This element is independent of previous elements and we should take credit for any "real" reductions of wastes. Paperwork reductions for 313 emissions should not "count".
7. This element is tied to element 2. This score can't be higher than element 2.
8. This element is very close to the same as element 4. It appears element 4 speaks to the inventory and element 8 speaks to the progress in reductions on solutions to waste issues. In practice, any communication generally involves both.
9. Specific project examples should be cited. If no projects have been initiated, we should score at least a Stage III based on the environmental policy we've adopted.
10. The definition of "others" includes customers, industry neighbors, trade association efforts, industry consortiums, etc. This one is pretty vague and will require some discussion.

Tom

T. G. Grumbles

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A Public Commitment

WASTE AND RELEASE REDUCTION CODE OF MANAGEMENT PRACTICES

Purpose.

This Code is designed to achieve ongoing reductions in the amount of all contaminants and pollutants released to the air, water, and land from member company facilities. These reductions are intended to respond to public concerns with the existence of such releases, and to further increase the margin of safety for public health and the environment.

The Code is also designed to achieve ongoing reductions in the amount of wastes generated at facilities. These reductions are intended to help relieve the burden on industry and society of managing such wastes in future years.

In implementing the Code, each company should strive for annual reductions, recognizing that production rates, new operations, and other factors may result in increases. Despite these fluctuations, however, the goal is to establish a long-term, substantial downward trend in the amount of wastes generated and contaminants and pollutants released. Quantitative reduction goals will be established for giving priority to those pollutants, contaminants, and wastes of highest health and environmental concern.

This Code complements, and should be implemented in conjunction with current and future Codes of Management Practices. Key terms are defined in the Glossary, which should be consulted for assistance in interpreting the provisions of this Code.

Relationship to Guiding Principles.

Implementation of this Code helps achieve the following Guiding Principles:

- o To recognize and respond to community concerns about chemicals and our operations;
- o To operate our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public;

- o To make health, safety, and environmental considerations a priority in our planning for all existing and new products and processes;
- o To extend knowledge by conducting or supporting research on the health, safety, and environmental effects of our products, processes, and waste materials.
- o To promote the principles and practices of Responsible Care by sharing experiences and offering assistance to others who produce, handle, use, transport, or dispose of chemicals.

Management Practices.

Each member company shall have a waste and release reduction program which shall include:

1. A clear commitment by senior management through policy, communications, and resources, to ongoing reductions at each of the company's facilities, in releases to the air, water, and land and in the generation of wastes.
2. A quantitative inventory at each facility of wastes generated and releases to the air, water, and land, measured or estimated at the point of generation or release.
3. Evaluation, sufficient to assist in establishing reduction priorities, of the potential impact of releases on the environment and the health and safety of employees and the public.
4. Education of, and dialogue with, employees and members of the public about the inventory, impact evaluation, and risks to the community.
5. Establishment of priorities, goals and plans for waste and release reduction, taking into account both community concerns and the potential health, safety, and environmental impacts as determined under Practices 3 and 4.
6. Ongoing reduction of wastes and releases, giving preference first to source reduction, second to recycle/reuse, and third to treatment. These techniques may be used separately or in combination with one another.
7. Measurement of progress at each facility in reducing the generation of wastes and in reducing releases to the air, water, and land, by updating the quantitative inventory at least annually.
8. Ongoing dialogue with employees and members of the public regarding waste and release information, progress in achieving

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reductions, and future plans. This dialogue should be at a personal, face-to-face level, where possible, and should emphasize listening to others and discussing their concerns and ideas.

9. Inclusion of waste and release prevention objectives in research and in design of new or modified facilities, processes, and products.
10. An ongoing program for promotion and support of waste and release reduction by others, which may, for example, include:
 - a. Sharing of technical information and experience with customers and suppliers;
 - b. Support of efforts to develop improved waste and release reduction techniques;
 - c. Assisting in establishment of regional air monitoring networks;
 - d. Participation in efforts to develop consensus approaches to the evaluation of environmental, health, and safety impacts of releases;
 - e. Providing educational workshops and training materials;
 - f. Assisting local governments and others in establishment of waste reduction programs benefitting the general public.

Industry Trend Data.

To develop and maintain statistical industry trends, CMA will collect currently available data. Each company shall report annually to CMA, or its designated agent, for each facility:

- o Releases of substances as reported under SARA Section 313; and
- o Wastes generated, as defined and reported in CMA's annual hazardous waste survey.

Member Self-Evaluation.

Each member company shall report annually to CMA, or its designated agent, the stage of implementation of each management practice in this Code. The reports shall be on the member self-evaluation form attached as Attachment B.

Glossary of Terms

As used in this Code, key terms are defined as set forth below. Note that these definitions may be broader than regulatory definitions, and that adherence to this Code does not relieve a company of the obligation to meet Federal, state and local regulatory requirements.

Facility - A site used for chemical manufacturing, processing, refining, packaging, R&D, distribution or related commercial activity.

Recycle - A practice which regenerates or processes a material from a process to recover a useable product or material for reuse.

Release - Any emission, effluent, spill, discharge or disposal to the air, land, or water, of any pollutant or contaminant, whether routine or accidental, at or from a facility. The term does not include shipment or distribution of chemical product, nor release to the environment as part of normal and intended use of a product by the consumer.

Reuse - A practice that reemploys a material from a process either as an ingredient in a process to make a product, or as an effective substitute for a commercial product in a particular function or application.

Source Reduction - A practice that reduces the amount of any release or waste generated at the source, including closed loop recycle and reuse before exit from a process. The term includes, among other practices, equipment and technology modifications, process and procedure modifications, reformulation and redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training and inventory control.

Treatment - A practice, other than recycle or reuse, that alters the physical, chemical, or biological characteristics or the volume of a waste through a process or activity separate from the production of a commercial product or the provision of a service.

Waste - Any gas, liquid, or solid residual material at a facility, whether hazardous or nonhazardous, that is not used further in the production of a commercial product or provision of a service and which itself is not a commercial product.

ATTACHMENT B



Responsible Care:®
A Public Commitment

CHEMICAL MANUFACTURERS ASSOCIATION
MEMBER SELF-EVALUATION FORM

WASTE AND RELEASE REDUCTION
CODE OF MANAGEMENT PRACTICES

Member Company

Name: _____

Responsible Care Coordinator

Name: _____

Address: _____

Telephone: () _____

Number of facilities subject to Code _____

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WASTE AND RELEASE REDUCTION CODE

Instructions:

1. Under the Responsible Care Initiative, each member company will submit a Self-Evaluation form annually to CMA. To establish the industry baseline, each member company should complete this Self-Evaluation form and send it to Heiden Associates by August 10, 1990.

Dr. Edward J. Heiden
Heiden Associates, Inc.
1815 H Street, NW
Suite 501
Washington, D.C. 20006

2. Indicate on the cover page the number of member company facilities subject to the Code. Each company must report the implementation stage for all facilities subject to the Code on this form.
3. For each Management Practice on the following two pages, indicate the number of facilities that have attained each implementation stage. Each facility should appear in only one milestone stage per Management Practice. That is the total number of facilities subject to the Code should equal the number of facilities across all six implementation stages for each Management Practice.
4. For the Industry Trend Data, show the total number of facilities in each appropriate box. The total number of facilities for each type of Trend Data should equal the total number of facilities subject to the Code.
5. Only subject facilities owned or operated as of the reporting date should be included.
6. The implementation stages are:
Stage I - No action.
Stage II - Evaluating company practices against Code practice.
Stage III - Developing action plan to implement Code practice.
Stage IV - Implementing action plan.
Stage V - Code management practice in place.
Stage VI - Implementation reviewed and reaffirmed this year.

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WASTE AND RELEASE REDUCTION CODE

Management Practice Milestones

Management Practices

Stages

	I	II	III	IV	V	VI
1. A clear commitment by senior management through policy, communications, and resources, to ongoing reductions, at each of the company's facilities, in releases to the air, water, and land and in the generation of wastes.						
2. A quantitative inventory at each facility of wastes generated and releases to the air, water, and land, measured or estimated at the point of generation or release.						
3. Evaluation, sufficient to assist in establishing reduction priorities, of the potential impact of releases on the environment and the health and safety of employees and the public.						
4. Education of, and dialogue with, employees and members of the public about the inventory, impact evaluation, risks to the community.						
5. Establishment of priorities, goals and plans for waste and release reduction, taking into account both community concerns and the potential health and safety impacts as determined under Practices 3 and 4.						

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WASTE AND RELEASE REDUCTION CODE

Management Practice Milestones

Management Practices

Stages

	I	II	III	IV	V	VI
6. Ongoing reduction of wastes and releases, giving preference first to source reduction, second to recycle/reuse, and third to treatment. These techniques may be used separately or in combination with one another.						
7. Measurement of progress at each facility in reducing the generation of wastes and in reducing releases to the air, water, and land, by updating the quantitative inventory at least annually.						
8. Ongoing dialogue with employees and members of the public regarding waste and release information, progress in achieving reductions, and future plans. This dialogue should be at a personal, face-to-face level, where possible, and should emphasize listening to others and discussing their concerns and ideas.						
9. Inclusion of waste and release prevention objectives in research and in design of new or modified facilities, processes, and products.						
10. An ongoing program for promotion and support of waste and release reduction by others.						

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WASTE AND RELEASE REDUCTION CODE

Industry Trend Data

Report annually to CMA or its designated agent, for each facility:

	Annual report submitted*	Annual report not submitted*	Annual report not required to be submitted*
1. Release of substances as reported under SARA Section 313; and			
2. Wastes generated, as defined and reported in CMA's annual hazardous waste survey.			

*Enter number of facilities for which annual report to CMA has or has not been submitted.

NOTES:

1. CMA expects to receive release data only from those facilities that are required to complete the Form R following the requirements in the Superfund Amendment and Reauthorization Act (SARA) Section 313 and EPA's clarifying regulations and instructions. Companies, not required to report 313 release data to EPA, may volunteer to send release data to CMA. These facilities are not required to submit release data to CMA as an obligation of membership.
2. The 313 Form R release data are due to CMA on July 1, 1990, the same time these data are due to U.S. EPA. These release data cover the calendar year 1989 and form the baseline for the CMA's industry trend data. CMA will issue clarifying instructions about how companies can report these TRI data to CMA. CMA is looking at several options:
 - o Submission of the same data as EPA requires,
 - o Submission of aggregated facility totals by media.

Companies are asked to await further instructions before sending CMA the 313 Form R's.

3. The first year for companies to complete CMA's annual Waste Survey as an obligation of membership under the Waste and Release Reduction Code will begin with the data covering the calendar year 1990. This survey will be sent to the Responsible Care Coordinators in the Spring of 1991.

CMA will send the annual Waste Survey covering the calendar year 1989 to members in May 1990. Completion of the survey covering the 1989 calendar year remains voluntary.

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ATTACHMENT C

WASTE AND RELEASE REDUCTION CODE OF MANAGEMENT PRACTICES QUESTION AND ANSWERS

1. **Is this a voluntary or mandatory policy?**

Answer: The Waste and Release Reduction Code of Management Practices has been developed under CMA's Responsible Care program. Adherence to the Responsible Care guiding principles is an obligation of membership in CMA.

2. **Must the Management Practices be completed in the specific order listed?**

Answer: The Management Practices are laid out in a logically sequential pattern to complete a reduction project. The sequence should be generally adhered to although slight re-arrangement under specific circumstances may be warranted.

3. **Since the scope of this policy covers all hazardous and non-hazardous wastes and releases, doesn't the Code require too much too fast or dilute the focus from hazardous pollutants?**

Answer: The public is not seeing or making a distinction between hazardous and non-hazardous releases and wastes. Public opinion research shows that the public wants releases lowered and performance improved. This research indicates that the public is concerned about both chemicals and trash generated by industry.

The definition of "hazardous" is not uniform throughout the United States, since many states have their own definitions that are more restrictive than the federal EPA's. Furthermore, these definitions of "hazardous" keep changing over time.

Each company is starting from differing points. Each company must identify its own reduction opportunities, identify the concerns of its own public, determine the reduction priorities and goals, and develop and implement its own reduction plan. The goal of this Code is continued performance improvement by a long term commitment to the reduction of wastes and releases.

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**Questions & Answers about the
Waste & Release Reduction Code
April 10, 1990**

4. Why does this Code appear to endorse reductions for reductions sake? Why should wastes and releases be reduced below health-based standards? Why should wastes and releases be reduced below levels allowed by statute, regulation, or permit?

Answer: The public does not endorse the concept of "permitted" generation of wastes or releases to the environment. The public desires an increased margin of safety and environmental protection as a goal. If the policy is to address the concerns of the public, it must require sustained reductions.

5. Is this Code a never-ending spiral of reductions?

Answer: The policy is flexible so that each company can assess the viability of further reductions. Certainly, reductions will be sustained under the Code as long as they are technically and economically viable. To the extent reduction options remain viable, the goal is to establish a long-term, substantial downward trend in wastes generated and releases to the environment.

6. Will this Code cause members to accomplish substantive reductions?

Answer: To achieve the goal of earning the public's trust through improved performance, real reductions must occur. Therefore, this Code has measurable implementation stages and industry trends data submission requirements.

7. Does this Code apply to both large and small companies and facilities? Is there a threshold below which this Code does not apply?

Answer: The Code applies to all members of CMA. Even a small company or facility can generate wastes and releases to the environment. There is no threshold for volume of wastes generated, releases to the environment, or size of facility below which this Code does not apply. Each company/facility will establish its own priorities. The Code envisions progress by all of industry in reducing wastes and releases.

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**Questions & Answers about the
Waste & Release Reduction Code
April 10, 1990**

8. Does this Code apply to domestic or world-wide operations?

Answer: The principles behind the Code are universal in concept. The reduction of wastes and releases is good business and good citizenship. However, for purposes of CMA eligibility requirements, the Code applies to that portion of a corporation or company that is used to determine CMA dues.

9. What about multi-divisional companies? Does this Code apply to mining operations? Service stations? Warehouses?

Answers: Adherence to the Code of Management Practices is a Guiding Principle of the Responsible Care program. The Responsible Care program is a membership requirement for those portions of a company that determine the CMA dues structure. The principle of reducing wastes and releases is responsible corporate behavior and should be encouraged throughout an organization.

The Waste and Release Reduction Code of Management Practice is designed for flexible implementation by companies and facilities. Each company/facility must determine the reduction opportunities, priorities, baseline, and implement the reduction plan in accordance with these company/facility-derived goals. Inherent in this Code is the need to communicate with the public when determining reduction opportunities and priorities. Therefore, while the scope of this policy is broad, each company must identify the sources that are included in its implementation activities as well as the priority and timing for these reduction activities.

10. If all of the chemical industry is to be affected, how do we ensure fair and equitable reductions? How do we prevent competitive disadvantages among CMA member companies?

Answer: The Waste and Release Reduction Code is predicated on making reductions that are economically and technically sound. The Code does not envision enforcing competitive disadvantages on member companies by usurping their decision-making processes. Each company must evaluate its own reduction opportunities and develop its own reduction plan to meet company/facility priorities.

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**Questions & Answers about the
Waste & Release Reduction Code
April 10, 1990**

- 11. If all of the chemical industry is to be affected, how do we ensure fair and equitable reductions? How do we prevent competitive disadvantages with other industry segments?**

Answer: This Code will actually make our industry more competitive than those that do not embrace its concepts. Waste and release reductions will result in less wastes, improved efficiency, and make the industry a superior competitor.

- 12. Is this a non-growth Code? How can this Code be reconciled with the need for expansions? How are opportunities for emission offsets (needed for air permitting) to be preserved?**

Answer: This Code envisions a long-term, substantial downward trend in total releases to the environment and waste generation. However, the method of achieving reductions is left to the needs and priority determinations of the individual member companies.

The policy is not a no-growth policy; rather, it is a policy of balancing future expansions with future waste and release reductions.

Voluntary waste and release reductions may be eligible to be banked with appropriate governmental agencies. Any plan for waste and release reductions must also plan to accommodate expansions. Public perceptions may ultimately require a waste and release reduction type program just as a condition to be able to construct or expand. Several states already have proposed such regulations.

- 13. Won't this Code have enormous economic consequences?**

Answer: Waste and release reductions may or may not have a huge price tag. Some reduction projects, like fugitive emission abatement, tend to pay for themselves in recovered product(s); other projects may increase the price of doing business. Industry must be willing to invest in plants that will lead to a future with less wastes and fewer releases to the environment. The goal of Responsible Care is that the chemical industry will improve the performance of its operations constantly.

In making reduction progress, each company must look at all the reduction opportunities and set their own priorities. Each company can set the scope of these priorities broadly or narrowly and implement actions at their own pace.

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**Questions & Answers about the
Waste & Release Reduction Code
April 10, 1990**

14. Does the hierarchy of reduction methodologies mean that all projects must use source reduction unless it is technically infeasible?

Answer: Each waste and release source must be evaluated for its reduction potential. The hierarchy requires that reduction projects for source reduction be evaluated before recycle/reuse or treatment. However, the project to be implemented will depend on the evaluation.

Technical infeasibility is only one of several facility and/or waste specific criteria that can lead to selection of a reduction project involving recycle/reuse or treatment. When developing their reduction priorities, companies may choose to consider other criteria including risk/benefit mechanisms, public concern, size of the facility, economics, and other factors such as conservation of resources.

Each company must identify its own reduction priorities and implement a reduction plan to meet company/facility-set goals.

15. This Code, as well as other codes under the Responsible Care program, require ongoing dialogues with employees and members of the public. Does each such Management Practice require a separate meeting?

Answer: No. Meetings with employees or the public can have multiple agenda items. If several Management Practice items are to be covered in a single meeting, all that is required is that the agenda and presentation clearly address each topic, rather than have a general "discussion of topics."

Under the Responsible Care Program, the process to communicate with the public and employees is established under the Community Awareness and Emergency Response (CAER) Code of Management Practice. Companies are encouraged to use the mechanisms set up under other codes to enhance effective implementation of the Responsible Care Program and to better use and conserve company resources.

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**Questions & Answers about the
Waste & Release Reduction Code
April 10, 1990**

- 16. Is dialogue with the public required for all facilities?**

Answer: Meaningful dialogue is essential to better understanding public concern, improving the public's understanding of our operations, and building trust. Some facilities, due to size and location, may have limited opportunity for such dialogue. Where the opportunity for dialogue exists, even on a limited basis, it should be actively pursued individually or jointly with other neighboring companies/facilities.

- 17. Should individual companies and/or facilities submit to CMA the rationale behind the annual Industry Trend data submissions?**

Answer: No. The data submitted for the Industry Trend Data reports need not have supporting documentation submitted to CMA. However, when discussing these data with the local public, it is assumed that general methods and assumptions will be discussed as part of the public education and dialogue process.

- 18. When completing the Self-Evaluation Form, must every facility attempt to progress through all the implementation stages, or can some facilities "mature" their progress in code implementation at less than full implementation?**

Answer: All participating facilities should work to achieve full implementation of each Code and embrace the concepts of this Code in the spirit of the Responsible Care Guiding Principles. Depending on the size of a particular facility or the activities carried on by that facility, a company may decide that different implementation methods are appropriate. For example, a large facility may use formal procedures such as written policies and manuals and conduct formal employee meetings. Whereas, a smaller facility can accomplish the same implementation using less formal methods.

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