

Monsanto

FROM (NAME, LOCATION, PHONE) Michael A. Pierle - F2EE (Phone: 314-694-8882/Fax: 314-694-8957)

DATE: June 18, 1997

cc:

SUBJECT: Establishing ESH Policy For
The New Company

REFERENCE:

TO: Jim Collins - F2EF
Jeff Felder - F2EC
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Attached is the most recent copy of the presentation to the Chemical Leadership Team on establishing ESH Policy for the new company. Also included is the work done on analyzing the Pledge Guidelines and their continued value under a Chemicals Company program.

The Leadership and Policy teams have given approval to the recommended standard of care and the commitment statements. We now need to engage the businesses, O.E., and other business process leads in developing the specific strategy and tactics that complete our policy/guidelines package.

In order to move to the next step, we plan two approaches:

- ★ 1. The business unit ESH contact should set a time for a review with each business leader and his/her team. I believe it is best that Garth and/or I make the initial presentation.

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2. The regulatory leads will take up the discussion at their regional site managers meetings and with the ESH site leaders.

We should accept the decision of the Leadership and Policy teams on the commitment statements, and engage the businesses and O.E. in consensus building of the specific strategies and tactics under the commitments. I would expect that a successful first meeting would produce:

- Further comments on the commitment statements.
- An agreed process within each business on how to build strategies and tactics.
- A schedule to complete the work by 10/1.

We can discuss this further at our staff meeting on 6/27, but you can proceed to set meeting dates with the businesses after 6/27.


Michael A. Pierle

Attachment

PRESENTATION

Value Alignment

Desired Outcomes

Options Discussed

Commitments

- **Statements**
- **Strategies**

What do we retain?

What do we discard?

What do we add?

“Does Improving A Firm’s Environmental Mangement System Result in a Higher Stock Price?”

- **Study , real-world data 300 Largest US companies - Feldman, Soyka and Ameer**

Conclusions:

- **Sound Environmental management leads to reduced risk and risk reduction is valued by financial markets...can increase stock price by 5%...**

Reasons:

- **Direct cost reduction benefits...**
- **Perceived as being less risky business entities...**

...therefore are accorded a lower cost of capital

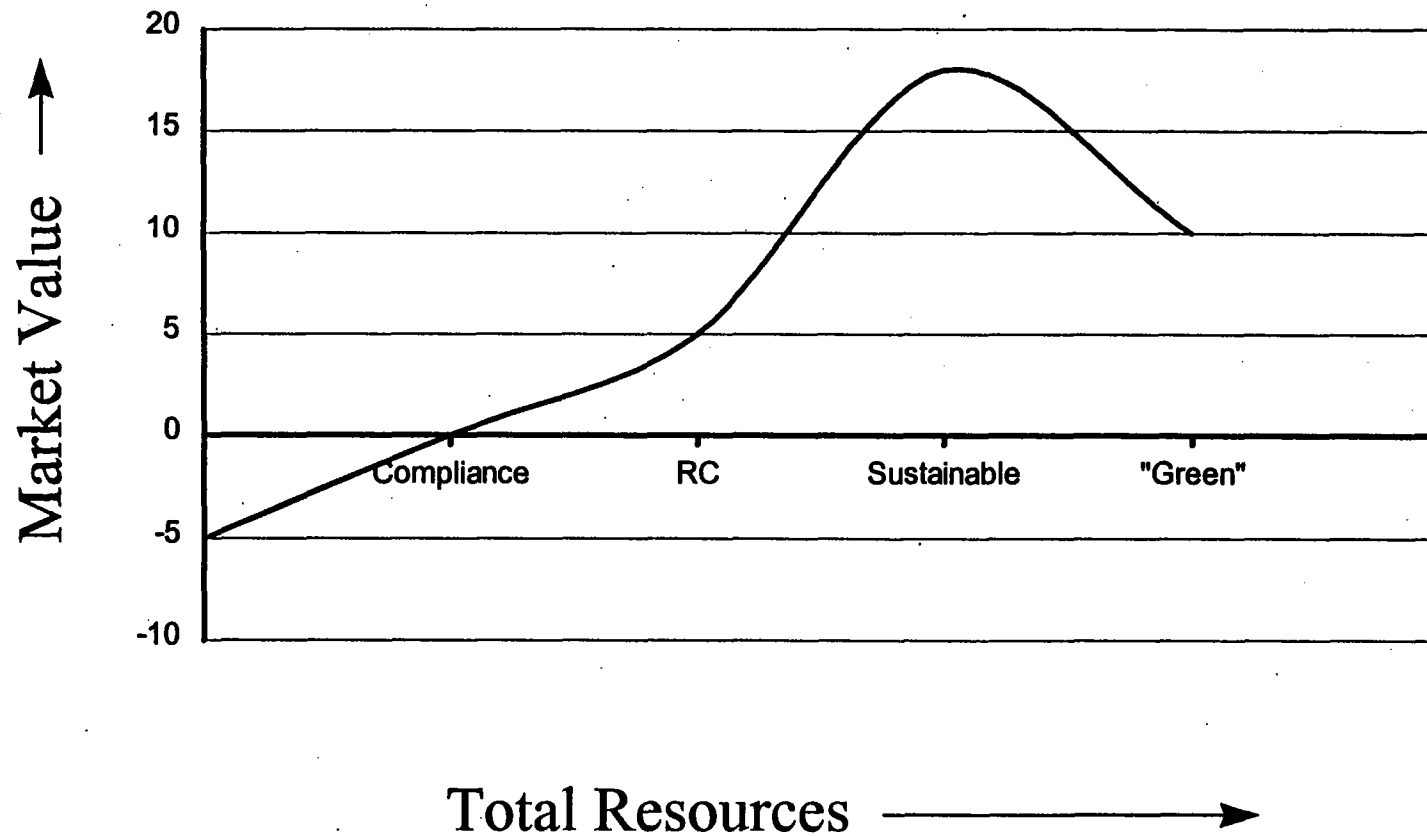
**Key: Excellence must be recognized by market...
communications of plans /progress critical**

The Most Relevant Analyst Questions

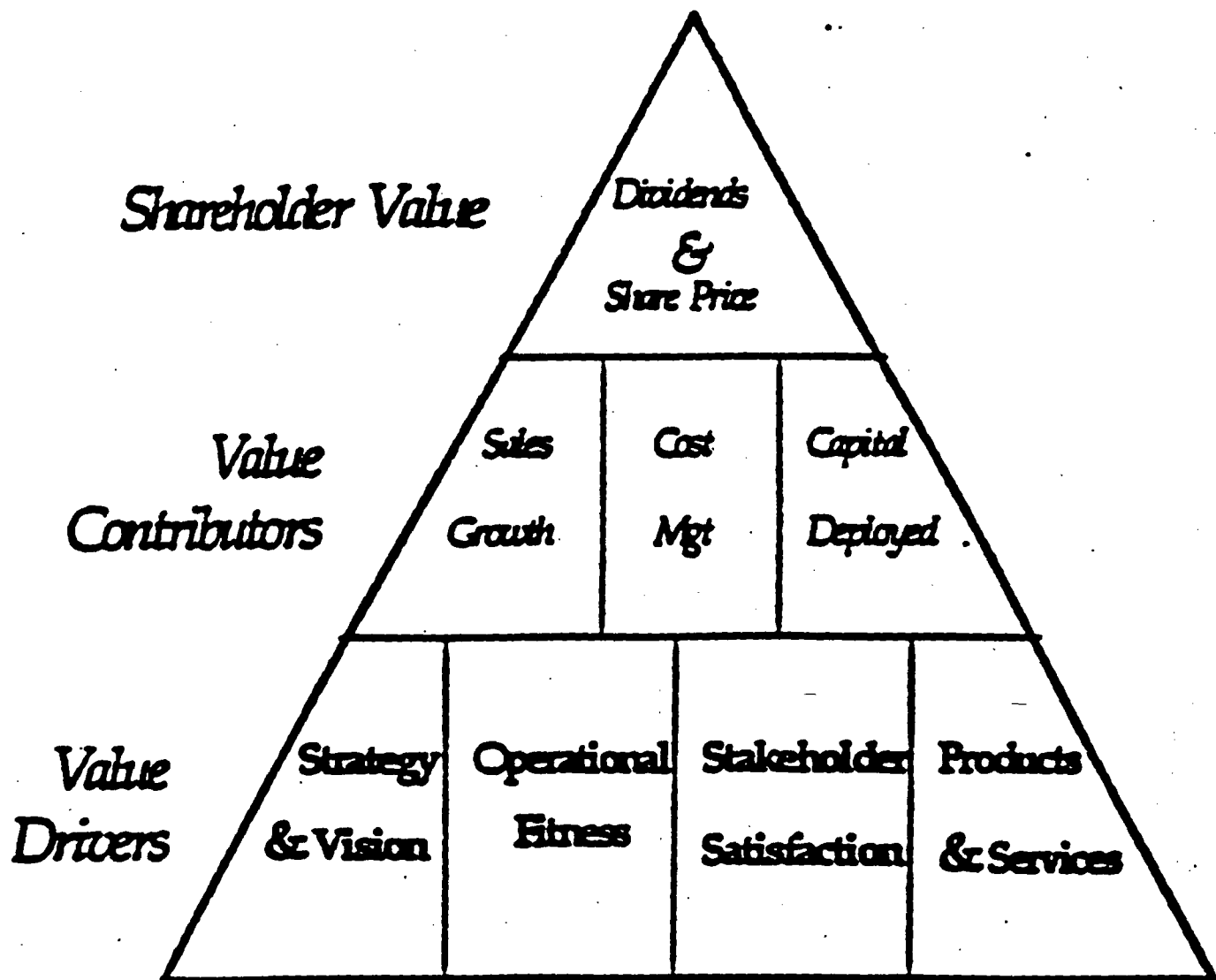
Strategy and Vision

- **Does the company have a global environmental policy?**
- **Is there an environmental program with objectives and measures?**
- **How is progress measured versus main environmental problems/opportunities of the company?**
- **What is the impact of environmental strategy on shareholder value?**
- **Does implementation fall into line responsibility?**
- **Is the company alert to emerging environmental issues?**
- **How does the company deal with risk and crisis management?**

Market Value vs. "Quality" of ESH Effort



Shareholder Value Pyramid



ISSUES

- **Standard of Care**
- **Pledge Items Dropped**
- **Decision on New Elements**
- **Internal Approval Process**

Desired Outcomes

Produce a Strategy / Plan That:

- **Results in safe and sustainable operations and products**
- **Complies with regulations**
- **Results in a motivated work force that drives continuous improvement**
- **Maintains existing credibility with all audiences and is valued by them**
- **Maintains momentum**
- **Is clearly integrated with company mission statement**
- **Causes the ESH components to be viewed as a contributor to achieving financial goals via risk management, cost management, new business development, etc.**

BEHAVIOR

REGULATORY:	COMPLY w/FINES	COMPLY	COMPLY 100%	COMPLY 100%
ASSETS:	FUNCTIONAL	RISKS TOLERANT	RISK ADVERSE	RISK ADVERSE
PRODUCTS:	SALEABLE	SAFE TO EMPL.	SAFE TO CUSTOMERS	DIFFERENTIATED
PEOPLE:	HOLD HARMLESS	ACCEPT IN	INJURY/ILLNESS RATE LOW	INJURY/ILLNESS FREE
PROCESS:	RELIABLE	AVERAGE	HIGH YIELD	• INPUT = OUTPUT • LOW RISK

STANDARD OF CARE	ACCOUNTABLE	PROTECT	RESPONSIBLE	SUSTAINABLE
------------------	-------------	---------	-------------	-------------

- | | | | |
|--|---|--|---|
| <ul style="list-style-type: none"> • SHORT TERM FOCUS ON INCOME VS. LONG TERM LIABILITY | DEFERRED CAPITAL SPENDING

AVG. COST AV. VALUE. | MEETS INDUSTRY EXPECTATIONS

MOTIVATED EMPLOYEE

LOWER COSTS | <ul style="list-style-type: none"> • LOWER COSTS • LEADER • CREDIBILITY REQUIRES SHORT TERM INVESTMENT LONG TERM NET VALUE • SHOULD ALIGN WITH GROWTH PORTIONS OF PORTFOLIO • PREMIUM PRICE FOR PRODUCTS |
| <ul style="list-style-type: none"> • DECENTRALIZED POLICY MAKING | | | |

VALUE

OUTCOMES	STANDARD OF CARE			
	ACCOUNTABLE	PROTECT	RESPON.	SUST.
MAINTAINS MOMENTUM	-	-	0	+
MAINTAINS CREDIBILITY	-	-	0	+
INTEGRATED WITH BUSINESS MISSION	-	-	0	0
SAFE & SUST. OP. & PROD.	-	-	0	0+
MOTIVATED EMPLOYEE	-	-	0	0+
ESH VIEWED AS CONTRIBUTOR	0	0	0	0

A “PLEDGE-LIKE” STATEMENT:

- **We will ensure our operations are safe and pose no undue risk to employees, customers, the environment and communities.**
- **We will make products that are safe for intended use and sustainable.**
- **We will keep our operations open to our communities, and foster open communications with all of our stakeholders.**
- **We will continue to improve the sustainability of our businesses by improving their economic and environmental efficiencies.**
- **We will encourage active participation in and positive contributions to environmental areas by our employees.**

COMMITMENT:

We will ensure our operations are safe and pose no undue risk to employees, customers, the environment and communities.

STRATEGY:

Achieve total compliance with ESH requirements while striving to achieve incident/injury free operations over 10 years.

COMMITMENT:

We Will make products that are safe for intended use and are sustainable.

STRATEGY:

Fully implement Product Stewardship Code of Responsible Care and reviewed by management by the end of 1998.

A Sustainability Assessment will be required for all new products.

COMMITMENT:

We will keep our operations open to our communities, and foster open communications with all of our stakeholders

STRATEGY:

We will maintain proactive dialogue with employees, customers and the public worldwide on ESH matters.

COMMITMENT:

We will continue to improve the sustainability of our businesses by improving their economic and environmental efficiencies.

STRATEGY:

- **Systematically increase raw material and energy efficiencies (make more or less)**
- **Search for technology and operational improvements**
- **Maintain 90% air commitment**

COMMITMENT:

We will encourage active participation in and positive contributions to environmental areas by our employees.

STRATEGY:

Use special enterprise recognition programs and site-specific initiatives.

NEW ELEMENTS

- **Sign CERES**
- **Replace Deep Well Policy with “Make more with Less”**
- **Add “New Product” sustainability**
- **Compliance Process date**

Decision/Communication Plan

- **Policy Committee Decides on “Standard of Care” and Commitments** **June**
- **Operations/Leadership Committees build the Strategy/Tactics** **Aug./Sept.**
- **Internal and External Communication Plan** **Sept/Oct.**

CROSS REFERENCE:
Pledge Manual and Responsible Care®

Pledge Manual	Responsible Care Codes
• Pollution Prevention	• Pollution Prevention, Practices 1 through 11, except Nos. 4 and 8
• Employee and Community Safety and Health	• Process Safety • Employee Safety and Health • Community Awareness and Emergency Response
• Process Safety and Emergency Response	• Process Safety • Community Awareness and Emergency Response
• Product Stewardship	• Product Stewardship
• Chemical Distribution	• Distribution
• Groundwater and Soil Quality	• Pollution Prevention, Practices 13 and 14 • Pollution Prevention, Practice 12
• Outside Processors	• Pollution Prevention, Practice 12
• Community Awareness at Manufacturing Sites	• Community Awareness and Emergency Response, Practices A1 thru A9 • Pollution Prevention, Practices 4 and 8

I. Commitment: Safe Operations, No Undue Risk (Includes Environmental Risk/Threat Containment)					
Pledge Program	Program Element	Compliance	Risk Mgmt.	Resp. Care	Beyond Resp. Care
1	Policy for Zero Effect		x	x	x
1.1	PCB-Free in the U.S.A.		x		
1.3	No landfill of acutely hazardous or incinerables	x			
1.3	Manage wastes as if they were hazardous, if criteria met				x
1.3	Medical Wastes to be incinerated, manifested		x		x
1.3	Monsanto not a commercial waste disposer		x		
1.3	Land Application of wastes requires assessment, approvals		x		x
1.4	Assessment of air emissions	x	x		
1.4	Assessment of water discharges	x	x		
2	Policy for Employee, Contractor, Community Safety	x	x	x	
2.1	Health Surveillance and Assessment	x	x	x	
Recommendation					
KEEP. Integrate into Commitment statement.					
REVISE. Essentially done. Change to a maintenance-oriented requirement.					
DROP. The LDR program has basically mandated that hazardous wastes, including ignitables, must be treated before landfill.					
KEEP. A reasonable approach. The rules fail to capture all high-threat wastes as "hazardous".					
KEEP. Good protection at low cost.					
KEEP. Simply requires policy-level approval to get into waste disposal business.					
KEEP. Land application is high risk, in that any cleanup will involve large land areas.					
REVISE: This policy as written has "past its time", but the Core Team has recommended new language/program to deal with the "residual risk" issue after MACT.					
REVISE: This policy as written has "past its time", but the Core Team has recommended new language/program to deal with the risk issues likely to emerge on a watershed basis in the future; this needs critical consideration.					
KEEP. These are reasonable principles that should guide our actions. Consider adding contractors to Commitment statement.					
KEEP, but more clearly focus health assessment language on workers workplace exposures.					

Pledge Program	Program Element	Compliance	Risk Mgmt.	Resp. Care	Beyond Resp. Care	Recommendation
2.2	Data Management, workplace materials and exposures	x		x		KEEP. A right to operate, defense and management necessity. Drop the reference to MARS.
2.3	Reviews and Guidance (safety audits, LP&EC reviews, compliance with policy/stds)	x	x	x		KEEP. A right to operate, defense and management necessity.
2.4 & 3.4.9	Spill Prevention		x	x	x	KEEP, but REVISE to reflect the new 75% by year 2000 goal, as agreed to by the MLC.
2.5	Personnel Training and Security	x		x		KEEP. A right to operate issue.
3	Policy for Process Safety/ Emergency Response	x	x	x		KEEP.
3.1	Process Development and Design	x	x	x		KEEP. Right to operate and management tool.
3.2	Project Reviews	x	x	x		KEEP. A right to operate issue.
3.3	High Hazard Materials (HHM) Program	x	x			KEEP. A right to operate issue.
3.4	Operational Safety Management (procedures, training, contractors, MOC, audits, investigations)	x	x	x		KEEP. A right to operate issue.
3.5	Emergency Response	x	x	x		KEEP. A right to operate issue.
5	Policy for Safety in Distribution	x	x	x		KEEP. Consider adding carriers/distributors to Commitment statement.
5.1	Incident Reduction (in distribution)	x	x	x		KEEP, but edit out Ag references.
5.2	Safety Standards for Warehouses and Terminals		x	x	x	KEEP. Reasonably needed to assure right to operate.
6	Policy/goals for groundwater and soil quality		x	x		KEEP. These are reasonable statements of the principles under which we must operate

Pledge Program	Program Element	Compliance	Risk Mgmt.	Resp. Care	Beyond Resp. Care	Recommendation
6.1	Groundwater Assessments at Major/Contaminated Sites	x	x	x		REVISE to reflect that this is a <u>continuing</u> program at acquired sites and at sites that have issues; no longer a new initiative.
6.2	Groundwater Protection		x	x	x	KEEP groundwater protection plans, facility design stipulations. Recommend that we STRENGTHEN our position on impoundments except for post treatment or stormwater storage.
6.3	Superfund Site Actions	x		x		KEEP. These are reasonable actions that we are likely to take even without this requirement, to minimize cost and maximize public acceptance.
7	Policy for Outside Processors		x	x		KEEP.
7.1-7.2	Selection, Assessment and Approval of Outside Processors		x	x		KEEP. This program was recently overhauled.
9	Policy for ESH Reviews of Capital Projects	x	x	x		KEEP. Assures new projects are compliant, risk averse, protective of health and the environment.
9.3-9.5	Procedure for project reviews	x	x	x		REVISE to reflect the new Chemicals nomenclature, organization.
10	Policy for ESH Reviews of Acquisitions and Divestitures	x	x	x		KEEP. An essential element for compliance, safety, health and financial goals.
10.3-10.5	Procedure for A&D reviews	x	x	x		REVISE to reflect the new Chemicals organization.
11	Policy on Compliance with Laws and Policies	x	x	x	x	KEEP, but revise the <u>title</u> , if kept, to focus on sites where the company <u>does</u> have operating control. Title is misleading, content of policy is not.
12	Policy and Procedures on Reproductive Hazards in the Workplace				x	KEEP.
13	Policy and Procedures on Safe Handling of Carcinogens	x	x	x		KEEP.
14	Policy and Procedures on Contractor/Guest ESH Standard		x	x		KEEP.

Pledge Program	Program Element	Compliance	Risk Mgmt.	Resp. Care	Beyond Resp. Care	Recommendation
16	Policy and Procedures on Use of Ozone Depleting Chemicals	x		x		KEEP. This is a recent addition to the policy inventory, is probably more applicable to Chem than to LS. Not overly strenuous as written, but solid direction.
17	Policy and Procedures on ESH Auditing	x	x	x		KEEP. Update to new Chemicals nomenclature.
New	VPP Program; Achieve Star Status at all Sites				x	ADOPT, with goal of all sites with Star status by 12/97.
New	Network to Implement Behavior Modification Safety Principles				x	ADOPT, with goal of having programs in place by end of 1998.
New	ESH Compliance Management Systems				x	ADOPT, with goal of having all sites verified essentially compliant by end of 1999.
	Filed as [lty]commit1.xls					

II. Commitment: Product Stewardship						
Pledge Program	Program Element	Compliance	Risk Mgmt.	Resp. Care	Beyond Resp. Care	Recommendation
4	Policy for Product Stewardship	x	x	x		KEEP. An evergreen statement.
4.1	ESH Information and Risk Characterization (re. products)	x	x	x	x	REVISE marginally to accommodate planned IT improvements on info management. Toxicology Section assembly process can be revised.
4.2	Risk Management System		x	x		KEEP. Still don't know all minor uses of all products in U.S. or Europe, although excellent progress has been made in Canada.
4.3	Principles and Key Elements (info for R&D, tollers, to/from customers, suppliers)	x	x	x		KEEP and UPGRADE. Incorporate principles into NPPD process. Expand "employee" feedback to be "stakeholder" feedback. Strengthen discipline in assuring data transmittal to tollers.
15	Policy and Procedures on Use of Animals in Research				x	DROP. A much diminished issue in a Monsanto without pesticides, pharmaceuticals.
New	Product Stewardship Code Compliance			x		ADOPT, with all "gaps" identified and closure plans developed and reviewed by management by end of 1998
New	Review of Business Product Portfolios				x	ADOPT, with goal of screening all portfolios to identify sustainability opportunities and threats by end of 1998.
New	Product Stewardship Training Program for R&D				x	ADOPT, with plan to develop ESH/Product Development training to impact product/process selections.
New	Use of NPPD Process to Drive Sustainability				x	ADOPT plan to evaluate opportunities with the NPPD process which has integrated sustainability concepts into its evaluation.

Filed as [lty]commit2.xls

III. Commitment: Operations Open To Communities; Open Stakeholder Communications					
Pledge Program	Program Element	Compliance	Risk Mgmt.	Resp. Care	Beyond Resp. Care
3.5.5	Communication of Potential	x	x	x	
8	Policy on Community Awareness at Mfg. Sites		x	x	x
8.1	Community Involvement and Dialogue			x	x
8.2	Info. on Chemical Releases/ Incidents			x	x
New	Annual ESH Progress Report			x	x
New	Pursuit of Sustainability				x
New	CERES				x
New	Telephone Access				x
Recommendation					
					KEEP.
					KEEP. A right to operate need.
					KEEP. Assures right to operate.
					KEEP. Essential elements of a good community relations dialogue.
					ADOPT goal to issue an annual progress report.
					ADOPT intent to actively seek opportunities to work collectively on global sustainability, including in development of strategic philanthropy.
					ADOPT and execute plan to sign CERES principles.
					ADOPT and execute plan to establish "1-800" number for ESH/sustainability calls.
Filed as [lty]commit3.xls					

IV. Commitment: Economically/Environmentally Efficient Operations						
Pledge Program	Program Element	Compliance	Risk Mgmt.	Resp. Care	Beyond Resp. Care	Recommendation
1	Policy for pollution prevention		x	x	x	KEEP. Integrate into Commitment statement.
1.1	Statement: Toward Zero Effect; heirarchy of methods		x	x		KEEP
1.1	70% Waste Reduction Target, future program for effects-based target		x	x		NEED NEW pollution prevention program with goals, with emphasis on sustainability (see below).
1.1	Inventory of waste generation			x		KEEP
1.2	Deepwell injection of Haz. Waste and SARA 313 chemicals				x	DROP. Replace with a robust pollution prevention program, with emphasis on sustainability (see below).
1.2	Contingency Plan for Deepwell Withdrawal				x	KEEP. Makes good sense to be ready for this eventuality.
1.2	No new uses of Deepwells, unless approved at policy level				x	KEEP. Keeps pressure on deepwell sites to look for viable options.
1.3	Record of commercial waste treatment, disposal			x	x	KEEP. A must if we get called under Superfund.
New	Process and environmental efficiency in new processes and projects			x	x	ADD a program element to assure review of process/project materials selection and utilization in project reviews.
New	Target New Environmental Efficiency Goals	x		x	x	DEVELOP and ADOPT improved pollution prevention program based on sustainability principles, including focuses on: 1) lowering TRI releases as ____% of production 2) lowering deepwell losses as ____% of production 3) developing CO2 emissions target by the end of 1995.
New	Efficiency Review of Processes			x	x	ADOPT plan to complete efficiency/sustainability review of all processes for improvements, by end of 1997.

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Pledge Program	Program Element	Compliance	Risk Mgmt.	Resp. Care	Beyond Resp. Care	Recommendation
New	Technology Development			x	x	ADOPT plan to evaluate technology partnerships for ESH needs on a continuing basis.
New	Business LRPs				x	ADOPT plan to ESH/stewardship status and needs in LRPs for businesses.
New	Waste Reutilization			x	x	ADOPT plan to use industry and regulatory contacts, TRI lists and Internet to develop list of potential wastes for recovery/sale and commit a small amount of research budget.
Filed as [lty]commit4.xls						

V. Active Employee Participation						
Pledge Program	Program Element	Compliance	Risk Mgmt.	Resp. Care	Beyond Resp. Care	Recommendation
New	Employee communications			x	x	ADOPT with 9/98 target date.
New	Annual award program used to track & reward performance				x	ADOPT
New	Employee survey to determine attitudes and needs				x	ADOPT with 1998 target date.