TO: Distribution

~~TGG~~ JCL: ERT: ~~MJH~~: ~~AJO~~: RF

XF: Desk

FROM: T. G. Grumbles
DATE: January 21, 1991

Interoffice Communication

VISTA

SUBJ: RESPONSIBLE CARE WARR CODE

Attached is the draft of the expanded WARR Code. Four waste management practice elements are being added to the waste and release reduction codes. I'm asking you to review these four new elements and provide any comments you may have to me by March 1. I'll collate the comments and provide to CMA.

The attachment is thick, but you need only specifically review the italicized portion of the Code. You've seen the rest before.

T. G. Grumbles

dlj

Attachment

Distribution:

PLANT MANAGERS

R. W. Seymour-Aber, L. R. Bauer-Balt, G. D. Williams-Blane, J. Pavao-Hmd, J. Friend-LCCP, J. W. Ware-LCLAB, R. A. Conrad-LCVCM, H. D. Garrison-Okc, P. L. Foote-Prem, V. W. Weiss-Austin

T. H. Huffman, J. C. Ledvina

CHEMICAL MANUFACTURERS ASSOCIATION

January 8, 1991

TO RESPONSIBLE CARE COORDINATORS

Subject: Review of the Waste Management Practices

Dear Responsible Care Coordinator:

Enclosed is the draft language for the four waste management practices and preface language that will be added to the Waste and Release Reduction (WARR) Code of Management Practices. We request your review of the four practices and preface language that are found in the ***italicized*** typeface in the attached code.

NO CHANGES to the existing WARR Code are proposed.

As Responsible Care Coordinator for your company, please collect comments from your Environmental Contact and other appropriate reviewers and submit your company's compiled comments in writing to Ann M. Mason, CMA's Associate Director of Waste and Release Reduction. Written comments may be sent to Ann by mail or by telefax at 202/887-1237. The comment period for these four practices ends on March 8, 1991.

SUMMARY

Over the last year, the Waste Management Code Drafting Work Group of the Environmental Management Committee has worked to write four waste management practices. The Responsible Care Coordinating Group (RCCG) and the Environmental Management Committee (EMC) have approved adding these four practices to the ten practices in the existing WARR Code. These four practices encompass facility assessments, member company assessment of contractors handling wastes, groundwater protection, and member company evaluating past operating sites that are currently owned by the company.

When the WARR Code was named, EMC was in the process of writing a second code to address waste management. Since then, the EMC and RCCG have agreed that the name, *Pollution Prevention Code of Management Practices*, more accurately reflects the scope of the expanded code and indicates that the chemical industry is concerned with protection concepts beyond reduction and waste management. More importantly, the name represents a more positive image that responds to public concerns and is easier to communicate.

VVV 000011656

BACKGROUND

Originally, the Board of Directors proposed two codes to address protection of the environment:

1.) Waste and Release Reduction, and
2.) Waste Management.

Based upon input from the membership, the RCCG and the EMC decided to add the four practices to the ten existing management practices in the WARR Code.

This membership review requests comments only on practices 11-14 and on the *italicized* words (paragraph 4) in the purpose. No changes will be made to the first ten management practices in the WARR Code that the Board approved in April 1990.

Management practices 11-14 add four concepts to the existing WARR Code:

- Review Waste Management Practices at Member Company Facilities. (Practice 11)
- Review Contractor Facilities that Handle Member Company Wastes, Residues, or Recyclables. (Practice 12)
- Protect Groundwater. (Practice 13)
- Evaluate Prior Sites that are Still Under Your Ownership. (Practice 14)

REPORTING REQUIREMENTS

Starting in 1991, CMA will mail a three part report for the Pollution Prevention Code to each Responsible Care Coordinator as follows:

1. Self-Evaluation Form. In 1991, the Self-Evaluation Form will address all fourteen Management Practices.

2. Toxic Release Inventory (TRI) Data. In 1991, CMA will encourage members to submit the TRI data to CMA using an electronic submission. Paper, while accepted, will not offer members the benefit of quality assuring the data that will be added to the TRI database.

3. Waste Survey. The Waste Survey becomes mandatory beginning with the 1990 reporting year.

   As such, CMA has simplified the existing Waste Survey. The 1990 Waste Survey contains some of the data that were included in previous voluntary requests but has been streamlined significantly. Attached for your information only is the 1990 Waste Survey.

The revised format of the Waste Survey is a one page table that provides members an opportunity to fill in the appropriate blanks. This format reflects minor changes to the type of information collected. The survey simplification includes using two broad headings: non-hazardous and hazardous. For each of these groups the wastes are divided into solid wastes and wastewater. In addition, the list of management practices represents a consolidation of the practices into 11 types.

SCHEDULE FOR MEMBERSHIP REVIEW

The official review of the four waste management practices will last until March 8, 1991. The Board is scheduled to have a preview of these practices in January 1991.

In September 1990, EMC sent the four waste management practices to a number of CMA's environmental task groups. At the same time, the draft language was sent to Responsible Care Coordinators and Environmental Contacts for their preview. Furthermore, the waste management practices were discussed at the Responsible Care Coordinators National Meeting on September 25, 1990 in Chicago.

Also in September, the draft practices were reviewed by the Responsible Care Public Advisory Panel. They supported both the concepts of a single code and the four proposed practices.

On February 26, 1991, at the Madison Hotel in Washington, D.C., CMA will hold an Open Forum to discuss the four waste management practices with the membership. Please plan to have a representative from your company attend the Open Meeting. A registration form is enclosed for your convenience.

In advance, we thank you for your continued support to make the Responsible Care initiative successful. If you have any questions about the waste management practices, please contact Ann M. Mason (202-887-1180), or Richard Dennis, American Cyanamid, (201-831-3996).

Sincerely,

Lori M. Ramonas, Ph.D.
Director
Responsible Care

Enclosures

cc: (w/out Open Forum brochure)
Environmental Contacts
Waste Management Code Drafting Work Group
Environmental Management Committee
Responsible Care Coordinating Group
Responsible Care Communications Contacts

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POLLUTION PREVENTION CODE OF MANAGEMENT PRACTICES

NOTE: Normal Text indicates the language approved 4/90 for the Waste and Release Reduction Code (WARR); ***text shown in italics and bold is the draft language that adds the waste management concepts to the WARR Code.***

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 also includes practices that address the broader waste management issues beyond source reduction and waste and release reduction efforts. Each member company must manage remaining wastes and releases in a manner that protects the environment and the health and safety of employees and the public.

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:

- To recognize and respond to community concerns about chemicals and our operations;
- ***To develop and produce chemicals that can be manufactured, transported, used and disposed of safely.***

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- To make health, safety, and environmental considerations a priority in our planning for all existing and new products and processes;

- *To report promptly to officials, employees, customers and the public, information on chemical-related health or environmental hazards and to recommend protective measures.*

- To operate our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public;

- To extend knowledge by conducting or supporting research on the health, safety, and environmental effects of our products, processes, and waste materials.

- 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.

- *To work with others to resolve problems created by past handling and disposal of hazardous substances.*

- *To participate with government and others in creating responsible laws, regulations and standards to safeguard the community, workplace and environment.*

- *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 (WARR).

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.

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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 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.

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11. *Periodically evaluate waste management practices associated with operations and equipment at each facility, taking into account community concerns and health, safety, and environmental impacts and implement ongoing improvements.*

12. *Conduct initial and periodic reviews of contractors' and toll manufacturers' relevant facilities and operations used by the member company and verify that sound waste management practices are used to protect the environment and the health and safety of employees and the public.*

13. *Implement engineering and operating controls at each member company facility to improve prevention of, early detection of, and response to releases to groundwater.*

14. *Assess prior operating and disposal practices at each active or inactive facility owned by a member company and implement an ongoing program to resolve identified problems, taking into account community concerns and health, safety, and environmental impacts.*

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:

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

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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 procedures 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 non hazardous, 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.

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ATTACHMENT A

CHEMICAL MANUFACTURERS ASSOCIATION

MEMBER SELF-EVALUATION FORM

POLLUTION PREVENTION

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 29, 1991.**

   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.

POLLUTION PREVENTION CODE

Management Practice Milestones

Management Practices	Stages						
	I	II	III	IV	V	IV	
1. A clear commitment by senior management through pol icy, communications and resources, to ongoing reduc tions, 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 gener ated 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 mem bers of the public about the inventory, impact evalu ation, risks to the community and waste and release reduction priorities.							
5. Establishment of priorities, goals and plans for waste and release reduction, taking into account both commu nity concerns and the potential health and safety impacts as determined under Practices 3 and 4.							
6. Ongoing reduction of wastes and releases, giving prefer ence first ot source reduction second to recycle/reuse, and third to treatment. These techniques maybe used separately or in combination with one another.							

WASTE AND RELEASE REDUCTION CODE

Management Practice Milestones

Management	Stages						
	I	II	III	IV	V	VI	
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. On going dialogue with employees and member s 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, when 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.							
11. Periodically evaluate waste management practices associated with operations and equipment at each facility, taking into account community concerns and health, safety, and environmental impacts and implement ongoing improvements.							
12. Conduct initial and periodic reviews of contractors' and toll manufacturers' relevant facilities and operations used by the member company and verify that sound waste management practices are used to protect the environ ment and the health and safety of employees and the public.							
13. Implement engineering and operating controls at each member company facility to improve prevention of, early detection of, and response to releases to groundwa ter.							
14. Assess prior operating and disposal practices at each active or inactive facility owned by a member company and implement an ongoing program to resolve identified problems, taking into account community concerns and health, safety, and environmental impacts.							

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WASTE AND RELEASE REDUCTION CODE

Industry Trend Data

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

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.

Annual report submitted* Annual report not submitted* Annual report not required to be submitted*

*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. Com pletion of the survey covering the 1989 calendar year remains voluntary.

WASTE MANAGEMENT PRACTICES
QUESTION AND ANSWERS

Four practices will be added to the ten existing and Release Reduction Code of Management Practices. As companies implement Practices 1-10, they should examine their implementation actions and modify them to include wastes and waste management.

It is particularly important to recognize the overlap of the employee and community outreach portions and include waste management and remediation concepts when implementing Practices 4 and 8.

QUESTION:

WHAT ARE THE WASTE MANAGEMENT PRACTICES ASSOCIATED WITH ALL OPERATIONS AND EQUIPMENT?

The Code envisions companies reviewing all waste management practices at each step of the operation where wastes are generated or released within each facility. This review is within the operating processes not just at the "end of the pipe."

QUESTION:

HOW OFTEN SHOULD PERIODIC REVIEWS BE DONE?

A review or evaluation should be done on some repeat basis. Timing for follow-up evaluation should be determined by the results of previous reviews, potential impacts, potential liability, etc.

QUESTION:

WHAT DO YOU MEAN BY A CONTRACTOR AND TOLL MANUFACTURER?

Contractors are any entity a member company uses to handle their residual materials and wastes. This includes, for example, waste treatment facilities, disposal facilities, tank cleaners, reclaimers, recyclers, and the like. Toll manufacturers are independent parties who perform a manufacturing step for a member company, use the member company's feed stock, and generate waste from the manufacturing step.

QUESTION:

HOW DO YOU VERIFY THAT SOUND WASTEMANAGEMENT PRACTICES ARE USED BY A CONTRACTOR OR TOLL MANUFACTURER?

Member company verification should at least include a site visit and visual inspection of waste management practices by a company representative. More rigorous inspection may be appropriate based on initial findings. As part of the contracting procedure, member companies should consider including language requiring the contractor to use proper health, safety, and environmental practices and that the member company has a right to inspect for that purpose. Responsible Care covers toll manufacturers operations under two Codes: wastes are covered under the Pollution Prevention Code; other operations are covered under the Product Stewardship Code.

QUESTION:

WHAT RECOURSE DOES A COMPANY HAVE IF THE CONTRACTOR OR TOLL MANUFACTURER DOES NOT MEET THE SOUND WASTE MANAGEMENT PRACTICES OF THE MEMBER COMPANY?

Sound waste management practices are those that protect the environment and the health and safety of employees and the public.

If the contractor or toll manufacturer does not meet the member company's expectations of sound waste management practices then the member company has several options including not using or terminating the contractor or working with him to quickly correct any deficiencies.

QUESTION:

WHAT DO WE MEAN BY IMPROVE THE PREVENTION OF RELEASES TO GROUNDWATER?

While it is envisioned that a company will have an SPCC (Spill Prevention and Countermeasures) plan in place for a limited number of materials, companies should review the chemicals at the facility and extend the SPCC concepts to other materials. The goal is to prevent releases to the ground and to protect existing groundwater quality.

QUESTION:

WHAT IS MEANT BY ASSESSING PRIOR OPERATING AND DISPOSAL PRACTICES?

The purpose of the assessment is to obtain sufficient knowledge about a given site to make a judgement regarding what, if any, actions need to be taken to address potential health, safety and environmental concerns. Each member company must develop its own plan for setting priorities and for assessing and identifying sites requiring remediation.

Waste operating practices that companies should consider may include: recycling and reuse; source control to minimize generation of waste; effective treatment of waste generated; waste used as alternate fuel and incineration. Waste disposal practices may include: land disposal; land treatment and farming, and deepwell injection.

QUESTION:

WHICH MEMBER COMPANY FACILITIES, ACTIVE OR INACTIVE, ARE INCLUDED IN PRACTICE 14?

This practice applies to facilities or property currently owned by a CMA member company. This includes properties that are still owned, but no longer have ongoing operations. Inactive sites, not owned by a member company where the company has potential involvement, should be addressed to the extent the member company determines feasible.

QUESTION:

WHAT IS MEANT BY IMPLEMENTING AN ONGOING PROGRAM TO RESOLVE IDENTIFIED PROBLEMS?

Each member company is expected to implement an ongoing waste management program to assess its prior operating and waste management practices. As areas of greatest concern, identified by the initial assessments, are resolved remaining sites should be evaluated, as needed. This evaluation should take into account public, regulatory, and technical concerns, as well as the economic viability of resolving these concerns.

QUESTION:

WHAT IS MEANT BY TAKING INTO ACCOUNT COMMUNITY CONCERNS AND HEALTH, SAFETY, AND ENVIRONMENTAL IMPACTS?

When CMA member companies implement the employee and public outreach of the Code (Practices 4 and 8), companies should present information about their current and past waste management practices with the goal of identifying the community concerns. Companies should consider this input when developing plans and setting priorities for waste management and remediation activities.

Return by 3/8/91

POLLUTION PREVENTION
CODE OF MANAGEMENT PRACTICES
RESPONSE FORM

1. We have reviewed the Pollution Prevention Code of Management Practices and have no comments. _____ (Check only if no other comments are provided).

2. Is the purpose of the Code appropriate and/or clearly set forth? Explain.

_____

_____

_____

3. Is the scope of the added practices--manage remaining wastes and releases in a manner that protects the environment and the health and safety of employees and the public--appropriate? Explain.

_____

_____

_____

Please return by <u>March 8, 1991 to:</u>

Ann M. Mason
Associate Director
Waste and Release Reduction Programs
Chemical Manufacturers Association
2501 M Street, N.W.
Washington, D.C. 20037

Ann M. Mason
Associate Director
Waste and Release Reduction Programs

POLLUTION PREVENTION
CODE OF MANAGEMENT PRACTICES

ADDITIONAL COMMENTS

CMA requests voluntary additional comments from member companies on implementation of the Pollution Prevention Code. Information obtained from these comments will be used to design support activities and other assistance for members.

1. What size chemical company do you represent (annual chemical sales)?
   ____small(<$400million) ____ medium($400million-1billion) ____large(>$1billion)
   Number of facilities? _____
   Number of employees/workers at your facilities (range):
   _____(low) to _____(high)
   Company name (optional): _____
   Are you the Responsible Care Coordinator? _____(yes or no)

2. Are you encountering problems implementing this Code at your facilities, and, if so, what are they? How could CMA help overcome these problems?

3. From the following list, what tools would be most useful to your company to help in implementing the Pollution Prevention Code

   Mark only 3. Rank by 1-2-3.

   ____ CMA technical seminars specific to code implementation.
   ____ Poster series for employee awareness.
   ____ Technical "how to" Bulletins issued periodically.
   ____ Software system for industry trend and self evaluation data collection and manipulation.
   ____ WARR video for employees.
   ____ "Resource team" for on-site training.
   ____ Clearing house for good implementation ideas.
   ____ Case histories of success stories.
   ____ Information "hot line."
   ____ Assistance in community outreach.
   ____ Regional issues/self help organization.
   ____ Other _____

4a. In June 1991, CMA plans to have four workshops to assist members in understanding the Code. Please indicate the anticipated number of representatives from your company for each workshop.

   ____ Houston, Texas
   ____ Newark, New Jersey
   ____ New Orleans, Louisiana
   ____ St. Louis, Missouri

4b. What specific topics do you want covered at these workshops?

____ Review how Pollution Prevention Code fits into Responsible Care Initiative.
____ Review implementation of added practices.
____ Review Industry Trend data submissions
____ Review Self-Evaluation Form
____ Review of topics covered in first ten practices (check appropriate boxes)
  ____ Management commitment
  ____ Inventory/measurement
  ____ Educate and communicate with public
  ____ Establishing reduction plans, priorities, goals
  ____ Integrate reduction objectives into product plans and process design and modification
  ____ Outreach to customers, suppliers
  ____ Other (specify)

5. What do you see as your most significant problem or barrier to full implementation of the Pollution Prevention Code (check no more than 2)

____ Management commitment.
____ Available manpower.
____ Capital/expense budget.
____ Low on plant priority.
____ Lack of policy or direction.
____ Economic climate of industry.
____ Lack of internal infrastructure to implement.
____ Lack of authority.
____ No barriers.
____ Other _____

6. What organizational format are you using to implement <u>this code</u>? (Check as many as appropriate)

_____ Full time Coordinator.
____ Part time Coordinator.
_____ Executive level steering committee.
_____ Individual coordinators for each code.
_____ Steering committees for each code.
_____ Coordinator at each facility.
_____ Existing line organization.
_____ Existing staff organization.
_____ Other _____
_____
_____

7. Has your company established a waste and release reduction goal (e.g. 50% reduction in SARA 313 emissions by 1995)?
_____ (yes or no). If so, please tell us what it is?

8. How else can we help you implement the Pollution Prevention Code?

9. As part of your commitment to Responsible Care, what can your company do to assist other companies (including competitors, customers and suppliers) to implement this code?

10. Other comments about the Pollution Prevention Code.

CMA WASTE SURVEY 1990

The Waste Survey reporting obligation begins with the 1990 reporting year.

Attached for your information only is the 1990 Waste Survey.

CMA has simplified the existing Waste Survey. The 1990 Waste Survey contains some of the data that were included in previous voluntary requests but has been streamlined significantly.

The revised format of the Waste Survey is a one-page table that provides members an opportunity to fill in the appropriate blanks. This format reflects minor changes to the type of information collected. The survey simplification includes using two broad headings: non-hazardous and hazardous. For each of these groups the wastes are divided into solid wastes and wastewater. In addition, the list of management practices has been consolidated.

CMA Waste Survey '90

Hazardous and Nonhazardous Waste

Please complete information on this cover page.

Return surveys to:
Dianna Kocurek
Tischler/Kocurek
116 East Main
Round Rock, TX 78664

Questions? Call:
Dianna Kocurek
Tischler/Kocurek
(512) 244-9058

CONFIDENTIAL INFORMATION

Survey information is confidential and will not be released to anyone outside of CMA or CMA's contractor, Tischler/Kocurek, and cannot be accessed by other CMA member companies.

Parent Company Name

If the facility was purchased in 1990 from a different company, please give SELLER-COMPANY name. (This allows us to keep track of facilities and their code numbers from year to year.)

Subsidiary Name

Plant Name

Plant Address

City State Zip

EPA Identification No.

Contact Name

Title

VVV 000011679

Telephone

CMA Waste Survey '90

Facility Information

1	Facility name	
2	City and state	
3	Primary SIC	

Generation

		Non-hazardous		Hazardous	
		A	B	C	D
		Solid Waste	Wastewater	Solid Waste	Wastewater
4	Total generation				
5	Site cleanup wastes				
6	Other non-routine wastes				
7	Special wastes				

Management Practices

		Non-hazardous		Hazardous	
		A	B	C	D
		Solid Waste	Wastewater	Solid Waste	Wastewater
8	Material recovery				
9	Burning, energy recovery				
10	NPDES				
11	POTW				
12	Incineration				
13	Land treatment/application				
14	Underground injection				
15	Landfill				
16	Other				
17	Storage at year-end				
18	Total				

Major Changes

Line	Col	Reasons for Change (using codes to the right)

Codes to Explain Changes in Wastes

a–production increase
b–production decrease
c–equipment and technical modifications
d–procedural modifications
e–reformulation/redesign of product
f–substitution of raw material
g–improved housekeeping, training, or inventory contol
h–reuse/recycle
i–regulatory changes or interpretations
j–other

Comments

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Write any comments or details that you have on the wastes reported here. Continue on the back of this sheet if you need space.

Introduction

Under CMA's Responsible Care program, CMA member companies are required to follow the Waste and Release Reduction (WARR) Code of Management Practices. One of the requirements of the WARR code is to report wastes generated for each company facility. CMA uses these data to track industry trends, particularly those in waste reduction.

Confidentiality

Survey information is confidential and is not released to anyone outside of CMA or CMA's contractor, Tischler/Kocurek. The information cannot be accessed by other CMA member companies.

Facilities will be coded in the database for confidentiality. The report that will be prepared from the survey information will have only data summaries—no individual facility will be identified.

General Instructions

You will find the two forms you need to complete at the front of this packet. The forms consist of: (1) a cover sheet and (2) a sheet for waste information.

Who Responds

All facilities that participate in CMA's Responsible Care Program must complete this survey. Complete a survey form for each facility — do not combine facilities on a single form.

You may complete a survey for facilities that are not part of the Responsible Care program if you wish, but it is not required.

Due Date

Survey forms must be sent in by _____ __, 1991. It is not necessary to use express delivery—shipment by US mail by the due date is fine.

Where to Send

Send the two completed forms (cover sheet and waste information sheet) to:

Dianna Kocurek
Tischler/Kocurek
116 East Main
Round Rock, TX 78664

If You Have Questions

Call:

Dianna Kocurek
Tischler/Kocurek
(512) 244-9058

Line-by-Line Instructions

Briefly review all instructions before beginning to get an idea of what data you will need and how to report it. You may print instead of typing your answers, but please use ink or ball point pen.

Definitions

Definitions are located at the end of the instructions on pages __ – __.

Units

Report all wastes in tons. Below are some conversion factors for other units.

1 ton = 2000 pounds
= 0.907 metric tons
= 240 gallons

Double-Counting

In the Management Practices section of the waste information form, you are asked to divide your waste into different groups like NPDES treatment, incineration, etc. You must choose only one of these groups for each waste, otherwise the waste will be double-counted. See the instructions under Management Practices for more detail.

Form 1
Cover Sheet

Complete the cover sheet on page __. The cover sheet has information that identifies the facility and person to contact in case of questions.

Form 2
Facility Information

Line 1—Facility Name
Enter the name of the facility.

Line 2—City and State
Enter the city and state in which the facility is located.

Line 3—Primary SIC
Enter your primary Standard Industrial Classification (SIC). Your primary SIC is the one that is the largest source of revenue for your facility. If you are unsure, ask your company environmental coordinator or financial officer.

If your facility is only research and development (R&D), you may enter the SIC for which the majority of the work is done. If there is no major SIC, enter "R&D" instead of an SIC.

Generation

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Non-hazardous vs. Hazardous

Divide your wastes into non-hazardous and hazardous groups. If a hazardous waste becomes non-hazardous after treatment, count it as hazardous. Hazardous wastes are defined in federal regulations at 40 CFR 261 (see Definitions on page __). In addition, your state may have defined other wastes as hazardous. Any waste that does not fit the hazardous waste definition, is a non-

hazardous waste.

Solid Waste vs. Wastewater

After you divide your wastes into non-hazardous and hazardous groups, subdivide these wastes into solid wastes and wastewaters.

In this survey, wastewaters are separated from other wastes because wastewater is usually a large volume waste. EPA does not have a regulatory definition of wastewater, so for this survey, use the following definitions:

Wastewater—wastes that are treated in an NPDES facility or Publicly-Owned Treatment Works (POTW), injected underground, or any other aqueous waste.

Solid waste—any waste that does not fit the definition of wastewater.

This definition of solid waste is not meant to be the same as EPA's at 40 CFR 261.2. EPA's definition includes all wastes, regardless of physical form. Again, for this survey, use the above definitions to separate wastewaters from other "solid" wastes.

Calendar Year—1990

Your answers must cover only the calendar year 1990, from January '90 through December '90.

Line 4—Total Generation

Enter the amount of waste generated at your facility during 1990. This will include wastes generated by normal facility activities, site cleanups, and other non-routine wastes. If you are in the ore/mineral processing business, be sure to include Bevill wastes and brine (see Line 7 instructions for more detail).

Line 5—Site Cleanup Wastes

Of the total waste reported on line 4, enter the amount that came from cleanups at the facility. Cleanups may come from RCRA, CERCLA, or any other remedial action. Examples of cleanups are contaminated soil and ground water.

Line 6—Other Non-routine Wastes

Of the total waste reported on line 4, enter the amount that came from other non-routine activities (those besides site cleanups). Examples are: infrequent tank cleanouts, sludge removal from ponds, equipment dismantling, demolition wastes, lab stockroom cleanouts, and disposal of out-of-date stock.

Line 7—Special Wastes

Special wastes are Bevill wastes from ore/mineral processing (listed below, in Definitions, and at 40 CFR 261.4(b)(7)) and brine from oil and gas production. Enter the amount of these special wastes on Line 7. Be sure to include these wastes in your total generation on Line 4.

Bevill wastes

1—slag from primary lead processing
2—slag from primary lead processing
3—red and brown muds from bauxite refining
4—phosphogypsum from phosphoric acid production
5—slag from elemental phosphorus production
6—gasifier ash from coal gasification
7—process wastewater from coal gasification
8—calcium sulfate wastewater treatment plant sludge from primary copper processing
9—slag tailings from primary copper processing
10—fluorogypsum from hydrofluoric acid production
11—process wastewater from hydrofluoric acid production
12—air pollution control dust/sludge from iron blast furnaces
13—iron blast furnace slag
14—treated residue from roasting/leaching of chrome ore
15—process wastewater from primary magnesium processing by the anhydrous process
16—process wastewater from phosphoric acid production
17—basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production
18—basic oxygen furnace and open hearth furnace slag from carbon steel production
19—chloride process waste solids from titanium tetrachloride production
20—slag from primary zinc processing

Management Practices

Management practices are what you do with the waste after you generate it. Taking the amount of waste you entered on Line 4, divide the waste among the management practices you used. The sum of all the wastes that you enter in Management Practices must equal the total generation in Line 4. That means that you must choose only one management practice for each waste.

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It may be difficult to choose only one practice for each waste because you may have used multiple practices to

handle it. For example, a sludge may be solidified before landfilling. See the descriptions of practices that follow for detail on choosing one practice over the other. In general, the practice last used with the waste is the one you choose.

Do Not Switch Columns

Do not switch columns when entering wastes. That means if you entered a waste in one column of Line 4 (total generation), then you must keep the waste in the same column when you divide the waste under Management Practices. For example, if you entered a waste under column C (hazardous solid waste), divide this waste in Management Practices only under column C. A typical problem would be a hazardous waste (column C or D) that is made non-hazardous before landfilling. Even though the waste is made non-hazardous, keep it under the same column you used to enter its generation.

Balance Generation with Management Practices

The wastes that you enter under Management Practices must balance with the wastes you entered under generation.

Example: Your facility generated 10,000 tons of non-hazardous waste (8,000 tons were wastewater) and 5,000 tons of hazardous solid waste in 1990. You treated 7,000 tons of the non-hazardous wastewater in your NPDES facility; the other 1,000 tons of wastewater you sent to the POTW. You landfilled 1,800 tons of the non-hazardous solid waste and stored the rest. You incinerated 4,000 tons of the hazardous waste and stored the remaining 1,000 tons at the end of the year. Here's how your numbers should balance on page __.

Non-hazardous Solid Waste		Tons
Generation		
4A.	Total Generation	2,000
Management Practices		
15A.	Landfill	1,800
17A.	Storage	200
18A.	Total	2,000

Non-hazardous Wastewater		Tons
Generation		
4B.	Total Generation	8,000
Management Practices		
10B.	NPDES	7,000
11B.	POTW	1,000
18B.	Total	8,000

Hazardous Solid Waste		Tons
Generation		
4C.	Total Generation	5,000
Management Practices		
12C.	Incineration	4,000
17C.	Storage	1,000
18C.	Total	5,000

Note: Notice how the same column is used within each waste group. See Do Not Switch Columns for details.

Waste Piles and Surface Impoundments

Waste piles and surface impoundments are considered storage—not disposal practices—in this survey. This view is taken from the RCRA hazardous waste regulations where these types of units must be closed as landfills when they are no longer in use. If you use waste piles or surface impoundments as the final disposition of your waste, you must enter it under Storage on Line 17. Exceptions to this rule are wastewater treated in NPDES and POTW facilities. See the instructions for NPDES (Line 10) and POTW (Line 11) for more detail.

Line 8—Material Recovery

Material recovery is the reuse/recycle of a waste, except those that are burned for energy recovery. Even though a waste may be treated before reuse/recycle, enter it under material recovery.

Line 9—Burning for Energy Recovery

Burning for energy recovery should include only those wastes with high enough heating value (more than 5000 Btu per pound, Btu/lb). If a waste that was burned had a lower heating value, enter it under incineration. Facilities that burn wastes for energy recovery include boilers and industrial furnaces. If your waste goes to a fuel blender, include it if it had a heating value greater than 5,000 Btu/lb.

Line 10—NPDES

NPDES facilities treat and discharge wastewaters by permit. NPDES stands for National Pollution Discharge Elimination System and is a federal program under section 402 of the Clean Water Act. If a state has assumed authority for the NPDES program the name may change slightly (for example, Wisconsin has a WPDES program, the "W" being for Wisconsin).

POTWs are also permitted under NPDES programs. If you discharged to a POTW, however, enter your wastewater under POTWs. See the following section on POTWs for more detail.

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If your wastewater was treated in surface impoundments at an NPDES facility, enter the wastewater under NPDES. Using surface impoundments

for other wastes is considered storage in this survey. See Waste Piles and Surface Impoundments for more detail.

If a surface impoundment is used for a sludge from an NPDES facility, the sludge should be entered under Storage (Line 17) as a solid waste.

Line 11—POTWs
POTW—or Publicly Owned Treatment Works—usually means a municipal (city) wastewater treatment plant. EPA defines a POTW at 40 CFR 260.10 as "any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial waste of a liquid nature which is owned by a 'State' or 'municipality' (as defined by Section 502(4) of the CWA)." There are other facilities that are not city treatment plants that meet this definition, for example, Gulf Coast Waste Disposal Authority in Texas.

POTWs are also permitted under NPDES programs, however if you discharge to a POTW, enter your wastewater under POTW, not NPDES.

If your wastewater was treated in surface impoundments at an POTW facility, enter the wastewater under POTW. Using surface impoundments for other wastes is considered storage in this survey. See Waste Piles and Surface Impoundments for more detail.

Line 12—Incineration
An incinerator is a unit that is not defined as a boiler or industrial furnace (see Definitions for details). If the waste had a heating value less than 5,000 Btu/lb, however, and was burned in a boiler or industrial furnace, enter it under incineration.

If the waste was treated prior to incineration, enter it under incineration.

If you can estimate the amount of ash left after incineration, subtract this amount from the waste incinerated. Enter the ash under the appropriate management practice.

Example: You incinerated 500 tons of hazardous solid waste. Ten (10) percent of the waste remained as ash. The ash was solidified, then landfilled. Enter 50 tons of ash under hazardous-solid waste-landfill (Line 15, Column C). Enter the remaining waste, 450 tons (500 minus 50 tons), under hazardous-solid waste-incineration (Line 12, Column C).

Line 13—Land Treatment/Application
Enter the amount of waste that was treated in or applied to land. If the waste was treated prior to land treatment/application, enter it under land treatment/application. If the waste was removed and disposed in a landfill after treatment, enter it under landfill.

Line 14—Underground Injection
Enter any waste that was underground injected. If a waste was treated before injection, enter it under injection.

Line 15—Landfill
Enter any waste that had landfill as its final disposition. If a waste was treated before landfilling, enter it under landfill.

Line 16—Other
Enter any waste that does not fit in any other category. These wastes would not fit any of the other listed management practices (recovery, NPDES, POTW, incineration, land treatment/application, injection, and landfill). Remember that you should consider the final disposition of the waste before you enter it under *Other*. For example, if you dewatered a sludge before you landfilled it, enter it under landfill.

Example: Practices that could be *other*:

1—Explosives that are detonated
2—Open burning of wastes
3—Wastewater treated and returned to process with no NPDES permit required

Line 17—Storage
Enter the amount of waste that remained in storage at the end of 1990.

Waste piles and surface impoundments are considered storage—not disposal practices—in this survey. This view is taken from the RCRA hazardous waste regulations where these types of units must be closed as landfills when they are no longer in use. If you use waste piles or surface impoundments as the final disposition of your waste, you must enter it under *Storage*. Exceptions to this rule are wastewater treated in NPDES and POTW facilities. See the instructions for NPDES (Line 10) and POTW (Line 11) for more detail.

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Line 18—Total
Add the numbers in each column and enter the total on Line 18. These totals must be the same as the total generation on Line 4 for each column. If they are not the same, you have made an error and must correct your numbers.

If the total on Line 18 is greater than the total generation on Line 4 (and your math is correct), you may have made either of these two mistakes.

Balancing Errors

1—you chose more than one management practice for a waste (you double-counted)

2—you carried over waste that was in storage at the beginning of 1990

If your mistake is carrying over waste from previous storage, you need to subtract this waste from your management practices. Make a reasonable estimate if you do not know exactly.

Major Changes

Major changes in your generation or management practices affect data trends used to track industry performance in waste reduction. Therefore, it is important that you explain these changes. A good example of a major change for 1990 is the definition of *Toxic Characteristic (TC)* organic wastes as hazardous.

Use these rules to identify major changes:

Solid Waste—if a change from the previous year is 50% or 10,000 tons

Wastewater—if a change from the previous year is 50% or 1,000,000 tons

You are given codes for changes on the form on page __. Use as many of these codes as you need to explain changes from the previous year.

For each waste group that had a major change, enter the line and column number from the *Generation* or *Management Practices* sections, then enter the codes explaining the changes.

If a change in your waste does not meet the rules above, but you consider it important, you may enter it also.

Comments

Use this section to write any comments or details that you have on the data that you have entered.

Definitions

These definitions are of a general nature and are only for the purposes of this survey. Interpretation and compliance with local, state, and federal regulations is the responsibility of the reader.

Bevill Wastes—any of the following 20 wastes from ore/mineral processing, listed as solid wastes by EPA at 40 CFR 261.4(b)(7).

1—slag from primary lead processing

2—slag from primary lead processing

3—red and brown muds from bauxite refining

4—phosphogypsum from phosphoric acid production

5—slag from elemental phosphorus production

6—gasifier ash from coal gasification

7—process wastewater from coal gasification

8—calcium sulfate wastewater treatment plant sludge from primary copper processing

9—slag tailings from primary copper processing

10—fluorogypsum from hydrofluoric acid production

11—process wastewater from hydrofluoric acid production

12—air pollution control dust/sludge from iron blast furnaces

13—iron blast furnace slag

14—treated residue from roasting/leaching of chrome ore

15—process wastewater from primary magnesium processing by the anhydrous process

16—process wastewater from phosphoric acid production

17—basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production

18—basic oxygen furnace and open hearth furnace slag from carbon steel production

19—chloride process waste solids from titanium tetrachloride production

20—slag from primary zinc processing

Boiler—an enclosed device using controlled flame combustion and having the following characteristics: (1) recovery and exporting of thermal energy, (2) combustion chamber and primary energy recovery sections of integral design, (3) thermal energy recovery efficiency of at least 60 percent, and (4) use of at least 75 percent of the recovered energy. This definition is summarized from the RCRA hazardous waste regulations. For more detail, see 40 CFR 260.10(a).

CFR—Code of Federal Regulations

Facility — A site used for chemical manufacturing, processing, refining, packaging, research and development, distribution or related commercial activity.

Hazardous Waste—a waste meeting the definition at 40 CFR 261.3. A waste is either *characteristically* hazardous or hazardous by *listing*. There are four groups for characteristically hazardous wastes: ignitable, corrosive, reactive, and toxic. Listed hazardous wastes are wastes from specific processes or wasted chemicals. See 40 CFR 261.3 and 261.21–33 for more detail.

Incinerator—any enclosed device using controlled flame combustion that is not defined as a boiler or industrial furnace.

Industrial Furnace—any of the following enclosed devices that are integral components of manufacturing processes and that use controlled flame devices to accomplish recovery of materials or energy:

1—cement kilns
2—lime kilns
3—aggregate kilns
4—phosphate kilns
5—coke ovens
6—blast furnaces
7—smelting, melting, and refining furnaces
8—titanium dioxide chloride process oxidation reactors
9—methane reforming furnaces
10—pulping liquor recovery furnaces
11—combustion devices used in the recovery of sulfur values from spent sulfuric acid

Land Treatment/Application—placement of a waste onto a soil or incorporation into the soil. Treatment is usually biological degradation of organics and immobilization of metals.

Landfill—a disposal facility where waste is placed in or on land and which is not a pile, land treatment facility, surface impoundment, underground injection well, salt dome, salt bed, underground mine, or a cave.

Non-hazardous Waste—a waste that does not meet the definition of a hazardous waste.

NPDES—National Pollution Discharge Elimination System. A federal program controlling wastewater discharges under section 402 of the Clean Water Act. A state may have assumed authority for the program.

POTW—Publicly Owned Treatment Works. A POTW is usually a municipal (city) wastewater treatment plant. EPA defines a POTW at 40 CFR 260.10 as "any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial waste of a liquid nature which is owned by a 'State' or 'municipality' (as defined by Section 502(4) of the CWA)." There are other facilities that are not city treatment plants that meet this definition, for example, Gulf Coast Waste Disposal Authority in Texas.

Recycle—a practice that regenerates or processes a waste from a process to recover a useable product or material for reuse.

Reuse—a practice that uses a waste from a process either as an ingredient in a process to make a product, or as a substitute for a commercial product.

Solid Waste—any waste that does not fit the definition of a wastewater in this survey. Note that this definition is for the purposes of this survey and is not meant to be the same as EPA's all-encompassing definition of solid waste at 40 CFR 261.2. EPA's definition includes solids, liquids, and gases.

Special Wastes—Bevill wastes from ore/mineral processing (see Bevill wastes in *Definitions*) and brine from oil and gas production.

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

Underground Injection—the injection of waste through a bored, drilled, or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension.

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.

Wastewater—wastes that are treated in an NPDES facility or POTW, injected underground, or any other aqueous waste.

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