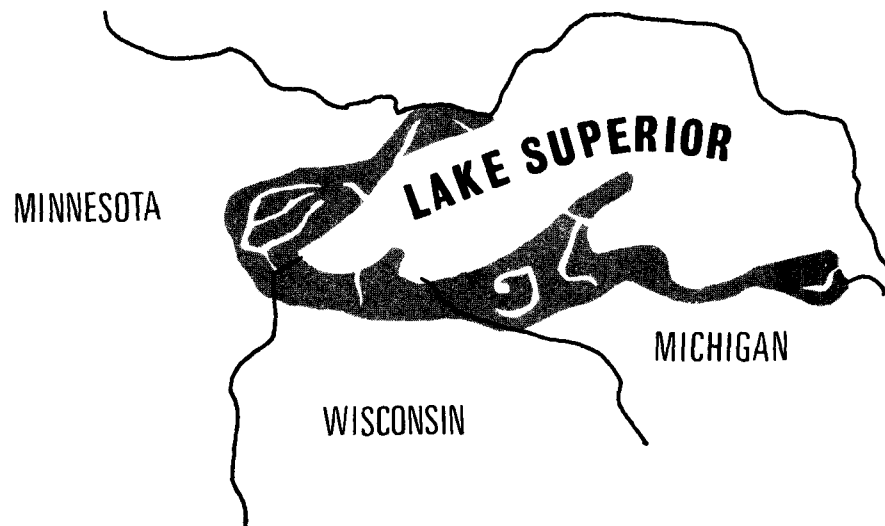


PROCEEDINGS



**Third Meeting of the
Second Session (Reconvened)
Duluth, Minnesota
April 22-23, 1971**

CONFERENCE

**In the Matter of Pollution of Lake Superior
and its Tributary Basin-Minnesota-
Wisconsin-Michigan**

ENVIRONMENTAL PROTECTION AGENCY

THIRD MEETING
OF THE
SECOND SESSION (RECONVENED)
OF THE
CONFERENCE
IN THE MATTER OF POLLUTION OF LAKE SUPERIOR
AND ITS TRIBUTARY BASIN
IN THE STATES OF MINNESOTA, WISCONSIN, AND MICHIGAN

held in
Duluth, Minnesota
April 22, 23, 1971

TRANSCRIPT OF PROCEEDINGS

CONTENTS

	<u>PAGE</u>
Opening Statement - Mr. Dominick	5,311,333,442
D. S. Bryson	13
C. A. Johannes	16
E. T. Fride	32,273,297, 307,446
G. J. Merritt	199,367,397
H. W. Bergson	225
Honorable Wm. G. Milliken	226
B. M. Niss	230, 330
C. H. Stoddard	242, 328
Honorable F. H. Scheuring	257,403
E. A. Roach	262
E. Kirsch	266
R. Nelson	270
I. Burchard	271
K. Haley	289,299
Dr. H. A. Andersen	325
S. J. Gadler	334
Rev. C. Dirksen	337
Mrs. A. Harvell	339
L. Jandrt	341
G. Gimich (read by Don Hanson)	349
L. Lueschow	351
T. G. Frangos	355
F. B. Frost	361

CONTENTS

	<u>PAGE</u>
Hon. B. Boo	366
J. Johnson	367
J. Sarchet	394
W. Johnson	398
A. A. Jensen	404
T. F. Wisniewski	410
M. Knutson	418
Executive Session	452

CONTENTS

<u>COMMUNICATIONS</u>	<u>PAGE</u>
George Roseneau and John M. Oliver	313
Mrs. Nancy Scofield	314
Mrs. C. Tidwell	315
Mrs. Davis W. Hubbard	316
Robert and Viola Brown	317
Laughton High School	318
James P. Bronner	319
Mrs. George R. Mattson	320
Dorothy M. Cox	321
Marie Frey	322
Hon. John D. Dingell	323
Carl W. Gutman	324a
Hon. Philip Ruppe	324b
Dr. Betzabe Allison, Dr. John Allison	324b
Dr. and Mrs. Otto Ruehr	324c
Mr. and Mrs. John Larue	324c

EXHIBITS

1. "Reserve Mining Company's Response to Inquiry from the Lake Superior Enforcement Conference Technical Committee"
(See p. 33)
2. Wisconsin Department of Natural Resources - Study from Summer, 1968
(See p. 310)

These exhibits are on file at Hq. EPA, Washington, D.C.
and Region V, Chicago, Illinois.

Third Meeting of the Reconvened Conference in the Matter
of Pollution of Lake Superior and its Tributary Basin in the States
of Minnesota, Wisconsin, and Michigan - April 22-23, 1971.

PRESIDING:

Mr. David D. Dominick
Acting Commissioner
Water Quality Office
Environmental Protection Agency
Washington, D.C.

VICE-CHAIRMAN

Mr. Murray Stein
Assistant Commissioner for
Enforcement
Environmental Protection Agency
Water Quality Office
Washington, D. C.

CONFEREES:

Francis B. Frost
Chief Engineer
Michigan Water Resources Commission
Lansing, Michigan

Theodore Wisniewski
Wisconsin Department of Natural Resources
Madison, Wisconsin

Thomas G. Frangos
Administrator, Division of Environmental Protection
Wisconsin Department of Natural Resources
Madison, Wisconsin

Robert C. Tuveson
Minnesota Pollution Control Agency
Albert Lea, Minnesota

Dr. Howard A. Andersen, Chairman
Minnesota Pollution Control Agency
Minneapolis, Minnesota

Grant J. Merritt
Executive Director
Minnesota Pollution Control Agency
Minneapolis, Minnesota

James O. McDonald
Director of Regulatory Programs, Region V
Environmental Protection Agency
Chicago, Illinois

Dale S. Bryson
Environmental Protection Agency
Chicago, Illinois

PARTICIPANTS:

Clarence A. Johannes, Acting Director
Division of Water Quality
Minnesota Pollution Control Agency
Minneapolis, Minnesota

Edward T. Fride
Attorney-at-Law
Duluth, Minnesota

Herbert W. Bergson, President
Save Lake Superior Association
Secretary, Northern Environmental Council
Duluth, Minnesota

Honorable William G. Milliken
Governor, State of Michigan
(read by H. Bergson)

Bruce M. Niss
Research Associate
Northern Environmental Council
Duluth, Minnesota

Charles H. Stoddard
Resource Consultant
Wolf Springs Forest
Minong, Wisconsin

Honorable Frank H. Scheuring
Mayor of Silver Bay
Silver Bay, Minnesota

Eugene A. Roach, President
United Steelworkers of America
Local Union 5296
Silver Bay, Minnesota

Eldon Kirsch
Staff Representative
United Steelworkers of America
Virginia, Minnesota

Ryan Nelson
Ashland High School
Ashland, Wisconsin

Irene Burchard
Vice-Chairman, Wisconsin Sector
Northern Environmental Council
Duluth, Minnesota

PARTICIPANTS (cont'd):

K. Haley
Vice-President, Reserve Mining Company
Manager, Research & Development Division
Silver Bay, Minnesota

Steven J. Gadler
Private Citizen
St. Paul, Minnesota

Pastor Clifford Dirksen
Silver Bay, Minnesota

Mrs. Arlene I. Harvell
Editor, Save Lake Superior News
Duluth, Minnesota

L. Jandrt
Private Citizen
Toste, Minnesota

George Gimich
Babbitt Steel Workers
Local 4575
Babbitt, Minnesota

Lloyd Lueschow
Water Quality Technical Committee
Wisconsin Department of Natural Resources
Madison, Wisconsin

Honorable Ben Boo
Mayor, City of Duluth
Duluth, Minnesota

James Johnson
Superintendent of Sanitary Services
Duluth, Minnesota

Jack Sarchet
Project Coordinator
Village of Grand Marais
Minnesota

Wayne Johnson
Attorney-at-Law
Silver Bay, Minnesota

Axel A. Jensen
Superintendent, Water Sewer Department
Silver Bay, Minnesota

Merwin Knutson
Chairman, Carlton County Soil and Water
Conservation District
Carlton County, Minnesota

LIST OF ATTENDEES
LAKE SUPERIOR ENFORCEMENT CONFERENCE
April 22-23, 1971

Mrs. Duane Allen
601 So. 66th Ave. W.
Duluth, MN 55807

Donald Aluni
Reserve Mining Co.
Babbitt, MN

David B. Anderson
Associate District Chief
U.S. Geological Survey
1033 Post Office Bldg.
St. Paul, MN 55101

David W. Anderson
Biologist
Reserve Mining Co.
Silver Bay, MN

Marty Anderson
22 Davis Drive
Silver Bay, MN 55614

Stanley Anderson
632 N. 60th Ave. W.
Duluth, MN 55807

Phillip Anick
1401 Mac Arthur Ave.
Ashland, WI

A. F. Asplund
44 Ash Blvd.
Babbitt, MN

Carol Bacon
110 Hays Ci.
Silver Bay, MN 55614

John P. Badalich
Associate
Quirk, Lawler, Matusky Engineers
Box 546
South St. Paul, MN

Jack H. Bailey
10043 North Shore Dr.
Duluth, MN 55804

John J. Baker
Consulting Engineer
Iron Range Communities
RR Wallace & Assoc.
Box 481
Hibbing, MN

D. J. Baumgartner
Chief, Coastal Pollution Research
U.S. Environmental Protection Agency
200 SW 35th
Corvallis, OR

Gary Baune
Wm. Kelley High School
10 Field Road
Silver Bay, MN 55614

Wm. S. Beck
Arrowhead Regional Planning Commission
900 Alworth
Duluth, MN

Herbert W. Bergson, President
Save Lake Superior Assn.
3630 Crescent View
Duluth, MN 55804

John P. Bergson
Jack D. Salo, Inc.
Consulting Engineers
15 E. 1st St.
Duluth, MN 55802

Mary H. Bergson
Save Lake Superior Assn.
3630 Crescent View Ave.
Duluth, MN 55804

Glenn R. Bergstrom
Grand Marais, MN

Allen Berlauk
Reporter
Silver Bay High School
Silver Bay, MN

Arthur V. Biele
City of Duluth Water Dept.
414-416 W. 1st
Duluth, MN

Mrs. Earl Biggins
Lax Lake Property Owners Assn.
Star Route, Box 98
Silver Bay, MN 55614

Brady Binde
Kelly High School
30 Nelson Dr.
Silver Bay, MN

Benjamin J. Blacik
Attorney
U.S. Steel Corp.
700 Missabe Bldg.
Duluth, MN

R. E. Blankenburg
Saganaga Outfitters
Gunflint Trail
Grand Marais, MN

Mrs. Frank P. Blatnik
League of Women Voters
4902 Oneida
Duluth, MN 55804

Arnold W. Blomquist, Ph.D.
President
National Biocentric Inc.
2233 Hamline Ave.
St. Paul, MN 55113

James Bonneville
Independent Citizen
40th Ave. W. & 9th St.
Duluth, MN

Ben Boo
May, City of Duluth
Duluth, MN

George A. Bourman
Structural Technician
U.S.A.F.
Duluth, MN

Lyell Brand
United Northern Sportsmen
319 - 76th Ave. W.
Duluth, MN

Mrs. Martin Brink
Reserve Mining Co.
71 Edison Blvd.
Silver Bay, MN

Bernard L. Brommer
105 E. Toledo St.
Duluth, MN 55811

Mrs. Ronald Brunko
Housewife
Reserve Mining Co.
27 Ives Rd.
Silver Bay, MN 55614

Lynn D. Buri
Civil Engineer
U.S. Environmental Protection Agency
Minneapolis, MN

Karen Bystrom
Students for Saving Lake Superior
122 N. Ellis Ave.
Ashland, WI

Thomas Caine
Great Lake Divers
615 N. 16th Ave. E.
Duluth, MN 55812

Conrad J. Carlson
136 Bank Blvd.
Silver Bay, MN

Mrs. Melvin Carlson
Reserve Mining Co.
136 Banks Blvd.
Silver Bay, MN 55614

Rick Carlson
Citizens for Silver Bay
60 Davis Drive
Silver Bay, MN

Rita Carman
27 Evans Circle
Silver Bay, MN

Vernon W. Carter
Water Plant Oper.
Village of Silver Bay
Silver Bay, MN

Raymond Chagnon
Northern Environmental Council
2811 E. Superior St.
Duluth, MN 55812

Lois Chase
Teacher
325 West 5th St.
Duluth, MN

Robert Chisel
Babbitt Steelworkers Credit Union
Box 250
Babbitt, MN

Bob Christianson
Reporter
Box 70A Star Route
Silver Bay, MN 55614

Mrs. B. W. Clam
Local 5296 Steelworkers
Silver Bay, MN

Don Cole
Utilities Commissioner
46 Fern
Babbitt, MN

Robert J. Connor
Steelworkers L. U. 5296
16 Law
Silver Bay, MN 55614

Leslie A. Cooper
Reserve Mining Co.
28 Banks Blvd.
Silver Bay, MN

Mrs. Wm. A. Cox
Deputy Clerk
Village of Silver Bay
109 Hays Circle
Silver Bay, MN

Quincy Dadisman
Reporter
Milwaukee Sentinel
10817 N. San Marino Dr.
Mequon, WI 53092

Al Dahlgren & Karen
39 Evans Circle
Silver Bay, MN

Mike Danz
Save Lake Superior
1116 - 11th Ave. W.
Ashland, WI

Wm. J. Deinhammer
Reserve Mining Co.
Babbitt, MN

Thomas E. DeWitt
District Engineer
State of Wisconsin
Dept. of Natural Resources
Spooner, WI

Larry Dickinson
Kelly High School
Star Route
Silver Bay, MN

George Dimich
U.S.W.A. Local 4757
38 Elm Blvd.
Babbitt, MN 55706

George Ditsworth
Oceanographer
U.S. Environmental Protection Agency
200 S.W. 35th
Corvallis, OR

Beverley Driscoll
LWV of Minnesota
Route 2
Stillwater, MN 55082

Leo Ducharme
Retired Reserve Mining Co.
1112 East 3rd St.
Duluth, MN 55805

Bob Eckstrom
Wm. Kelly High School
26 Gibson Road
Silver Bay, MN

Roy Edwards
Beaver Bay, MN

Jay A. Empie
District Conservationist
Soil Conservation Service
Superior, WI 54880

Mr. & Mrs. Harold A. Engman
140 Banks Blvd.
Silver Bay, MN

J. H. Evans
Private individual
515 Warwick
St. Paul, MN 55116

Donald Eyinck
1457 Hazelwood
St. Paul, MN 55106

Larry & Jean Feldt
United Steelworkers
32 Horn Blvd.
Silver Bay, MN 55614

Mr. & Mrs. John Filipovich
502 Ugsted Road
Proctor, MN 55810

Fred M. Fox
Outreach Worker
Family Service
128 W. 1st St.
Duluth, MN 55802

James N. Frericks
Steelworker Local 5296
15 Lee Circle
Silver Bay, MN

Rick Frey
Citizens for Silver Bay
29 Davis Drive
Silver Bay, MN

Mrs. Walter H. Frey
Council Women
Village of Silver Bay
29 Davis Drive
Silver Bay, MN 55614

Mr. Walter H. Frey
Steelworkers 5296
29 Davis Drive
Silver Bay, MN 55614

E. T. Fride
Attorney, Reserve Mining Co.
1200 Alworth Bldg.
Duluth, MN 55802

Gary Gange
Social Worker
St. James Childrens Home
320 Lucesster
Duluth, MN

Mark A. Gae
Apt. 34F, Bell Circle
Silver Bay, MN

Bonnie Goulette
31 Law Drive
Silver Bay, MN 55614

James Gray
98 Hays Circle
Silver Bay, MN

Mrs. James D. Gray, Jr.
98 Hays Circle
Silver Bay, MN

Wesley A. Grosh
Liaison Officer
U.S. Bureau of Mines
Ft. Snelling Federal Bldg.
Twin Cities, MN 55111

Pat Grady
Student
906 Grandview Ave.
Duluth, MN

Mrs. R. J. Grathe
U.S. Steelworkers 5296
20 Adams Blvd.
Silver Bay, MN

K. J. Grathe
Steelworkers 5296
20 Adams Blvd.
Silver Bay, MN

Mrs. John C. Green
Students for Environmental Defense
9773 N. Shore Drive
Duluth, MN 55804

Mrs. E. G. Greenwalt
Reserve Mining Co.
22 Bell Circle
Silver Bay, MN

Harry C. Grounds
477 S. Cretin
St. Paul, MN 55105
TKDA, St. Paul
Representing McKinley, MN

Mrs. Wm. W. Hagen
D.F.L. Ladies Group
501 E. Skyline Pkwy.
Duluth, MN

Trudy Hagstrom
SSLS
Ashland High
1101 11th Ave. W.
Ashland, WI

K. M. Haley
V.P. Manager R & D
Reserve Mining Co.
Silver Bay, MN 55614

Barbara Halligan
National Water Quality Laboratory
6201 Congdon Boulevard
Duluth, MN 55804

Debbie Hanson
43 Hays Circle
Silver Bay, MN 55614

J. Louis Hanson
Home Secretary
Gaylord Nelson, U.S.S.
Box 707
Mellen, WI

Martin Hanson
Wisc. Res. Consu. Council
Box 707
Mellen, WI 54546

Mrs. Glenn Harriman
Reserve Mining
27 Edwards Dr.
Silver Bay, MN

Mace Harris
MPCA
Cloquet, MN

Mrs. Arlene I. Harvell
Editor
Save Lake Superior News
1612 Waverly Ave.
Duluth, MN 55803

Mrs. George Hein
Beaver Bay, MN

Dr. D. Herman
Res. Microbiologist
National Water Quality Laboratory
6201 Congdon
Duluth, MN

Jay Holmen
14 Field Road
Silver Bay, MN

Tim Horvat
Wm. Kelly High School
63 Horn Blvd.
Silver Bay, MN 55614

Clayton B. Howk
Lake Superior Licensed Guides
Box 116
Cornucopia, WI 54827

Raymond Hudson
Wm. Kelly High School
49 Davis Dr.
Silver Bay, MN 55614

Miss Mary Hugo
Save Lake Superior
510 N. 13th Ave. E.
Duluth, MN

Evelyn P. Hunt
National Water Quality Laboratory
6201 Congdon Boulevard
Duluth, MN 55804

Keith Huseby
15 Gibson Road
Silver Bay, MN

Gerald Iverson
Local 5296 U.S.W.
36 Garden Drive
Silver Bay, MN

James B. Isackson
Save Lake Superior Assn.
Duluth, MN

Les Jandrt
Tofte, MN

Mrs. Karl Jevning
Reserve Mining Co.
22 Drake Circle
Silver Bay, MN

Karl A. Jevning
22 Drake Circle
Silver Bay, MN

Mrs. Adrian Johnson
#5296 Steelworkers Silver Bay
38 Aiken Circle
Silver Bay, MN

Adrian Johnson
United Steelworkers
38 Aiken Circle
Silver Bay, MN

Clair Johnson
Kelley High School
28 Davis Drive
Silver Bay, MN

Elma N. Johnson
SLSA
4707 Pitt
Duluth, MN

Mrs. Gunnar Johnson
Box 463 MTD Rte.
Two Harbors, MN

James Johnson
Students for Saving Lake Superior
1123 10th Ave. West
Ashland, WI

James A. Johnson
Supt. of Sanitary Services
City of Duluth
211 City Hall
Duluth, MN 55801

Mrs. John Johnson
School Teacher
2201 Pershing St.
Duluth, MN 55811

Wayne G. Johnson
Village Attorney
Silver Bay - Beaver Bay
Norshor Bldg.
Silver Bay, MN

Richard A. Johnston
City of Fraser
Chisholm, MN

Daniel Jorgenson
32 Davis Dr.
Silver Bay, MN

Lena Kachmarzuiski
36 Dogwood
Babbitt, MN

Lawrence J. Kachmarzuiski
36 Dogwood Blvd.
Babbitt, MN

Raymond Kalkbrenner
Recording Secretary
U.S.S.W. #5296
43 Horn Blvd.
Silver Bay, MN

Mrs. Darrel Kempffer
Two Harbors, MN

Richard Kienitz
Milwaukee Journal
2 W. Miffie St.
Madison, WI

Mike Kimbrell
Silver Bay Reporter
Kelley High School
118 Banks Blvd.
Silver Bay, MN

Mrs. Keith Kinnear
22 Edison Blvd.
Silver Bay, MN

Dorothy Klinker
Student
Reserve Mining Co.
Star Route Box 88
Silver Bay, MN

Gary L. Knutson
Students
Star Route Box 95A
Silver Bay, MN

Mrs. John R. Kohlbray
League of Women Voters
2928 Greysolon Road
Duluth, MN

Jill Kolberg
Ashland High SSLS
1000 6th Ave. W.
Ashland, WI

George R. Koonce
Minnesota Pollution Control Agency
717 Delaware St. S.E.
Minneapolis, MN

Nancy E. Kreher
President
Students Saving Lake Superior
1310 Vaughn
Ashland, WI 54806

Wm. E. Krueger
52 Fir
Babbitt, MN

Mr. & Mrs. Kenneth Kuerg
Babbitt, MN

A. F. Laidlaw
1944 Flandrau St.
St. Paul, MN
Soil Conservation Service

Russell Lakey
Tech. Sales Rep. Allied Colloids, Inc.
1523 N. Durkee St.
Appleton, WI 54911

Stan Landa
Reserve Mining Co.
810 E. Patt
Ely, MN

Raymond Langet
Reserve Mining Co.
85 Hays Circle
Silver Bay, MN

Herbert Larsen
United Steelworkers Local 5296
Silver Bay, MN

Mrs. W. Lauder
Homeowner
5518 London Rd.
Duluth, MN 55804

G. Fred Lee
Professor of Water Chemistry
University of Wisconsin
Water Chemistry Program
Madison, WI 53706

Mrs. Vernon D. Lee
President - Silver Bay LWV
90 Hays Circle
Silver Bay, MN

Mrs. J. E. Lien
Housewife
Reserve Mining Co.
91 Hays
Silver Bay, MN

Mr. & Mrs. John Lind
Resort
Box 117, E. Star Rte.
Two Harbors, MN

Dean A. Lindberg
Chief Chemist
Continental Oil Company
Box 8, Wrenshall, MN 55807

Mrs. Robert A. Lee
51 Hays Circle
Silver Bay, MN

A. J. LeGeault
Local 5296 U.S.W.A.
26 James Rd.
Silver Bay, MN

Armond E. Lemke
Research Aquatic Biologist
National Water Quality Laboratory
6201 Congdon Boulevard
Duluth, MN 55804

Edward N. Leonard
Chemist
National Water Quality Laboratory
Duluth, MN 55804

Royce R. Lewis
USDA, Soil Conservation Service
2706 E. Superior St.
Duluth, MN

Donald M. Lindahl
14 Hays Circle
Silver Bay, MN

C. E. Lovold
Kings Landing Marina
P.O. Box 427
Beaver Bay, MN

Richard Lugeanheal
Reserve Mining Co.
49 Garden Drive
Silver Bay, MN

Carl A. Lund
City of Duluth, Rm. 201 City Hall
Duluth, MN

Thelma Luthanen
Babbitt, MN

Jay Robert Mackie
Reserve Mining Co.
Babbitt, MN

Gordon Madson
Prem, Inc.
408 Board of Trade
Duluth, MN 55802

Wm. H. Magie
Executive Secretary
Friends of the Wilderness
3515 E. 4th St.
Duluth, MN 55804

Richard C. Mahal
Village of Babbitt
38 Fir Circle
Babbitt, MN 55706

Thomas E. Malmo
Chamber of Commerce
Silver Bay, MN

Debbie Mann
Student
Reserve Mining Co.
32 Field Road
Silver Bay, MN

Mr. & Mrs. Elmer Mann
Reserve Mining Co.
32 Field Road
Silver Bay, MN

Brenda Markley
Kelley High School
Beaver Bay, MN

Robert S. Mars, Jr.
WP & RS Mars Co. & NEMDA
215 So. 27th Ave. West
Duluth, MN 55806

J. Martinsen
Steelworkers 5296
Silver Bay, MN

Willard Maeter
3009 E. 1st St.
Duluth, MN 55804

Robert Mattila
5296 Local Steelworkers
49 Law Dr.
Silver Bay, MN

Mr. & Mrs. Milton Mattson
Beaver Bay, MN

Vincent R. Mattson
Research Aquatic Biologist
National Water Quality Laboratory
6201 Congdon Boulevard
Duluth, MN

Lillian Maxwell
33 Evans
Silver Bay, MN

Mrs. Vera G. Melin
216 N. 14th Ave. E.
Duluth, MN

Mr. & Mrs. Melby
Voyageurs Marina
Grand Portage, MN

Mr. & Mrs. Glen J. Merritt
2035 Columbus Ave.
Duluth, MN

Eileen D. Marshart
Vice Chairman
Northern Environmental Council
601 Christie Bldg.
Duluth, MN

Roger Mickelson
27 Gibson Road
Silver Bay, MN

Mrs. Lloyd Miller
Village of Silver Bay
19 Arthur Circle
Silver Bay, MN

R. L. Mitchell
Reserve Mining Co.
Babbitt, MN 55706

G. Molstad
38 2nd St.
Proctor, MN

Milo J. Munson
SSLS
413 14th Ave. West
Ashland, WI

Daniel Murphy
SLSA
2720 E. 7th St.
Duluth, MN

Phillip Nelson
Process Supt.
1206 Wilson Ave.
Cloquet, MN

Ralph Nelson
Forester
1708 Jefferson St.
Duluth, MN

Ryan Nelson
Ashland High SSLS
1100 Mac Arthur
Ashland, WI

George Nikkola
Reserve Mining Co.
39 Edison Blvd.
Silver Bay, MN

Cindy Norman
Silver Bay High School
42 Aiken Circle
Silver Bay, MN

Lois Okon
Student
2219 Ensign St.
Duluth, MN

Dr. Dale W. Olsen
MPCA
4615 London Road
Duluth, MN

John Oliver
36 Law Dr.
Silver Bay, MN

Mrs. Otto Overby
East Star Route
Two Harbors, MN

Otto Overby
East Star Route
Two Harbors, MN

Mrs. Mary Palmer
University Methodist Church
1818 Melrose Ave.
Duluth, MN

Mrs. Myrna Panno
Steelworkers Union 5296
Silver Bay, MN

Mr. & Mrs. Jos. Pastika
53 Ash Blvd.
Babbitt, MN

Kenneth Pavling
Reserve Mining Co.
St. Rt. #2 Box 113
Embarrass, MN

Edwin C. Pearson
United Northern Sportsmen
2202 Hillcrest Dr.
Duluth, MN

Becky Pelkey
Wm. Kelley High School
29 Evans Circle
Silver Bay, MN

Milton E. Pelletier
President, United Northern Sportsmen
3680 Munger Shaw Road
Duluth, MN

Ron Peterson
SSLS Member
614 St. Claire St.
Ashland, WI

Peter Petric
38 Edison Blvd.
Silver Bay, MN

Jerry Pittman
5723 Wyoming St.
Duluth, MN

Mike Pittman
5723 Wyoming St.
Duluth, MN

Russell H. Plumb, Jr.
University of Wisconsin
Water Chemistry Laboratory
Madison, WI 53706

Howard L. Potter
Upper Great Lakes Regional Commission
Christie Bldg.
Duluth, MN

Mrs. Donald Prestidge
Reserve Mining Co.
31 Burk Dr.
Silver Bay, MN

Jeanne Price
SSLS
1104 3rd Ave. E.
Ashland, WI

Frank A. Puglisi
National Water Quality Laboratory
Duluth, MN

Mrs. Evelyn J. Putnam
Duluth Audubon Society
1407 Woodland
Duluth, MN

Richard Puttonen
Independent citizen
40th Ave. W. 9th St.
Duluth, MN 55807

Mrs. M. J. Riley
631 4th Ave.
Two Harbors, MN

Gene A. Roach
United Steelworkers
Silver Bay, MN

Deloris E. Roach
Star Route
Silver Bay, MN

Mrs. Malvin Robinson
11 Ives Rd.
Silver Bay, MN

Malvin M. Robinson
11 Ives Road
Silver Bay, MN

Marvin T. Robinson
Local 5296 USW
42 Adams Blvd.
Silver Bay, MN

Wm. D. Rolfe
Repr. City of Fraser
Chisholm, MN

Gloria Rosenau
45 Hays Circle
Silver Bay, MN

Mrs. George Rosenan
45 Hays Circle
Silver Bay, MN

George Rosenau
State Farm Insurance Co.
45 Hays
Silver Bay, MN

Warren Roske
North Star Chapter Sierra Club
3048 N. Lee
Minneapolis, MN

Earl H. Ruble
Earl Ruble & Assoc., Inc.
217 Lake Ave. So.
Duluth, MN

Franklin Ryder
Civil Engineer
Corps of Engineers
St. Paul, MN

Bruce St. Germain
SSLS
322 11th Ave. E.
Ashland, WI

Wilmar L. Salo
Dept. of Chemistry
UMD, Duluth, MN

Mrs. Arthur H. Samuel
16 Floyd Circle
Silver Bay, MN

L. L. Sarchett
Project Coord.
Village of Grand Marais, MN

Mary Sarum
School
Silver Bay, MN

Frank H. Scheuring
Mayor of Silver Bay
70 Garden Drive
Silver Bay, MN

Gerald D. Schissler
Metro. Reporters
Court Reporter
8920 83rd St. Ct.
Cottage Grove, MN

Howard Schmitz
SLSA
1306 N. Central
Duluth, MN

Thomas W. Schmucker
Eveleth Fee Office
P.O. Box 521
Eveleth, MN

Mrs. Richard Schneiderhan
Beaver Bay, MN

Ernest Schober
2205 East 5th (SCS)
Duluth, MN

Mrs. Dennis Severson
94 Hays Circle
Silver Bay, MN

Helen Seymour
1925 East 1st
Duluth, MN

Mrs. Don Sieger
17 Cedar Dr.
Babbitt, MN

Donald J. Sieger
17 Cedar Dr.
Babbitt, MN

Mrs. Margaret Silverness
1904 North 51st Ave. E.
Duluth, MN 55804

Vernon Simula
SLSA
3879 Midway Road
Duluth, MN

Jerry Singer
The Duluthian
220 Medical Arts Bldg.
Duluth, MN 55802

Frank J. Siskar
Mayor
Village of McKinley, MN

Walter A. Skalsky
19 Evans Cr.
Silver Bay, MN

Kim Louise Skog
26 Davis Drive
Silver Bay, MN

John R. Skoug
Steelworker Local Union 5296
31 Bell Circle
Silver Bay, MN

Frank R. Smith
Director, SLSA
1422-1/2 East 1st St.
Duluth, MN

Wesley E. Smith
Research Aquatic Biologist
1822 East 3rd
Duluth, MN

Gerald J. Smrstick
USWA 5296
17 Evans Circle
Silver Bay, MN

Stephen A. Stepec
Reserve Mining Co.
42 E. Beacon Hill Road
Ely, MN 55731

Anton Sterle
United Northern Sportsmen
2418 West 15th St.
Duluth, MN 55806

Charles H. Stoddard
Resources Consultant
Northern Environmental Council
600 Christie Bldg.
Duluth, MN 55802

Leif O. Subm
Duluth, MN

John R. Suffron
Environmental Control Engineer
White Pine Copper Co.
White Pine, Michigan

Dave Sutherland
Kelley High School
100 Edison Blvd.
Silver Bay, MN

George Sutherland
100 Edison Blvd.
Silver Bay, N

Leonard R. Sve
E. Star Rte., Box 120A
Two Harbors, MN 55616

Ragnald Sve
East Star Rte.
Two Harbors, MN

Roy J. Tanner
U.S. Army Corps of Engineers
Canal Park, Duluth, MN

Joe Thomsen
Mayor, Village of Grand Marais, MN

David S. Thornton
Independent citizen
5065 Hermantown Rd.
Duluth, MN

Sandy Tomlinson
SSLS
Ashland, WI

Ray Van Den Heuvel
Village Councilman - Silver Bay
10 Charles Circle
Silver Bay, MN

Harold Varney
71 Banks Blvd.
Silver Bay, MN

Mark Viola
Kelley High School
39 Arthur Circle
Silver Bay, MN

Charles Walbridge
Biol. Lab. Technician
National Water Quality Laboratory
Duluth, MN

Mrs. Vern Walentin
Private citizen
20 James Rd.
Silver Bay, MN

Rudy Wendland
4757 Local
Star Route
Babbitt, MN

Otto Westenfield
Mayor
Village of Floodwood, MN

Elsie Western
SLSA
Two Harbors, MN

Ronald L. Wiegil
Research Associate
Mineral Resources Research Center
University of Minnesota
Minneapolis, MN 55455

Mary Wing
13 James Road
Silver Bay, MN

Theodore F. Wisniewski
Asst. to Administrator
Division of Environmental Protection
Wis. Dept. of Natural Resources
P.O. Box 450
Madison, WI 53711

Mary Woods
SSLS
Ashland, WI

Bernie Young
5296 Local Steelworkers
Star Route Box 60
Silver Bay, MN

Bernard Zupancich
Zupancich Bros. Grocery Store
Silver Bay, MN

Opening Statement - David D. Dominick

P R O C E E D I N G S

OPENING STATEMENT

BY

MR. DAVID D. DOMINICK

MR. DOMINICK: I'd like to welcome you all, ladies and gentlemen, to the Lake Superior Enforcement Conference.

I understand we have a number of high school students in the audience. Is that from Ashland High School, is that correct?

Very good. Glad to have you here on the Second Annual Earth Day.

I also understand that we have a number of citizens from Silver Bay here, and we welcome you.

The conference is hereby officially opened.

This second session of the conference in the matter of pollution of Lake Superior and its Tributary Basin in the States of Minnesota, Wisconsin and Michigan has been reconvened under the provisions of Section 10 of the Federal Water Pollution Control Act. The first session of this conference was held on May 13-15, 1969, and the conferees met in executive session on September 30 and October 1, 1969.

The second session met on April 29 and 30 of 1970 and met again on August 12 and 13 of 1970.

The conference again met on January 14 and 15 of 1971.

Both the State and Federal Governments have responsibilities in dealing with water pollution control problems. The Federal Water Pollution Control Act declares the States have primary rights and responsibilities for taking action to abate and control pollution. Consistent with this, we are charged by law to encourage the States

Opening Statement - David D. Dominick

in these activities. At the same time the Administrator of the Environmental Protection Agency is charged by law with specific responsibilities in the field of water pollution control in connection with pollution of interstate and navigable waters. The Federal Water Pollution Control Act provides that pollution of interstate or navigable waters endangers the health or welfare of any persons shall be subject to abatement. This applies whether the matter causing or contributing to the pollution is discharged directly into such waters or reaches such water after discharge into a tributary.

The purpose of this conference is to bring together the State water pollution control agencies, representatives of the Environmental Protection Agency and other interested parties to review the existing situation and the progress which has been made, to lay a basis for future action by all parties concerned, and to give the States, localities and industries an opportunity to take additional and indicated remedial action under State and local law.

At the January 14-15, 1971 conference session, a plan was submitted by Reserve Mining Company for the disposal of the taconite tailings in Lake Superior. The conferees did not endorse any method of disposal at the last session, but established a Technical Committee to evaluate Reserve's plan and to consider land disposal methods as well. The Committee was to complete its work within 45 days. This was done, and the conference today will consider the report of the Technical Committee.

At this point in time I would like to have the conferees introduce themselves, starting on my left, on your right, down at the end of the table, will you please identify yourselves and the

Opening Statement - David D. Dominick

agencies which you represent.

MR. FROST: Francis B. Frost, Chief Engineer, Michigan Water Resources Commission.

MR. WISNIEWSKI: Theodore Wisniewski of the Wisconsin Department of Natural Resources.

MR. FRANGOS: Thomas Frangos, Wisconsin Department of Natural Resources.

MR. STEIN: Murray Stein, Environmental Protection Agency, Washington, D.C.

MR. DOMINICK: I'm David Dominick, I am the Acting Commissioner of the Water Quality Office, Environmental Protection Agency, in Washington, D.C., and I am the representative of Administrator Ruckelshaus of the Environmental Protection Agency.

MR. McDONALD: James O. McDonald, Director of Regulatory Programs, Region 5, Environmental Protection Agency, Chicago.

MR. BRYSON: Dale Bryson, Environmental Protection Agency, Chicago.

MR. TUVESON: Robert C. Tuveson, Minnesota Pollution Control Agency.

MR. ANDERSEN: I'm Howard A. Andersen, Minnesota Pollution Control Agency.

MR. MERRITT: My name is Grant J. Merritt, Minnesota Pollution Control Agency, Executive Director.

MR. DOMINICK: Thank you. The parties to this conference are the official State and water pollution control agencies of Minnesota, Wisconsin, Michigan and the Environmental Protection Agency.

Participation in this conference will be open to representatives and invitees of these agencies and such persons as informed

Opening Statement - David D. Dominick

me that they wish to make statements. However, only the representatives of the State water pollution control agencies and the Environmental Protection Agency constitute the conferees.

Now, a word, if we may, about the procedures governing the conduct of the conference. The conferees will be called upon to make statements. The conferees, in addition, may call upon participants whom they have invited to the conference to make statements. In addition, we shall call on other interested individuals who wish to present statements. At the conclusion of each statement, the conferees will be given an opportunity to comment or ask questions, and I may ask a question or two. This procedure has proven effective in the past in reaching equitable solutions.

At the end of all of the statements, we shall have a discussion among the conferees and try to arrive at a basis of agreement on the facts of the situation. Then we shall attempt to summarize the conference orally, giving the conferees, of course, the right to amend or modify the summary.

Under the Federal law, the Administrator of the Environmental Protection Agency is required at the conclusion of the conference to prepare a summary of it, which will be sent to the conferees. The summary, according to law, must include the following points: No. 1, occurrence of pollution of interstate waters subject to abatement under the Federal Act; No. 2, adequacy of measures taken toward abatement of that pollution; and No. 3, the nature of delays, if any, being encountered in abatement of the pollution, and the Administrator is also required to make recommendations for remedial action, if such recommendations are indicated.

Opening Statement - David D. Dominick

A record and verbatim transcript of the conference is being made by, and could you identify yourself, please.

THE COURT REPORTER: Gerald Schissler, St. Paul.

MR. DOMINICK: Thank you.

This is being made for the purpose of aiding us in preparing a summary and also for providing a complete record of what is said here. It usually takes about three or four months for the transcript to come out in printed form. If you wish a record beforehand, you can check with the reporter, who is on contract to us, and make your own arrangements with him to prepare a transcript.

I should indicate we do not print in color, so take into account any charts you may present will be done in black and white. Try not to refer to colors if you use graphic aids in your presentation, as they will be meaningless in the reading of the transcript.

We shall make copies of the summary and transcript available to the official State water pollution control agencies. We have generally found that for the purpose of maintaining relationships within the States, that people who wish summaries and transcripts should request them through their State agency, rather than come directly to the Federal Government. The reason for this is that when the conference has been concluded, we would prefer people who are interested in the problem, to follow their normal relations in dealing with the State agencies rather than the Federal Government. That has worked successfully in the past and we would be most happy to make this material available for distribution.

I would suggest that all speakers and participants other than the conferees making statements come to the lectern and identify

Opening Statement - David D. Dominick

themselves for purposes of the record.

I would like at this point to turn to the agenda which has been drawn up in consultation with the conferees and read from that agenda and receive any statements from the conferees as to the adequacy of the agenda: Statements by Federal or State elected representatives; a statement by EPA summarizing past conferences, to be conducted by Mr. Dale Bryson; a report of the Lake Superior Technical Committee; a statement by the Reserve Mining Company; statements by Minnesota relative to Reserve Mining Company discharge; statements by Wisconsin relative to Reserve Mining discharge; statements by Michigan relative to Reserve Mining discharge; statements by private citizens or groups relative to Reserve Mining discharge; statements by other Federal or State agencies relative to Reserve Mining discharge; and discussion by conferees.

We would hope to be able to conclude the majority of our business with respect to the major discharger in this conference area, the Reserve Mining Company, today, but we must keep that agenda flexible in order to examine all of the facts.

Tomorrow it is planned to have statements by private citizens or groups on other subjects; statements by Federal or State agencies on other subjects; proposed provisions to Lake Superior water quality criteria; status of compliance of dischargers in the conference area from the following States in this order: Wisconsin, Michigan and Minnesota; a discussion of the red clay area problem by Wisconsin; and a discussion of other recommendations.

Are there any comments from the conferees at this time on this agenda?

Very well. We would hope to stick to this agenda as carefully

Opening Statement - David D. Dominick

as possible. We want to accommodate everyone here who has taken time and trouble to come and express an interest in this matter, and if there are any extraordinary circumstances which require that you testify, please present them to me personally, but we would hope to stick to this agenda as closely as possible.

I would like to turn now to statements by Federal or State-elected State Representatives.

We have a number of telegrams and messages here, including letters. I would like to ask the conferees that these messages and letters be placed in the record verbatim. Is there any desire that -- does any other conferee have additional telegrams or statements?

Well, there are not that many, and I might just read them to make them available to the entire audience.

"I urge that you require Reserve Mining Company to dispose of tailings on land. Please don't allow continued dumping in Lake Superior. Help us to keep our lake clean, beautiful and live. Dr. and Mrs. Otto Ruehr, South Range, Michigan."

"Cause Reserve Mining Company proposal for disposing of taconite tailings has been found unacceptable. I now urge the Enforcement Conference to devise criteria for an acceptable disposal plan to be carried out by the company within a specified time period. It is time to focus attention not on how or to what degree the pollution will stop but when it will stop. Philip E. Ruppe, Member of Congress, 11th District of Michigan."

"The endangered state of Lake Superior being under active discussion, we protest the Reserve Mining Company's being meanwhile allowed to continue dumping in the lake and request that the company

Opening Statement - David D. Dominick

be required to store their rock waste on the land until a final decision is reached. Dr. Betzabe Allison, Bio-science Department, Michigan Technology; Dr. John Allison, Chemistry Department, Michigan Technology."

"As residents of the copper country in upper Michigan, we want our names added to the list of those urging the immediate stoppage of dumping taconite tailings into Lake Superior. Please force the Reserve Mining Company to use an on-land disposal for their wastes. Please save Lake Superior from further pollution. Don't allow Reserve Mining Company to delay any longer. Mr. and Mrs. John Larue of Houghton, Michigan."

A statement from Carl W. Gutman, Co-chairman of Citizens to Save Superior's Shoreline. "Conferees, to whom it may concern: Citizens to Save Superior's Shoreline of Marquette, Michigan, Michigan Branch of Save Lake Superior Association, wishes to reiterate its position on Reserve Mining Company's protracted dumping of iron ore tailings daily into Lake Superior. Under no circumstances must this be allowed to continue. Profits cannot now be at the expense of people and the environment. Reserve should be forced to halt production immediately until a satisfactory(read clean)disposal plan can be implemented. The debt it owes to the public in fouling the environment is inestimable and the damage it has inflicted is irreversible. Since Reserve Mining officials now know full well they are the major polluters of Lake Superior, their continued disregard for the environment is an affront to the public and a travesty to future concern on the part of big business. For Federal Agencies to allow this condition to exist is to perpetuate a grievous error. Sincerely,

D. Bryson

Carlton W. Gutman, Co-chairman, Citizens to Save Superior's Shoreline."

Those represent the messages that have come to our attention.

I'd like to turn now to Mr. Dale Bryson with a statement summarizing past conferences.

DALE S. BRYSON

ENVIRONMENTAL PROTECTION AGENCY

GREAT LAKES REGIONAL OFFICE

CHICAGO, ILLINOIS

MR. BRYSON: On January 16, 1969, the Secretary of the Interior called a conference in the matter of pollution of the waters of Lake Superior and its Tributary Basin on the basis of reports, surveys and studies indicating that interstate pollution was occurring, and in accordance with Section 10 of the Federal Water Pollution Control Act. The conference first met on May 13th to the 15th, 1969, and reconvened in Executive Session on September 30 and October 1, 1969. The conference has subsequently met April 29th and 30th, August 12th and 13th, 1970 and January 14th to 15th, 1971.

At the first session of the conference, the conferees concluded that the general quality of the water of Lake Superior is excellent, and that the lake is a priceless natural heritage which the present generation holds in trust for posterity, with an obligation to pass it on in the best possible condition.

The largest single source of waste discharge to Lake Superior is from the Reserve Mining Company taconite beneficiation plant in Silver Bay, Minnesota. The conferees concluded at the first session that there was presumptive evidence in the record to indicate that the discharges from Reserve Mining Company endangered the health

D. Bryson

or welfare of persons in States other than that in which such discharge originated and this pollution was subject to abatement under the provisions of the Federal Water Pollution Control Act. The conferees also addressed themselves to other discharges of waste originating in Michigan, Minnesota and Wisconsin, and concluded that there are other discharges causing pollution of Lake Superior, endangering the health or welfare of persons in States other than those in which the discharges originated, and were also subject to abatement under the provisions of the Federal Water Pollution Control Act.

The conferees recommended that all dischargers provide secondary biological waste treatment or its equivalent by January 1974 or earlier if required by Federal-State Water Quality Standards. Reserve Mining Company, because of the complexities involved, was requested to undertake further engineering and economic studies relating to possible ways and means of reducing by the maximum practicable extent the discharge of tailings to Lake Superior and to submit a report on progress to the Minnesota Pollution Control Agency and the conferees by July 26, 1970. The report was to include a tentative timetable for necessary action. In issuing the Summary of Conference, First Session, the Secretary of the Interior recommended that a working copy of the progress report be readied by April 1, 1970, with the final progress report submitted by the July 26, 1970 date.

At the April 29-30, 1970 meeting of the Second Session, the Reserve Mining Company presented its preliminary progress report, a working copy of its progress report. At the August 12-13, 1970 meeting of the Second Session, the committee presented a further progress report. In light of the discussions at the Second Session, the

D. Bryson

conferees recommended that the Reserve Mining Company provide to the conferees, through the State of Minnesota, preliminary plans for abatement of the pollution from its discharge to Lake Superior by December 1, 1970, and the final plans and specifications by September 1, 1971 for accomplishing its remedial program. All other dischargers causing pollution of Lake Superior or its interstate tributary streams were listed by the conferees along with final completion dates for construction and placing in operation remedial facilities.

Reserve Mining Company failed to submit the preliminary plans by December 1, 1970. The company did request an extension of this deadline which was not granted. At the January 14-15, 1971 Conference Session, the committee submitted their preliminary plan titled "Plan to Modify Tailings Discharge System." In order to effectively evaluate Reserve's proposal, the conferees established a technical committee and charged it with evaluating the plan put forth by Reserve and also to consider land disposal of the taconite tailings. The committee was instructed to report back to the conferees in 45 days. At this session the Technical Committee will present its report and make its recommendations.

While Reserve Mining Company has occupied a great share of conference time and consideration, the other dischargers in the conference area have not been ignored. All dischargers except Reserve Mining Company have been placed under final requirements by the States that will effect compliance with conference requirements. The States will present a progress report on status of compliance later in the conference.

C. A. Johannes

This conference has taken strong action against all sources of pollution to preserve and protect the general overall excellent water quality of Lake Superior. Appropriate legal action has been taken where necessary to achieve compliance with established requirements. All legal and/or administrative actions will continue to be used as necessary to achieve compliance with the conference requirements.

MR. DOMINICK: Thank you, Mr. Bryson.

I'd like to hear now from Mr. Johannes, giving a report of the Lake Superior Technical Committee.

CLARENCE A. JOHANNES

ACTING DIRECTOR, DIVISION OF WATER QUALITY

MINNESOTA POLLUTION CONTROL AGENCY

MINNEAPOLIS, MINNESOTA

MR. JOHANNES: My name is Clarence A. Johannes. I'm the Acting Director of the Division of Water Quality of the Minnesota Pollution Control Agency.

The report of the Technical Committee is as follows:

The discharge of taconite tailings from the Reserve Mining Company at Silver Bay, Minnesota, its effect on Lake Superior and method of control, have occupied a large portion of the conference discussions. At the January 14-15, 1971 conference, Reserve Mining Company submitted a "Plan to Modify Tailings Discharge System." The conferees established a Technical Committee to evaluate the plan presented and also to consider land disposal of the taconite tailings. The committee was instructed to report back to the conferees in 45 days.

C. A. Johannes

The following committee was designated by the conferees:

Minnesota: Executive Director of the Minnesota Pollution Control Agency, John P. Badalich, succeeded by Mr. Merritt in March, and appointed myself from the Minnesota Pollution Control Agency, named official representative in March.

Lovell E. Richie and George M. Koonce, both of the Minnesota Pollution Control Agency.

In Wisconsin, Thomas G. Frangos, Wisconsin Department of Natural Resources; Theodore F. Wisniewski, Wisconsin Department of Natural Resources, named official representative in January. Lloyd Lueschow, Wisconsin Department of Natural Resources, was an alternate.

From Michigan we had Joe Bal, Michigan Water Resources Commission, Thomas L. Kamppinen, Michigan Water Resources Commission as an alternate.

From the Environmental Protection Agency, Mr. Dale Bryson was the Secretary, and Dr. Donald Mount served as Advisor to the Committee.

The Technical Committee held meetings in Minneapolis on January 19, 26, February 2-4, 11, 25, and March 5 of this year.

In order for the committee to evaluate alternative methods of disposal of taconite tailings, more detailed information was needed than the indefinite method of "on-land disposal." The committee, therefore, delineated methods of disposal they felt were representative of the various alternatives available. These alternative methods were of necessity, general conceptual methods in place of detailed specific methods that specified processes and piping arrangements. These alternatives are described in Attachment A, which

C. A. Johannes

is appended to this report.

If a true environmental impact assessment is going to be made of alternative methods of disposal, a number of considerations involving water, land and miscellaneous other aspects must be considered. The committee recognized this and developed a list of criteria to use in evaluating any method. These are presented in Attachment B to this statement. In reviewing Attachment B it becomes evident that it would be impossible for any method of disposal to minimize the impact on all of the criteria at one time. In other words, a disposal method may satisfy certain criteria at the expense of other criteria. It is at this point that environmental trade-offs must be considered.

The committee combined the alternate methods of disposal and the evaluating criteria in tabular form, establishing a rating system and distributed the information to various groups to elicit discussion on the subject. The following organizations were requested to appear before the committee to discuss their evaluation and any other pertinent material. These were the Minnesota Environmental Control Citizens Association, the Save Lake Superior Association, the Northern Environmental Council, the Minnesota Department of Natural Resources, Reserve Mining Company, the U. S. Bureau of Mines, and the U. S. Sport Fisheries and Wildlife.

A summary of these organizations' discussion with the committee is available in the committee minutes and will not be presented here. The appearance by these groups helped to establish important concepts and served to highlight the difficulty of discussing conceptual methods of tailings disposal and achieving a consensus of

C. A. Johannes

opinion. Varying viewpoints were presented by the groups as to methods of achieving adequate disposal. For example, Minnesota Environmental Control Citizens Association, Save Lake Superior Association and Northern Environmental Council favored a method of disposal of the total tailings on-land in an area near Lax Lake. On the other hand, the Minnesota Department of Natural Resources, while not making a judgment on the alternative, said such a location for a tailings lagoon presents certain safety hazards and possible impairment to the land uses in that area which must be evaluated. Instead they suggested as an alternate that a portion of the plant be relocated closer to the mine. Reserve Mining Company explained that the latter plan would not be feasible.

The "Plan to Modify Tailings Discharge System" as presented by the Reserve Mining Company at the January 14-15 Lake Superior Enforcement Conference was reviewed by the committee. The committee concludes this method of disposal is unacceptable as it does not comply with appropriate pollution abatement regulations. The main concerns relative to this method are:

- a. The proposed method would not eliminate green water.
- b. The proposed method would not materially reduce dissolved solids discharged to the lake.
- c. The proposed method would not materially reduce the suspended solids discharged to the lake, and
- d. The proposed method would employ a flocculent which would be discharged to the lake and which would have unknown ecological impact.

When considering the abatement of an existing source of

C. A. Johannes

pollution, the historical policy of the State and Federal Regulatory Agencies has been to rely upon the discharger to develop the appropriate acceptable method of waste treatment consistent with established guidelines. If the method proposed by the discharger is found to be unacceptable, appropriate additional guidance is furnished the discharger for use in making the proper corrections prior to resubmission. In the Lake Superior Enforcement Conference situation, general guidance and criteria are provided in the conference recommendations. Specification of remedial facilities in securing compliance have been left to each conferee for polluters located within its jurisdiction. The Lake Superior Technical Committee feels that the same consideration should apply to the Reserve Mining Company method of disposal.

We therefore concluded as a committee that the "Plan to Modify Tailings Discharge System" as presented by Reserve Mining Company is an unacceptable method of waste disposal.

No other firm methods of tailings disposal were presented to the conference for evaluation.

The committee was unable to obtain and develop alternative disposal methods in sufficient detail to technically evaluate them.

It is the responsibility of a waste discharger to develop an acceptable method of waste treatment for presentation to the appropriate regulatory agencies.

It is the responsibility of the appropriate regulatory agencies to provide guidance to the discharger, in this case Reserve Mining Company, as to the acceptability of a method of disposal and, if unacceptable, to provide guidance as to the modifications necessary to become acceptable.

C. A. Johannes

The Lake Superior Technical Committee recommends that:

1. Reserve Mining Company be instructed to develop a means of taconite tailings disposal that will eliminate the causes of concern delineated above and elsewhere in the conference proceedings.

2. Reserve Mining Company be provided with the appropriate criteria upon which an acceptable method of disposal can be designed.

That concludes my report, Mr. Chairman.

(The above - mentioned report follows in its entirety.)

LAKE SUPERIOR ENFORCEMENT CONFERENCE
TECHNICAL COMMITTEE REPORT
ON
TACONITE TAILINGS DISPOSAL

MARCH 1971

LAKE SUPERIOR ENFORCEMENT CONFERENCE

TECHNICAL COMMITTEE REPORT

ON TACONITE TAILINGS DISPOSAL

I. INTRODUCTION

On the basis of reports, surveys or studies the Secretary of the Interior, on January 16, 1969, called a Conference in the Matter of Pollution of the Interstate Waters of Lake Superior and Its Tributary Basin (Minnesota-Wisconsin-Michigan) under the provisions of Section 10 of the Water Pollution Control Act as amended.

The conference held sessions on May 13-15, 1969; September 30 - October 1, 1969; April 29-30, 1970; August 12-13, 1970, and January 14-15, 1971.

The discharge of taconite tailings from the Reserve Mining Company at Silver Bay, Minnesota - its effect on Lake Superior and method of control have occupied a large portion of the conference's discussions. At the January 14-15, 1971 conference, Reserve Mining Company submitted a "Plan to Modify Tailings Discharge System." The conferees established a Technical Committee to evaluate the plan presented and also to consider land disposal of the taconite tailings. The committee was instructed to report back to the conferees in 45 days.

The following committee was designated by the conferees:

Minnesota: Executive Director, Minnesota Pollution Control Agency
John P. Badalich, succeeded by Grant J. Merritt in March.
Clarence A. Johannes, Minnesota Pollution Control Agency,
named official representative in March.
Lovell E. Richie, Minnesota Pollution Control Agency.
George M. Koonce, Minnesota Pollution Control Agency.

Wisconsin: Thomas G. Frangos, Wisconsin Department of Natural Resources
Theodore F. Wisniewski, Wisconsin Department of Natural
Resources, named official representative in January.
Lloyd Lueschow, Wisconsin Department of Natural Resources,
(Alternate).

Michigan: Joe Bal, Michigan Water Resources Commission.
Thomas L. Kamppinen, Michigan Water Resources Commission
(Alternate).

Federal: Dale S. Bryson, Environmental Protection Agency, Water
Quality Office, (Secretariat).

Dr. Donald I. Mount served as an advisor for Environmental Protection
Agency, Water Quality Office, to the committee.

II. COMMITTEE ACTIONS

The Technical Committee held meetings in Minneapolis, Minnesota on
January 19, 26, February 2-4, 11, 25, and March 5, 1971.

In order for the committee to evaluate alternative methods of disposal
of taconite tailings, more detailed information was needed than the indefi-
nite method of "on-land disposal." The committee, therefore, delineated
methods of disposal they felt were representative of the various alterna-
tives available. These alternative methods were of necessity, general
conceptual methods versus detailed specific methods that specified processes
and/or piping arrangements. These alternative methods are described in
in attachment A.

If a true environmental impact assessment is going to be made of alternative methods of disposal, a number of considerations involving water, land and miscellaneous other aspects must be considered. The committee recognized this and developed a list of criteria to use in evaluating any method. These are presented in attachment B. In reviewing attachment B it becomes evident that it would be impossible for any method of disposal to minimize the impact on all of the criteria at one time. In other words, a disposal method may satisfy certain criteria at the expense of other criteria. It is at this point that environmental trade-offs must be considered.

The committee combined the alternate methods of disposal and the evaluating criteria in tabular form, established a rating system and distributed the information to various groups to elicit discussion on the subject. The following organizations were requested to appear before the committee to discuss their evaluation and any other pertinent material: Minnesota Environmental Control Citizens Association, Save Lake Superior Association, Northern Environmental Council, Minnesota Department of Natural Resources, Reserve Mining Company, U.S. Bureau of Mines and U.S. Sport Fisheries & Wildlife.

A summary of these organizations' discussion with the committee is available in the committee minutes and will not be presented here. The appearance by these groups helped to establish important concepts and served to highlight the difficulty of discussing conceptual methods of tailings disposal and achieving a consensus of opinion. Varying viewpoints were presented by the groups as to methods of achieving adequate disposal. For example, Minnesota Environmental Control Citizens

Association, Save Lake Superior Association and Northern Environmental Council favored a method of disposal of the total tailings on land in an area near Lax Lake. On the other hand, the Minnesota Department of Natural Resources, while not making a judgement on the alternative said such a location for a tailings lagoon presents certain safety hazards and possible impairment to the land uses in that area which must be evaluated. Instead they suggested as an alternative that a portion of the plant be relocated closer to the mine. Reserve Mining Company explained that the latter plan would not be feasible.

The "Plan to Modify Tailings Discharge System" as presented by the Reserve Mining Company at the January 14-15 Lake Superior Enforcement Conference was reviewed by the Technical Committee. The committee concludes this method of disposal is unacceptable as it does not comply with appropriate pollution abatement regulations. The main concerns relative to this method are:

- a. The proposed method would not eliminate green water.
- b. The proposed method would not materially reduce dissolved solids discharged to the lake.
- c. The proposed method would not materially reduce the suspended solids discharged to the lake.
- d. The proposed method would employ a flocculent which would be discharged to the lake and which would have unknown ecological impact.

When considering the abatement of an existing source of pollution the historical policy of the State and Federal regulatory agencies has been to rely upon the discharger to develop the appropriate acceptable

method of waste treatment consistent with established guidelines. If the method proposed by the discharger is found to be unacceptable, appropriate additional guidance is furnished the discharger for use in making the proper corrections prior to resubmission. In the Lake Superior Enforcement Conference situation, general guidance and criteria are provided in the conference recommendations. Specifications of remedial facilities in securing compliance have been left to each conferee for polluters located within its jurisdiction. The Lake Superior Technical Committee feels that the same consideration should apply to the Reserve Mining Company method of disposal.

III. CONCLUSIONS

The Lake Superior Technical Committee concludes that:

1. The "Plan to Modify Tailings Discharge System" as presented by Reserve Mining Company is an unacceptable method of waste disposal.
2. No other firm methods of tailings disposal were presented to the conference for evaluation.
3. The committee was unable to obtain and develop alternative disposal methods in sufficient detail to technically evaluate them.
4. It is the responsibility of a waste discharger to develop an acceptable method of waste treatment for presentation to the appropriate regulatory agencies.
5. It is the responsibility of the appropriate regulatory agencies to provide guidance to the discharger, in this case Reserve Mining Company, as to the acceptability of a method of disposal and, if unacceptable, to provide guidance as to the modifications necessary to become acceptable.

IV. RECOMMENDATIONS

The Lake Superior Technical Committee recommends that:

1. Reserve Mining Company be instructed to develop a means of taconite tailings disposal that will eliminate the causes of concern delineated above and elsewhere in the conference proceedings.
2. Reserve Mining Company be provided with the appropriate criteria upon which an acceptable method of disposal can be designed.

DESCRIPTIONS OF ALTERNATIVE METHODS OF DISPOSAL

1. Present method of discharge. Discharge all tailings and wastewater, untreated, directly to Lake Superior from existing facility at Silver Bay.
2. Proposed method of discharge. This encompasses the plan entitled, "Plan to Modify Tailings Discharge System," as presented at the Lake Superior Enforcement Conference. It entails hydro-separation of the coarser tailings and coagulation of the hydro-separator overflow. The combined underflow from the clarifiers and hydro-separators will be discharged in the conduit down the face of the existing delta, 150 feet below the lake's surface. The clarified overflow will be discharged to the harbor area.
3. Modified proposed method. Method No. 2 above modified for direct recirculation of clarifier overflow for use as process water with no discharge to the harbor. Assume an acceptable coagulant is used. Assume existing launderers are removed.
4. Lake shore tailings pond. A dike of coarse tailings would be built in the lake with the base approximately 100 feet deep. Subsequent to construction all tailings would be discharged to the pond with the overflow being recirculated as process water. The proposal would eliminate the discharge of any tailings to the lake other than the coarse tailings required to build the dikes.
5. Solids to denuded area. Separation of solids at plant site utilizing system as described in number 2. Solids would be hauled to a remote site for disposal in a denuded area. Complete recirculation of clarified water for use as process water.
6. Coarse material to Lake Superior, fines to land disposal. Coarse material would be separated at the plant without use of a flocculent utilizing processes described in number 2. This material would be discharged to Lake Superior in approximately 10,000 gallons per minute of water. The fine fraction of tailings would be discharged to a settling pond on land. Assume recirculation of any overflow from the pond for use as process water, and hence, no discharge from the pond area to a surface water course. Assume diversion of natural runoff around the pond.
7. Coarse material to Lake Superior, fines to land disposal, overflow to surface water course. Assume conditions same as No. 6 except that overflow from settling pond meets all applicable effluent standards for disposal of surface waters.

8. Total tailings on land, no discharge to a surface water course. Total tailings would be discharged to a settling pond with the overflow being recirculated for process water. All natural drainage would be diverted around the settling pond.
9. Total tailings on land, overflow to surface water. Total tailings would be discharged to a settling pond with the overflow from the site meeting all applicable effluent standards for disposal to surface waters.
10. Relocation of beneficiation plant near the existing mine site. Assume process water is obtained from the immediate area initially with complete recirculation of settling pond overflow thereafter. Assume makeup water is obtained from the immediate area.

CRITERIA FOR EVALUATING
ALTERNATIVE
METHODS OF DISPOSAL

WATER CONSIDERATIONS

1. Meets Federal-State water quality standards:
 - a. 5 JTU turbidity
 - b. 30 mg/l suspended solids
 - c. 1 mg/l phosphorus
 - d. 10/100 ml fecal coliform
 - e. pH 6.5 to 8.5
 - f. Secondary treatment or equivalent
 - f. Non-degradation
2. Minimum discharge to surface waters
 - a. Suspended solids
 - b. Dissolved solids
3. Minimum appropriation of surface waters
4. Minimum discharge of chemical additives to surface waters
5. Esthetically pleasing

LAND CONSIDERATIONS

6. Acceptable for:
 - a. Wildlife
 - b. Timber & pulp production
 - c. Recreation
7. Esthetically pleasing
8. Reclaimable
9. Minimum post-operative maintenance

OTHER CONSIDERATIONS

10. No dust problem
11. Flexibility to accomodate process changes
12. Adequate capacity to handle future tailings production
13. Economically feasible
14. Technically feasible
15. Reliability
16. Short construction time

E. T. Fride

MR. DOMINICK: Thank you very much.

Do we have any comments or questions on the report presented by the representative of the Technical Committee? Comments or questions from the conferees?

State of Wisconsin?

MR. FRANGOS: We will reserve any comments until we comment on the Reserve Mining situation.

MR. DOMINICK: Thank you.

State of Michigan?

MR. FROST: No, sir, not at this time.

MR. DOMINICK: State of Minnesota?

MR. MERRITT: Minnesota has no questions at this time.

MR. DOMINICK: Thank you.

We'll hear now from the Reserve Mining Company

All right, Mr. Fride.

EDWARD T. FRIDE

ATTORNEY-AT-LAW

DULUTH, MINNESOTA

MR. FRIDE: Mr. Commissioner, conferees, my name is Edward Fride. I am a practicing lawyer in Duluth. I'm appearing here on behalf of Reserve Mining Company.

At the January 15, 1971 Session of this conference, the conferees concurred in the establishment of a Technical Committee, which was charged with responsibility, and I quote, "The committee will consider land disposal as well as the underwater disposal plan presented here and come up with its evaluation as well as its recommendations...the Committee can just look at the feasibility of this kind of thing and hopefully get in touch with Reserve or any of the

E. T. Fride

other parties and ask them to consult with them and see what recommendations they can come up with.

"Now, I think we are faced"-- and I'm continuing the quote -- "with several propositions. We are faced with the proposition of -- and let's start the other way by saying we are going to entertain the Reserve proposal for underwater disposal as is. We are going to entertain that and recommend it with modifications. We are going to reject it and tell them to go to a land disposal system, or we are going to reject it completely, that they have not come up with a remedial program and take appropriate action legal action and let the court decide what the solution should be... I would strongly urge that everyone get all their theories out on the table at least at this go-around...." end of quote.

This then was the charge to the Technical Committee.

Responsive to the Technical Committee's request, Reserve Mining Company appeared before it on February 3, 1971, and submitted at that time its written response to the committee's inquiry. A copy of that response has been previously supplied to the conferees, and at this time, Mr. Commissioner, I would like to formally make such response an exhibit in these proceedings.

MR. DOMINICK: Without objection that will be done.

(The response referred to is entitled "Reserve Mining Company's Response to Inquiry from Lake Superior Enforcement Conference Technical Committee" and is marked Exhibit 1 and is on file at HQ, EPA, Washington, D.C. and Region V, Chicago, Illinois.)

MR. FRIDE: Statements and activities pertinent to the Technical Committee are summarized and referred to in my affidavit

E. T. Fride

which I submitted to the Minnesota District Court, which is attached and made a part of the statement which I am presenting this morning. Mr. Merritt's responsive affidavit is attached to my statement for its informative value.

By letter dated April 15, 1971, from the Environmental Protection Agency, Reserve was furnished the report of the Lake Superior Technical Committee, which has just been formally presented by Mr. Johannes of the Minnesota Pollution Control Agency staff. I think it's significant and should be noted that the report provides in part, and I quote, "The Committee was unable to obtain and develop alternative disposal methods in sufficient detail to technically evaluate them..." And just pausing for moment, I think it is significant as to whether or not, as you review the committee's report, whether they were in position to meet the charge that was addressed to them. The report continues, "It is the responsibility of the appropriate regulatory agencies to provide guidance to the discharger, in this case Reserve Mining Company, as to the acceptability of a method of disposal and, if unacceptable, to provide guidance as to the modifications necessary to become acceptable... Reserve Mining Company be provided with the appropriate criteria upon which an acceptable method of disposal can be designed." End of quotes from that Technical Committee report.

Now, inasmuch as the "guidance" and the "criteria" contemplated by the Technical Committee has not been presented to Reserve, it would be now premature for Reserve to make an analysis and evaluation of the Technical Committee report, and the proposed agenda referred to by the Commissioner provides that following this statement

E. T. Fride

by Reserve, there will be statements by Minnesota relative Reserve's discharge. I think it is significant that just last Monday at the April 19 meeting of the Minnesota Pollution Control Agency - and parenthetically, may I suggest that this conference under the Federal law is a conference of the agencies', it does not purport to be a conference reflecting the views of any individual or any single political figure, but rather under law, it is a conference of the agencies. The Minnesota Pollution Control Agency on April 19, 1971, at its regular monthly meeting unanimously passed a motion to the effect that the Minnesota representatives are obligated to make clear to the conferees that any Minnesota statements or Minnesota Pollution Control Agency staff reports which may be presented to this conference have not been approved or sanctioned by the Minnesota Pollution Control Agency and do not reflect the policy of that Agency, since any policy considerations contained in any such statements or staff reports have not been the subject of an opportunity to review or vote on them by the Agency which is the official party to this conference.

Now, subsequent to the presentation of Reserve's modification plan to the Minnesota Pollution Control Agency on February 8, 1971, that Agency directed its staff to engage in good faith negotiations with Reserve Mining Company consistent with Judge C. L. Eckman's decision of December 15, 1970. That court directed negotiation was also the subject of a subsequent order, in which the Court said that while there was evidence of an arbitrary position taken by the director, that the Agency itself had made clear to the court as it had made clear to its staff, that it wanted to engage in good faith negotiations with Reserve Mining Company consistent with the judge's order. The plan that was presented to the Minnesota Pollution Control Agency was presented on February 8. Now, there may be some question here as to times. But it

E. T. Fride

perhaps, parenthetically, could be noted that Reserve had until May 15 of 1971 to present a plan to the Minnesota Agency. It did not wait until May 15. It came in as soon as possible on February 8, and presently, we are hopeful that there will in fact be good faith negotiations between Reserve and the Minnesota Pollution Control Agency.

The plan of Reserve, as Mr. Bryson has noted, was presented to this conference at its January 15, 1971 Session.

It is respectfully requested, Mr. Commissioner and conferees, that Reserve be afforded an opportunity to later respond during this conference session to any statements to be made with respect to Reserve's plan by the States, private citizens or groups, Federal or State agencies or the conferees. Until Reserve is made aware of further conference proceedings, it has not been provided with the guidance contemplated by the Technical Committee report, quote, "As to the acceptability of Reserve's plan (as represented) and, if unacceptable, guidance as to the modifications necessary to be acceptable" as concluded by the Lake Superior Technical Committee of this conference. Again, it would be premature for Reserve at this point, without such guidance and without such criteria, to attempt to make any meaningful response to the Technical Committee report.

As the Commissioner noted in his opening remarks, this conference was convened under Section 10 (d) (1) of the Federal Water Pollution Control Act. That Act contains a congressional declaration of policy which states, and I quote, "...It is declared to be the policy of Congress to recognize, preserve and protect the primary responsibilities and rights of the States in preventing and controlling water pollution...Nothing in this chapter shall be construed as impairing or in any manner affecting any right or jurisdiction of the

E. T. Fride

States with respect to the waters (including boundary waters) of such States."

The Act goes on to provide that, "Consistent with the policy declaration of this chapter, "that I referred to, "State and interstate action to abate pollution of interstate or navigable waters shall be encouraged and shall not, except as otherwise provided by or pursuant to Court Order under Subsection (h) of this Section, be displaced by Federal enforcement action."

Now, as the conferees and the audience are well aware, both Reserve Mining Company and the Minnesota Pollution Control Agency have expended very substantial effort in the Minnesota Courts in attempting to arrive at a final legal conclusion of the controversy. The issues litigated have included whether certain interstate water quality standards are reasonable as applied to Reserve, and significantly, whether Reserve is polluting Lake Superior within the meaning of the very stringent Minnesota definition of pollution, or is guilty of creating any nuisance by its discharge. These issues have been determined at the trial court level.

The Minnesota Pollution Control Agency, after the decision that I referred to, moved the Court for amended findings or a new trial. Now, this motion has been denied by the Court as of April 8, 1971.

On April 20, last Tuesday, Reserve Mining Company was served with a Notice of Appeal by the -- or to the Minnesota Supreme Court by the Minnesota Pollution Control Agency. Now, in making this appeal to our Supreme Court in this State, the Agency is obviously expressing its intention to pursue the matter to the highest appellate court in Minnesota for final determination. Thus, until the Minnesota Supreme Court has resolved the matter, Reserve is subject to possible conflicting directives, and in the light of the congressional policy to

E. T. Fride

which I have referred, under which this conference was convened, it is respectfully submitted that the conference should defer further action until the Supreme Court determination sought by Minnesota is available. This is not in any way to suggest that Reserve is unwilling to promptly evaluate any criteria and guidance proffered by the conference with respect to possible modification of its tailings system. Affirmatively, it is most willing to evaluate and consider any guidance offered by this conference to the company, just as it is more than willing to negotiate in good faith with the Minnesota Agency with respect to any possible modifications.

It is, of course, not desirous of being placed in the untenable position of obeying one of several conflicting directives at its peril. To that end, and in view of the primary responsibility of Minnesota, it is also recommended that the Minnesota Pollution Control Agency and Reserve negotiate with respect to a modification as contemplated by the Court Order and the expressed desire of the Minnesota Agency. Any such agreement could form the basis for a Minnesota recommendation to this conference, and aid in what all well intentioned parties desire -- a prompt, fair and a reasonable solution to this controversy; which, of course, should consider the impact of the discharge on the total environment, air and land, as well as water, and a solution which does not threaten the continuance of Reserve's significant contribution to this area, the State and the Nation.

That, Mr. Commissioner, concludes the statement which Reserve would like to submit at this time. I am, of course, available to respond to any questions, but I do, as I indicated earlier, respectfully request an opportunity to again be heard at this session

E. T. Fride

of the conference to discuss with the conferees any guidance or criteria that may be suggested by the conferees.

MR. DOMINICK: Are there any questions by the conferees?

MR. STEIN: I have a comment about the representatives of Minnesota not being authorized to speak for their Board. I think in all cases we have that problem when a conferee comes to any conference. Matters which come up at the conference cannot be anticipated, and often the conferee has to make a judgment on how he is going to react one way or the other. Then, of course, any State Board has the privilege of ratifying it. However, I think from the Federal point of view, if we are going to utilize this procedure, when we send an official notification to a State and it sends the representative, we have to assume that he is speaking for the State for the purposes of this conference, and the recommendations will be sent to the Administrator of EPA in accordance with Federal law. This is what the law provides. If the State responds by sending a conferee here, we certainly assume the good faith and credit of the State in sending the duly authorized representative to the conference.

MR. FRIDE: Well, Mr. Stein, Mr. Commissioner, if I may just respond to that comment.

I am sure that what you have indicated is probably the general rule and is one that provides for practical workability at most conference sessions. In many respects, however, I suggest that this conference relating apparently as it does to one discharger, at least the principal focus is obviously in that direction, is somewhat unique from a number of other conferences. And I suggest, too, that an agency which is the conferee, should and must have, in

E. T. Fride

fairness and consistent with its responsibilities, an opportunity to give instructions to the conferees who are representing that particular agency.

Now, the subject - and I don't want to take a great deal of the conferees time on it, but I think it's quite pertinent and quite important - the point that you bring up, because we are dealing here with a rather unique situation, I suppose it isn't always the case where the principal civilian antagonist of a company ends up purporting to act in judgment of the views which he has long expressed. I think that when Mr. Merritt appeared before the Technical Committee, he took a very definite stand - one that I think has been consistent with his long held views on the subject, but which I submit operated to really frustrate an honest technical evaluation of Reserve's plan or any other plan. Because he stated simply that any plan or combination of plans which did not envision total on-land deposition of Reserve's tailings would not be acceptable, and he purported to be speaking in an official capacity. Now, with that kind of an input, if you will, to the Technical Committee, it was hardly in a posture to do that which the charge of this conference stated; namely, to objectively evaluate Reserve's plan, to come up with any recommendations as to modifications if the plan was found unacceptable, and also to evaluate any other plan. It is significant to note that no other plan was presented to the Minnesota Pollution Control Agency. I think that as practical people we can't simply deal in concepts. We have to deal in reality, and that concept, and I'm not suggesting that it isn't a sincerely held viewpoint, but it does get into the situation where you may not have a committee able to fulfill its charge. And it was with respect to that that the agency took the

E. T. Fride

specific direction that it did that I have referred to last Monday when similar viewpoints were expressed by Mr. Merritt to the agency. He suggested, and an inquiry was made who did he speak for in exposing total on-land deposition, and the response was himself and the Governor. Well, the agency specifically took the action that I referred to, and I think in that light it is significant and it is not just the normal situation where you have somebody clothed with apparent authority. You have a specific directive that Minnesota, the Minnesota Pollution Control Agency is not committed to total on-land deposition of Reserve's tailings, and so with that, Mr. Stein, I think we have a little bit different situation than would be the normal case in a conference procedure.

MR. DOMINICK: Mr. Fride, if I may speak to that presentation of yours. I do not intend, as Chairman of this conference, to go behind any actions taken by the Technical Committee which has filed its report with us. That report was filed with the concurrence and with the approval of all members of that Technical Committee, and they reported back to this conference. The Technical Committee found that the disposal plan presented by Reserve Mining Company was unacceptable, and I believe spelled out many of the reasons for its unacceptability.

As to the problems that you have discussed within the agency of the State of Minnesota, I, as Chairman, also do not intend to go behind those questions. We are dealing in an official capacity with the State of Minnesota. We have given official notice to the State of Minnesota, and we assume that the representatives here are speaking for the sovereign State of Minnesota.

E. T. Fride

With that, I would turn the mike to any other conferees that wish to comment on this point.

MR. MERRITT: Mr. Chairman and Mr. Commissioner, if I may be permitted to make a short reply.

MR. DOMINICK: You certainly may.

MR. MERRITT: Thank you, Mr. Dominick. I appreciate your comments, and I think that we should recognize, first of all, that the conferees, Dr. Andersen, Chairman of our Minnesota Pollution Control Agency, and Mr. Robert Tuveson, and myself as Executive Director, are fully authorized to be here and represent the State of Minnesota.

I would like to just briefly reply to some of the comments of Mr. Fride. We have been through this before, and I don't think we should get involved in any detailed argument back and forth, and I am a little bit surprised that it came up again. We have been through this at least twice now in the last week, and I have made my comments. But I think for the record since Mr. Fride has made certain allegations that I should respond, and I would like to briefly mention the attack against me by the Reserve Mining Company in my appearance before the Technical Committee and the allegation that I have frustrated the work of the Technical Committee of this conference. I deny that categorically, and I want to explain just exactly what happened, briefly. I attended the last committee session on March 5, 1971 in Dale Bryson's office of the Environmental Protection Agency. The draft of the Technical Committee report was there and contained the essence of the report that has been presented by the committee here today, and specifically contained the finding that the Reserve Mining plan was unacceptable. Now, how

E. T. Fride

could I frustrate the work of that committee? I think that charge is false, and I think the drafts of the committee reports will substantiate what I have said.

Now, Mr. Fride and Reserve Mining Company, and I assume you're speaking when you talk about my arbitrary attitude, Mr. Fride, for the company, I know this isn't a personal attack by you.

MR. FRIDE: It certainly isn't.

MR. MERRITT: I would like to explain just what this is all about if I might, briefly, Mr. Chairman.

What Mr. Fride and the company seem to be saying is that because the Governor of Minnesota, the Governor of Wisconsin, and now I'm pleased to hear and see, the Governor of Michigan, have endorsed on-land disposal; and I, in my official capacity as the representative of the Governor of Minnesota, Governor Wendell Anderson, have made certain statements in regard to that policy; and I fully support that policy that somehow this is arbitrary. I think the question that is before this governmental body and other governmental bodies in the country today is whether we, as governmental representatives, representatives of the people, if you will, can carry out the will of the people. The Governors haven't taken any arbitrary stand here. They have campaigned throughout the length and breadth of their States, and I can speak for Governor Anderson in this regard. This is a policy which is based on the people that he has talked to and the will of the people of the State of Minnesota. It is not an arbitrary stand. It is not a stand that he accepted just because I told him to, by the way. It is a position which he arrived at independently, I might say, and his position is just basically this that the people of Minnesota

E. T. Fride

are insisting that these taconite tailings be deposited on-land.

Just one more point, if I may, Mr. Chairman. In line with what Mr. Stein said - and I fully subscribe to his views - I think what Mr. Fride and the company are seeking here, when he states that he understands the procedure of this conference but that there ought to be some special exception, is that the Reserve Mining Company is the only discharger that is not under an abatement schedule, and that chart up on the wall behind the conference table here points that out, I think very dramatically. When you read the legend, the only circle that is entirely black, which signifies no treatment, is Reserve Mining Company. Now, when they take the position that Mr. Fride is requesting, they're asking for continuation of the special consideration that they have received over the past two years from this conference and from others, and I'd like to just end by quoting from a statement Mr. Murray Stein made to the last session of this conference when he stated in reference to the Reserve Mining matter, "I feel that this special consideration of one polluter must end."

Thank you.

MR. FRIDE: Mr. Commissioner, perhaps if I might -- certainly I have not and do not now intend to make any personal criticism of Mr. Merritt's views. I think, however, that there may be differences of opinion which are a proper subject of conference deliberations.

The word "arbitrary" that I utilized was not my word, but rather a District Judge's word in describing the actions taken by Mr. Merritt at the Technical Committee sessions, and so I am simply quoting his word, not any others.

E. T. Fride

I might just suggest, Mr. Commissioner, that in this situation when one says that we will not go behind a particular report, I know that you have a legal background. I know that. I suppose it would only be a fair situation when, for example, a doctor might register a diagnosis, I think it would simply be fair to ask him whether he's examined the patient before he would operate; and I think that that is what I am referring to in making it a part of the record. The situation is I think that the Technical Committee representatives are certainly well intentioned and generally very technically qualified. But the question is what was the frame of reference in which they were put, and what kinds of attitudes were expressed to them which they were trying to accommodate and yet live within the charge of the committee of this conference? And so I simply refer to that and make it a part of the record, because I think it is fair. I think you know that when we talk about legalisms, this company is branded in the medium, through a Technical Committee report, that a plan is quote "unacceptable" end of quote.

Now, I think perhaps all of us may have some idea what the Technical Committee had in mind when it made that statement. It said that the plan as presented is not acceptable. It didn't address itself to possible modifications. But the fact of the matter is that this company is subjected to a great deal of criticism simply by the use of that term. And I suggest that it is an important function of the conference, as they come to grips with the Technical Committee report, to properly inquire whether the Technical Committee had the opportunity to fulfill its charge and whether or not its report purports to be an objective evaluation

E. T. Fride

of Reserve's plan, possible modifications to it, and possible land deposition. I think that is a proper and a fair question for this conference.

MR. DOMINICK: Thank you, Mr. Fride, for your considered statements. I would like to respond to some of the issues and questions that you have raised with respect to the Technical Committee. Then I would hope that we could recess for a short time and after the recess receive statements from the various States.

But responding to some of your concerns, I do not believe that the Reserve Mining Company has been unfairly treated by the handling of this Technical Committee report. The report clearly states why the plan as proposed by Reserve was found to be unacceptable:

- a. The proposed method would not eliminate green water.
- b. The proposed method would not materially reduce dissolved solids discharged to the lake.
- c. The proposed method would not materially reduce the suspended solids discharged to the lake.
- d. The proposed method would employ a flocculent which would be discharged to the lake and which would have unknown ecological impact.

Further, I think the committee went to some length in its report to discuss the traditional role of those who are regulated, as opposed to the regulators - be it a State agency or a Federal Agency - the role being that in order to abate pollution those who are being regulated are requested, and in the past have fulfilled those requests, to come up with acceptable plans for treatment and disposal of their wastes. In this case, the Technical Committee

E. T. Fride

pointed out very clearly that there had not been plans developed with sufficient specificity, with sufficient detail to present to the Technical Committee alternatives for on-land disposal, and therefore the committee was unable to give its attention and give its technical expertise to such on-land disposal proposals. I think those two points need to be made.

Are there any other questions or comments here from conferees?

MR. STEIN: I have one other legal one, that I hope won't kick off a debate. I just made the first one on the authority of the State conferees for the record, and I have another legal point which Mr. Fride raises which goes to the heart of the matter. When you say it is submitted that the conference should defer further action until the State Supreme Court determination sought by Minnesota is available, now, the notion here is that we defer any action here until the State court takes action. Now, again, we are faced with the proposition - and I duly respect your thesis on this, Mr. Fride, and your citation of the law - but if we followed that procedure, then any conference anywhere in the country could be held up by someone taking the case to a State court, appealing it, and then getting the notion that we should wait and not take any action here until we have an appeal. A roughly similar case was just considered - a case brought by Ohio. It went to the Supreme Court, where the United States Supreme Court said that the conference was the place to handle the case and that the court would not be appropriate. Now, I think we have to get this kind of balance, but I think what you are raising here is a key question. If your thesis were true, then the conferees couldn't say anything and we would just go home and wait for the

E. T. Fride

Minnesota Supreme Court.

MR. FRIDE: Well, Mr. Stein, as I am sure you are well aware, the Ohio case that you refer to in the United States Supreme Court was perhaps a little broader than the comment mentioned. That decision was one which simply stated -- said that the United States Supreme Court was not the proper forum to initiate legal action because the United States Supreme Court was not properly equipped to evaluate facts. It did refer to trial court's ability so to do and also referred to the conference proceedings, and the point I think being very properly one that here we have already expended a great deal of effort in giving everybody an ample opportunity to ventilate their views, scientific and otherwise, in the court. It is not Reserve Mining Company's decision to appeal that case to the Minnesota Supreme Court. Reserve Mining Company was and is willing to abide the judgement of that court, but since the Minnesota Pollution Control Agency has taken the initiative and action in appealing, it obviously must follow, I suggest, that a court -- a Supreme Court of the State having jurisdiction over the parties in possession of the facts is in a position to make a definitive ruling on the subject. Now, if this conference or some subsequent action comes up with a directive which is in conflict with that of the Minnesota Supreme Court, I think we are in the obvious illogical and unfortunate position of (1) being forestalled by activity which tends to minimize the opportunities to do that which Reserve Mining Company is most willing and anxious to do -- resolve this matter on a fair and equitable basis; and (2) if we get a conflict developing through the conference route as opposed to the Minnesota Supreme

E. T. Fride

Court route, then who is to take precedence? Well, Congress, as I am sure you are well aware, Mr. Stein, has already addressed itself to this possible problem saying that the State in which the discharge occurs, that agency has the primary responsibility. And so I suggest that we permit the implementation of that congressional policy by allowing the State to pursue that remedy which it has chosen to get a definitive decision, and I think we'll be closer in point of time to a solution. I am not suggesting for a moment, as I try to make clear, that everything stop until that court acts. I told the agency last Monday, I told the District Court, I have told this conference, that Reserve is more than willing to evaluate criteria to try to come up with something acceptable. But, obviously, in order for there to be any kind of a meaningful resolution, there has to be some kind of concurrent action by this conference, by the court, or agreement on some course of action that will tend to eliminate the dilemma that anybody is faced with having the possibility of one judge on one side or one administrative agency on the other side issue completely contradictory orders.

MR. STEIN: I don't think that is what I am addressing myself to. But I don't know, Mr. Fride, how significant it is who makes the appeal, because in a sense we would have to determine whether we were going to defer action under a Federal endorsement procedure by who made the appeal, whether it was the plaintiff or the defendant. I am not sure the Congress had this in mind. But I also would like to point out, that we do recognize the primary rights and responsibilities of the case, and if I recall that trial judge's comment, he did say that this case probably involved more scientific testimony than probably any other case in the history of

E. T. Fride

Minnesota. And you might recall, if you would look just at the list of the scientific witnesses, that on request we supplied to the State of Minnesota 11 of those witnesses. So we did cooperate fully with the State in its case. We would hope that in this reciprocal problem we have of water pollution control, the State is going to cooperate with this as they have in these proceedings.

MR. FRIDE: I might just suggest, Mr. Stein, and I am most aware of the distinguished Federal scientists who appeared during the 7-week trial, and I think it is significant to note that the judge in evaluating all of that testimony, in effect, suggested that his conclusion was consistent with the views held by those distinguished Federal scientists who did appear. And I think that that is a significant and an important kind of a recognition, but, actually, if we could take and eliminate some sense of the politics from this problem and rely on technical experts, I think we could reach a solution to this problem much more rapidly. And I might suggest, too, Mr. Stein, that I am not suggesting at all that the State of Minnesota be prohibited from doing that which it has solemnly assured the court and its duly elected -- duly appointed citizen members, that it wants to negotiate in good faith; it wants to try to resolve it. All I am suggesting is let's give them an opportunity to do so.

Now, I think that later on today you may have the benefit of a report from a member of the staff of the Minnesota Pollution Control Agency. I say that because Mr. Merritt was kind enough to supply me with a copy of it last evening. I think in that report there is some indication that the Minnesota Agency is not yet completely in a posture where it can definitively arrive at a conclusion. And all I'm suggesting to this conference is that in the light

E. T. Fride

of the congressional policy, in the light of the position of the agency, that it wants to try to negotiate and resolve this matter in good faith, and certainly in the light of Reserve's willingness to do so, that if this were to come to pass, it could form the basis for a significant recommendation to this conference and would be consistent with both our State and Federal laws.

MR. DOMINICK: Thank you very much, Mr. Fride.

Yes, do you have a question?

MR. FRIDE: Thank you, Mr. Commissioner.

DR. ANDERSEN: Mr. Chairman, I am Howard A. Andersen, Chairman of the Minnesota Pollution Control Agency of Minnesota, and although it seems redundant now, and I didn't bring along my own cheering section, yet the Minnesota Pollution Control Agency did in truth on April 19 instruct me to make it clear to this conference that any views expressed by any of its conferees, do not express the considered viewpoint of the agency. We have not had a chance to evaluate the technical reports and have not discussed this matter in detail.

We are in a peculiar position in Minnesota. We are under conflicting orders by different courts, and this is one of the reasons I believe that we would like to make it clear that the agency has not taken a position as yet.

MR. DOMINICK: Mr. Merritt, you said that you had one further question for Mr. Fride.

MR. MERRITT: Yes, I do, Mr. Commissioner.

In connection with his report on Page 5, if I might refer to Page 5. Mr. Fride, referring to your comments of the company's position on Page 5, where Reserve states its willingness to

promptly evaluate criteria and its cooperation in evaluating and considering any criteria that the conference may come up with later in the session, I find it interesting that you use these words "evaluate and consider." Would Reserve Mining Company accept the direction -- in other words, accept, not just "evaluate and consider", but accept any direction from this conference for on-land disposal?

MR. FRIDE: Well, I don't like too many medical analogies, but would you accept going to a doctor and having him tell you that he is going to perform surgery without indicating why or to what extent? I think that the suggestion that, at this point in time, before the conferees and before the Minnesota Agency have had an opportunity to enunciate what the criteria and guidance are, it would be totally impossible for me to say at this point in time that it was considered something that could be accepted or rejected without really understanding and knowing what it is and what kind of guidance is proper. I just couldn't do that, Mr. Merritt.

MR. DOMINICK: Any further questions for Mr. Fride?

Thank you very much, once again, Mr. Fride.

(Mr. Fride's statement in its entirety follows.)

I suggest we take a 15-minute recess and be back to hear the comments of the States. (A short recess was taken.)

MR. DOMINICK: Ladies and gentlemen, we'd like to hear now from the State of Minnesota and its conferees.

Mr. Merritt, Dr. Andersen, Mr. Tuveson, would you please present the position of the State of Minnesota.

STATEMENT OF RESERVE MINING COMPANY
TO
APRIL 22-23, 1971 SESSION OF
LAKE SUPERIOR ENFORCEMENT CONFERENCE

My name is Edward T. Fride. I am a practicing lawyer in Duluth, Minnesota. I am appearing on behalf of Reserve Mining Company.

At the January 15, 1971, session of this Conference the Conferees concurred in the establishment of a "Technical Committee" which was charged with responsibility:

"The Committee will consider land disposal as well as the under water disposal plan presented here and come up with its evaluation as well as its recommendations.
* * * The Committee can just look at the feasibility of this kind of thing and hopefully get in touch with Reserve or any of the other parties and ask them to consult with them and see what recommendations they can come up with.

"Now I think we are faced with several propositions. We are faced with the proposition of--and let's start the other way by saying we are going to entertain Reserve's proposal for under water disposal as is. We are going to entertain that and recommend it with modifications. We are going to reject it and tell them to go to a land disposal system, or we are going to reject it completely, that they have not come up with the remedial program and take appropriate action--legal action--and let the Court decide what the solution should be. * * * I would strongly urge that everyone get all their theories out on the table at least at this go-around * * *."

Responsive to the Technical Committee's request, Reserve appeared on February 3, 1971 and submitted at that time its written response to the Committee's inquiry. A copy of that response has been previously supplied to the Conferees and at this time I would like to formally make such response an exhibit in these proceedings. Statements and

activities pertinent to the Technical Committee are summarized and referred to in my Affidavit submitted to the Minnesota District Court which is attached hereto and made a part of this statement. PCA Director Merritt's responsive Affidavit is attached.

By letter dated April 15, 1971, from the Environmental Protection Agency, Reserve was furnished the report of the Lake Superior Technical Committee which has just been formally presented by Mr. C. A. Johannes of the Minnesota Pollution Control Agency staff. It is noted that said report provides in part:

"The Committee was unable to obtain and develop alternative disposal methods in sufficient detail to technically evaluate them * * *. It is the responsibility of the appropriate regulatory agencies to provide guidance to the discharger, in this case Reserve Mining Company, as to the acceptability of a method of disposal and, if unacceptable, to provide guidance as to the modifications necessary to become acceptable. * * * Reserve Mining Company be provided with the appropriate criteria upon which an acceptable method of disposal can be designed."

Inasmuch as the "guidance" and "criteria" contemplated by the Technical Committee has not been presented to Reserve, it would be now premature for Reserve to make an analysis and evaluation of the Technical Committee report.

The proposed agenda provides that following this statement by Reserve Mining Company there will be statements by Minnesota relative to Reserve's discharge. The Minnesota Pollution Control Agency on April 19, 1971 at its regular monthly meeting unanimously passed a Motion to the effect that the Minnesota representatives are obligated to make clear to the

Conferees that any Minnesota statements or Minnesota Pollution Control Agency staff reports which may be presented to the Conference have not been approved or sanctioned by the Minnesota Pollution Control Agency and do not reflect the policy of the Agency since any policy considerations contained in any such statements or staff reports have not been voted on by the Agency.

Subsequent to the presentation of Reserve's modification Plan to the Minnesota Pollution Control Agency on February 8, 1971, that Agency directed its staff to engage in good faith negotiations with Reserve Mining Company consistent with Judge C. L. Eckman's decision of December 15, 1970, of which a copy is hereto attached as an exhibit. The Court directed negotiation was also the subject of the appended Court Order of April 7. Reserve's Plan was formally presented to this Conference at its January 15, 1971 session.

It is respectfully requested that Reserve be afforded an opportunity to later respond during this Conference session to any statements to be made with respect to Reserve's Plan by the States, private citizens or groups, Federal or State Agencies, or the Conferees. Until Reserve is made aware of further Conference proceedings, it has not been provided with the guidance "as to the acceptability of (Reserve's Plan as presented) and, if unacceptable, guidance as to the modifications necessary to be acceptable" as concluded by the Lake Superior Technical Committee of this Conference.

It would obviously be premature to attempt any response at this time without such guidance.

The Lake Superior Enforcement Conference was convened by Notice under Section 10 (d) (1) of the Federal Water Pollution Control Act as amended (33 USCA 1160, et seq.). That Act includes a Congressional declaration of policy (33 USCA 1151 (b) and (c)) stating:

"* * * it is declared to be the policy of Congress to recognize, preserve and protect the primary responsibilities and rights of the States in preventing and controlling water pollution.* * *. Nothing in this chapter shall be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States."

That Act further provides in Section 10 (b) (33 USCA 1160

(b)):

"Consistent with the policy declaration of this chapter, State and interstate action to abate pollution of interstate or navigable waters shall be encouraged and shall not, except as otherwise provided by or pursuant to Court Order under Subsection (h) of this Section, be displaced by Federal Enforcement action."

As the Conferees are aware, both Reserve Mining Company and the Minnesota Pollution Control Agency have expended substantial effort in the Minnesota Courts in attempting to arrive at a final legal conclusion of the controversy. The issues litigated have included whether certain interstate water quality standards are reasonable as applied to Reserve and whether Reserve is polluting Lake Superior within the meaning of the stringent Minnesota definition of pollution or is guilty of creating any nuisance by its discharge. These issues have been determined at the Trial Court level.

The Minnesota Pollution Control Agency's Motion for Amended Findings or a New Trial was denied by the Court as reflected in the attached Order of April 8, 1971. On April 20, 1971, Reserve Mining Company was served with the attached Notice of Appeal to the Minnesota Supreme Court by the Minnesota Pollution Control Agency. In making the Appeal Minnesota is obviously expressing its intention to pursue the matter to the highest Appellate Court in Minnesota for final determination. Thus until the Minnesota Supreme Court has resolved the matter Reserve is subject to possible conflicting directives and in the light of the Congressional policy evidenced in the Statute under which this Conference was convened, it is respectfully submitted that the Conference should defer further action until this Supreme Court determination sought by Minnesota is available. This is not to suggest that Reserve is at all unwilling to promptly evaluate any criteria and guidance proffered by this Conference with respect to a possible modification of its tailings system. Reserve is and has been willing to fully cooperate with all regulatory agencies. It does not, of course, wish to be in the position of obeying one of several conflicting directives at its peril. To that end and in view of the primary responsibility of Minnesota it is also recommended that the Minnesota Pollution Control Agency and Reserve negotiate with respect to a modification of Reserve's discharge as contemplated by the Court Order and the expressed desire of the Minnesota Pollution Control Agency. Any such agreement could form the basis for a Minnesota recommendation to this Conference

and aid in what all well intentioned parties desire: a prompt, fair and reasonable solution to this controversy which considers the impact of the discharge on the total environment--air and land as well as water-- and does not threaten the continuance of Reserve's significant contribution to this area, the State and the nation.

STATE OF MINNESOTA

D I S T R I C T C O U R T

COUNTY OF LAKE

SIXTH JUDICIAL DISTRICT

* * * * *

Reserve Mining Company,

Appellant,

vs.

AFFIDAVIT OF EDWARD T. FRIDEMinnesota Pollution Control
Agency,

Respondent.

* * * * *

STATE OF MINNESOTA)

) ss.

COUNTY OF ST. LOUIS)

EDWARD T. FRIDE being first duly sworn deposes and says:

1. That he is an attorney at law duly admitted to practice in the State of Minnesota and is a member of the firm of Sullivan, Hanft, Hastings, Fride & O'Brien with offices at 1200 Alworth Building, Duluth, Minnesota.

2. Affiant has appeared as counsel for Appellant Reserve Mining Company in all proceedings involved herein.

3. The decision of The Honorable C. L. Eckman rendered on December 15, 1970 in the above matter stated in part:

"28. After 15 years of operations and discharge of tailings into Lake Superior by the Appellant, the evidence before the Court establishes that said discharge has had no measurable adverse or deleterious effects upon the water quality or use of Lake Superior insofar as its drinking water quality, any conditions affecting public health, affecting fish life or the reproduction thereof, or any interference with navigation."

"29. Appellant's discharge of tailings into Lake Superior has had a measurable effect upon Lake Superior and the use thereof in regard to:

(1) The aesthetic enjoyment of the Lake by the increase of the 'green water phenomenon' both within and without the zone of discharge as described in the Permits.

(2) A decrease in the presence of Pontoporeia, commonly known as scud, in the vicinity of the zone of discharge. This fish food used primarily by smelt has had only a minimal and immaterial effect on the fish population of the Lake * * *."

"36. Pursuant thereto, adoption of such modified methods of discharge require the immediate attention of Reserve Mining Company and negotiations and study by Reserve's and Respondent's agencies, with a reasonable time to arrive at a mutually-acceptable plan between Reserve and the Minnesota Pollution Control Agency; that to insure the establishment of such a mutually-agreeable modification and to prevent a stalemate in such negotiation, it is necessary that the Court retain jurisdiction of this matter. * * *"

"* * * The Court concludes that the present method of discharge of tailings from its plant at Silver Bay, Minnesota, shall be altered and modified by Appellant Reserve Mining Company to the extent that the disposition of fine tailings into Lake Superior and the distribution thereof into areas outside of the so-called 'great trough' is discontinued."

"5. Pursuant thereto, Appellant Reserve Mining Company shall submit to Minnesota Pollution Control Agency on or before May 15, 1971, for its approval, such plans for modification as are necessary to accomplish the result set forth in paragraph 4 above. After such approval by Minnesota Pollution Control Agency, Reserve shall have two additional years in which to build, install, and put into operation such approved modified method of tailings discharge."

"6. The District Court shall retain jurisdiction of this matter for the purpose of insuring the implementation and good-faith negotiations towards a satisfactory modification of discharge and a reasonable and equitable solution of this controversy. To that end, this Court, upon application of either party, shall exercise its authority to take further evidence, if necessary, and to render a final decision therein in the event that no mutual agreement as to such modification can be reached between the parties." * * *

60

"* * * In the judgment of this Court, any modification must insure the flocculation of the fine tailings and the deposit of all the tailings by conduit to the floor of the great trough, where they will remain, eliminating thereby their dispersion to other parts of Lake Superior, and elimination of complaints of aesthetic loss, net or shore slime, drinking water contamination, or eutrophication by increased algal growth. In support of this solution, the Court has gleaned from the Respondent's experts that the deposit of the tailings on the Lake floor in a relatively quiescent condition would substantially remove their apprehensions as to their effect upon the Lake's ecology, aesthetics, or navigation."

4. In accordance with the Court's decision Reserve Mining Company completed a "Plan to Modify Tailings Discharge System" which contemplates flocculation of the tailings and deposition under water by conduit of the thickened slurry. Said Plan is summarized in Exhibit A-1 attached.

On January 19, 1971, Affiant advised John Badalich, Executive Director of the Minnesota Pollution Control Agency of the completion of this Plan and submitted sufficient copies of it to him to permit preliminary evaluation by the Agency staff and members and requested an opportunity to formally present the Plan to the Agency on February 8, 1971.

A Memorandum on Reserve Mining Company dated February 2, 1971 by George R. Koonce, Acting Chief, Section of Industrial and Other Wastes of the Minnesota Pollution Control Agency, stated in part:

"* * * The Company's consulting engineer proposes the use of hydroseparators and thickeners to concentrate the tailings with the addition of a flocculating agent. The concentrated underflow from the clarifiers will be piped some 150 feet below the surface and deposited on the lake bottom within the Company's permit zone. The tailings delta is to be stabilized to prevent erosion of fines into the lake.

There are advantages to this plan over the present method of disposal. The increased density of the tailings stream will create a stronger density current which will help to carry tailings toward the bottom. There will be fewer

finer in the effluent so there should be less dispersion of material away from the discharge point, either vertically or horizontally. Because the outlet will be 150 feet below the surface of the lake, wind and currents should not have as great an effect on the drift of the tailings. Thus, a smaller area of the lake bottom will probably be covered with tailings. The proposed method would bring a lesser amount of fine tailings in contact with fresh lake water and thus the rate of solution of the solids might be reduced.
* * * "

5. In accordance with said Court Order, Appellant on February 8, 1971 presented to the Minnesota Pollution Control Agency the "Plan to Modify Tailings Discharge System" hereto attached as Exhibit A-1. During the course of the discussions which followed the presentation of the Plan, Reserve Mining Company through Kenneth M. Haley, its Vice President and Manager of Research & Development, presented a "Summary" of various other concepts of tailings disposition which is attached hereto as Exhibit A-2. Following Reserve's presentation the Agency members discussed the necessity of an evaluation including impact of various concepts on the total ecology--land, water and air--and instructed its technical staff to evaluate Reserve's Plan, possible modifications of it or any alternative plan presented. Such evaluation was to occur by and through Respondent's representatives on the "Technical Committee" of the Lake Superior Enforcement Conference and also apparently independently. Specifically the staff was instructed to refrain from making or following political judgments and to honor Judge Eckman's directive to proceed in good faith and negotiate with regard to Reserve's Plan. Attached as Exhibit A-3 is an excerpt from those deliberations and instructions. Attached as Exhibit A-4 are the views of one member of Respondent.

6. On January 15, 1971, Reserve Mining Company presented to the reconvened session of the Lake Superior Enforcement Conference its "Plan to Modify Tailings Discharge System" previously identified as Exhibit A-1. During the Conferees' deliberations which followed the Plan's presentation, Dr. Donald Mount, Director of the National Water Quality Laboratory, of the Environmental Protection Agency was asked to comment on the Plan by the Chairman and other Conferees. Excerpts from his comments are attached as Exhibit A-5.

7. At the commencement of the January 14, 1971 Session of the Lake Superior Enforcement Conference, Minnesota Governor Wendell Anderson stated, before Reserve's Plan had been submitted or described to either the Conferees or Respondent, that:

"Last August when I was here, I indicated that if the Conference found interstate pollution I felt it would be most appropriate if they would issue a proper order indicating that Reserve Mining would have to provide appropriate facilities on-shore, and I also indicated I felt that a very specific time table should be adopted."

8. On January 15, 1971, the Conferees convened in Executive Session and concluded that the Conference would establish a Technical Committee. The Chairman and representatives of Minnesota, Michigan and Wisconsin concurred in a charge to the Technical Committee which is attached as Exhibit A-6.

9. The Technical Committee held meetings in Minneapolis, Minnesota on January 26, February 2-4, 11, 23, and March 5, 1971.

On January 27, 1971, the Technical Committee sent to Reserve Mining Company a table requesting Reserve to evaluate alternate disposal methods and further requesting Reserve to appear before the Committee on February 3, 1971. Reserve Mining Company appeared

before said Technical Committee on February 3, 1971 and submitted at that time its response to the Agency's inquiry which is hereto attached as Exhibit A-7. During all other sessions of the Technical Committee Affiant is informed and believes that no other Plan for tailings modification or change was presented to the Committee by any of the individuals or groups who chose to appear.

10. On March 5, 1971 Grant Merritt, newly appointed Executive Director of the Minnesota Pollution Control Agency, informed the Committee that, as the official representative of Respondent, he would refuse to endorse, recommend or participate in any Plan or modification that did not completely eliminate any discharge of water containing any amount of Reserve's taconite tailings to Lake Superior. He stated that he would only endorse or participate in a Plan or recommendation that precluded any discharge to Lake Superior, Minnesota rivers, streams, surface or ground waters which could in any way reach Lake Superior. He said this prohibition was absolute regardless of any effect on receiving waters and regardless of whether such discharge complied with all existing Minnesota laws and regulations of the Minnesota Pollution Control Agency.

Mr. Merritt stated that any contrary views previously expressed by Minnesota representatives to the Technical Committee should be disregarded as they did not now represent the "new" policy. He said further that any prior statements by the Minnesota Department of Natural Resources, formerly the Minnesota Conservation Department, that that Department was opposed to a method of disposal of tailings on land in the Lax Lake area because of safety hazards and the impairment to land uses in that region should be disregarded and he

would confer with the Commissioner of that Department so as to obtain a change in such position.

When informed by the Secretariat and other members of the Technical Committee that even tentative concepts presented to the Technical Committee by the Minnesota Environmental Control Citizens Association, Save Lake Superior Association, and Northern Environmental Council could not meet the newly announced policy of "zero discharge" Mr. Merritt responded by stating that "zero discharge" was the policy and no water from any source containing any amount of Reserve's tailings would be permitted to reach Lake Superior or any rivers, ground waters, surface waters which might lead thereto.

Affiant was in attendance at said Technical Committee session as an observer and attached as Exhibit A-8 is Affiant's Summary of some of those proceedings.

11. Wisconsin representatives to the Technical Committee submitted a report attached as Exhibit A-9 which states that Wisconsin rejected Reserve's Plan and refused to consider any modification to it allegedly premised on the Wisconsin Statute prohibiting the deposition of "stone or sand" in waters within the jurisdiction of Wisconsin. Wisconsin, like Minnesota and Michigan, has a Permit system which when complied with authorizes deposition of materials in State waters. Exhibit A-10 is a memorandum prepared by Affiant which questions the legal sufficiency of Wisconsin's position.

12. The Michigan representative to the Technical Committee included Reserve's Plan as among the "recommended methods" as reflected in Exhibit A-11. Preliminary drafts of the Technical Committee deliberations prior to the position taken by Mr. Merritt

as described above are appended as Exhibits A-12, A-13 and A-14.

13. In support of the Motion herein reliance is placed on the deposition of Grant Merritt, an attorney appointed as Executive Director of the Minnesota Pollution Control Agency on March 1, 1971, and on the deposition of Lovell Richie, Assistant Director, Division of Water Quality of the Minnesota Pollution Control Agency, who is a member of the technical and scientific staff of the Agency and has been so employed by Respondent and its predecessor continuously since April, 1958.

Mr. Merritt testified that he had no formal education or experience in the sciences involved with the ability to analyze or judge the impact of alleged pollutants on the environment; that he has never inspected or visited Appellant's plant or the mine or plant of any other iron ore or taconite producing facility in Minnesota or outside of Minnesota; that he has never inspected or visited any tailings pond or basin utilized for on-land deposition of tailings either in Minnesota or outside of Minnesota; that he has not analyzed Respondent's records and studies disclosing the monitoring and surveillance of Appellant's discharge which has been conducted by Minnesota Agencies prior to the commencement of Appellant's operations and since; that he did not claim any technical, scientific expertise in either determining or analyzing or weighing effects of alleged pollutants on the environment; that he refused to answer whether he would place reliance on people with technical, scientific expertise in such fields to give him knowledge and understanding about such subjects; that he refused to answer whether he would place any reliance on the

technical staff of Respondent in reaching scientific judgments about effects of alleged pollutants on the environment; that he regards Judge Eckman's decision of December 15, 1970 with respect to the submission of the Modification Plan and good faith negotiations with respect to it as simply a "suggestion of the Court" rather than an Order; that he has not reviewed Reserve's Plan appended as Exhibit A-1; that he has not requested any analysis of Reserve's Plan from any staff member of Respondent or any consultant whom he deems qualified to express an opinion with respect to it; that he has not sought nor does he deem it necessary to secure the approval of a majority of the members of Respondent prior to taking the position which he claimed was an official one of the Respondent at the March 5, 1971 Session of the Technical Committee described above; that the views which he expressed to said Technical Committee are views which he has held for many years as an active leader in various conservation groups; that he knows of no plan in any written form for total on-land deposition of Reserve's tailings except the Bureau of Mines Plan presented as a part of the Stoddard report and upon which Mr. Merritt places reliance; attached as Exhibit A-15 are excerpts from said Bureau of Mines report; that he knows of no other municipality, industry or other entity which may discharge an effluent that is subject to the same prohibition as Appellant's as reflected in the "policy" stated by Mr. Merritt to the Technical Committee and others; that he knows of no other discharger in Minnesota which is subject to an absolute prohibition on its discharge to Minnesota waters regardless of whether the discharge

meets all effluent requirements and all legal regulations and statutes in the State; that he was unable to identify any individual who was technically qualified whose views he would accept on the alleged pollutant effects of Reserve's discharge on Lake Superior but that he regarded any layman's views as entitled to the same weight which should be accorded the views of Dr Donald Mount, Director of the National Water Quality Laboratory; that he declined to answer questions relating to whether Mr. Merritt drafted the letter which Governor Anderson sent to General Clarke appended as Exhibit A-16;

That Lovell Richie testified by way of deposition that he had been familiar with Reserve's discharge and the studies and investigations of it made by Respondent since 1958; that he concurred with Dr. Mount's views as expressed in Exhibit A-5; that the Technical Committee had not had any plan presented to it for on-land deposition of Reserve's tailings so as to permit an evaluation of the impacts of such a concept on the total environment; that Wisconsin representatives relied on the Wisconsin Statute described above and that Minnesota representatives felt bound by the position taken by Mr. Merritt of "zero discharge"; that Mr. Richie's evaluation of Reserve's Plan was such that if it were modified by appropriate testing of flocculents and re-circulation of the overflow clarifier discharge to the maximum extent practicable consistent with Reserve's operation that the Plan as modified would satisfactorily meet the concerns raised about Reserve's discharge.

14. The foregoing described actions and other activities revealed in the depositions filed in this matter disclose that the

new Executive Director of the Minnesota Pollution Control Agency has attempted to usurp the legal functions, powers and duties of the Respondent Agency as vested in said Agency by Minnesota Statutes 115.03, 115.04, 115.05, 115.42, 115.43, 115.44, 115.45, 115.47, 116.07, et al. Said actions preclude objective analysis by either the Minnesota Pollution Control Agency, the Technical Committee or the Conferees to the Lake Superior Enforcement Conference. Such actions represent political judgment not based on fact and constitute illegal prohibitions and regulations. Said actions are apparently designed to except Reserve Mining Company from application of and protection of Minnesota Statutes and Regulations as well as to nullify the Court's decision herein. Said actions unlawfully discriminate against Reserve Mining Company when compared with all other dischargers in the State of Minnesota. Said actions also seek to cause an illegal modification or revocation of Reserve's Permits duly issued by the Minnesota Water Pollution Control Commission, the Minnesota Department of Conservation and the Corps of Engineers. Said actions further attempt to prohibit Reserve's discharge under the guise of unauthorized executive and administrative regulation, and wrongfully interfere with valued property and contract rights of Appellant.

15. On March 8, 1971, the Minnesota Pollution Control Agency held its regularly scheduled monthly meeting. Despite the passage of some 30 days since Reserve's formal presentation of its Modification Plan, the Agency has taken no action with respect to Reserve's Plan except through the acts of its new Executive Director described above and hence it is doubtful that the Agency will engage in good faith

negotiations contemplated by the Court's Order herein.

Appellant has advised Respondent of its willingness to submit proposed flocculents to extensive governmental testing, analysis and approval as well as to consider possible modifications in Reserve's Plan relating to the clarifier overflow water and other aspects of the contemplated discharge. The position of the Executive Director that only "zero discharge" would be authorized, however, compels the conclusion that no modification of the proposed Plan would be acceptable and hence the Court should, in Appellant's view, exercise the jurisdiction retained herein to order a modification consistent with its decision.

16. During his deposition Mr. Merritt testified that he would attempt to convene hearings before the Minnesota Pollution Control Agency on the question of whether Reserve was violating the Permit issued by Respondent's predecessor, the Minnesota Water Pollution Control Commission, within six months from March 1, 1971. Attached as Exhibit A-17 is an analysis by Respondent's Technical Staff of the issue of whether Reserve is in violation of such Permit.

Further Affiant saith not save that this Affidavit is made in support of Appellant's Motion for Order Rendering Final Decision. .

Edward T. Fride

Subscribed and sworn to before me
this 21 day of March, 1971.

SUMMARY

Of numerous tailings disposal concepts investigated by Reserve's Engineering Task Force, "on-land" deposition received considerable attention. Other taconite producers in Minnesota, other states and other countries utilize the method. Reserve's original concept in the late 1940's called for the use of an on-land tailings basin near the mine. In fact, the 1920-1924 taconite plant operated unsuccessfully at Babbitt, Minnesota, by Mesabi Iron Company deposited its tailings on land, the common, accepted practice in mineral processing for decades. Reserve itself re-equipped that old plant and operated it as a small pilot plant to train personnel, test equipment and processing methods, utilizing a low-lying, swampy area there for tailings disposal, even though it had become clear that two features of the Babbitt area would force Reserve to an unusual and more expensive system.

The first factor was the lack of sufficient water to sustain as large an operation as Reserve contemplated. The processing of Reserve's taconite into iron oxide pellets requires a minimum of 55 tons of water for each ton of pellets. This can be "new" water or reclaimed, recirculated water. The Babbitt pilot plant experience showed that a closed-circuit water system would require a minimum of 7% new water. Therefore, water and not the ore is the largest raw material required. Reserve's mineral deposit at Babbitt is on the Laurentian Divide where there is insufficient water for a processing plant the size of Reserve's--even though this would have been the preferred location from a cost standpoint. This

was one of the two principal reasons why Reserve was forced to transport the crude taconite mined at Babbitt 47 miles to Silver Bay for processing--resulting in increased capital and operating costs for the railroad, ore handling equipment, two separate industrial installations, towns, etc., with attendant duplication of certain activities and facilities.

The second factor that prevented Reserve from building its processing plant beside the mineral body at Babbitt was that no suitable land area was available in the region which was large enough to impound the tailings Reserve would produce.

This was documented in the extensive permit hearings held between 1947 and 1960, and recently confirmed by Judge C. Luther Eckman's finding:

"The principal reasons for the location of (Reserve's) plant at Silver Bay rather than the mine site near Babbitt were the lack of necessary water, the lack of an appropriate area for tailings deposition at the mine site ***"

For these reasons, Reserve built its processing plant on the shore of Lake Superior, after extensive investigations were made by Reserve and the appropriate governmental agencies to assure that the discharge of tailings into the lake would have no material adverse effect on the quality of the water, on aquatic life or any of man's beneficial uses of the lake.

Other Minnesota taconite operations have large, low-lying areas in the vicinity of their processing plants which are suitable for tailings disposal. These areas do not have any appreciable amount of natural surface water draining through them, nor do they require high dams or dikes to

impound water and tailings. The many square miles they cover were primarily wastelands and bogs upon which little vegetation grew. In contrast, the terrain near Silver Bay is rugged and so hilly that great dams would be required to form an impoundment. The construction of dams would be unusually expensive and difficult since the area is so rocky and little natural dam building materials are found in the area. Further, the closest area (encompassing Lax Lake) is not below or on the same level as Reserve's processing plant. Instead, it is about 800 feet higher and about five miles distant--posing additional problems of great magnitude for engineers, operators and ecologists.

The plan Reserve proposed on January 15 is unique and imaginative in some respects--huge thickeners and hydroseparators, the piping, pumping and flocculating of great volumes of water and solids, the recirculation of clarified water into the harbor and thence into the plant. But these considerations exist in the "on-land" tailings disposal schemes, as well. The only segment of the plan which is not duplicated in the on-land schemes is the buoyancy-controlled pipes which will convey the tailings into deep water to form the sand reef 150 feet below the lake's surface. However, such pipes are available on the market today and the technique is being used elsewhere successfully.

The plan proposed by Reserve on January 15 does not require as much capital investment nor annual operating cost as some of the schemes investigated by Reserve's Engineering Task Force. But it is not the least expensive; two other proposals would have been much less costly..

During the past two years, the entire Silver Bay-Babbitt region was carefully studied for potential on-land disposal sites by Reserve's Engineering Task Force:

One or more of the nationally-known engineering consulting firms --members of the Task Force--actually investigated ten different "on-land" disposal concepts. These and all other proposals were carefully considered before Reserve selected and proposed on January 15 the plan it believes to be best from an environmental, technical and economic standpoint.

Eight of these ten "on-land" investigations made by Reserve's Engineering Task Force involved the Lax Lake area. One study concerned depositing the tailings along the lakeshore. The other called for returning the tailings to the eastern Mesabi Range. Some of the disadvantages of each of these ten plans are cited briefly below.

LAX LAKE AREA

1. This area is prime hunting, fishing, recreation and resort country.
2. Seasonal and year-around homes near the lake would be covered by tailings. Lax Lake itself would cease to exist and would become a part of the large tailings basin.
3. The drainage from the 71-square mile watershed which flows through this area would exceed Reserve's process requirements, so excess water (containing unsettled very fine tailings) from the basin would have to be released to the Beaver River and thence to Lake Superior. Much of the year these tailings would enter Lake Superior at the

surface--without the benefit of a heavy density current.

These fine particles would likely remain in the surface waters of the lake and be carried by surface currents and be dispersed over a wide area of the lake before they settled naturally.

4. The tailings deposited as an underwater reef would be in contact with the neutral to slightly basic water of Lake Superior. Thus, practically no elements would go into solution. In contrast, the water of the Lax Lake area is slightly acid and could leach some of the elements from any tailings deposited there. These dissolved solids leached from tailings would enter the Beaver River and then flow on into Lake Superior.
5. The lower pH (slightly acid) water from the tailings basin would enter the ground waters of the area carrying with it more dissolved solids from tailings deposited there.
6. Dust from blowing tailings could be expected to cover a wide area.
7. Two of the eight proposals involved hauling coarse tailings containing 18% moisture in electrically-heated, insulated railroad cars to prevent freezing during winter months. This concept and the proposed equipment are new and untried and extensive pilot testing over at least three winters would be necessary before implementation could be considered.

8. In three of these Lax Lake studies, coarse tailings containing 18% moisture would be stockpiled on the present tailings delta during the winter months to avoid cold weather handling problems. These tailings would be reclaimed during the summer months and hauled in conventional equipment for disposal. We believe these piles of coarse tailings with 18% moisture would freeze solid during the winter. It is questionable whether this frozen tailings stockpile would thaw sufficiently in the summer months to permit reclamation. Any such practice would require large scale testing before it could be considered feasible.
9. A Lax Lake area tailings basin, high upstream from the Beaver Bay-North Shore region, could present a safety hazard. A huge system of dams and dikes--among the largest in the world--would present the constant threat of leakage or rupture.
10. Upon depletion of Reserve's mineral body (approximately 40 years), a Lax Lake tailings basin would be nearly full and in a short time natural surface drainage from the 71-square mile area would overflow the tailings basin with rains and spring thaw, carrying some fine tailings into the Beaver River and Lake Superior, in spite of efforts to vegetate the area against erosion.
11. The same type thickening system would thicken the tailings slurry for pumping to the impoundment area as would

be used for pumping the tailings to an underwater reef.

The same type and amount of flocculants would be used and the thickener overflow would be handled in the same manner through Reserve's harbor. Thus, any objections raised with respect to the use of flocculants in Reserve's plan would apply to these on-land tailings basin systems.

12. Incomplete capital costs for these on-land disposal systems range from \$44,100,000 to \$195,138,000. Annual expenditures for on-land tailings disposal proposals range from \$7,823,000 to \$27,284,000. Few, if any, objections to Reserve's present or proposed disposal methods would be relieved.
13. Construction times for these on-land disposal facilities would range from five to six years. As noted in Reserve's report, the underwater reef disposal system could be operational within two years after approval by the proper regulatory agencies.
14. Most on-land disposal systems in use by other taconite operators have some alternate means to discharge tailings in the event of an emergency. However, the only emergency discharge of tailings available to Reserve would be to Lake Superior.

DISPOSAL OF TAILINGS IN OR NEAR A MINE ON THE MESABI RANGE

A number of persons have proposed that Reserve's tailings be hauled back to the Mesabi Range and deposited in open pits. It is obviously

impossible to use any active open pit mine for such deposition and most exhausted natural iron ore mines represent a "bowl" of taconite which, hopefully, will someday be processed by others. So it would be foolhardy to fill these pits with tailings. However, members of Reserve's Engineering Task Force investigated use of an area near Reserve's mine (but not controlled by Reserve) for the deposit of tailings produced at Silver Bay.

Some assume that simply because the hopper cars which haul the taconite to Silver Bay return to Babbitt empty, they would be able to carry tailings back to the ranges. However, important factors are overlooked. Babbitt is approximately 47 rail miles away from Silver Bay and more than 700 feet higher in elevation, and one section of the railroad is more than 900 feet higher than the Silver Bay car dump location. Thus, the loaded ore cars proceed down-grade from Babbitt and the empties return up-grade. Therefore, only about one-third as many loaded cars could be hauled from Silver Bay back to Babbitt with same horsepower. Thus, much additional equipment would be required to rail haul tailings from Silver Bay to Babbitt.

Obviously, Reserve's total discharge (water and tailings) cannot be transported by rail to Babbitt, as others have suggested. So much water is used that the tailings constitute only a tiny per cent of the total discharge. Piping such a volume of liquid so far and so high would be out of the question even if there were no "freeze-up" problems.

However, one of the Task Force investigations called for removing most of the water at Silver Bay, leaving the tailings with about 20% moisture. The first step of this moisture removal would involve thickening equipment very much like that proposed in the underwater reef plan. Flocculants would be used in these thickeners to clarify the water. After thickening, the tailings would be filtered. Both the clarified water and the filter water would be discharged into the harbor, then pumped back into the process plant.

Filtered tailings would be hauled by railroad cars to an area adjacent to the Babbitt mine where thaw shed equipment would be required to thaw out frozen cars during winter operation. Further engineering has indicated that the preliminary estimates of capacity of the thaw sheds was inadequate. Far larger thaw sheds would be needed, or the freezing would have to be prevented by designing equipment to dry the tailings to about one per cent moisture at Silver Bay. Another alternative would be to use electrically-heated, insulated railroad cars to haul the wet tailings during severe cold weather months. Such equipment does not exist today. In either case, three winters would be required for pilot engineering investigations and trial periods to develop satisfactory means of handling tailings with 20% moisture during severe winter weather.

Stacking conveyors would be used to deposit these tailings on land in layers approximately 50 feet deep. Although trees, grass and shrubs would be planted on the tailings as soon as possible, the very nature of the operation would leave large areas exposed to wind before this ground cover could grow and develop sufficiently to prevent blowing dust storms. The

Further, the site itself has swamp water draining through it and these slightly acid waters would leach elements from tailings piled there. This area drains into the Dunka River, into Birch Lake and into the Border lakes.

The area selected for piling these tailings is far too small to accommodate all tailings that would be produced during the life of the Babbitt mine. There were so many other unsatisfactory factors about this proposal that engineering was suspended without investigating other areas. It probably would be necessary to go as much as 15 miles south of Babbitt to locate an area large enough to be considered as a possible site. This region is also swampy, however, and drains into Lake Superior, so the same disadvantages with respect to dissolved solids would apply.

Three years would be needed to construct these facilities after a three-year period of engineering, investigation and pilot trials. Thus, the earliest such a system could be operational would be six years.

Preliminary estimates place incomplete capital expenditure for such an on-land tailings scheme at about \$74,132,000 and the estimated annual expenditure in excess of \$12,000,000. Clearly, from an environmental, technical or economic viewpoint, such a plan would not be feasible.

LAKESHORE TAILINGS PILE

Another of the investigations concerned a high tailings pond to be built on land on the lakeshore. In this proposal exactly the same thickening equipment and the same flocculating agent would be used as is proposed for the underwater reef plan. The thickener overflows would go into the

harbor before pumping back for recirculation into Reserve's plant, just as is planned in the Reserve underwater reef plan. Coarse tailings (+150 mesh) from the scalper, hydroseparators and the hydroseparators would be pumped to the lake's edge to make additional land upon which the fine tailings would be deposited. This would produce three miles of tailings beach exposed to wave action which undoubtedly would mean fine tailings would be constantly entering in the surface waters of the lake.

The fine tailings (-150 mesh) from the four thickeners would be pumped to movable cyclone classifiers around the edge of this entire area. The coarse discharge from these clones would be used to increase the height of the periphery around the area, and the fines would be discharged toward the center where they would settle. Water would be drawn from these impounding areas through decant towers into Reserve's harbor adjacent to the plant water intake. Before the high edge could be built, the tailings would have to be dried, thus about two-thirds of the tailings deposited in the area would be dry at all times, causing an almost continuous blowing dust problem over many miles in the vicinity of Silver Bay. No one could live in the community, in all probability. Also, this dust would blow out over the lake. Entering the lake in this manner, these fine wind-borne tailings would stay in suspension for a considerable time before settling.

These tailings piles would ultimately reach a height of 280 feet above the lake level, which is higher, for example, than Palisade Head, one of the scenic cliffs on the North Shore. They would tower about 200

feet higher than the roadbed of Highway #61. The tailings pile between the highway and the waters of the lake would be 2-1/4 miles long. In spite of the best efforts to grow vegetation on the slopes of the tailings piles, they would be extremely unsightly along the shore of Lake Superior.

A partial estimated capital cost for this proposal was \$31,369,000. The estimated average annual expenditure would be \$5,477,500.

Under this proposal, far more tailings would be entrained in surface waters of the lake than at present. Also, wave action and surface waters of the lake would be constantly "weathering" tailings and eroding the face of the coarse tailings "dike."

Critiques by independent consultants of on-land tailings deposition methods are contained in the Appendix, pages 68 - 80.

Photographs showing some of the areas which would be engulfed by a tailings basin in the Lax Lake area, and showing the height of Palisade Head as contrasted with Highway #61, Silver Bay and Lake Superior are contained in the envelope at the end of the Appendix.

Concern for total ecological effects of any method of tailings disposal must be the paramount consideration. On that premise, it is respectfully submitted Alternative Method of Disposal Number 2 should be the recommended solution.

1
2 MINNESOTA POLLUTION CONTROL AGENCY
3 REGULAR MEETING
4 BOARD ROOM OF OFFICE BUILDING
5 717 DELAWARE ST. S.E.
6 MINNEAPOLIS, MINNESOTA 55440
7 FEBRUARY 8, 1971
8
9 -----
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

(The following discussion occurred subsequent to a presentation by Reserve Mining Company of its plan to modify tailings discharge, and following questions by the agency members and staff of Edward T. Fride, attorney for Reserve Mining Company, Kenneth Haley, Vice-president and Manager of Research and Development of Reserve Mining Company and Dr. Leon W. Weinberger, Reserve Mining Company Environmental Consultant.)

Exhibit A-3

*

*

*

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

MR. TUVESON: Mr. Chairman.

CHAIRMAN ANDERSEN: Mr. Tuveson.

MR. TUVESON: I don't think we can just sit idly by while all these things are going on around us. I think we have three problems and I was concerned with them at the beginning of the hearing this afternoon and I'm still concerned with them.

I'm concerned first because the Court in Lake County did direct us to explore the problem with Reserve Mining Company and look at some alternatives and, to use the language, "Proceed in good faith and negotiation".

I think that we have to do this. I think that whatever we do has to be taken in light of what the Attorney General has done and is doing.

I think, however, the Attorney General is interested in some of the scientific problems involved.

If we go to on-land disposal there may be other air and land pollution problems that we don't have now with under water deposition.

I don't think at this point that I'm ready to make a judgment either way.

1 I'd like to be able to make just a poli-
2 tical judgment of what the people say, kind of
3 an easy way to come out. I'm also aware of the
4 Federal and State Conference, the Enforcement
5 Conference now that has appointed a technical
6 committee. We have staff members on that tech-
7 nical committee.

8 I think, Mr. Chairman, that our staff
9 should make a detailed evaluation of this plan
10 that was presented to us today.

11 I think they should also make an evalua-
12 tion of available information as to the desir-
13 ability or lack of desirability of on-land dis-
14 posal in the Lax Lake area or back in the area
15 of Babbitt somewhere. I think the staff could
16 pull together some of the information that's
17 being gathered by the Federal and State Confer-
18 ence.

19 I think it would be helpful to the
20 Attorney General. I don't think it means that
21 we're backing off from the position we've taken
22 in Court that we believe our standards apply to
23 Reserve Mining Company, I wouldn't want to imply
24 that in any way.

25 I don't think we should tell the staff

1 either that we expect them to come up with an
2 answer, but if they don't have enough informa-
3 tion I would expect they would be objective
4 enough about it to say that "We don't know enough
5 about on-land disposal now so that we can't rec-
6 ommend it", or if they do think there's enough
7 information, they should recommend it.

8 If they don't have enough information,
9 they should tell us so we can either get it our-
10 selves or tell someone else to get it.

11 I don't think we can mark time. I think
12 the staff should stay right with the problem. I
13 guess --

14 I don't know how to put all this into a
15 motion. Maybe it isn't necessary, but I think
16 the staff should be proceeding along those lines.

17 DR. BORTCHART: Mr. Tuveson, I gather what
18 you are saying is that you feel that in line with
19 the expressions from several members of the
20 agency here this afternoon, that we don't feel
21 ready to make a judgment on this, that we should
22 be provided with continuing staff advice and
23 input, and that the only way for us to get that
24 is for the staff to continue to work with us on
25 this.

1 MR. TUVESON: That's right, I don't think
2 we can make a political judgment and reject the
3 present system or the proposed system of dis-
4 charging tailings into that lake unless we know
5 what the alternative is.

6 DR. BORTCHART: Mr. Chairman, along this
7 line I'd like to express a judgment simply as
8 one member of the agency.

9 I would hope that the agency and the staff
10 are not at this time committed by anything that's
11 been said up to now, committed irrevocably to
12 land disposal of these wastes.

13 It seems to me that if one looks at the
14 law that created this agency, there is language
15 in there about land use, questions and issues
16 that are related to pollution abatement and con-
17 trol.

18 I think we've got a very serious land use
19 question involved here. It was implied in some
20 of the discussion earlier this afternoon, and I
21 think it should be pointed up, we have a long
22 history of land disposal of tailings and wastes
23 on the Mesaba Range.

24 As one looks ahead to the taconite epic
25 that lies ahead of us over the next half century,

1 or perhaps even several centuries for all anyone
2 knows, it's perfectly obvious we are talking
3 about a very large future deposit of tailings
4 in the vicinity of the Mesaba Range.

5 I think that there are some questions
6 that have to be faced as to how these tailings
7 are going to be handled, what kinds of lands
8 are going to be zoned to accommodate them.

9 At the same time it seems to me if we
10 are considering, as an alternative to disposi-
11 tion in Lake Superior, going back up to Babbitt,
12 which is on the Mesaba Range and which would be
13 simply a continuation of the trends that are
14 already there, that's one thing, but if we are
15 talking about land disposition in the Lax Lake
16 area or anywhere else in the Finland State For-
17 rest and Superior National Forrest, I think we
18 are talking about moving a very large part of
19 a problem that so far has been confined to the
20 Range, moving it down into one of the most
21 scenic areas of the Middlewest.

22 I think there is a real issue here as
23 between under water disposition and land dispo-
24 sition somewhere on the North Shore, and I for
25 one would not be ready at all to enforce some

1 kind of a position that pinned us into a corner
2 in favor implicitly of a land solution and
3 against a water solution at this point.

4 I think that the evidence that would per-
5 suade me that this was the route to go is simply
6 not in. In fact, we haven't even talked about
7 some of the most important questions, in my judg-
8 ment.

9 I would be very anxious to support Bob's
10 concern that the staff continue to study this,
11 continue to advise us and, secondly, that the
12 staff keep in mind the legislative language in
13 our own bill that created us that talks about
14 land use, because I think it's one of the major
15 questions in this particular matter.

16 MR. HARRIS: Just one question, did our
17 commitment with the Federal and State Conference,
18 did that commit us to anything in advance?

19 MRS. NELSON: As I remember it, Mr. Stein
20 specifically made the point that our minds
21 should not be closed, or that the technical com-
22 mittees minds should not be closed to any alter-
23 native until all segments were examined, that we
24 should not cure one problem and create a worse
25 one.

1 I think that's some of the things that
2 Professor Bortchart was referring to, some of
3 the things he had in mind, and along with that,
4 when you put it on land, what effect does this
5 have leeching back into the lake?

6 Can that be controlled as compared to
7 what you are doing?

8 As they say, we just don't have enough
9 evidence of all the alternatives. It's easy to
10 say "should we stop doing this?", but would the
11 other thing be worse?

12 I agree we need much more information on
13 the whole matter.

14 MR. TUVESON: Yes. I'd like to have some-
15 one kind of put this problem of the entire envi-
16 ronment up there in one package so that we could
17 better weigh the pros and cons.

18 I'm not sure that it's fair to ask Reserve
19 Mining Company to develop those figures for us
20 because, well, I guess we don't place too much
21 creditability in them, at least that's tradi-
22 tionally our approach.

23 Maybe the agency members themselves can
24 come up with some way to approach this problem
25 in an objective fashion. John, I would think

1 that would be of your line,

2 DR. BORTCHART: I would think this could
3 be done, particularly if the full resources of
4 the various state agencies are utilized, people
5 from the Department of Natural Resources, Geo-
6 logical Survey, as I'm sure the staff will do.

7 I would think that there are a lot of
8 resources around within the state agencies that
9 could be brought to bear on this question.

10 Again I feel very strongly that if some
11 of the very simply flat out statements that
12 have been made about this solution were followed,
13 it would lead to a real disaster.

14 I'm very anxious that we do everything
15 we can to make sure that the solution that is
16 arrived at here is an optimal one.

17 MR. GADLER: Mr. Chairman, Mr. Koonce
18 prepared a memo here which everybody seems to
19 have ignored.

20 MRS. NELSON: I read it.

21 MR. HARRIS: I got it all marked up.

22 MR. TUVESON: But he states, "If this
23 plan is adopted the agency would have to grant
24 a variance from the effluent standards of Regu-
25 lation WPC 15".

1 MRS. NELSON: You and I discussed that
2 at some length just a little bit ago.

3 MR. GADLER: Are you considering that?

4 DR. BORTCHART: Well, yes, I'm consider-
5 ing it.

6 MR. GADLER: I just wondered, you'd rather
7 pollute the water than the soil?

8 DR. BORTCHART: That's not what I'm say-
9 ing, I'm saying when we consider the applica-
10 tion of WPC 15 to this problem, I might decide
11 that there are some specific changes in the word-
12 ing of it that are called for.

13 I think it may say some things about this
14 problem that we really don't want it to say;
15 I'm not talking about polluting the water.

16 MR. GADLER: If there's something that
17 should be brought out, certainly it should be
18 brought out.

19 DR. BORTCHART: That's why I'm concerned.

20 MR. GADLER: We don't want to keep any-
21 thing secret.

22 MRS. NELSON: Bob wasn't talking about
23 keeping anything secret, he was talking about
24 the staff pursuing and informing us which is
25 quite the opposite of keeping anything secret.

1 MR. GADLER: I think the staff should
2 pursue it. I don't know why this wasn't brought
3 up.

4 DR. BORTCHART: It's been brought up by
5 you.

6 MR. GADLER: I just brought it up.

7 CHAIRMAN ANDERSEN: Is that enough of a
8 directive? It seems to me it is. Is that
9 enough of a directive to the staff, Lyle, Mr.
10 Smith?

11 (Chairman Andersen referring to Mr. Lyle
12 Smith on the PCA Staff.)

13

14

* * *

15

16

17

MRS. NELSON: Let's take up the next
matter.

18

19

* * *

20

21

22

23

24

25

1
2
3 STATE OF MINNESOTA)
4 COUNTY OF HENNEPIN) ss

5 BE IT KNOWN that I took the foregoing
6 hearing on said date and at said place; that I
7 was then and there a Notary Public in and for
8 said County and State; that this transcript is
9 a true record of the foregoing proceedings as
10 taken by me and transcribed under my direction.
11

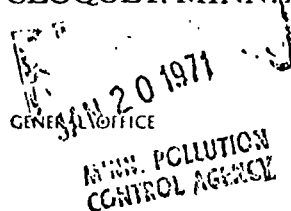
12 WITNESS MY HAND AND SEAL THIS 9TH DAY OF
13 FEBRUARY, 1971.

14
15 David A. Soulis
16 DAVID A. SOULIS
17 Notary Public, Hennepin County, Minnesota
18 My Commission Expires February 28, 1976
19
20
21
22
23
24
25

THE NORTH WEST PAPER COMPANY

A Subsidiary of Potlatch Forests, Inc.

CLOQUET, MINNESOTA 55720



✓	DIR.
✓	ASST.
✓	VR
	AS
	SW
	SALES
	FILE

218 879-6784

January 19, 1971

Mr. John Badalich, P.E.
Minnesota Pollution Control Agency
717 Delaware Street, S.E.
Minneapolis, Minnesota 55440

Subject: LAKE SUPERIOR HEARING, January 14 - 15, 1971

Re: RESERVE MINING COMPANY PROPOSAL

Dear John:

Because of a cold, I was not able to attend any of the sessions but read the news reports with interest. I was encouraged by the fact that Reserve came in with a proposal, which shows substantial progress has been made in the past two years since hearings were first held. As you know, my philosophy has always been that the object of the game is the prevention of pollution. Many of the environmental groups will not accept this premise unless the method used is one which they have promulgated. I liked Murray Stein's remarks at the beginning of this conference re same when he said to the effect, "Let's not prejudge before we hear the story." (Not a direct quote.)

Now a committee - of which you are one member - has been appointed to evaluate Reserve's proposal. Basically it must be judged on its merits, but a few considerations are pertinent.

1. Reserve has made a proposal (this came hard).
2. It is Reserve's money which will be spent.
3. They can't afford to spend so much if it doesn't provide a successful solution to the problem.
4. Failure gives them practically no salvage for equipment to be used otherwise (such as land based disposal).
5. There is no near land on shore available.
6. Proof of rapid pollution in the Lake by their present disposal manner has not been made.
7. Proof of a slow pollution in the Lake is still a matter for great argument, but we can't afford to take the long-range chance that drifting colloidal fines may be harmful.
8. The size of the "Great Trough" depository is many times more than ample to hold all the wastes.
9. If the new system doesn't provide containment in the Trough, Reserve is the loser because four years from now they would have to build another system or modify this one.

Exhibit A-4

THE NORTHWEST PAPER COMPANY⁹⁵

Mr. John Badalich

-2-

January 19, 1971

10. Minnesota should not argue with Judge Eckman's ruling re granting a Variance on our Turbidity Standard. It serves a purpose and he did not void it with regard to others.
11. Economic changes are inevitable so a few years hence both Reserve and the People of Minnesota may see things differently, but as of the present Reserve needs the taconite production facility, Minnesota needs the payrolls and new dollars brought into the state. They are all taxed at least three times, you know: Business Taxes, Income Taxes, and Sales Taxes. Also one more - Real Estate Taxes on employees' homes for schools, but if the plant closes, they won't be needed.
12. The above eleven items add up to "give 'em a chance."

I want to add that I think Albert Dickas' research project on the Lake near Duluth would evaluate colloidal drift of tailings, if any, as well as evaluate South Shore claybank losses and be extremely valuable with regard to determining lake currents. Minnesota, Wisconsin and Michigan might each benefit \$6,600 worth to finance the \$20,000 project.

I am sending a copy to our conferees, Howard and Bob, as well as my friend, Donald Mount.

With best regards,

Sincerely,



Mace Harris

MVH:en

P.S. I write this as my position as a member of MPCA as well as privately with no interest in Reserve.

Mace

Proceedings - Lake Superior Enforcement Conference - January 15,
1971 - Duluth, Minnesota

Dr. Mount: "**** To begin with, I would agree with Reserve's statement that they made earlier that the physical filling is not a problem. As a matter of fact, this deep water is essentially barren of producing food organisms and that sort of thing so that I don't really feel that if one looks at the possible total amount that might be put in that this is of importance. I would dispense with that consideration."

Mr. Stein: "I would like to flag that for the Conferees because I think that this is a ... as far as I can see a very important consideration for the Conferees. If you accept this, that the physical filling, this inert material is something that doesn't want to cause a problem in the trough--is of very little importance to the ecology of the lake, would you say? "

Dr. Mount: "That's what I'm saying. **** It seems to me that we can see now some of the considerations that are going to have to be looked at in regard to the alternatives as they relate to the effect on the environment and the one thing did deter me yesterday was the apparent feeling that just putting these things on the land was enough. It isn't possible to evaluate right now an on-land disposal system because we don't have any of the details of it. The principles are there, I think, and some of these have been mentioned and some of them have not been mentioned. I think the dust problem has been mentioned today; I guess is really a part of a larger problem. The whole esthetic problem, the appearance of this thing, is certainly one that does have to be evaluated and if a land disposal system is used, somehow we are going to have to crank this into the evaluation of it. Secondly, if it is a recreational area, this is a consideration and certainly to me a most important one. **** If we are going to make a comparison, there is no assurance that just pumping it (tailings) on the land is going to keep the water out of the lake. Now there is going to be seepage through the ground if it is on an area that is above or if it is on fill of some kind this water is going to go somewhere. It is either going to go into the lake or down some other river. And I do not subscribe to the position yesterday that we should take it out of Lake Superior and put it down some other river. I think this is burying your head in the sand. So I think we have to be concerned about this water wherever it goes. And, it is, also, I have heard comments about dumping the stuff in a bog somewhere and this is going to displace bog water which is clearly not desirable water either to put into the lake--so those are some of the considerations of on-land disposal. **** "

On January 15, 1971 the Conferees convened in Executive Session and concluded that the Conference would establish a Technical Committee. The Chairman and representatives of Minnesota, Michigan and Wisconsin concurred in the following:

"Chairman Murray Stein, Assistant Commissioner for Enforcement, Environmental Protection Agency, Water Quality Office, Washington, D. C.:

" * * * The Committee will consider land disposal as well as the under water disposal plan presented here and come up with its evaluation as well as its recommendations * * * The Committee can just look at the feasibility of this kind of thing and hopefully get in touch with Reserve or any of the other parties and ask them to consult with them and see what recommendations they can come up with.

Now I think we are faced with several propositions. We are faced with the proposition of--and let's start the other way by saying we are going to entertain the Reserve's proposal for under water disposal as is. We are going to entertain that and recommend it with modifications. We are going to reject it and tell them to go to a land disposal system, or we are going to reject it completely, that they have not come up with the remedial program and take appropriate action--legal action--and let the Court decide what the solution should be. * * * If we could set up a committee the committee can be established almost immediately, and we can ask the company to volunteer, and the committee could have their specifications of what they would ask the company to provide to them. In other words, I would like to give this to the committee when they have had a little thought and discussion with both and not set these specifics at a table like this, because I think we know what we are driving at, but I think this has to be the committee and the company deciding what they want and what was within the capability of the committee to give, and this will require a technical kind of discussion which we can leave to the committee. * * * Of course, any of the other conservation groups or anyone else you want to call into here, I suggest you get--I would strongly urge that everyone get all their theories out on the table at least at this go-around so that every time I come out here I don't grab another brass ring. * * * I would think that this is a Technical Committee, and we are not looking for votes or anything here. If there are different views we are going to take all of the views. * * * We just want to get all of the facts out. * * * I think we are very close to a solution and, as far as I am concerned, we are very close to a decision one way or the other. * * "

March 5, 1971 - Conversation with E. Fride

FRIDE: I attended a meeting of the Technical Committee of the Lake Superior Enforcement Conference today, Friday, March 5. The meeting was scheduled to commence at 11:00 a.m. Because the Minnesota delegation was not present, the meeting did not commence until 11:50 a.m. Present were Dale Bryson, Dr. Donald Mount, Ginny Snarski, Grant Merritt, Johannes and Richie from the Minnesota delegation, Lloyd Lueschow from Wisconsin, and Mr. Kampenan from Michigan.

Merritt said that he had a draft of a report from Minnesota, but he did not read it nor did he distribute it. He said that he had personally looked at the ten alternatives which the Committee had listed in their rating sheet while he was the Task Force chairman for MECCA in a meeting at his home and he understands that MECCA had made a report to the Technical Committee. He asked, what has been done with the rating sheet? Mount replied: No tabulation was made of the rating sheet because of two problems--one, a linear tabulation wouldn't be accurate, secondly, Minnesota and Wisconsin said they could not use it in any event because they wanted an on-land system. Mount said that MECCA in their presentation to the Technical Committee had recommended that of the ten alternatives, number eight would be the only one that would be acceptable which was total tailings on land, no discharge to a surface water course.

Merritt said it was the policy of the state that it would require total on-land tailings deposition. He said he had looked at the possibility of a dike in the water in a tailings pond adjacent to the plant in Lake Superior, but that this was not acceptable. It would look bad and he (Merritt) said he had also considered the possibility of having the concentrator moved back to Babbitt, but that he understood that this would mean that the men who are employed at the plant would also move with the plant and this would lose the tax base in Lake County and that would not be good.

Bryson said the Department of Natural Resources said they could not accept eight, but that they would accept ten; ten being the relocation of the beneficiation plant near the existing mine site. Merritt said, that's all changed; that's resolved. I met with Herbst on February 18th. Herbst now will change the Department of Natural Resources' position. He'll send you a letter and I will telephone him and tell him to send you a letter. The state policy is that it's only land disposal; that the state of Minnesota is not going to dictate at this time what type of system because that's open to decision. We don't care if it's a tailings basin. We don't care if they move the plant, just so there's absolutely no discharge to the lake.

- 2 -

Mount said, do you mean that literally no discharge to the lake? And Merritt said, exactly. And Mount said, it's incumbent on Minnesota to describe what you mean by an on-land system. That's simply a concept. What kind of a discharge would you be permitting? Merritt said, no discharge to the lake whatever, but we won't dictate the method that they come up with.

Merritt said, I have studied the laws and I'm not sure that the Conference can really tell the company what to do. And I'm not sure that this committee can determine what method can be utilized. Merritt further said, we don't know what plan the company will feel is most acceptable, and we don't know what's acceptable to the people in Minnesota, so we're not going to try to dictate the method. He said, we've asked the Corps of Engineers to revoke the permit. He (Merritt) said the company has to come up with the best plan and then we'll review it on both the state and federal level.

Bryson said, well NEMDA knows what regulations they have to meet in connection with their plan and historically, dischargers have to understand what kinds of criteria they have to meet. Would you permit them to put tailings in Lax Lake? Bryson referred to the fact that Michigan had, from what he understood, systems where iron ore companies would discharge into tailings basins but there would be overflows into rivers and, hence, to lakes and that Michigan authorized that. Minnesota will not, said Merritt. Bryson said, well Minnesota lost in court. How can you say that this is exactly what you're going to do now? Merritt said, there's lots of other actions that we're going to take and we're not too much concerned about that court decision. Mount said, do you mean to say that even if the discharge from Reserve meets all the effluent standards in Minnesota's regulations, that you still would prohibit any discharge to the lake meeting effluent requirements? And Merritt said, absolutely not one drop is going to that lake. He (Merritt) went on to repeat that we won't dictate the exact plan and you can't do it either (referring to the Technical Committee and to the Conference). Bryson and Mount both said that, well the Minnesota people who have been here from the PCA have previously reported to the Technical Committee that if some plan could be devised that would meet any effluent requirements of a discharge that this would be satisfactory. Merritt said, no, that's not going to be the case now; I'm changing that and there's not going to be any discharge at all to the lake. He (Merritt) said as far as Lax Lake is concerned that Stoddard's plan coming up soon will be reflecting that you don't have to use Lax Lake. And Merritt referred to Lax Lake as a red herring painted by Reserve.

Mount said, I'm familiar with what Stoddard is going to come up with ...he's told me. And he (Mount) said Stoddard's plan also has some discharge to the lake. Merritt said, if that's true, then it's not acceptable. Mount said, do you mean for all time. He (Mount) said

there's a natural overflow in the spring. You may be looking at 50 to 100 years from now. What kind of requirements are you going to impose for that (Mount still speaking)? Merritt said, I don't care what they do or how they do it, but the tailings basin if that's what the company decides to go must be maintained by the company and must provide that for all time there will never be any overflow to any rivers or to the lake. He (Merritt) said they can recirculate it...other companies do and there's no reason why Reserve can't do the same thing. Merritt then interjected that he had told me (Fride)...oh, he'd asked me a question and I asked Bryson whether he wanted me to answer it. This question related to the fact that there once was a pilot plant at Babbitt which did overflow into lakes and rivers and Merritt said that that was news to him; that he didn't know anything about a pilot plant and he asked me whether it was true. And I asked Bryson if he wanted me to respond to Merritt's questions or not; that I didn't intend to indicate any disrespect for Mr. Merritt, but that if they wanted me to respond, I would be glad to, but I wanted to know what the wishes were of the Committee. And Bryson said, no he didn't want me to speak; that as far as they were concerned I was simply a post in the corner and that they felt that the Committee's work would be better aided if there weren't any three-cornered kinds of decisions. Merritt then interjected, has the press been notified of this meeting; where's the press? And Bryson said, well the press have been notified that we are meeting from time to time. They know that there was a meeting scheduled for Friday, but they're not here and I haven't called them specifically about this meeting today.

Mount said to Merritt, would you accept any drainage to the St. Louis River or to the Mississippi River. Merritt said, no, we're going to use the St. Louis River for coho and we're not going to permit any discharge or any tailings of any kind to go into the river. Mount said, how about the Missouri or the Red River drainage? The Babbitt plant used to go there. Merritt said he didn't know anything about that, but they weren't going to do it any more if they ever had. He (Merritt) asked Johannes if that was correct. Johannes said that when there was a pilot plant, the tailings went to Birch Lake and then went up the other way. Merritt said, Erie at Hoyt Lakes has completely closed circulation, and that this is what Reserve was going to have to do. Mount said, when you start talking about zero discharges, you're getting into some very difficult kinds of areas. He (Mount) said that, for example, the Food and Drug Administration were talking about zero tolerances some time ago and each time they get a more sophisticated sampling technique, they find their zero tolerances changing. Merritt said he didn't much care about that; that other systems were closed and Reserve's was going to have to be closed and there was going to be absolute zero discharge.

Johannes then said to Merritt, are you ruling out any kind of a discharge even if it meets the effluent standards? Merritt said, yes. Mount said, well, number eight wouldn't meet that standard. And Merritt said, well then if it wouldn't, then we can't use it. Any water containing any fines of any kinds of tailings is not going to be permitted to go into Lake Superior or into any rivers that lead into Lake Superior (Merritt speaking). He (Merritt) said, what's the purpose of this Committee? Is the purpose to choose alternatives? What's the charge of the Conference? (Merritt still speaking.) They had some discussion about that and they finally got out the charge that Murray Stein had given to the Conference and read that and then Mount again said, you know the evaporation rate is substantially lower than the rainfall rate. How are you ever going to prevent any kind of discharge or overflow to Lake Superior (Mount speaking)? And Merritt said, he didn't care how they did it...they were just going to do it. And Mount said, well MECCA pressed for number eight...that wouldn't meet your policy. And Merritt said, well, if it wouldn't then they can't do it.

Merritt said, have you analyzed Reserve's plan? As the plan is presented, is it acceptable? Bryson then said, that he personally had a draft of the way that he thought the Technical Committee should go; that it was his (Bryson's) personal draft and that it was subject to change. Then they got out and passed around to those people a five-page draft with two attachments on it. Subsequently, I (Fride) got a copy of it so I won't belabor it too much. But it does say as far as conclusions, this: Quote..."The Plan to Modify Tailings Discharge System as presented by Reserve Mining Company at the January 14-15 Lake Superior Enforcement Conference was reviewed in detail by the Technical Committee. The Committee concludes that this method of disposal is unacceptable as it does not comply with appropriate pollution abatement regulations. The main concerns relative to this method are: (a) the proposed method would probably cause more green water than currently exists; (b) the proposed method would not materially reduce dissolved solids discharged to the lake; (c) the proposed method would not materially reduce suspended solids discharge to the lake; (d) the proposed method would employ a flocculant which would be discharged to the lake and which would have unknown ecological impact." Then it goes on to say, "When considering the abatement of an existing source of pollution, the historical policy of the state and federal regulatory agencies is to rely totally upon the discharger to develop the appropriate acceptable method of waste treatment. If the method proposed by the discharger is found to be unacceptable, appropriate guidance is furnished the discharger for his use in making the proper corrections prior to resubmission. The Lake Superior Technical Committee feels that considerations relating to the Reserve Mining Company method of disposal should be guided

by this precedent." At this point Merritt interjected and he said to Johannes, is that correct...that that's the historical policy? And Johannes said, yes. And Mount said to Wisconsin and Michigan, do you agree that that's the historical policy? And they both indicated yes.

The conclusions of the Bryson draft said: Quote..."(1) The Plan to Modify Tailings Discharge System as presented by Reserve is an unacceptable method of waste disposal; (2) No other firm methods of tailings disposal were presented to the Committee for evaluation; (3) The Committee was unable to develop alternative disposal methods in sufficient detail to technically evaluate them; (4) It is the responsibility of a waste discharger to develop an acceptable method of waste treatment for presentation to the appropriate regulatory agencies to eliminate the pollution problems from that discharge; (5) It is the responsibility of the appropriate regulatory agencies to provide guidance to the discharger, in the case Reserve Mining Company, as to the acceptability of a method of disposal and if unacceptable, to provide guidance as to what modifications of the proposed process are necessary to become acceptable. "

The recommendations in the Bryson draft were that the Committee recommends...quote...(1) The Conferees instruct Reserve to develop a means of taconite tailings disposal that will eliminate the causes of concern delineated; (2) The Conferees provide Reserve with the appropriate criteria against which a design of an alternative method of disposal can be designed; (3) Reserve Mining Company should present a preliminary proposal in as great detail as possible within 90 days from the date the Conferees instruct the company. The final detailed plans and specifications should be submitted six months thereafter as stated in Conference Recommendation number nine, final construction and operation of the system should be completed by January, 1974. "

They then embarked in a discussion of those recommendations and Merritt said that all Minnesota needs is number one--that was that they instruct Reserve to develop a means of taconite tailings disposal. Bryson said, that's quite a problem...you're expecting a discharger to do something blindly. You have to be fair and tell the company what it has to do (Bryson). Merritt said, it doesn't make any difference to have deadlines anyway...the company's missed two deadlines; they're not going to make any deadlines, there's no use giving them any deadlines. There are many other courses that the Conferees can take (Merritt). Mount said, maybe we should take out number three and just leave number one and number two (number two being that the Conferees would provide criteria). Mount asked Merritt again, would you accept an overflow that meets your effluent standards? Merritt said, absolutely not.

- 6 -

Johannes said, well, we're going to be taxed pretty much if we're going to try to develop criteria and if we're going to consider environmental effects on land... such as on wildlife and ground waters and so forth. Johannes said, why don't we just leave that sort of loose and Minnesota would have to issue a permit anyway, so it's a Minnesota problem. The overall criteria for land, let's just limit ourselves to water and tell Reserve to come up with a plan that meets the policy of the state insofar as water is concerned (Johannes).

Mount said, do you agree that they cannot use Lax Lake? Merritt said he doesn't care if they use Lax Lake or not...he doesn't think they have to use Lax Lake...but they could pollute Lax Lake if they have to because that's the lesser of many evils. He (Merritt) emphasized that he did not want Reserve to shut down. Mount said, will Minnesota present specific criteria to the Conference so that the Conferees can evaluate the criteria? Merritt said, no. Merritt said, let's call Stein...let's reconvene the Conference.

There was some discussion about who was going to call Stein. Merritt said he would be calling the principals insofar as Wisconsin and Michigan were concerned. He said (Merritt) maybe all we need is just number two, or just number one. He (Merritt) said that as far as I'm concerned this Committee has discharged its responsibility ...it says it can't come up with any alternative. And they can say that because of the lack of staff and lack of time. Wisconsin said, well if Minnesota wanted to establish criteria, that's up to Minnesota. Wisconsin is not saying zero discharge. All Wisconsin is saying is on-land discharge.

Johannes--we can't consider land without thinking about the effects, so let's just restrict ourselves to water considerations.

Mount said Reserve should be provided with criteria. Merritt said, no we don't have to provide them with criteria...the Conferees have to decide this; there's no point in spelling out the criteria. Mount again said, well even Stoddard's plan isn't acceptable by your definitions. Merritt said, well if it isn't, then it isn't acceptable as far as the state of Minnesota is concerned.

Merritt then said he'd have to leave (it was then 12:50--Merritt had been there just about exactly an hour). Bryson said, this Technical Committee must have information from Herbst by Monday. Merritt said don't worry, you'll get it.

In the Bryson draft it is provided.. quote..."The Minnesota Department of Natural Resources said they would not allow such a location (this is Lax Lake) to be used for a tailings lagoon due to the safety

hazard presented and the impairment to land uses in that region. Instead, they suggested that a portion of the plant be relocated closer to the mine. Reserve Mining Company explained that that latter plan would not be feasible."

The information that they came up with just before Merritt left was that they had advised Stein that the Committee would be ready for a report anytime after March 10th. Merritt said, I presume that Stein will want to give three weeks' notice of the reconvening, so that would be toward the end of March. Bryson said they didn't think they had to give three weeks' notice but maybe Stein would want to do so. It was left that Merritt was going to leave.

I then asked Bryson for a copy of the draft which he had and he polled the Committee and the poll was that we would be entitled to it so they gave me a copy of this draft. I said, write on it that it is a draft if you like, so they wrote on it, draft subject to revision.

Subsequent to that Merritt leaving then, they were going to have lunch and they said they would get together this afternoon and hammer out without Merritt being there, but with Johannes and Richie being there, hammer out some Committee report that would be acceptable as they understood it.

REPORT TO
LAKE SUPERIOR TACONITE TECHNICAL COMMITTEE
FROM
WISCONSIN

2/11/71
105

1. The committee was directed to consider land disposal of taconite tailings as well as their disposal by means of the underwater disposal plan presented at the January 14, 1971 enforcement conference and come up with an evaluation and recommendations.
2. The committee selected ten suggested methods for disposal of taconite tailings and developed sixteen criteria for evaluation of environmental impact of each of the methods.
3. Section 29.29(3), Wisconsin Statutes, prohibits deposition of stone or sand in waters within the jurisdiction of the State. In view of this statute, Wisconsin cannot authorize deposition of tailings in Lake Superior from any source in or outside of the State of Wisconsin.
4. In view of the legislation referred to in item 3, the only acceptable methods of taconite tailings disposal are 5, 8, 9 and 10. Of these, method 8 appears most suitable as it provides for disposal of taconite tailings on land as well as reuse of process water, thus reducing appropriation of water to a minimum. Potential for surface water pollution would also be at a minimum. Concern was expressed about the safety of the dam which would ultimately reach a height of 100 feet. In the interest of safety, the dam could over a period of time be built up in ten 10-foot set back terraces designed with a gradient towards the next succeeding terrace above it. These slanted terraces would act as catchment areas for rains and reduce runoff from the face of the dam to a minimum. On completion, the first terrace and its face could be fertilized and planted with suitable vegetation to prevent erosion.

5. Methods 1, 2, 3, 4, 6 and 7 must be rejected as each of these would result in discharge of tailings to Lake Superior.
6. See attached copy of Wisconsin Statutes and letter of November 16, 1967.

Theodore F. Wisniewski
February 11, 1971