

BOARD OF DIRECTORS PRESENTATIONS

NOVEMBER 9, 1998

August, 1998

FC ISSUES

Exhibit

1527

State of Minnesota v. 3M Co.,
Court File No. 27-CV-10-28862

3MA10081840

1527.0001

- Introductions

- Thanks

- Why we're here

- > Interest in fate & effects of chemicals - life cycle
⇒ Human Health & Environment

- We are here today new information on 3M chemicals
as part of our product stewardship program

- expectation of open dialogue, cont. improv

- not just quality, price, performance deliver

Workplace Information

Health Safety

Environmental

Regulatory Support

Social Expectations

Goals

- Our Goal is to inform you of an impt
situation - new information - tell you
what we know

- Ensure you fully understand issues
& implications so you can evaluate
in the context of your company

- Ensure you understand - potential Public Issue

Context

- FCs Stable - benefits

- Not 100% pure
residuals - also s

- Stability - Resist Degradation body/env.

- persist accumulate

- ∴ Need to understand exposure

History

Facts

- PC's known in humans early 70's
- 3M occupational exposures - early 80's
- 3M analytical technique ppm/ppb
- 1998 3M product blood of gen'l pop - stu
- No evidence health effects at observed lev
- Perceived Risk as Public Issue

3M Actions

- Analyses
- Toxicology Studies
- Occ. Medicine Studies
- Product Purification - Reengineering

• Meet @ Regulators

end

- Reinvestment - Transition to New Chemistry
- ~~Some~~ Emissions - Plant Long Term
- Battelle Env. Studies
- Science Advisory Panel
- Consultants
- Exposure Assessments - MSDS
- Communications @ Customers
-

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Product Stewardship Actions & Next Steps

- Commitment to reduce / minimize / eliminate exposure throughout product life cycle
 - we will work with you - your operations
 - x in plant exposures - IH
 - x occ. medicine assess.
 - x Env. Issues
- Commitment to keep you up to date
 - appropriate 3M experts

Next Steps

- Information updates from 3M
- Response to @ MSDS - Prod. Steward / ITH
- 3M Experts
- Communicate

Summary

No known health effects at levels observed
Env. studies ongoing

Committed to stay in business, unless (-) results

Potential to become Public Issue / Perceived Risk

3M prepared to handle communications

Thanks for business - hope to continue work:

Crisis

Divided up into teams

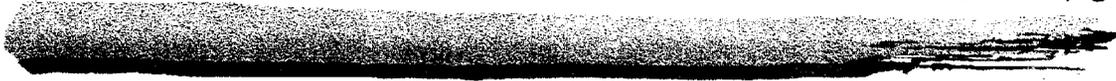
I coordinate teams - internal commun. Award

Sr. Exec. Leading This Issue - Led Baldridge

Review monthly with Sr. Executives.

Don't know how to account for blood levels
of PFOS - non occupationally exposed
- occupa

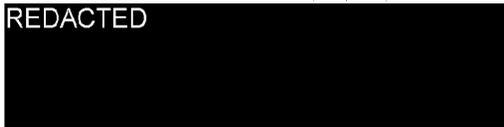
3M Fluorochemicals EHS&R Initiative



Issue Summary

- 3M discovery of 3M fluorochemical in blood of general population
- No medical or scientific basis to attribute any adverse health effects to 3M products
- Developing and implementing plans to minimize exposures and emissions
- Accelerating scientific studies - health, safety, environmental issues

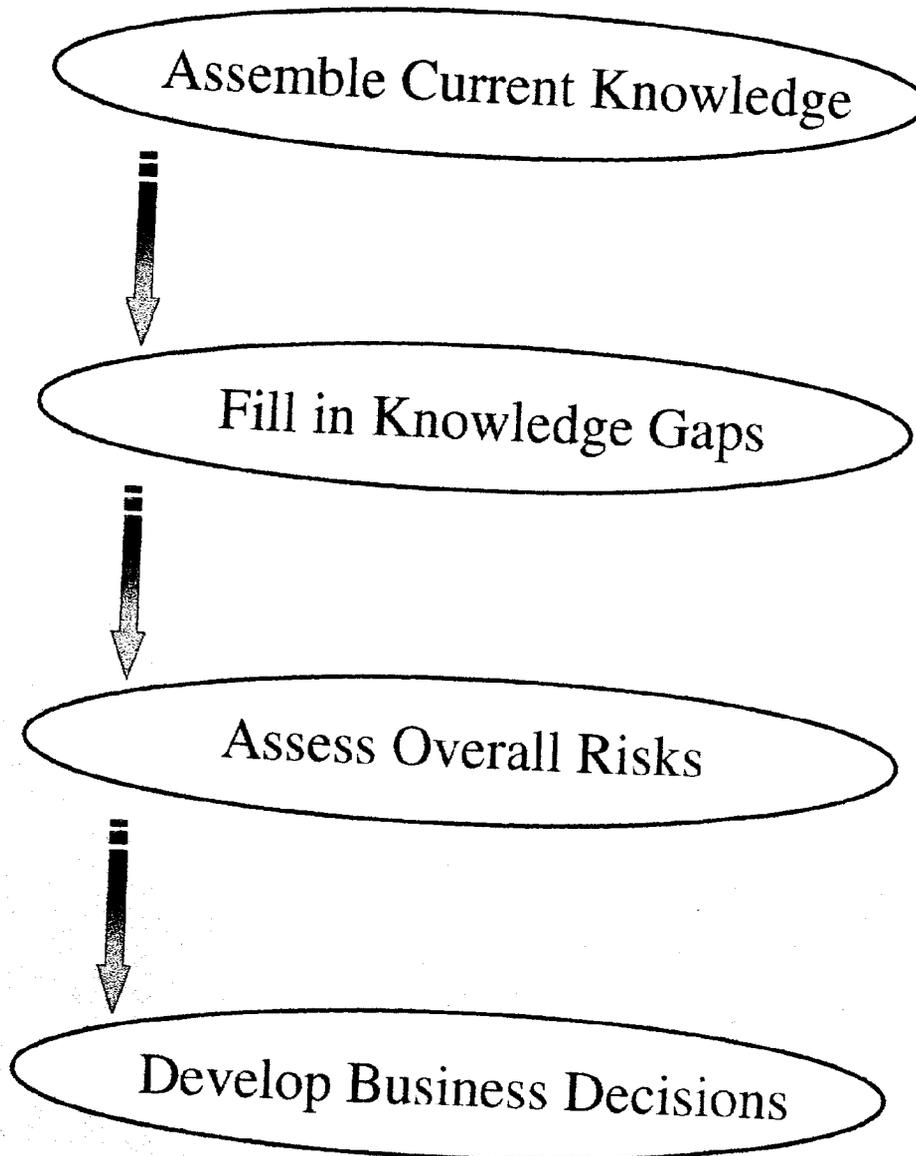
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SANDERS_D/REA/PFT98/REICH EHS&R PRES /1

Fluorochemical EHS&R Initiative

The Business Decision Process



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SANDERS_D/REA/PP108/REICH EHS&R PRES./2

Fluorochemical EHS&R Initiative

The Business Decision Process • Risk = Hazard x Exposure



- Product Composition
- Product Applications
- Life Cycle Product Exposures
- Life Cycle Env. Releases
- Plant Emissions
- Env. Fate & Effects
- Mfg. Employee Exposures
- Toxicology of Chemistries
 - Acute Toxicity
 - Chronic Toxicity
 - Sensitive Populations
 - Reproductive Effects
 - Endocrine Disruption

- Analyses
- Qualitative Exposure Assessments
 - Release Measurements
 - Degradation Studies
 - Occ. Medicine Studies
 - Toxicology Animal Studies

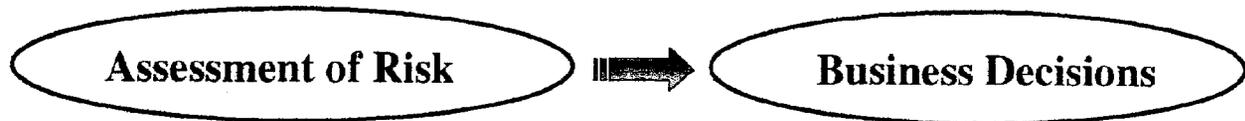
- Internal
- Criteria to Prioritize Risks
 - Opportunities to Minimize Exposure, Emissions
 - Studies Results
- External
- Regulators
 - Science Advisory Panel
 - Consultants
 - Food Safety
 - Occ. Med.
 - Toxicology
 - Environment
 - Communication
 - Analytical Quality

- Reengineering
- Reinvention
- Industrial Hygiene
- Product Substitution
- Product Labeling
- Change Business Process
- Phase Out Business or Application

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Fluorochemical EHS&R Initiative

Assessing the Science - Determination of Business Decisions



Internal

- Develop Criteria to Prioritize Risks
- Assess Options to Minimize Risks
- Studies Results

External

- Regulators
- Science Advisory Panel
- Consultants and Oversight
 - Toxicology
 - Public Health
 - Epidemiology
 - Analytical Quality
 - Sensitive Populations
 - Food Safety
 - Eco Toxicity
 - Environmental Fate

- Reengineering
- Reinvention
- Industrial Hygiene
- Product Substitution
- Product Labeling
- Change Business Process
- Phase Out of Business or Application

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Fluorochemical EHS&R Initiative

Understanding the Science

Assemble Current Knowledge

- Product Composition
- Product Applications
- Life Cycle Product Exposures
- Life Cycle Environmental Releases
- Plant Emissions
- Environmental Fate and Effects
- Occupational Employee Exposures (3M and Customer)
- Toxicology of Chemistries
 - Acute/Chronic Toxicity
 - Reproductive Effects
 - Sensitive Populations
 - Endocrine Disruption
 - Food Safety
 - Eco-Toxicity

Fill in Knowledge Gaps

- Analyses
- Qualitative Exposure Assessments
- Release Measurements
- Degradation Studies
- Battelle Studies
- Occupational Medicine Studies (IH, Blood Levels)
- Animal Studies to Determine Effects

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3M Fluorochemical EHS&R Initiative

Regulatory

Food Safety

- Continuing Dialogue with FDA
- Contacted German BgVV
- Contacted Health Canada

In compliance - meeting requirements with paper/packaging products

Public Health / Environment

EPA

- Filed two (8e) Communications
 - PFOS Findings
 - Multigeneration Rat Study
- Proactively seeking meeting and guidance

Canada, Europe, Japan - After EPA meeting.

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3M Fluorochemical EHS&R Initiative

Toxicology Studies

**Objectives: Develop Understanding/
Determine Effects - PFOS**

- **Acute Toxicity**
- **Chronic Toxicity**
- **Carcinogenic Effects**
- **Reproductive Effects**
- **Embryo/Fetal Development**
- **Endocrine Disruption**
- **Absorption/Distribution/Metabolism/Excretion**
- **Mechanism Studies**

Animal Studies



- ⊛ **Establish No Effect Levels**
- ⊛ **Relate No Effect Levels to Levels of PFOS
Found in 3M Workers and General Population**

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3M Fluorochemical EHS&R Initiative

Environmental Studies- Battelle Assessment

- **Product Stability**
 - * Chemical Degradation
 - * Biodegradation

- **Environmental Sampling - Targeted Geographies**
 - * Surface Water e.g. * Dalton, GA
 - * Drinking Water * Decatur, AL
 - * Sediments * Isle Royale
 - * Landfill Leachate * Boston
 - * Wastewater Treatment * New Orleans
 - * Air Emissions

- **“Market Basket” Sampling - FDA Protocol**
 - * Locally Grown Foodstuffs
Meat, Vegetables, Cereals, Dairy

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SANDERS_D/REA/PFT98/REICH EHS&R PRES./7

3M Fluorochemical EHS&R Initiative

Exposure Assessments/Reductions

- **Residuals reduced > 50% Paper & Packaging**
- **Initiated Program for “Trunk” Reductions - Entire Product Line**
- **Decatur Plant Exposure Assessment Complete - IH Program Result**
- **Initiated Plant Mass Balance/Gas Emissions Teams**
- **Implemented Wastewater Extraction Program - Decatur**
- **Completed Qualitative Product Exposure Assessments**
- **Distributed Expanded MSDS - US/Global**
- **Considering Appropriate Labeling Changes**
 - **Consumer Aerosols**
 - **Aftermarket**

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SANDERS_D/REA/PPT98/REICH EHS&R PRES./8

3M Fluorochemical EHS&R Initiative

Communications

Telephone Response Mode

- Inquiry Process Defined
- Training Complete Product Stewards/Network
- Trial Drills to Test Readiness

Proactive Mode

- Updated MSDSs
- Started Product Stewardship Initiative
 - Paper/Packaging Channel
 - Carpet/Upholstery Training
- Consumer Labeling Issues - Aerosols
- Employee Updates

Media

- Stakeholder Messages Drafted
- Spokesperson Training
- Consultants
- Science Advisory Panel
- Third Party Spokespersons

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SANDERS_D/REA/PPT98/REICH EHS&R PRES./9

3M Fluorochemicals EHS&R Initiative

Progress Report

- Meeting FDA commitments for reduced residuals in indirect food contact applications
- Notified EPA via TSCA 8(e) filings.
 - * Awaiting EPA evaluation
 - * Updating support materials
- Notified OUS Regulators; Germany, Canada
- Implemented broad range of tox., occ. medicine studies
 - * Interim results continue to validate product safety and employees are not at risk for adverse health effects
- Initiated Environmental Fate & Effect Study - Battelle
- Continuing plant emissions assessment and implementing options for reduction
- Preparing comprehensive exposure assessment/industrial hygiene initiative for all product applications
- Initiated Reengineering/Reinvention Program to optimize manufacturing processes and product purity
- Assembled external Scientific Advisory Panel and Third Party Spokespersons

SANDERS_D/REA/PT39/EHS&R/INITIATIVES/3

3M Fluorochemical EHS&R Initiative

Science Advisory Panel

Provide Independent Advice and Guidance to 3M on Public Health and Ecological Issues Relating to 3M Fluorochemicals

<u>Name</u>	<u>Position</u>	<u>Discipline</u>
Gil Omenn, M.D., Ph.D	Exec. V.P. Medical Affairs Univ. Michigan	Health Policy Risk Assessment
Ray Greenberg, M.D., Ph.D.	V.P. for Academic Affairs Provost, Medical Univ. of S.C.	Epidemiology Public Health Cancer
Elaine Faustman, Ph.D.	Co-Chair, Div. Envir. Health Univ. Washington	Toxicology
Bob Huggett, Ph.D.	V.P. Research & Grad. Studies Mich. State Univ.	Ecotoxicity Environmental Fate
Don Kennedy, Ph.D.	Bing Prof of Env. Science President Emeritus Stanford Univ.	Public Health Policy

Consultants to the Panel

Jack Moore, Ph.D.	President & CEO Inst. For Evaluation of Health Risks	Toxicology Risk Assessment
Joe Rodricks Ph.D. REDACTED	Dir. Health Sciences Environ Inc.	Toxicology Risk Assessment

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3M Fluorochemical EHS&R Initiative



Third Party Spokespersons

Elizabeth Whelan,
Sc.D., MPH

President, American Council
on Science and Health

Public Health
Policy

Christopher Wilkinson,
Ph.D.

Former Prof. Of Insecticide
Chemistry and Toxicology,
Cornell

Toxicology

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3M Fluorochemical EHS&R Initiative

Consultants (continued)

Environmental Fate & Effects

Harry Painter, Ph.D.	Managing Director Fresh Field Analysis Ltd., (U.K.)	Biodegradation
Joe Fiksell, Ph.D.	Director, Life Cycle Management Battelle Institute	Environmental Fate & Effects
Mario Molina, Ph.D. (Nobel Laureate)	Martin Professor Atmospheric Chemistry MIT	Atmospheric Science
John Giesy, Ph.D.	Distinguished Prof., Dept. Zoology National Food Safety & Toxicology Center Professor, Mich. State Univ.	Wildlife Biology
Don MacKay, Ph.D.	Professor & Dir. Env. Modeling Lab, Univ. of Toronto	Atmospheric Modeling
Don Crosby, Ph.D.	Professor Univ. of California-Davis	Chemical Degradation Processes
Craig Criddle, Ph.D.	Dept. of Environmental Science Stanford Univ.	Biodegradation Processes
Ralph Cicerone	Daniel G. Aldrich Prof. Earth Sciences Dept. Chancellor Univ. of CA - Irvine	Env. Science

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3M Fluorochemical EHS&R Initiative

Consultants

Communications

Myles Martel, Ph.D.	Martel & Associates	Comm. Strategies
A. John Adams, John Heinze, Ph.D.	Adams & Associates	Comm. Risks Public Issue Messages Media Monitoring
Richard Wirthlin, Ph.D.	Wirthlin Worldwide	Opinion Surveys Comm. Strategies

Occupational Medicine

Robert McCunney, Ph.D.	Dept. Chair. Occ. Environmental Medicine MIT	Medical Surveillance
Tim Church, Ph.D.	Assoc. Professor Univ. of Minnesota	Statistics
Jack Mandel, Ph.D.	Prof. And Chair-Div. of Occupational Medicine & Environmental Health Univ. of Minnesota	Epidemiology

Analytical Chemistry

Grant Plummer, Ph.D.	Professor-Dept of Physics N.C. State Univ.	Gas Phase FTIR
Robert Voyksner, Ph.D.	Research Triangle Inst.	LC/MS Technique
	Quest Analytical Inc.	Quality Assurance
	Quality Associates Inc.	GLP Oversight
Jack Henion, Ph.D.	Prof. of Toxicology Analytical Toxicology Dept. Cornell University	Analytical Toxicology

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SANDERS_D/REA/PPT98/REICH EHS&R PRES/12

3M Fluorochemical EHS&R Initiative

Outside Counsel

<u>Name</u>	<u>Firm</u>	<u>Discipline</u>
Chuck O'Connor Attorney	McKenna & Cuneo Washington, D.C.	<ul style="list-style-type: none">• EPA Regulatory Practice• Toxic Substances Control Act• FIFRA (Pesticides) Law• Consumer Products Safety Act
Dale Larson Attorney	Larson & Counsel St. Paul, MN	<ul style="list-style-type: none">• Insurance Law• Corporate and Product Liability
Julie Hatcher Attorney Bob Sussman Attorney	Latham & Watkins Washington, D.C.	<ul style="list-style-type: none">• Environmental Law• EPA regulatory issues• OSHA (Process Safety Management)
John Quarles Attorney	Morgan Lewis & Bockius Washington, D.C.	Environmental Law
Bruce Finzen, Attorney Dave Engen, Attorney Davie Bland, Attorney	Robins, Kaplan, Miller & Ciresi	Product Liability Defense

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3M Fluorochemical EHS&R Initiative

Future Milestones

4Q 1998 - 1Q 1999

- **Proactive Contact with EPA**
- **Ongoing Dialogue with FDA**
- **Interim Reports - Toxicology, Occupational Medicine**
- **Define Process for Business Decisions**
- **Guidance From Science Advisory Panel**
- **Expand Customer-Focused Product Stewardship-
Industrial Hygiene Initiative**
- **Implement Process Improvements -
Minimize Residuals**
- **Complete Plant Emissions/Exposure Assessments**
- **Complete Decatur Wastewater Treatment Upgrade**
- **Battelle Environmental Assessment Expands**
- **Continuing External Communications**

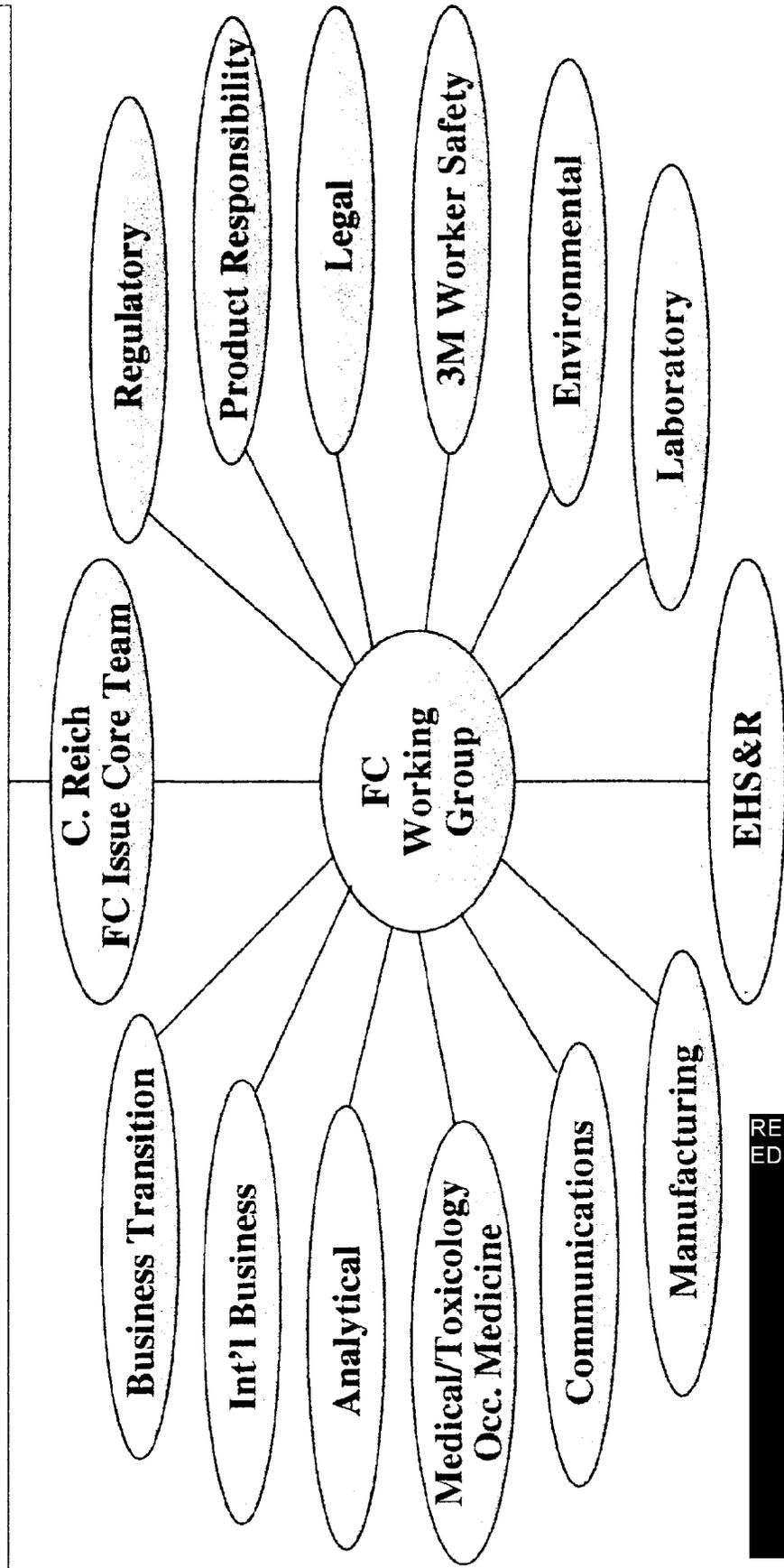
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3M OVERSIGHT

3M Corporate Operations Committee

3M Corporate Crisis and Environmental, Health, and Safety Committees



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Fluorochemical EHS&R Issues

The Business Decision Process • Risk = Hazard x Exposure

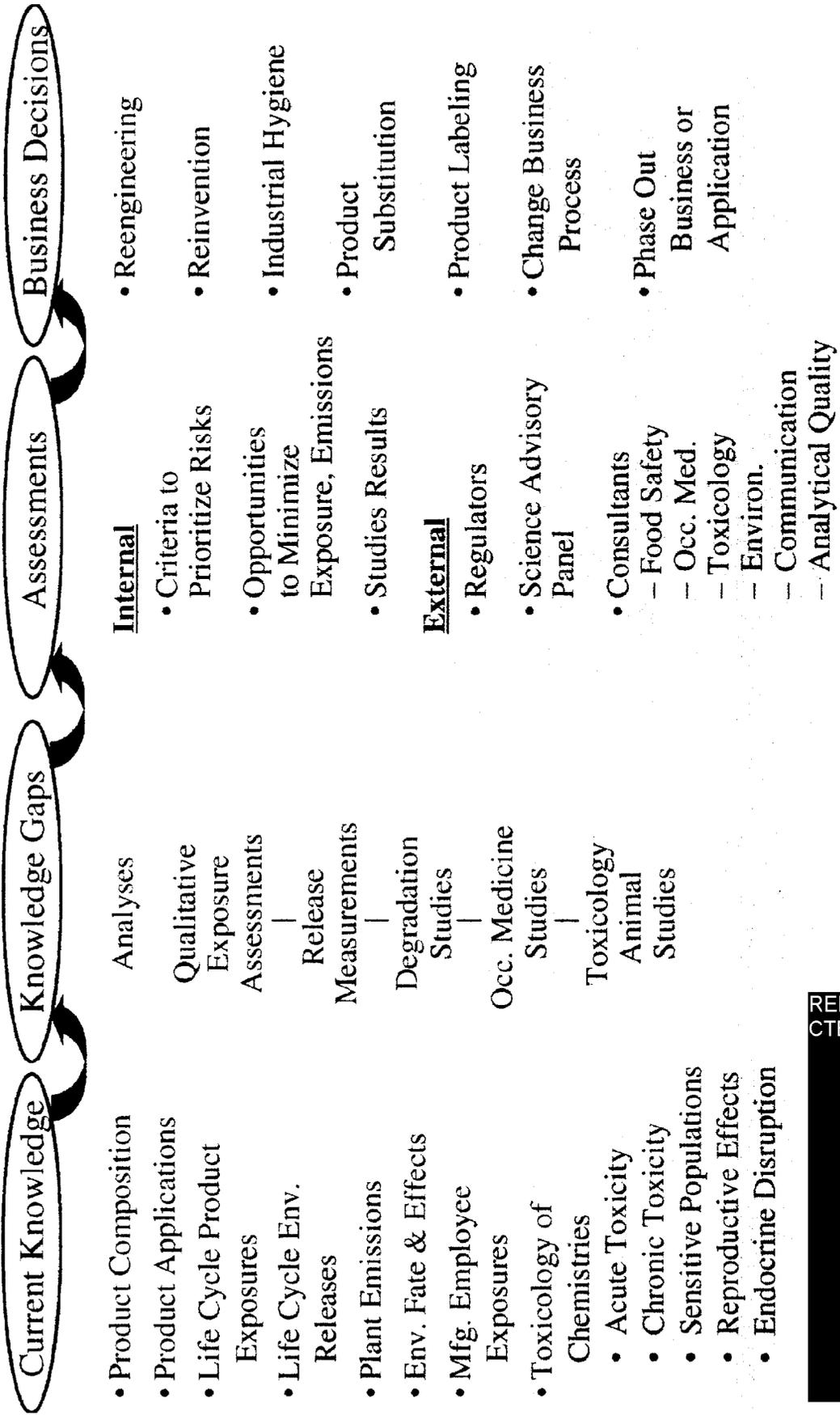


<ul style="list-style-type: none"> • Product Composition • Product Applications • Life Cycle Product Exposures • Life Cycle Env. Releases • Plant Emissions • Env. Fate & Effects • Mfg. Employee Exposures • Toxicology of Chemistries • Acute Toxicity • Chronic Toxicity • Sensitive Populations • Reproductive Effects • Endocrine Disruption 	<p>Analyses</p> <p>Qualitative Exposure Assessments</p> <p>— Release Measurements</p> <p>— Degradation Studies</p> <p>— Occ. Medicine Studies</p> <p>— Toxicology Animal Studies</p>	<p><u>Internal</u></p> <ul style="list-style-type: none"> • Criteria to Prioritize Risks • Opportunities to Minimize Exposure, Emissions • Studies Results <p><u>External</u></p> <ul style="list-style-type: none"> • Regulators • Science Advisory Panel • Consultants <ul style="list-style-type: none"> – Food Safety – Occ. Med. – Toxicology – Environ. – Communication – Analytical Quality 	<ul style="list-style-type: none"> • Reengineering • Reinvention • Industrial Hygiene • Product Substitution • Product Labeling • Change Business Process • Phase Out Business or Application
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Fluorochemical EHS&R Issues

The Business Decision Process • Risk = Hazard x Exposure



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Fluorochemical EHS&R Issues

The Business Decision Process • Risk = Hazard x Exposure



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Fluorochemical EHS&R Issues

Understanding the Science

Assemble Current Knowledge

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 - Food Safety

Fill in Knowledge Gaps

- Analyses
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SANDERS_D/REA/PPT98/EHS&R ISSUES/2

3M Fluorochemicals EHS&R Initiative

Issue Summary

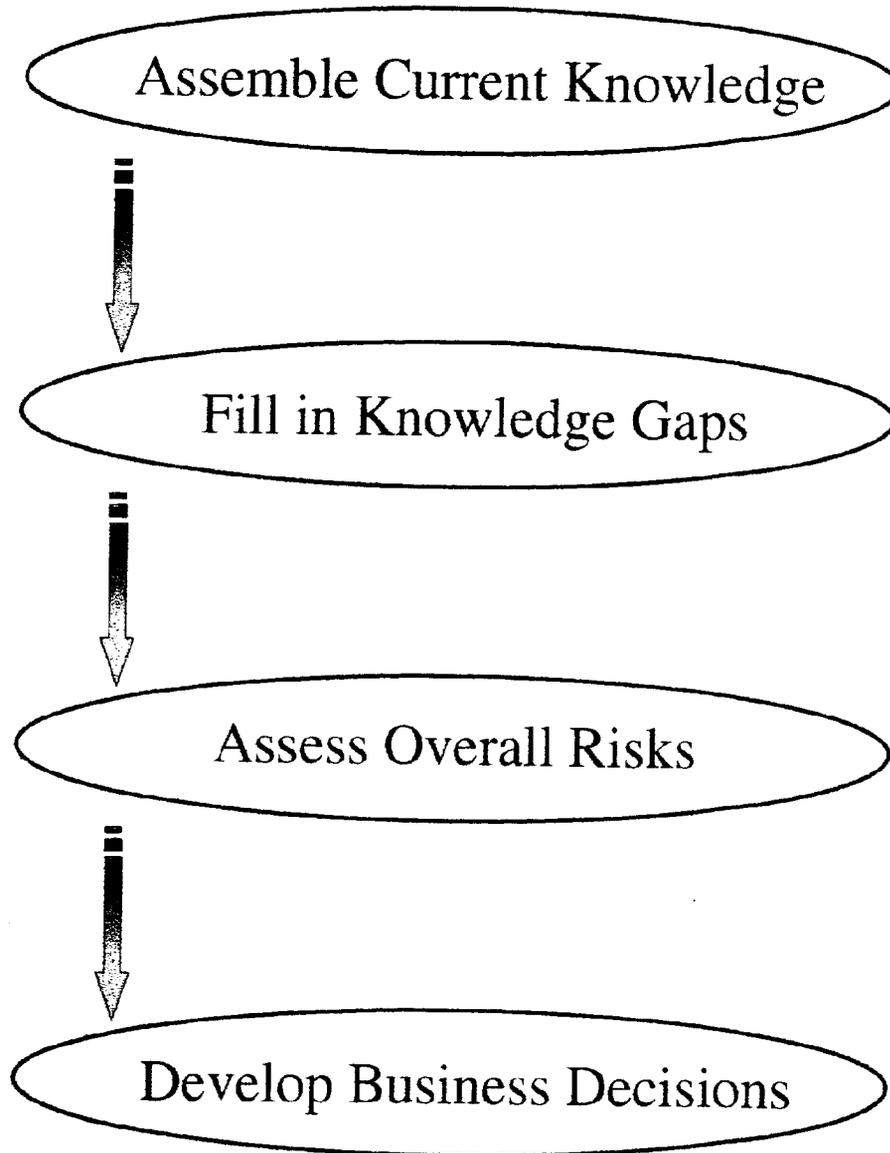
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- No medical or scientific basis to attribute any adverse health effects to 3M products
- Developing and implementing plans to minimize exposures and emissions
- Accelerating scientific studies - health, safety, environmental issues

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Fluorochemical EHS&R Initiative

The Business Decision Process



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SANDERS_D/REA/PPT96/REICH EHS&R PRES./2

Fluorochemical EHS&R Initiative

The Business Decision Process • Risk = Hazard x Exposure



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Fluorochemical EHS&R Initiative

Understanding the Science

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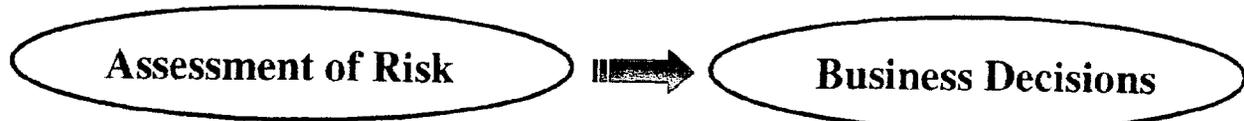
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Fluorochemical EHS&R Initiative

Assessing the Science - Determination of Business Decisions



Internal

- Develop Criteria to Prioritize Risks
- Assess Options to Minimize Risks
- Studies Results

External

- Regulators
- Science Advisory Panel
- Consultants and Oversight
 - Toxicology
 - Public Health
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 - Environmental Fate

Business Decisions

- Reengineering
- Reinvention
- Industrial Hygiene
- Product Substitution
- Product Labeling
- Change Business Process
- Phase Out of Business or Application

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3M Fluorochemical EHS&R Initiative

Regulatory

Food Safety

- Continuing Dialogue with FDA
- Contacted German BgVV
- Contacted Health Canada

In compliance - meeting requirements with paper/packaging products

Public Health / Environment

EPA

- Filed two (8e) Communications
 - PFOS Findings
 - Multigeneration Rat Study
- Proactively seeking meeting and guidance

Canada, Europe, Japan - After EPA meeting.

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3M Fluorochemical EHS&R Initiative

Toxicology Studies

**Objectives: Develop Understanding/
Determine Effects - PFOS**

- Acute Toxicity
- Chronic Toxicity
- Carcinogenic Effects
- Reproductive Effects
- Embryo/Fetal Development
- Endocrine Disruption
- Absorption/Distribution/Metabolism/Excretion
- Mechanism Studies

Animal Studies



- ⊛ **Establish No Effect Levels**
- ⊛ **Relate No Effect Levels to Levels of PFOS
Found in 3M Workers and General Population**

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3M Fluorochemical EHS&R Initiative

Environmental Studies- Battelle Assessment

- **Product Stability**
 - * Chemical Degradation
 - * Biodegradation

- **Environmental Sampling - Targeted Geographies**
 - * Surface Water e.g. * Dalton, GA
 - * Drinking Water * Decatur, AL
 - * Sediments * Isle Royale
 - * Landfill Leachate * Boston
 - * Wastewater Treatment * New Orleans
 - * Air Emissions

- **“Market Basket” Sampling - FDA Protocol**
 - * Locally Grown Foodstuffs
Meat, Vegetables, Cereals, Dairy

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3M Fluorochemical EHS&R Initiative

Communications

Telephone Response Mode

- Inquiry Process Defined
- Training Complete Product Stewards/Network
- Trial Drills to Test Readiness

Proactive Mode

- Updated MSDSs
- Started Product Stewardship Initiative
 - Paper/Packaging Channel
 - Carpet/Upholstery Training
- Consumer Labeling Issues - Aerosols
- Employee Updates

Media

- Stakeholder Messages Drafted
- Spokesperson Training
- Consultants
- Science Advisory Panel
- Third Party Spokespersons

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3M Fluorochemical EHS&R Initiative

Exposure Assessments/Reductions

- **Residuals reduced > 50% Paper & Packaging**
- **Initiated Program for “Trunk” Reductions - Entire Product Line**
- **Decatur Plant Exposure Assessment Complete - IH Program Result**
- **Initiated Plant Mass Balance/Gas Emissions Teams**
- **Implemented Wastewater Extraction Program - Decatur**
- **Completed Qualitative Product Exposure Assessments**
- **Distributed Expanded MSDS - US/Global**
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 - **Aftermarket**

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SANDERS_D/REA/PPT98/REICH EHS&R PRES./8

3M Fluorochemical EHS&R Initiative

Future Milestones

4Q 1998 - 1Q 1999

- **Proactive Contact with EPA**
- **Ongoing Dialogue with FDA**
- **Interim Reports - Toxicology, Occupational Medicine**
- **Define Process for Business Decisions**
- **Guidance From Science Advisory Panel**
- **Expand Customer-Focused Product Stewardship-
Industrial Hygiene Initiative**
- **Implement Process Improvements -
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- **Complete Plant Emissions/Exposure Assessments**
- **Complete Decatur Wastewater Treatment Upgrade**
- **Battelle Environmental Assessment Expands**
- **Continuing External Communications**

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SANDERS_D/REA/PPT98/REICH EHS&R PRES./14

3M Fluorochemical EHS&R Initiative

Science Advisory Panel

Provide Independent Advice and Guidance to 3M on Public Health and Ecological Issues Relating to 3M Fluorochemicals

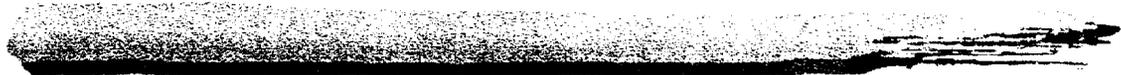
<u>Name</u>	<u>Position</u>	<u>Discipline</u>
Gil Omenn, M.D., Ph.D	Exec. V.P. Medical Affairs Univ. Michigan	Health Policy Risk Assessment
Ray Greenberg, M.D., Ph.D.	V.P. for Academic Affairs Provost, Medical Univ. of S.C.	Epidemiology Public Health Cancer
Elaine Faustman, Ph.D.	Co-Chair, Div. Envir. Health Univ. Washington	Toxicology
Bob Huggett, Ph.D.	V.P. Research & Grad. Studies Mich. State Univ.	Ecotoxicity Environmental Fate
Don Kennedy, Ph.D.	Bing Prof of Env. Science President Emeritus Stanford Univ.	Public Health Policy

Consultants to the Panel

Jack Moore, Ph.D.	President & CEO Inst. For Evaluation of Health Risks	Toxicology Risk Assessment
Joe Rodricks Ph.D. REDACTED	Dir. Health Sciences Environ Inc.	Toxicology Risk Assessment

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3M Fluorochemical EHS&R Initiative



Third Party Spokespersons

Elizabeth Whelan,
Sc.D., MPH

President, American Council
on Science and Health

Public Health
Policy

Christopher Wilkinson,
Ph.D.

Former Prof. Of Insecticide
Chemistry and Toxicology,
Cornell

Toxicology

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3M Fluorochemical EHS&R Initiative

Consultants

Communications

Myles Martel, Ph.D.	Martel & Associates	Comm. Strategies
A. John Adams, John Heinze, Ph.D.	Adams & Associates	Comm. Risks Public Issue Messages Media Monitoring
Richard Wirthlin, Ph.D.	Wirthlin Worldwide	Opinion Surveys Comm. Strategies

Occupational Medicine

Robert McCunney, Ph.D.	Dept. Chair. Occ. Environmental Medicine MIT	Medical Surveillance
Tim Church, Ph.D.	Assoc. Professor Univ. of Minnesota	Statistics
Jack Mandel, Ph.D.	Prof. And Chair-Div. of Occupational Medicine & Environmental Health Univ. of Minnesota	Epidemiology

Analytical Chemistry

Grant Plummer, Ph.D.	Professor-Dept of Physics N.C. State Univ.	Gas Phase FTIR
Robert Voyksner, Ph.D.	Research Triangle Inst.	LC/MS Technique
	Quest Analytical Inc.	Quality Assurance
	Quality Associates Inc.	GLP Oversight
Jack Henion, Ph.D. REDACTED	Prof. of Toxicology Analytical Toxicology Dept. Cornell University	Analytical Toxicology

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Consultants (continued)

Environmental Fate & Effects

Harry Painter, Ph.D.	Managing Director Fresh Field Analysis Ltd., (U.K.)	Biodegradation
Joe Fiksell, Ph.D.	Director, Life Cycle Management Battelle Institute	Environmental Fate & Effects
Mario Molina, Ph.D. (Nobel Laureate)	Martin Professor Atmospheric Chemistry MIT	Atmospheric Science
John Giesy, Ph.D.	Distinguished Prof., Dept. Zoology National Food Safety & Toxicology Center Professor, Mich. State Univ.	Wildlife Biology
Don MacKay, Ph.D.	Professor & Dir. Env. Modeling Lab, Univ. of Toronto	Atmospheric Modeling
Don Crosby, Ph.D.	Professor Univ. of California-Davis	Chemical Degradation Processes
Craig Criddle, Ph.D.	Dept. of Environmental Science Stanford Univ.	Biodegradation Processes
Ralph Cicerone	Daniel G. Aldrich Prof. Earth Sciences Dept. Chancellor Univ. of CA - Irvine	Env. Science

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3M Fluorochemical EHS&R Initiative

Outside Counsel

<u>Name</u>	<u>Firm</u>	<u>Discipline</u>
Chuck O'Connor Attorney	McKenna & Cuneo Washington, D.C.	<ul style="list-style-type: none">• EPA Regulatory Practice• Toxic Substances Control Act• FIFRA (Pesticides) Law• Consumer Products Safety Act
Dale Larson Attorney	Larson & Counsel St. Paul, MN	<ul style="list-style-type: none">• Insurance Law• Corporate and Product Liability
Julie Hatcher Attorney Bob Sussman Attorney	Latham & Watkins Washington, D.C.	<ul style="list-style-type: none">• Environmental Law• EPA regulatory issues• OSHA (Process Safety Management)
John Quarles Attorney	Morgan Lewis & Bockius Washington, D.C.	Environmental Law
Bruce Finzen, Attorney Dave Engen, Attorney Davie Bland, Attorney	Robins, Kaplan, Miller & Ciresi	Product Liability Defense

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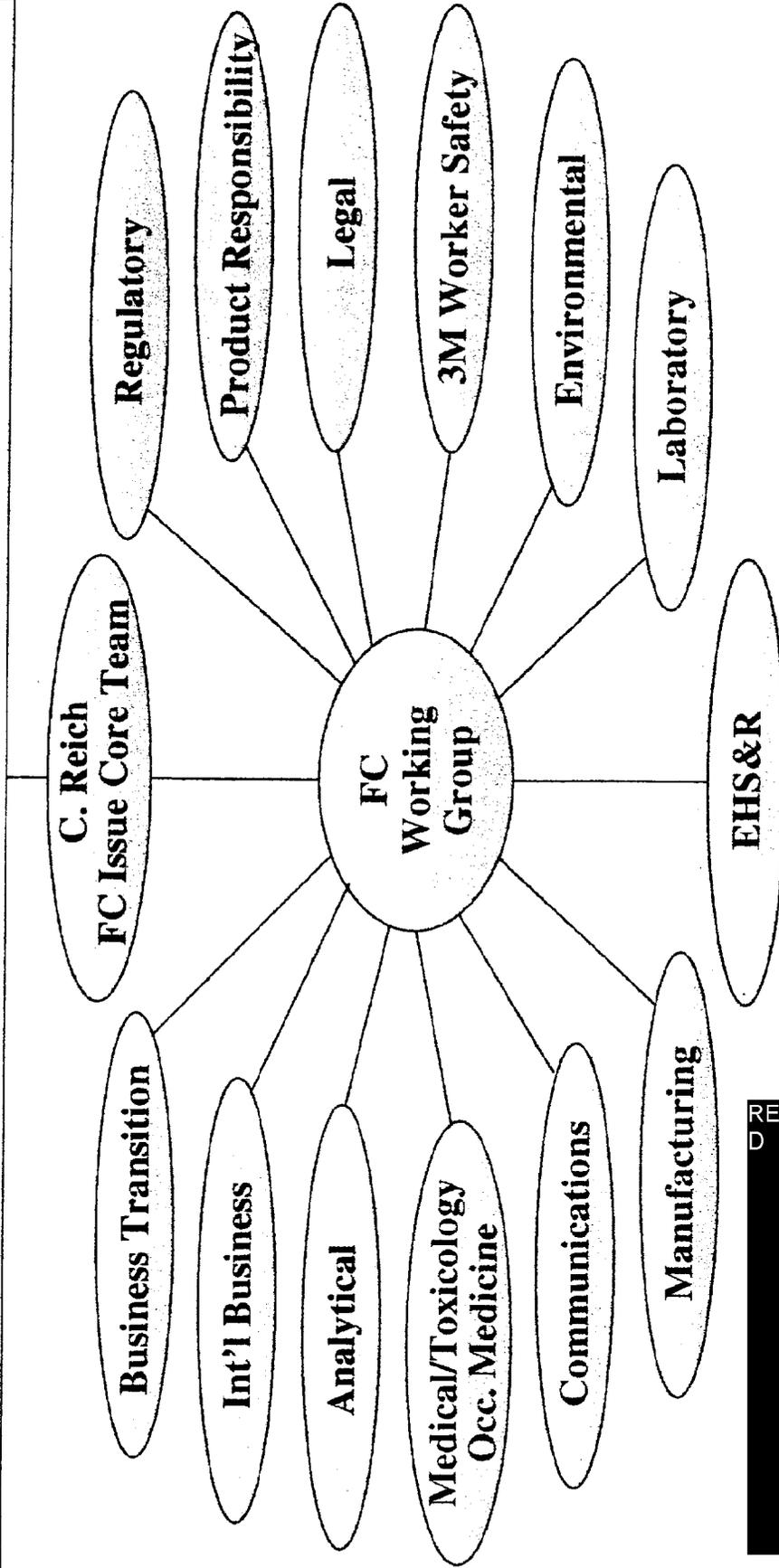
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3M OVERSIGHT

3M Corporate Operations Committee

3M Corporate Crisis and Environmental, Health, and Safety Committees

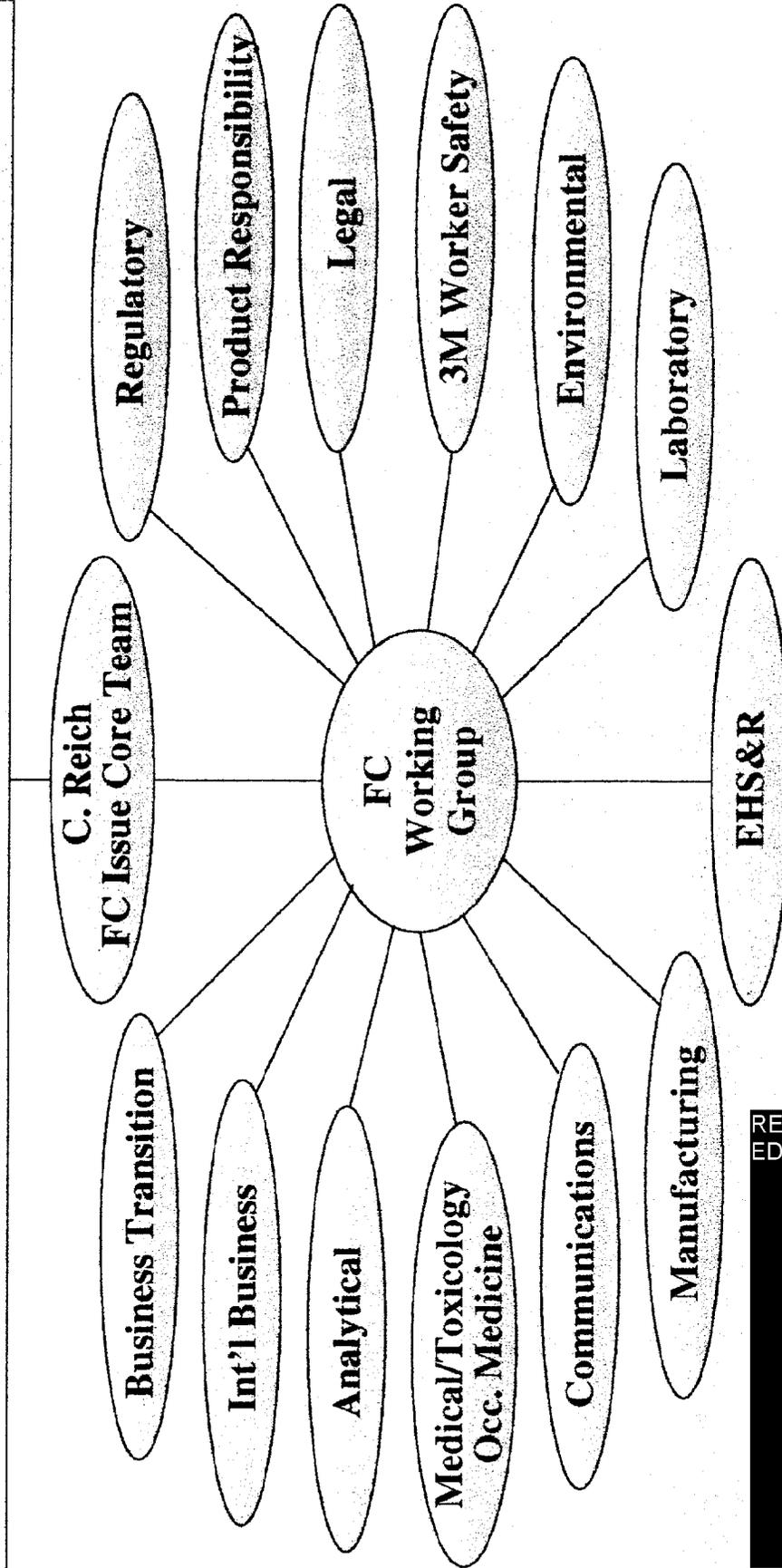


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3M OVERSIGHT

3M Corporate Operations Committee

3M Corporate Crisis and Environmental, Health, and Safety Committees



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Board of Directors

August 1998

C. Reich

3M Fluorochemicals EHS&R Initiative

Issue Summary

- 3M discovery of 3M fluorochemical in blood of general population
- No medical or scientific basis to attribute any adverse health effects to 3M products
- Developing and implementing plans to minimize exposures and emissions
- Accelerating scientific studies - health, safety, environmental issues

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3M Fluorochemicals EHS&R Initiative

#1 Operational Priority

To minimize the potential of 3M fluorochemicals for intake and retention in the human body, and for accumulation in the environment.

Conclusions from Current Body of Science

- No medical or scientific basis to attribute any adverse health effects to 3M products
- Our products are safe for their intended use

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3M Fluorochemicals EHS&R Initiative

3M Fluorochemicals EHS&R Initiative

Progress Report

- Meeting FDA commitments for reduced residuals in indirect food contact applications
- Notified EPA via TSCA 8(e) filing.
 - * Awaiting EPA evaluation
 - * Updating support materials
- Notified OUS Regulators; Germany
- Implemented broad range of tox., occ. Medicine studies
 - * Interim results continue to validate product safety and employees are not at risk for adverse health effects
- Initiated Environmental Exposure Assessment Study - Battelle
- Continuing plant emissions assessment and evaluating options for reduction
- Preparing comprehensive exposure assessment/industrial hygiene initiative for major product applications
- Initiated Reengineering/Reinvention Program to optimize manufacturing processes and minimize residuals
- Assembling external Scientific Advisory Panel and third party spokespersons

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SANDEP'S | REAFFIRM EHS&R INITIATIVE

Operational
Priority

workers
customers

3M Fluorochemicals EHS&R Initiative

Future Milestones

2nd Half 1998

- EPA Response/3M-EPA discussions, analysis, recommendations
- Ongoing dialogue with FDA
- Interim reports of toxicology, occupational medicine
- Complete initial stages of Exposure Assessment
- Scientific Advisory Panel convenes
- Complete communication plans for contingency scenarios.
- Implement customer-focused Industrial Hygiene Assessment
- Complete Product Line Analysis Program
- Implement Process Improvements / Minimize Residuals
- Complete Plant Emissions / Exposure Assessment - Decatur

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SANITIZED FOR PUBLIC RELEASE INITIATIVE

Framework for Business Growth

Continuous Improvement/Product Stewardship

- Assure product safety and regulatory compliance
- Continue scientific studies to expand knowledge base. Focus on health and environmental issues.
- Reengineering and reinvention of product lines to minimize residuals, maximize performance and value
- Minimize the opportunity for exposure, emissions throughout product life cycle

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MANUFACTURING AND ENVIRONMENTAL

Screen
+
Basis to
productively
grow!