

SB160

PTO.

THURSDAY, MAY 10
9:30 am
Room 411 South in State Capitol
Senate Bill 160 to ban cyanide in mining

(companion to Assembly Bill 95) will have a hearing in the Senate Environmental Resources Committee. AB- 95 is sponsored by Rep. Spencer Black, and SB-160 by Sen. Russ Decker. Please come to sign in and testify for SB-160! The "Black and Decker" Bill will be the fourth item on the agenda:

SB-15. Prohibits DNR from requesting social security numbers.

SB-156. Exceptions from requirement to obtain a license to practice professional geology, hydrology or soil science.

SB-159. Prohibits drilling beneath beds of the Great Lakes and adjacent waters to explore for or produce oil or gas.

SB-160. Prohibits use of cyanide in metallic mining. (The Committee may go into executive session and take a vote on SB-160.)

Madison people will be meeting Wednesday, May 9, at 7 pm in Catacombs (Pres House basement) to plan for the hearing, upcoming support for AB-95 / SB-160 and other Crandon mine business. At the hearing we will have a banner, signs (no sticks), headstones, etc. This is a chance to show our alliance to the media and public.

PETITION TO PROHIBIT THE USE OF CYANIDE IN WISCONSIN MINES

*Mining companies are increasingly using cyanide to extract gold, silver, copper, zinc, and other metals from metallic ore.

*The proposed Crandon zinc-copper mine near the Wolf River would use as much as 18 to 20 tons of sodium cyanide each month during its operation; and Wisconsin also contains other gold deposits that would likely require cyanide for processing.

*Cyanide poses serious environmental risks--from transportation on our roadways, from storage and use at the mine site, and from residuals disposed in waste dumps.

*Cyanide is highly toxic, with tiny traces fatal to human beings, fish and wildlife, and acts as a powerful solvent that can release other toxins.

*Cyanide has been the cause of recent environmental disasters at U.S. mines (in Colorado, Nevada, Montana, Idaho, California, South Dakota, and South Carolina), and at many foreign mines (such as in Romania, Guyana, Canada, Kyrgyzstan, and Papua New Guinea), resulting in massive fish kills and contaminated drinking water.

We, the undersigned support a prohibition on the use of cyanide reagents in Wisconsin mines and metallic ore processing facilities. In 1998, Montana voters banned cyanide for mining, and in 2000 the Czech Republic banned cyanide in mining. Wisconsin must have the strongest mining laws in the nation, in order to protect our abundance of clean water. Therefore, we urge our legislators to support a ban on the use of cyanide for mining.

Signature	Date	Printed name	Address	Town/ZIP	E-mail (for alerts)
Jessica Simanek	5/10/01	Jessica Simanek	509 E. Gorham St.	Madison, WI 53703	
Dana Prager	5/8/01	Dana Prager	2922 Stevens St.	Madison, WI 53705	
Kelly Froemming	5-8-01	Kelly Froemming		Madison, WI 53715	
Sarah Pfaller	5/8/01	Sarah Pfaller	216 Campbell St. #1	Madison, WI 53711	spfaller@...
Ryan M. Ueckert	5-8-01	Ryan M. Ueckert	110 W. Brooks St. Apt. F.	Madison WI 53715	
Jessica Schutz	5-8-01	Jessica Schutz	502 N. Henry St.	Madison, WI 53702	
Elizabeth Huckle	5-8-01	Elizabeth Huckle	12 N. Brown #2	Madison, WI 53703	
Tanet Karpinsky	5/8/01	Tanet Karpinsky	316 E. Butler Apt 304	Madison WI 53703	
Greg Baranczyk	5-8-01	Greg Baranczyk	408 W. Washington Av.	Madison, WI 53703	
Chris Klosman	5/8/01	Chris Klosman	2120 University Ave. #34	Madison, WI 53705	

Wisconsin student ed.

Copies of this petition will be delivered to the Wisconsin Assembly and Senate. Please return completed petitions to the Wolf Watershed Educational Project, c/o Midwest Treaty Network, P.O. Box 14382, Madison, WI 53714-4382. For background information see <http://www.alphaadc.com/treaty/cyanide.html>. For updates call the toll-free Hotline at (800) 445-8615.

- 11. Natalie Hill 5/8/01 Natalie Hill 615 N Henry St #1-A Madison WI 53703
- 12. Ann Kuehlman 5/8/01 Ann Kuehlman 622 Stockton Ct. Madison, WI 53711
- 13. Karen Buechner 5/10/01 Karen Buechner 509 Hilltop Dr. Madison, WI 53711

- ELIZABETH CHEREK zacherek@students.wisc.edu
16. Melissa Miller 5/8/01 Melissa A. Miller 435 W. Dayton St. #4 Madison, WI 53703
 17. Carissa Dickinson 5/8/01 Carissa M. Dickinson 2302 University Ave #241 Madison WI 53703
 18. Elizabeth Baur 5/8/01 Elizabeth Baur 318 W. Gorham #1 Madison, WI 53703
 19. Angela Milazzo 5/8/01 Angela Milazzo 538 W. N. Flinn #2 Madison, WI 53703
 20. Katie Merrill 5/8/01 Katie Merrill 312 N. Carroll #2 Madison, WI 53703
Colleen Viren
 21. Colleen Viren 5/8/01 211 S. Bedford #2 Madison WI 53703
 22. Cheryl Lukesh 5/8/01 Cheryl Lukesh 1325 Randall Ct. #10
Madison, WI 53715



5-9-01

LAKE POYGAN SPORTSMAN'S CLUB

P.O. BOX 76, LARSEN, WI 54947

May 7, 2001

Senator James Baumgart
Room 306 South
State Capitol
P.O. Box 7882
Madison, WI 53707-7882

Dear Senator:

We need your help! We are a 200-member non-profit (501©(3)) habitat restoration organization dedicated to Lake Poygan and the lower Wolf River.

We are very concerned about the proposed Crandon Mine. Please support S.B. 160 to ban cyanide in mining operations in Wisconsin. Cyanide is deadly to every plant and critter that we are trying to protect.

Thank you, Senator, for all of your hard work.

Very best regards,

Ronald J. Koeppler
President

cc: Dan Rudebeck
Habitat Restoration Coordinator

Wisconsin Facilities Using Cyanide

*from www.wisconsin.gov
Nucleat Minerals*

Company Name	Address	City	County	Senate District	Chemical	Actual/Max Amt
ACME GALVANIZING, INC.	2730 S. 19TH ST.	MILWAUKEE	MILWAUKEE	3	SODIUM CYANIDE	520 LB
ALDRICH CHEMICAL CO., INC.	1101 W. ST. PAUL AVE.	MILWAUKEE	MILWAUKEE	3	POTASSIUM CYANIDE	468 LB
ALDRICH CHEMICAL CO., INC.	1101 W. ST. PAUL AVE.	MILWAUKEE	MILWAUKEE	3	SODIUM CYANIDE	2,093 LB
ALDRICH CHEMICAL CO., INC.	230 S. EMMER LN.	MILWAUKEE	MILWAUKEE	3	BENZYL CYANIDE	549 LB
ALDRICH CHEMICAL CO., INC.	230 S. EMMER LN.	MILWAUKEE	MILWAUKEE	3	POTASSIUM	445 LB
ALDRICH CHEMICAL CO., INC.	230 S. EMMER LN.	MILWAUKEE	MILWAUKEE	3	SODIUM CYANIDE	2,047 LB
ALDRICH CHEMICAL CO., INC.	6000 N. TEUTONIA AVE.	MILWAUKEE	MILWAUKEE	4	POTASSIUM CYANIDE	472 LB
ALDRICH CHEMICAL CO., INC.	6000 N. TEUTONIA AVE.	MILWAUKEE	MILWAUKEE	4	SODIUM CYANIDE	566 LB
ALDRICH CHEMICAL CO., INC.	5485 CTY HWY V	SHEBOYGAN	SHEBOYGAN	9	SODIUM CYANIDE	1,540 LB
ALL METAL STAMPING, INC.	411 W. SPRUCE ST.	ABBOTSFOR	CLARK	23	SODIUM CYANIDE	450 LB
AMERICA'S BEST QUALITY COATINGS	1602 S. FIRST ST.	MILWAUKEE	MILWAUKEE	3	POTASSIUM CYANIDE	1,421 LB
ANDIS COMPANY	1800 RENAISSANCE BLVD.	STURTEVANT	RACINE	21	SODIUM CYANIDE	550 LB
ARTISTIC PLATING CO., INC.	428 W. VLIET ST.	MILWAUKEE	MILWAUKEE	6	SODIUM CYANIDE	454 LB
ARTISTIC PLATING CO., INC.	428 W. VLIET ST.	MILWAUKEE	MILWAUKEE	6	POTASSIUM CYANIDE	874 LB
AURA-II, INC.	8035 W. CALUMET RD.	MILWAUKEE	MILWAUKEE	4	SODIUM CYANIDE	1,000 LB
BALAX, INC.	W305 N7697 HWY E	NORTH LAKE	WAUKESHA	11	#90 CASTING SALT (50% SODIUM CYANIDE)	700 LB
BARREL PLATING SERVICE, INC.	301 E. RESERVOIR AVE.	MILWAUKEE	MILWAUKEE	6	SODIUM CYANIDE	100 LB
BERGAMOT BRASS WORKS, INC.	820 WISCONSIN ST.	DELAN	WALWORTH	15	POTASSIUM CYANIDE	50 LB
BERGAMOT BRASS WORKS, INC.	820 WISCONSIN ST.	DELAN	WALWORTH	15	SODIUM CYANIDE	50 LB
BISON PLATING, INC.	600 SHERMAN AVE.	ADELL	SHEBOYGAN	20	SODIUM CYANIDE	387 LB

Company Name	Address	City	County	Senate District	Chemical	Actual Max Amt
BRANDT A DE LARUE COMPANY	705 S. 12TH ST.	WATERTOWN	JEFFERSON	13	SODIUM CYANIDE	10 LB
CHILTON PLATING CO., INC.	420 E. MAIN ST.	CHILTON	CALUMET	1	SODIUM CYANIDE	400 LB
CHILTON PLATING CO., INC.	420 E. MAIN ST.	CHILTON	CALUMET	1	COPPER CYANIDE	400 LB
CHILTON PLATING CO., INC.	420 E. MAIN ST.	CHILTON	CALUMET	1	POTASSIUM CYANIDE	400 LB
COLUMBUS CHEMICAL INDUSTRIES, IN	N 4335 TEMKIN RD.	COLUMBUS	DODGE	13	POTASSIUM CYANIDE	1,100 LB
COLUMBUS CHEMICAL INDUSTRIES, IN	N 4335 TEMKIN RD.	COLUMBUS	DODGE	13	SODIUM CYANIDE	1,000 LB
COMMERCIAL HEAT TREATING, INC.	1952 S. FIRST ST.	MILWAUKEE	MILWAUKEE	3	SODIUM CYANIDE	400 LB
CUSTOM PLATING & POLISHING CO.	3021 W. LOCUST	MILWAUKEE	MILWAUKEE	6	SODIUM CYANIDE	0
DANLY DIE SET	151A INDUSTRIAL DR.	BEAVER DAM	DODGE	13	POTASSIUM CYANIDE	500 LB
DONALD SALES	N96 W14313 CTY LINE RD.	MENOMONEE	WAUKESHA	8	CYANIDE INORGANIC	18,454 LB
ELECTRO-PLATING, INC.	430 ARLINGTON AVE.	FOND DU LAC	FOND DU LAC	18	SODIUM CYANIDE	1,105 LB
ELECTRO-PLATING, INC.	430 ARLINGTON AVE.	FOND DU LAC	FOND DU LAC	18	POTASSIUM CYANIDE	800 LB
EXCLUSIVE METAL FINISHING	4235 B. 124TH ST.	BROOKFIELD	WAUKESHA	33	ZINC CYANIDE	400 LB
EXCLUSIVE METAL FINISHING	4235 B. 124TH ST.	BROOKFIELD	WAUKESHA	33	CUPRIC CYANIDE	800 LB
EXCLUSIVE METAL FINISHING	4235 B. 124TH ST.	BROOKFIELD	WAUKESHA	33	SODIUM CYANIDE	200 LB
FRANK HOLTON CO.	320 N. CHURCH ST.	ELKHORN	WALWORTH	15	POTASSIUM CYANIDE	300 LB
FRANK HOLTON CO.	320 N. CHURCH ST.	ELKHORN	WALWORTH	15	SODIUM CYANIDE	200 LB
HELWIG CARBON PRODUCTS, INC.	8900 W. TOWER AVE.	MILWAUKEE	MILWAUKEE	8	POTASSIUM CYANIDE	200 LB
HYDRITE CHEMICAL CO.	7300 W. BRADLEY RD.	MILWAUKEE	MILWAUKEE	8	POTASSIUM COPPER CYANIDE	2,500 LB
HYDRITE CHEMICAL CO.	7300 W. BRADLEY RD.	MILWAUKEE	MILWAUKEE	8	SODIUM CYANIDE	15,700 LB
HYDRITE CHEMICAL CO.	7300 W. BRADLEY RD.	MILWAUKEE	MILWAUKEE	8	POTASSIUM	13,000 LB
JAGEMANN PLATING CO.	1324 S. 26TH ST.	MANITOWOC	MANITOWOC	9	SODIUM CYANIDE	400 LB
JAGEMANN PLATING CO.	1324 S. 26TH ST.	MANITOWOC	MANITOWOC	9	COPPER CYANIDE	100 LB

Company Name	Address	City	County	Senate District	Chemical	Actual Max Amt
JEWEL'S BODY SHOP & CUSTOM CHR	W797 CTY K	BRILLION	CALUMET	1	POTASSIUM CYANIDE	120 LB
JEWEL'S BODY SHOP & CUSTOM CHR	W797 CTY K	BRILLION	CALUMET	1	SODIUM CYANIDE	220 LB
LIGNOTECH USA, INC.	100 GRAND AVE.	ROTHSCHILD	MARATHON	29	SODIUM CYANIDE	8,800 LB
MANITOWOC ICE, INC.	2110 S. 26TH ST.	MANITOWOC	MANITOWOC	9	COPPER CYANIDE	300 LB
MANITOWOC ICE, INC.	2110 S. 26TH ST.	MANITOWOC	MANITOWOC	9	POTASSIUM CYANIDE	715 LB
MASTER LOCK CO.	2600 N. 32ND ST.	MILWAUKEE	MILWAUKEE	6	SODIUM COPPER CYANIDE	800 LB
MASTER LOCK CO.	2600 N. 32ND ST.	MILWAUKEE	MILWAUKEE	6	SODIUM CYANIDE	3,200 LB
MCP CO., INC.	2320 N. 11TH ST.	MILWAUKEE	MILWAUKEE	6	SODIUM CYANIDE	215 LB
MILPORT ENTERPRISES, INC.	2829 S. 5TH CT.	MILWAUKEE	MILWAUKEE	3	POTASSIUM CYANIDE	660 LB
MILPORT ENTERPRISES, INC.	2829 S. 5TH CT.	MILWAUKEE	MILWAUKEE	3	SODIUM CYANIDE	67,000 LB
MILWAUKEE PLATING	1434 N. FOURTH ST.	MILWAUKEE	MILWAUKEE	6	POTASSIUM CYANIDE	1,100 LB
MILWAUKEE PLATING	1434 N. FOURTH ST.	MILWAUKEE	MILWAUKEE	6	SODIUM CYANIDE	250 LB
NATIONAL PLATING CO.	1565 W. BRUCE ST.	MILWAUKEE	MILWAUKEE	3	SODIUM CYANIDE	300 LB
NATIONAL PLATING CO.	1565 W. BRUCE ST.	MILWAUKEE	MILWAUKEE	3	POTASSIUM CYANIDE	350 LB
NATIONAL RIVET & MANUFACTURING	21 E. JEFFERSON ST.	WAUPUN	DODGE	18	METAL CYANIDE	500 LB
NATIONAL RIVET & MANUFACTURING	21 E. JEFFERSON ST.	WAUPUN	DODGE	18	SODIUM CYANIDE	884 LB
NIPHOS COATINGS, INC.	308 OAK ST.	SLINGER	WASHINGTON	20	COPPER CYANIDE	750 LB
NIPHOS COATINGS, INC.	308 OAK ST.	SLINGER	WASHINGTON	20	SODIUM CYANIDE	3,500 LB
OMC MILWAUKEE (EVINRUDE)	6101 N. 64TH ST.	MILWAUKEE	MILWAUKEE	4	POTASSIUM CYANIDE	1,355 LB
OMC MILWAUKEE (EVINRUDE)	6101 N. 64TH ST.	MILWAUKEE	MILWAUKEE	4	SODIUM CYANIDE	1,390 LB
PECHINEY PLASTIC PACKAGING, INC.	155 WESTERN AVE.	NEENAH	WINNEBAGO	19	SODIUM CYANIDE	500 LB
PJK FINISHING CO., INC.	N57 W13520 REICHERT AVE.	MENOMONEE	WAUKESHA	8	SODIUM CYANIDE (GRANULES)	200 LB

Company Name	Address	City	County	Senate District	Chemical	Actual	Max	Amt
PRECISION MOLD PLATING, INC.	1322 ELLIS ST.	WAUKESHA	WAUKESHA	28	SODIUM CYANIDE (SOLUTION)		160	LB
PRECISION MOLD PLATING, INC.	1322 ELLIS ST.	WAUKESHA	WAUKESHA	28	SODIUM CYANIDE		500	LB
PRINTING DEVELOPMENTS, INC.	2010 INDIANA ST.	RACINE	RACINE	21	POTASSIUM CYANIDE		1,860	LB
RACINE PLATING CO.	620 STANNARD ST.	RACINE	RACINE	21	SODIUM CYANIDE		964	LB
RBP CHEMICAL CORP.	150 S. 118TH ST.	MILWAUKEE	MILWAUKEE	5	POTASSIUM CYANIDE		190	LB
S.K. WILLIAMS CO.	4600 N. 124TH ST.	WAUWATOSA	MILWAUKEE	33	POTASSIUM CYANIDE		553	LB
S.K. WILLIAMS CO.	4600 N. 124TH ST.	WAUWATOSA	MILWAUKEE	33	SODIUM CYANIDE		400	LB
SOUTHWEST METAL FINISHING	2795 S. 166TH ST.	NEW BERLIN	WAUKESHA	33	COPPER CYANIDE		1,000	LB
SOUTHWEST METAL FINISHING	2795 S. 166TH ST.	NEW BERLIN	WAUKESHA	33	POTASSIUM CYANIDE		1,000	LB
SOUTHWEST METAL FINISHING	2795 S. 166TH ST.	NEW BERLIN	WAUKESHA	33	SODIUM CYANIDE		400	LB
STRATTEC SECURITY CORP.	3333 W. GOOD HOPE RD.	GLENDALE	MILWAUKEE	8	SODIUM CYANIDE		3,000	LB
STRONGS PRAIRIE SITE	1420 STATE HWY 21	FRIENDSHIP	ADAMS	24	SODIUM FERROCYANIDE		6,000,000	LB
THE CHROME SHOP, INC.	565 OLDE MIDWAY RD.	MENASHA	WINNEBAGO	19	POTASSIUM CYANIDE		158	LB
THE OILGEAR CO.	2300 S. 51ST ST.	MILWAUKEE	MILWAUKEE	3	SODIUM CYANIDE		4,400	LB
ULTRA PLATING CORP.	345 S. PEARL ST.	GREEN BAY	BROWN	30	CADMIUM CYANIDE		60	LB
ULTRA PLATING CORP.	345 S. PEARL ST.	GREEN BAY	BROWN	30	COPPER CYANIDE		50	LB
ULTRA PLATING CORP.	345 S. PEARL ST.	GREEN BAY	BROWN	30	POTASSIUM CYANIDE		300	LB
ULTRA PLATING CORP.	345 S. PEARL ST.	GREEN BAY	BROWN	30	SODIUM CYANIDE		400	LB
ULTRA PLATING CORP.	345 S. PEARL ST.	GREEN BAY	BROWN	30	ZINC CYANIDE		75	LB
UNIVERSITY OF WISCONSIN-MADISON	158 BASCOM HALL	MADISON	DANE	26	POTASSIUM CYANIDE		9,999	LB
UNIVERSITY OF WISCONSIN-MADISON	158 BASCOM HALL	MADISON	DANE	26	SODIUM CYANIDE		9,999	LB
WISCONSIN PLATING WORKS OF RACI	931 CARROLL ST.	RACINE	RACINE	21	POTASSIUM CYANIDE		444	LB

TABLE 2

Cyanide Concentrations: Regulatory Limits and Comparative Background Concentrations vs. Crandon Mine Waste Concentrations

	CRANDON MINE	REGULATORY	COMPARATIVE
I. Crandon Mine			
- Treated Wastewater	Non-Detect (<0.0034 mg/L)		
- Backfill (1,2)	<0.0034 - 0.011 mg/L		
II. Regulatory Limits			
Groundwater			
- Federal MCL (40 CFR 141)		0.2 mg/L	
- Wisconsin ES (NR 140)		0.2 mg/L	
- Wisconsin PAL (NR 140)		0.04 mg/L	
Bottled Water (21CFR 165.110)		0.2 mg/L	
Surface Water (3)			
Chronic Toxicity Criteria (NR 105.03)		0.0052 - 0.0114 mg/L	
Acute Toxicity Criteria (NR 105.03)		0.0224 - 0.0458 mg/L	
Human Threshold Criteria (NR 105.08)		0.2-120 mg/L	
Industrial Wastewater Standards (NR 211)			
- Metal Finishing Industry (4)		1.2 mg/L	
Non-hazardous, Special Waste (5,6)		<200 - 250 mg/kg	
EPA Region IX Preliminary Remediation Goals (7)			
- Soil (residential)		11 mg/kg	
- Soil (industrial)		33 mg/kg	
- Tapwater (ingestion)		0.73 mg/L	
Citrus Fruit Residue (40 CFR 180.130) (8)		50 mg/kg	
III. Comparative Concentrations			
Road Salt (9)			350 mg/kg
Wastewater Sludge/Fertilizer (10)			1.5 mg/kg - 6.5 mg/kg

ND = Not Detected

All concentrations are total cyanide unless otherwise designated.

- 1. CN concentrations in the backfill are negligible. 0.011 mg/l represents the highest probable CN concentration of solute if there are no source controls. (Source controls will be implemented).*
- 2. 12/1/2000, Foth & Van Dyke, Mine Permit Application, Reflooded Mine Management Plan.*
- 3. Water quality criteria for Wisconsin surface waters.*
- 4. NR 261 categorical pretreatment standard for the Metal Finishing industry. Allowable daily maximum discharge concentration to surface water or the POTW.*
- 5. Reactive cyanide*
- 6. Non-hazardous waste permit limits for Waste Management and Onyx/Superior landfills.*
- 7. EPA Region IX cyanide concentrations which require no further investigation or remediation.*
- 8. EPA allowable residual concentration of cyanide in citrus fruit.*
- 9. Reported maximum*
- 10. Milwaukee Metropolitan Sewage District 1998 sampling of Milorgonite brand fertilizer sold to consumers.*



WOLF RIVER CHAPTER - TROUT UNLIMITED

Founded in 1964 - White Lake, Wisconsin

May 9, 2001

Herbert Buettner, Pres.
N 4297 Buettner Rd.
White Lake, Wi. 54491

Re: Hearing on bill banning the use of cyanide in metallic mining.

To: Hearing Chairman,

I had planned on coming the 186 miles to attend your hearing on the bill but am unable, so may I submit the following comments of our Wolf River Chapter - Trout Unlimited, for consideration:

Since the discovery of a dozen or more metallic mineral deposits across northern Wisconsin's water-rich tourism dependent areas, most of them containing gold, the need to protect those vital surface and groundwaters is an absolute necessity and our responsibility to future generations. The very lives of the residents in those areas and the fish and wildlife depend on protecting and enhancing our natural resources now, in a clean and healthful state, as does the constitutionally assured rights of future generations to life and the pursuit of happiness.

Most, if not all of those metallic deposits are in high-sulfide volcanic ore which the mining industry has never been able or willing to mine without severe toxic acid and heavy metals drainage causing irreparable environmental damage. Cyanide has been the mining industry's most cost-effective method of recovering gold from low grade ore but it also has been the most environmentally dangerous around the world. Western States have banned the use of cyanide after experiencing its environmental damage. Wisconsin must ban its use in metallic mining now, or we also will suffer irreparable environmental damage. Our remaining clean surface waters and healthful groundwaters on which most of our residents depend for their domestic needs and uses are vital and more precious than gold for the lives of every living thing needs healthful water. With our ever-increasing population the need and value of safe water and the demands for protecting and enhancing it must take precedence over subjecting it to widely proven dangers of cyanide use in metallic mining to enhance the profits of foreign or domestic mining corporations.

That is why the founding fathers of Wisconsin incorporated into our state constitution the "Public Trust Doctrine", which mandates that the state legislature, as the primary trustee of the people's natural resources, must protect and enhance them. They shall be used, but not abused, so they will be passed on to succeeding generations undiminished in quality or quantity.

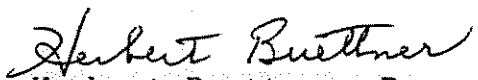
Present and future citizens of our state have a constitutional guarantee to life, liberty and the pursuit of happiness. (See Article 1, Sec. 1) Government was established, deriving its just powers from the governed, to assure those rights. We can do our children no greater service than to fulfill that mandated responsibility.

Let me close by conveying the wisdom of inductees into the Wisconsin Conservation Hall of Fame, Owen Gromme: "By every legal means, it is our duty to oppose those who out of greed or avarice or for selfish or other means, would pollute, defile or destroy that which means life itself to every living thing."

And, inductee, Virgil Muench: "If every citizen, every municipality and every industry is willing to assume their civic and moral responsibility in pollution abatement, the natural resources could be restored to the wellbeing of man. How can we do anything less and think of ourselves as educated, enlightened and a responsible society?"

In that light may I urge that we fulfill our moral and ethical responsibility to future generations by enacting the ban on the use of deadly cyanide in metallic mining in our state so we can pass on the vital waters to future generations undiminished in quality or quantity.

Sincerely,


Herbert Buettner, Pres.
Wolf River Chapter - TU

WISCONSIN LABORERS' DISTRICT COUNCIL

AFFILIATED WITH A.F.L.-C.I.O. LABORERS' INTERNATIONAL UNION OF NORTH AMERICA

MICHAEL R. RYAN

President / Business Manager

AARON G. COUILLARD

Vice-President

THOMAS E. FISHER

Secretary-Treas. / Rec. Secretary



Date: May 10, 2001

To: Members, Senate Environmental Resources Committee

From: Mike Ryan, Business Manager

Re: SB 160, prohibiting the use of cyanide in metallic mining

The Wisconsin Laborers' District Council is opposed to SB 160, relating to prohibiting the use of cyanide in metallic mining. We view the bill as the latest attempt to derail the state's mining permitting processes and for all practical purposes outlaw the mining industry in Wisconsin.

Wisconsin has a mining permitting process that is designed to deal with the very sort of safety and health issues raised in this bill. The technical issues raised by this proposal are precisely why this state relies on the exhaustive mining permitting process we have today.

We urge the Committee to reject SB 160.



Testimony Before
Senate Environmental Resources Committee on
SB 160, Bill to Ban Cyanide in Mining
Thursday May 10, Madison, WI

By
Tom Wilson
Representing Northern Thunder
416 East Court Street
Viroqua, WI 54665
phone & fax 608-637-3356
Resenergy@mwt.net

Thank you for the opportunity to address you today. I would like to start off by congratulating all of us in this room and the many thousands of groups and individuals across the state --legislators (especially those on this committee), Governor McCallum, Secretary Bazzell, sports people, environmental advocates, business leaders, farm groups and just plain folk -- who recently demonstrated an unprecedented show of unified, bipartisan support to restore the authority of the Department of Natural Resources (DNR) to provide oversight over thousands of acres of isolated wetlands in our state. As first in the nation to make this move, this is a model of statesmanship and stewardship of which we can all be proud.

I am speaking to you today representing Northern Thunder, the Western Regional Hub for the Wisconsin Stewardship Network, for whom I am Co-chair of the Metallic Mining Issues Committee. WSN is a network of hundreds of hunting, fishing, environmental and other non-traditional allied groups who have committed themselves to key state-wide issues including the mandate to promote general public education on the mining, strengthen the rules regulating metallic mining in Wisconsin and demand fair and thorough enforcement of existing mining law.

There are undoubtedly several people here today who can speak more eloquently than I to the many historic environmental debacles associated with the use of cyanide in mining, but as one who recently returned from a trip to Austria and Germany where I had a teaching engagement, I can assure you, the historic lesson of their experience with this technology and the devastation wrought upon the Danube River has not been lost on their psyches and regulatory agencies.

Specifically today I would like to focus on a couple of inherent flaws in the defense of the use of this highly toxic material as offered in recent press statements from the Nicolet Minerals Company; namely that this proposed legislation is unfairly directed at a specific project or a specific industry.

The company claims that the vat floatation beneficiation processes proposed for the Crandon/Wolf River mine is inherently different than the heap leach technology associated with many of the worst environmental disasters regarding cyanide spills. Although it is true that many of the *worst* cases of poisoned rivers and aquifers have occurred at heap leach processing facilities, by no means are they the only sites where critical events have occurred.

The proponents of this risky technology seem to want us believe this bill is directed only at the Crandon project. As one whose property in Jackson County has been eminently threatened by minerals development actions by the Kennecott Corporation, let me assure you, there are plenty of hungry international mining conglomerates just waiting in the wings to jump is as soon as they perceive, once again, a favorable political climate, lax environmental standards, or in this case, no authority at all to the regulatory authority to forbid the use of these inherently risky technologies

Kennecott Minerals (A.K.A. Rio Tinto Ltd. or Flambeau Mining) once also proposed the establishment of a massive gold and copper mineral processing facility on the banks of the Flambeau River. Wait you say,

I thought this was just a copper mine? So would Kennecott like us to believe. They, like the public relations folks at the Crandon project, typically characterize the gold component of their operation at Ladysmith as being "a small percentage of the overall yield." With copper selling at a peak price of less than \$3 *per pound* and gold selling in the range of \$300 *per ounce*, it doesn't take a great percentage of gold to be a significant draw for the mining sharks. The bottom line, however, is the Flambeau mine was not only one of the richest copper mines in the world (up to 10% copper content) but also yielded between 1 1/2 and 3 ounces of gold per ton as well.¹ The question I ask this committee --and the DNR officials overseeing the Crandon Project, do you know the economic percentage of the gold versus zinc yield from the proposed mine or how many other potentially gold-rich sites lie throughout this state?

The reason this is important is because cyanide is economically the material of choice (although not the only alternative) for the extraction of gold from crushed ore.² This on-site processing liability was why the people of Rusk County initially rejected Kennecott's proposal to develop the Ladysmith site into a full-blown gold and copper processing facility. The yield in gold and copper was so great at this mine, however, it was economically feasible to ship the raw ore many hundreds of miles by rail to Canadian processing facilities, thus sparing Rusk county the *worst* (but by no means all) of the potential environmental damage from this short-lived resource exploitation effort.

Future project communities, including Forest County, may not be so lucky. When the stakes are so high, as at Ladysmith, the mining companies are willing to spend the extra money and go the extra mile, if you will, to use the safest, if not most economic alternatives to reach their goal. As the gold and other yields go down on future proposed projects, the greater the pressure to use more cyanide in every greater bulk processing facilities.

The key point I would like to make here is that *any* use of cyanide for the extraction of minerals, whether it be floatation, vat leaching, heap leach or in-situ solution mining (where they inject cyanide directly into the mine cavity) in the State of Wisconsin is a fully legal process that the DNR has no authority to forbid as long as *the numbers* on the computer modeling and the *promise* that there will be no accidents are offered. The "science" of groundwater modeling, toxic transport flows and their environmental impacts are far less well understood than the mining companies would like us to believe.³ The same technologies, apparently being accepted by our DNR for the perpetual storage of the cyanide-laced tailings (rated toxic waste in any but the federally-exempted mining industry) facility at Crandon are the same types of configurations typically used in the heap leach facilities elsewhere--though to be built here to less rigorous standards than are required in other states.⁴

¹ These data were provided (perhaps inadvertently) by Flambeau's chief information officer and, when pressed, never refuted by other company officials.

² "The Agency recognizes that the vast majority of gold mining in the US now relies on the use of cyanide heap and vat/tank leaching. This significant expansion of this form of chemical extraction presents a range of environmental risks was not well understood in 1985. The gold mining sector is now one of the largest industrial consumers of cyanide. ...The introduction of cyanide heap leach designs which originated in Nevada into dissimilar climates and geologies, also presents different type of risks... and there may not be adequate experience with siting factors to adequately control such issues as snow melt, freeze thaw cycles, and avalanche and seismic threats." (Risks Posed by Beville Wastes, Environmental Protection Agency, 1997)

³ "Although bioleaching is similar to leaching of copper ores with sulfuric acid or the production of acid drainage, the combined environmental impacts of acidic drainage and cyanide have not been examined. For example, the kinetics of formation and the stability of metal-cyanide complexes may be different under acidic, rather than basic, pH values. In addition, the long-term acid generation potential of neutralized and cyanidized sulfidic ore has not been investigated. The long-term environmental impacts of bioleaching and other new techniques for recovering precious metals from sulfide ore bodies need to be investigated." (*Hardrock Mining On Federal Lands*, the National Academy of Sciences, 1999 p. 208.)

⁴ It should be noted, standards in other states far exceed those in Wisconsin, despite what some DNR officials claim: "Nevada ...has promulgated the most advanced cyanide mill tailings facility regulatory framework. The State of Nevada minimum design criteria for tailings impoundments include a 12 inch thick soil liner with a coefficient of permeability of 10^{-6} cm/sec, or equivalent. The design criteria for tailings impoundments under 192 requires three layers of solution containment - two of flexible geomembrane and a bottom liner of 3 feet of compacted soil with a coefficient of permeability no greater than 10^{-7}

We have seen how flawed the present mine permitting system is where computer groundwater models under which the Flambeau Mine was permitted were allowed to be modified twice after the fact to meet new lower standards as original projections could not be met and the massive flows of the Flambeau River are allowed to dilute acid mine run off before ground water standards 1,000 feet on the other side of the river are compromised. Were cyanide also included in the effluent, the impacts could be much more intense.⁵

This is not the time to go into these historic failures of the Flambeau process. The bottom line, however, is that the legislature has not, as yet, given the DNR the authority to forbid these inherently risky cyanide technologies.⁶ As long as any future mining company can appear with good-looking numbers projections—no matter how many other disasters with the technology occur world-wide—the DNR can claim lack of legislative mandate—just as they have done with the Perrier project and just as they were forced to do on wetlands destruction before you so wisely gave them that specific authority.

Now is the time for the legislature to step forward on the cyanide issue while there is but one proposal on the board to use this toxic substance. If the present project gets approved using these technologies, the flood gates will be open and any other fly-by-night mining concern can come in, claim the legal precedent has been set, and legitimately claim bias against any future operation.

The mining industry as a whole is not being singled out here. They have already deselected themselves out from standard groundwater regulations, wetland restrictions, local zoning restrictions (via the so-called “local agreement” law) and even corporate taxation requirements. They themselves have asked for and been granted special consideration in these and many other environmental and corporate areas. Since they *don't* have to play by the same rules as everybody else, it is necessary for the legislature to give the DNR the mandate to provide the specific protection capabilities where potential for abuse is apparent. The inherent dangers associated with *any* use of massive amounts of cyanide in the mining industry deserves the same special legislative oversight you have been asked to offer them in every other regulatory realm. Please take on this enabling legislative authority with the foresight and care it deserves.

cm/sec, with geotextile leak detection collection system between the liners.” (Risks Posed by Bevill Wastes, Environmental Protection Agency, 1997)

⁵ “Although cyanide and some cyanide-metal complexes are susceptible to photolytic degradation in surface water, not much is known about how they behave in down-gradient groundwater that eventually may be discharged to surface water or be used for drinking water or irrigation... Like long-term water quality predictions, the modeling of water quantity and hydrologic processes also contains uncertainties. It may not be known, for example, whether some pit lakes will have closed-basin or flow-through hydrologic features, or whether and under what circumstances they may turn over. Long-term ecological, water quantity, and water quality impacts of pit dewatering and discharge of pit water to streams are beginning to be investigated, but results of these studies are not yet available. Site-specific water balances, which in part were responsible for uncontrolled discharges from the mine at Summitville, Colorado, are not sufficiently understood. The flow of water through and interaction with unsaturated waste rock and saturated fractured media is poorly characterized and affects the validity of models that predict the behavior of groundwater in these media. Water quantity affects water quality, and uncertainties in one area compound uncertainties in the other. The following research areas in hydrology warrant further investigation.” (*Hardrock Mining On Federal Lands*, the National Academy of Sciences, 1999 p. 202.)

⁶ “It is frequently assumed that the relatively new advances in hydrometallurgical systems result in better waste minimization characteristics than the more traditional physical separations. This is true only if leaching agents can be entirely recycled or if discharge streams can be treated effectively to eliminate pollutants before discharge. Toxic leaching agents must be contained if subsequent environmental problems are to be avoided.

“Future mineral processing and extractive metallurgy technologies must improve efficiencies in energy consumption, liberation and process metallurgy (including mathematical modeling for process optimization augmented by better sensors and control mechanisms), and most importantly waste reduction and stable disposal techniques. From an environmental standpoint, future technological advances in process metallurgy must address issues pertaining to methods that... efficiently eliminate cyanide and other troublesome processing chemicals safely and rapidly.” (*Hardrock Mining On Federal Lands*, the National Academy of Sciences, 1999 p. 212.)

**STATEMENT for PRESENTATION to
THE WISCONSIN SENATE COMMITTEE on
ENVIRONMENTAL RESOURCES**

WHAT IS CYANIDE?

Terry McNulty, PhD, P.E.
4550 North Territory Place
Tucson, AZ 85750
May 10, 2001

A. Chemistry of Cyanide

The cyanide family of chemicals is large and diverse, and cyanide forms many compounds and so-called complexes. Sodium cyanide is one of the most common commercial forms of cyanide. Hydrogen cyanide, or hydrocyanic acid, forms during decomposition of cyanide solutions. Cyanide forms many complexes with metals, and one commonly formed in the gold industry is the gold cyanide complex. The gold and iron cyanide complexes are very stable, whereas less stable cyanide complexes include those of copper and zinc.

In fact, cyanide undergoes so many reactions and transformations in nature that it simply does not persist in the environment.

Cyanide released into the environment can be degraded by a variety of natural mechanisms:

- Complexation* by metals in soils;
- Precipitation* by iron and sulfur;
- Adsorption* onto the hydrous oxides of iron and manganese;
- Oxidation* to relatively non-toxic cyanate;
- Volatilization* occurs rapidly in neutral or slightly acidic solutions
- Bio-degradation* forms ammonia, nitrates, and carbon dioxide;
- Reactions* with sulfur in soil form thiocyanate;
- Hydrolysis* converts cyanide to formic acid.

As an example, volatilization of cyanide reflects the equilibrium between cyanide and aqueous hydrogen cyanide. If an acidic substance is used to neutralize lime in a flotation process like the one planned for Crandon, over 99% of all the cyanide is converted to hydrogen cyanide and becomes unstable, allowing rapid decomposition to harmless constituents including ammonia, nitrogen, and carbon dioxide.

B. Examples of Cyanide Found in Nature and Routinely Ingested by Humans

About 800 species of plants including cassava, sorghum, peaches, pears, cherries, plums, corn, potatoes, almonds, and beans produce chemicals which, upon digestion by humans, release cyanide. The resulting cyanide concentration from ingestion of some types of lima beans is as high as 3,000 ppm. Cigarette smoke, the dominant form of exposure to humans, contains

high levels of cyanide, and the blood serum in smokers typically contains three times the cyanide level of that in nonsmokers. Coffee contains cyanide.

C. Typical Uses of Cyanide in Manufacturing and Other Human Endeavors

Worldwide production of hydrogen cyanide is around 1.5 million tons annually and about 20% of that is converted to sodium cyanide, most of which is used in the mining industry. Much of the remaining hydrogen cyanide is used in the synthesis of Nylon and acrylic plastics. Cyanide in various forms is used in electroplating and fumigating and in the hardening of steels. Iron cyanide, which is nontoxic and relatively insoluble in water is used as an anti-caking agent in table salt and road salt. In the City of Milwaukee, the amount of cyanide applied in road salt each winter is more than 12 tons.

According to the USEPA's 1981 exposure and risk assessment document for cyanide, about 20,000 metric tons of cyanide were being released annually into the atmosphere by the U.S. Of this amount, 90%, or 18,000 metric tons, was estimated to have come from automobile exhaust. Most of the remainder derived from steel mills, coal-fired power plants, petroleum refineries, municipal waste incinerators, cigarette smoke, and the manufacture of plastics.

D. Reasons Why Cyanide is Used in the Mining Industry

Application of dilute alkaline cyanide solutions to the extraction of gold from ores was patented in 1887 and this technique has been used in thousands of ore processing operations worldwide. Cyanidation quickly supplanted other leaching techniques because it was generally cheaper, more effective, and easier to control.

Despite the success of cyanidation, the leaching of gold ores with other reagents has been extensively examined by academics and by government and industry research groups. There are over 25 reagent systems that either predated cyanidation or have been discovered during the last century. Last year, eight colleagues and I conducted a comprehensive investigation of alternatives to cyanide for a proposed gold mining project in Montana. Four of the most promising alternative reagent systems were compared with dilute alkaline cyanide by two commercial laboratories. Each system was then evaluated in terms of waste water chemistry, total reagent requirements, operating and maintenance costs, and the costs of waste water treatment during operations through post-closure. Risks associated with human and environmental exposure, as well as transportation mishaps were assessed and an EPA-based ranking analysis was performed. For that particular project, cyanidation was the only economically acceptable approach, as well as being by far the safest to humans and the environment.

Now, the foregoing comments apply to the heap leaching of gold ores, which is done at higher cyanide concentrations and without the positive physical

containment planned for the Crandon Project. The use of cyanide as a flotation reagent, as planned for Crandon, has been an industry standard for 75 years.

E. Toxicology of Cyanide

Cyanide's high toxicity is offset by stringent industry and government guidelines which ensure that it can be manufactured, stored, transported, used, and disposed of safely. If an adult of average size were to drink water containing 10 ppm cyanide, a fatal dosage (about 8 milligrams per kilogram of body weight) would not be reached until 15 gallons had been swallowed. There is no evidence that cyanide is mutagenic, carcinogenic, or capable of accumulating in human tissues.

During the entire 20th century, there were no reported accidental deaths by cyanide poisoning in the North American mining industry.

Fresh water fish have variable sensitivities to cyanide in water, but most species are unaffected at cyanide concentrations below 0.01 ppm and some are tolerant to long-term exposure to 0.1 ppm or higher. Mallards have been shown to have no ill effects at dosages up to 1 milligram of sodium cyanide per kilogram (mg/kg) of body weight, whereas a 50% mortality rate may result from a dosage of 2.7 mg/kg.

Mammals and birds are able to detoxify themselves rapidly through the reaction of absorbed cyanide with thiosulfate in the presence of enzymes to produce thiocyanate. Thiocyanate is then excreted in urine. This process allows animals to ingest large sublethal doses over extended periods without harmful effects.

The key point is that the solutions which will be impounded with Crandon's processing wastes will contain little or no cyanide, and trace amounts that may exist will be at concentrations well below those toxic to mammals, birds, or aquatic life.

TERRY MCNULTY
Consultant in
Mineral Processing and Chemical Engineering

B.S. Chemical Engineering, 1960, Stanford University.
M.S. Metallurgical Engineering, 1963, Montana School of Mines.
D. Sc. Extractive Metallurgy, 1966, Colorado School of Mines.
Registered Professional Engineer, Colorado No. 24789.

1988-present, President, T.P. McNulty and Associates, Inc. Work has been conducted for clients including mining companies, banks, chemical producers, technology developers, and engineering services firms. By early-2001, there were twenty-six Associates, including metallurgists, chemical engineers, geologists, and mining engineers.

1983-1988, President and CEO, Hazen Research, Inc., a firm that provides contract testing, analysis, evaluation, and process development services to the world's minerals, metals, materials and chemicals industries.

1980-1983, Vice President, Technical Operations, Kerr-McGee Chemical Corporation, with responsibility for the direction of all research and process engineering activities for facilities producing \$600 million annually of minerals, metals, and inorganic chemicals.

1974-1980, Director of Research and Technical Support, The Anaconda Company. Managed all corporate R&D, plant startups, and metallurgical technical services.

1972-1974, Supervisor of Process Engineering, The Anaconda Company. Managed process engineering/design and startups of plants employing mineral beneficiation, pyrometallurgy, and hydrometallurgy for copper, uranium, lead, zinc, and silver.

1970-1972, Concentrator Superintendent, Anaconda Canada Ltd. Started up and operated a 1000 TPD copper/zinc/silver flotation concentrator in New Brunswick.

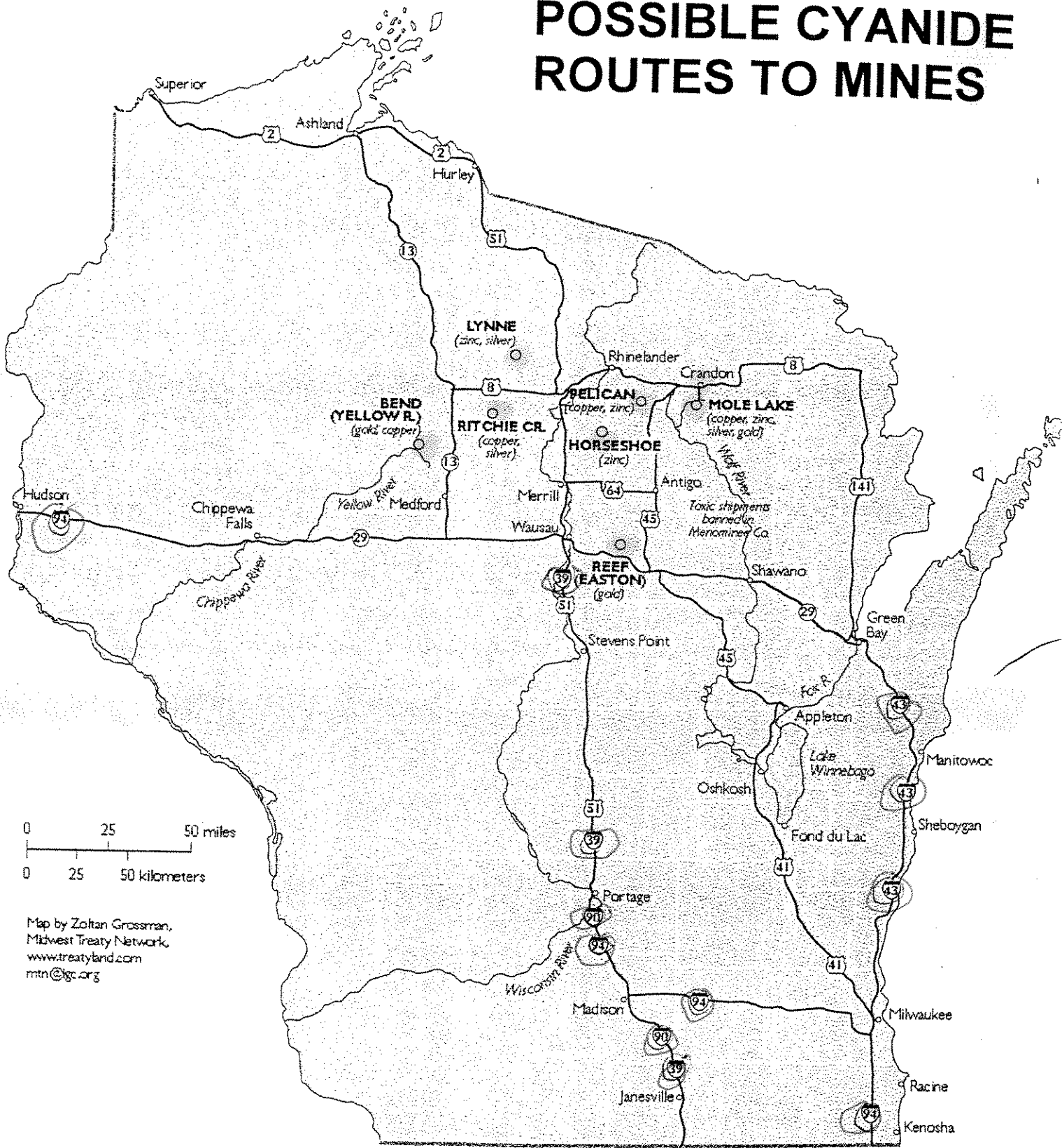
1960-1970, Research Engineer and Senior Research Engineer, The Anaconda Company. Managed process development projects for ores of copper, iron, lead, zinc, manganese, uranium, beryllium, aluminum, precious metals, and various nonmetallic minerals. Provided operating supervision during test programs in hydrometallurgical plants, concentrators, smelters, and refineries.

Member of AIME (SME and TMS), MMSA, Mining Club of the Southwest, and the Colorado Mining Association. Director of Hazen Research, Inc. and of Iron Carbide Holdings, Ltd. Trustee Emeritus of Colorado School of Mines.

Author of 35 publications in the process metallurgy of iron, copper, uranium, and precious metals, as well as in plant auditing, energy conservation, environmental issues, instrumentation, and technology development. Granted 2 patents in copper metallurgy.

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POSSIBLE CYANIDE ROUTES TO MINES



Based on 1997 WDNR identification of hazardous mine reagent distribution centers:
Chicago, Milwaukee, Green Bay, St. Paul, Duluth
<http://www.dnr.state.wi.us/org/es/science/mining/crandon/eisschedule/rhinelanderrisks.htm>

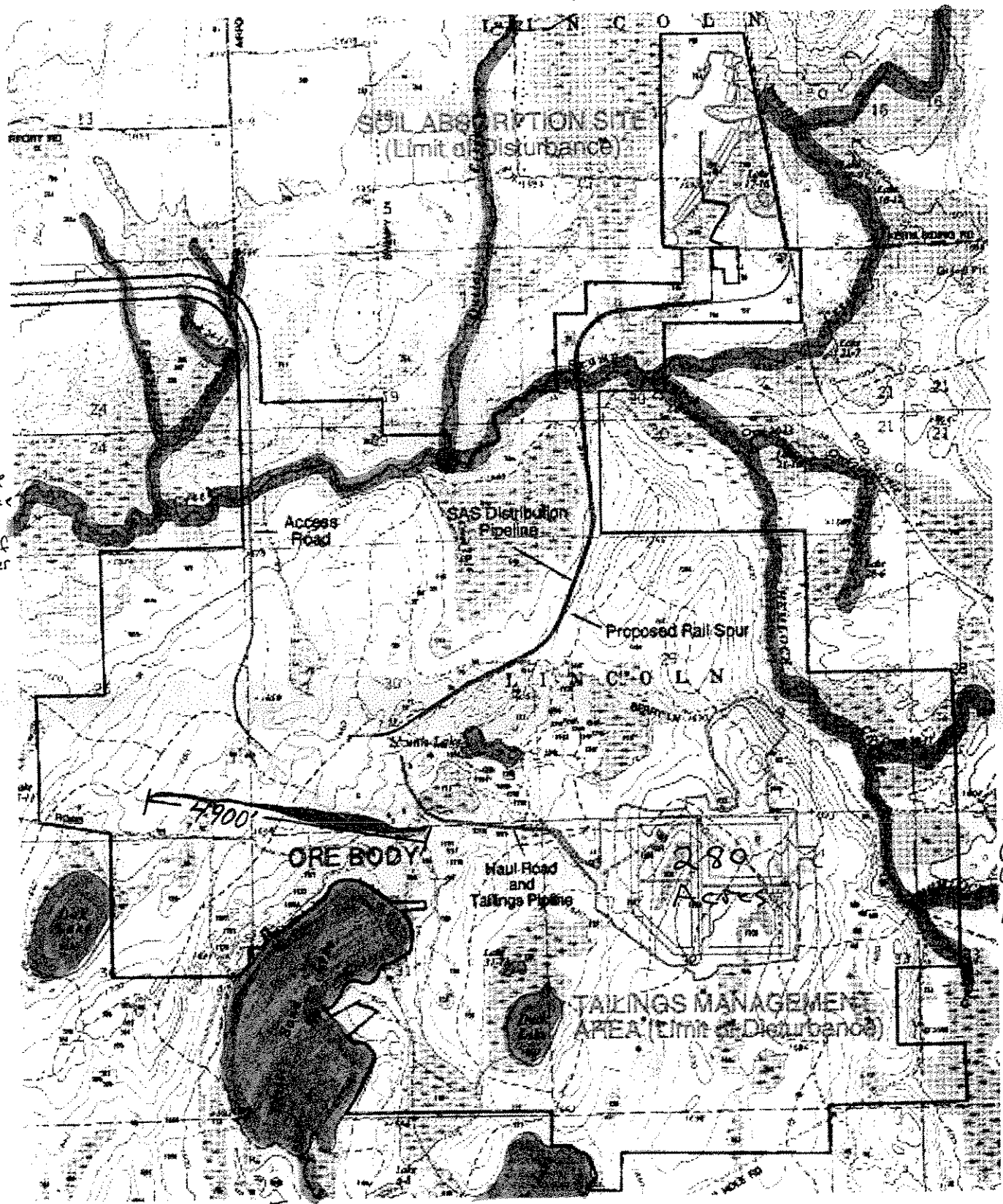
To
Lake
Metonga

To
Lake
Lucerne

To
Rice
Lake
+
Wolf
River

To
Grand
Hem-
lock
Lake

To
Rolling
Stone
Lake +
Wolf R.



**BEFORE THE WISCONSIN STATE SENATE
SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES
May 10, 2001**

Madison, Wisconsin

Testimony of:

Harry H. Posey, Ph.D.

Geologist/Isotope Geochemist

Colorado Department of Natural Resources

Division of Minerals and Geology

1313 Sherman Street, Room 215

Denver, Colorado 80203

BACKGROUND

Gentlemen of the Committee on Environmental Resources:

My name is Harry Posey. I am from Lakewood, Colorado, and I work with the Colorado Department of Natural Resources, Division of Minerals and Geology in Denver.

This is the Colorado regulatory agency that conducts mine permitting and enforcement at all mines in Colorado. This includes all mines that use cyanide, in whatever capacity

At the Division of Minerals and Geology, I serve as a geologist and as the Staff Authority on Geochemistry. In that work, I deal with mine water quality issues in permitting, particularly in the fields of cyanide processing and cyanide detoxification. I am also the principal author of Colorado's Cyanide Guidelines.

I have been asked by Nicolet Minerals Corporation to address this Committee, and provide some technical perspective on the uses of cyanide in mining.

I would like to emphasize that I am here for technical information only. My focus will be on technical aspects of cyanide use, mostly from a regulatory perspective gained in Colorado.

INTRODUCTION

The safe use of cyanide in mining relies on a complex infrastructure. In the U.S., standard environmental protections are provided at many stages: during transport, during storage, during application at the mine, and when the mine is decommissioned. Proper handling and proper regulation at all these stages are what assure its safe use.

Cyanide treatment and containment are straightforward processes. The breakdown of cyanide takes place quickly, usually on the order of minutes to hours depending on the amount of solution to be decommissioned.

Importantly, cyanide does not persist in the environment.

CYANIDE USE

Through mine permitting, agencies such as mine are challenged frequently to re-examine cyanide use. I believe this gives us an up-to-date view of conditions in the mining industry where cyanide is used. It engages us in the appraisal of cyanide-related events that appear the news.

From this, I would say that amidst misunderstandings and occasional misstatements about cyanide use, it is nonetheless evident to me that cyanide use persists in numerous mining applications, worldwide, usually without cyanide-induced incidents.

In this presentation I will differentiate between the two major types of cyanide use in mining: leaching and froth flotation.

The record of cyanide use in leaching operations, while not pristine, shows that where cyanide is indeed associated with mishaps or environmental problems, worldwide, these problems are caused by poor solution management or inadequate transportation.

There is nothing about cyanide leaching itself that can inherently cause spontaneous environmental damage. It doesn't eat through pipes or liners. It is not explosive. It volatilizes quickly in water.

Froth flotation is the more common use of cyanide. This mining application of cyanide has been practiced for nearly 80 years, and while environmental record-keeping is a phenomenon of about the past 25 years, the use of cyanide in flotation appears to be without environmental incident. That is more certainly the case for modern times in industrialized countries.

Transport of cyanide in the U.S. is strictly regulated by the U.S. Department of Transportation. Cyanide compounds are transported in placarded vehicles, inside impact-resistant containers, and the containers are double walled.

Recent environmental incidents involving cyanide in various places in the world apparently are boosting opposition to cyanide use in mining. When I look at these incidents in perspective, however, I see problems other than the use of the chemical itself.

For instance, when a truckload of NaCN slid into the Barskaun River in Kyrgyzstan in 1998 it caused significant environmental damage. Some felt that this incident justified a cyanide ban.

But early news of this event did not mention some of the critical features of that accident. Namely: cyanide in that incident was being hauled in paper bags, stacked on wooden pallets, and carried in an open truck. This situation was tailor-made for an accidental release. This was a problem of poor infrastructure, not cyanide use.

Transport under those circumstances would not be permitted in the United States.

Another example. When a tailings dam failed in 1999 in Romania, it released tailings and solution containing extreme concentrations of cyanide to the Danube River. That incident also was used to support cyanide opposition in the U.S.

However, cyanide did not create that spill. Instead, it was staged through engineering, construction, and regulatory shortfalls. Proper regulation, professional engineering, and adequate construction could have prevented that situation.

A frequently cited misuse of cyanide was the loss of migratory birds at cyanide solution ponds in the 1980's in the western U.S. More up-to-date laws and environmental awareness help prevent such events.

Even so, wildlife access is not an issue for a mine using froth flotation because cyanide solutions, in those cases, are kept indoors.

Overwhelmingly, chemical problems at cyanide leaching operations are not due to cyanide itself. They are due to other factors such as inadequate solution handling, improper engineering, or poor maintenance. These can be controlled through proper regulation.

Spills of cyanide solution into streams at Summitville, Colorado, for instance, had nothing to do with cyanide chemistry. Rather, they were caused by improper piping, inappropriate sizing of solution containment vats, a lack of emergency freeboard in storage vessels, and inadequate backup generating systems that caused pumps to shut off during power failures with no backup. Better regulations preclude such accidents.

Cyanide is easily and quickly neutralized. Cyanide use is straightforward. It has a long history. And once detoxified, it requires zero post-mining care.

CYANIDE IN MINING IN COLORADO

Colorado has two active mining operations that use cyanide currently and has a host of completed or inactive mines, or mines on standby that used cyanide in the past. These mines use cyanide either for leaching or for froth flotation, or both.

Generally, cyanide has been used in Colorado without incident. More specifically, there has never been a release of cyanide in Colorado that can be tied to any environmental damage.

One of our active mines that uses cyanide currently is a heap leach operation, and it has operated without any cyanide release, except from some abandoned mines in the perimeter of the new mine. Even so, there has been no environmental damage.

Our other active mine that uses cyanide employs froth flotation. It has operated without cyanide-related environmental incident ever since it opened, which was over 20 years ago.

There are at least 30 inactive gold mines in Colorado that used cyanide leaching in the past. These mines are closed, either because their deposits were mined out, or because of depressed gold and silver prices. There have been minor spills from a few of these, but none caused environmental damage.

In addition, there are at least 10 inactive mines that used cyanide in froth flotation in the past. All but one of these are closed as the deposits are mined out. One of these is on hold, pending more favorable markets.

In no case in Colorado has there been a recorded release of cyanide process solutions from the froth flotation operations.

Many other states also use cyanide in froth flotation, or have used it in the past. In Missouri, for instance, there are at least 12 mines on a trend 27 miles long, all of which use froth flotation, and there has never been an environmental release of cyanide. This is the site of the world's largest reserve of lead, and there has never been a release of cyanide to the environment.

Mines in central and eastern Tennessee use cyanide in froth flotation, also without releases to the environment.

Montana, Idaho, New Mexico, Arizona all use massive amounts of cyanide in froth flotation or used it in the past. Without environmental incident.

Wisconsin also is a state that used cyanide in froth flotation in mines in Southwest Wisconsin. I have found no record of environmental damage due to cyanide at these operations.

SUMMARY

While mining consumes only 13% of the total HCN used in all industries, mining seems to attract more public opposition. Overall, those objections focus on precious metal leaching, not flotation. Opposition to cyanide use in flotation chemicals is rare; in fact, this is the first opposition I have ever heard to it.

Cyanide concentrations in flotation chemicals are low compared with leach solutions. The cyanide delivery and environmental protection infrastructures are the same.

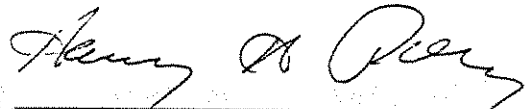
Solution containment systems are generically different between flotation and leaching. Flotation occurs indoors; leaching occurs outdoors.

This is not to say that leaching cannot be conducted without environmental incident: it *can*, and it *is* being conducted without incident. Safely. Profitably. In several states, both west and east. And in many countries.

When objections to cyanide use are weighed against what mining laws and the environmentally conscious public demand, cyanide in North America seems to be adequately controlled. Misuse is rare, though well publicized.

Through constant review of cyanide safety measures and ongoing evaluation of cyanide use, its practical and safe use should continue.

Thank you for your time. I would be pleased to try to answer any questions



Harry Posey

May 10, 2001

THURSDAY, MAY 10
9:30 am
Room 411 South in State Capitol
Senate Bill 160 to ban cyanide in mining

(companion to Assembly Bill 95) will have a hearing in the Senate Environmental Resources Committee. AB- 95 is sponsored by Rep. Spencer Black, and SB-160 by Sen. Russ Decker. Please come to sign in and testify for SB-160! The "Black and Decker" Bill will be the fourth item on the agenda:

SB-15. Prohibits DNR from requesting social security numbers.

SB-156. Exceptions from requirement to obtain a license to practice professional geology, hydrology or soil science.

SB-159. Prohibits drilling beneath beds of the Great Lakes and adjacent waters to explore for or produce oil or gas.

SB-160. Prohibits use of cyanide in metallic mining. (The Committee may go into executive session and take a vote on SB-160.)

Madison people will be meeting Wednesday, May 9, at 7 pm in Catacombs (Pres House basement) to plan for the hearing, upcoming support for AB-95 / SB-160 and other Crandon mine business. At the hearing we will have a banner, signs (no sticks), headstones, etc. This is a chance to show our alliance to the media and public.

PETITION TO PROHIBIT THE USE OF CYANIDE IN WISCONSIN MINES

*Mining companies are increasingly using cyanide to extract gold, silver, copper, zinc, and other metals from metallic ore.

*The proposed Crandon zinc-copper mine near the Wolf River would use as much as 18 to 20 tons of sodium cyanide each month during its operation; and Wisconsin also contains other gold deposits that would likely require cyanide for processing.

*Cyanide poses serious environmental risks--from transportation on our roadways, from storage and use at the mine site, and from residuals disposed in waste dumps.

*Cyanide is highly toxic, with tiny traces fatal to human beings, fish and wildlife, and acts as a powerful solvent that can release other toxins.

*Cyanide has been the cause of recent environmental disasters at U.S. mines (in Colorado, Nevada, Montana, Idaho, California, South Dakota, and South Carolina), and at many foreign mines (such as in Romania, Guyana, Canada, Kyrgyzstan, and Papua New Guinea), resulting in massive fish kills and contaminated drinking water.

We, the undersigned support a prohibition on the use of cyanide reagents in Wisconsin mines and metallic ore processing facilities. In 1998, Montana voters banned cyanide for mining, and in 2000 the Czech Republic banned cyanide in mining. Wisconsin must have the strongest mining laws in the nation, in order to protect our abundance of clean water. Therefore, we urge our legislators to support a ban on the use of cyanide for mining.

Signature	Date	Printed name	Address	Town/ZIP	E-mail (for alerts)
Jessica Simanek	5/10/01	Jessica Simanek	509 E. Gorham St.	Madison, WI 53703	
Dana Prager	5/8/01	Dana Prager	2922 Stevens St.	Madison, WI 53705	
Kelly Froemming	5-8-01	Kelly Froemming		Madison, WI 53715	
Simk Pfaller	5/8/01	Simk Pfaller	216 Campbell St. #1	Madison, WI 53711	spfaller@
Ryan M. Vernech	5-8-01	Ryan M. Vernech	110 W. Brooks St.	APT F. Madison WI 53715	
Jessica Schutz	5-8-01	Jessica Schutz	502 N. Henry St.	Madison, WI 53702	
Elizabeth Hicke	5-8-01	Elizabeth Hicke	12 N. Brown #2	Madison, WI 53703	
Janet Karpinsky	5/8/01	Janet Karpinsky	316 N. Butler	Apt 304 Madison WI 53703	
Greg Baranczyk	5-8-01	Greg Baranczyk	408 W. Washington Av.	Madison, WI 53703	
Chris Klusman	5/8/01	Chris Klusman	2170 University Ave. #84	Madison, WI 53705	

Jessica Simanek
student

Students.
edu

Copies of this petition will be delivered to the Wisconsin Assembly and Senate. Please return completed petitions to the Wolf Watershed Educational Project, c/o Midwest Treaty Network, P.O. Box 14382, Madison, WI 53714-4382. For background information see <http://www.alphacdc.com/treaty/cyanide.html>. For updates call the toll-free Hotline at (800) 445-8615.

11. Natalie Hill 5/8/01 Natalie Hill 615 N Henry St #1-A Madison WI 53703

12. Ann Kuehlman 5/8/01 Ann Kuehlman 622 Stockton Ct. Madison, WI 53711

<http://www.alphacdc.com/treaty/petition.html>

5/7/01

13. Karen Buechner 5/08/01 Karen Buechner 509 Hilltop Dr. Madison, WI 53711

14. Carrie Jensen 5/8/01 Carrie Jensen 2614 Golden Gate Way Madison, WI 53713

15. Elizabeth Cherek ELIZABETH CHEREK eacherek@students.wisc.edu
16. Melissa Miller 5/8/01 Melissa A. Miller 435 W. Dayton St. #4 Madison, WI 53713
17. Carissa M. Dickinsen 5/8/01 Carissa M. Dickinsen 2302 University Ave #241 Madison
18. Elizabeth Baur 5/8/01 Elizabeth Baur 318 W. Gorham #1 Madison, WI 53705
19. Angela Milazzo 5/8/01 Angela Milazzo 538 W. Mifflin #2 Madison, WI 53703
20. Kathleen Merrill 5/8/01 Katie Merrill 312 N. Carroll #2 Madison, WI 53703
Colleen Viren 53703
21. Colleen Viren 5/8/01 211 S. Bedford #2 Madison WI 53703
22. Cheryl Lukesh 5/8/01 Cheryl Lukesh 1325 Randall Ct. #10
Madison, WI 53715



Memo

To: Members of the Senate Committee on Environmental Resources
From: Joan Hansen, Director of Tax & Corporate Policy
Date: May 10, 2001
Re: Senate Bill 160

Wisconsin Manufacturers & Commerce (WMC) and the Wisconsin Mining Association (WMA) are strongly opposed to Senate Bill 160 that prohibits the use of cyanide in the metallic mining process. Like past attempts to outright ban metallic mining in the state of Wisconsin, SB 160 again unfairly targets the metallic mining industry.

A prohibition on the use of cyanide in metallic mining is potentially a ban on the Crandon mining project. There is no other economical, technically feasible or safer substitute that can be used to separate metals in metallic mining.

Under current law cyanide must be used properly and safely; and the record shows that this is the case in copper and zinc mining (as the Crandon project is). Cyanide is a safe and economical means of separating valuable ore from the surrounding rock. Currently, the only alternative to cyanide would be to use other, potentially more environmentally hazardous.

Like other metallic mining bills introduced in the past, Senate Bill 160 has absolutely no base in science. There have been no incidents of environmental damage resulting from cyanide use in copper or zinc mines anywhere in the United States. The risk of dying from cyanide exposure is very low in general, and no level of regulation can eliminate all risk from all people's lives. There is more risk of drowning, being struck by lightning, falling down or getting in a car accident, than accidental death from exposure to cyanide. Most exposure to cyanide comes from automobile exhaust and cigarette smoking, not mining.

Additionally, cyanide is a commonly used chemical in various types of manufacturing. Dozens of Wisconsin companies safely use cyanide in the manufacturing process. On a relative basis, only a very tiny percentage of cyanide use is in the copper and zinc mining industry. The largest use is in the production of every day items, such as pharmaceuticals, fire retardants, plastics, road salt and other products.

Wisconsin law is clear. The Wisconsin legislature has specifically allowed for mining in the state as long as it is accomplished in an environmentally sound manner and this includes using cyanide. Under current law a mine cannot be granted a permit unless it can be determined that the environment, public health, safety and welfare will be protected. It means protecting groundwater, surface water, wetlands, air, unique land, and endangered species.

In terms of economic development, mining is essential to Wisconsin's economy. There are literally hundreds of Wisconsin-based companies employing 10,000

plus individuals in mining and mining-related companies, including manufacturers, suppliers or transporters to the industry.

More specifically, the Nicolet Minerals Company will be a major contributor to Northern Wisconsin's economic vitality. Historically mining has been an extremely important industry in Wisconsin and remains so today. The Nicolet Minerals Company will provide hundreds of long-term mining and mine-related jobs to Forest, Oneida and Langlade counties – one of the poorest areas of the state. \$43 million will be spent for goods and services in the tri-county areas during three years of mine construction, and an average of \$1.2 million more will be spent each year during its 28 years of operation. As far as tax revenue is concerned, it is estimated that the mine will contribute up to \$425 million to local, state and federal governments over the life of the mine.

Finally, mining is fundamental to society and is a point that cannot be overstated. Everything used in modern society is a product of mining: cars, roads, planes, telephones, appliances, computers, stereos, TVs, electricity, roads, heat, buildings, machinery, equipment, agricultural equipment, fuel, fertilizers.

Senate Bill 160 sets a bad precedent by singling out the mining industry. If the ban on cyanide in metallic mining becomes law, other industries could become the target for extremists bent on legislating certain industries out of existence. For these reasons, WMC and WMA encourage the committee to reject Senate Bill 160.



Wolf Watershed Educational Project

Box 14382, Madison WI 53714; Tel/Fax (608) 246-2256
Hotline: (800) 445-8615; Web: www.treatyland.com; E-mail: mtn@igc.org

TESTIMONY OF ZOLTAN GROSSMAN TO WISCONSIN SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES ON SB-160 TO BAN CYANIDE IN MINING, MAY 10, 2001

I am a member of the Board of Directors of the Midwest Treaty Network, and a co-founder of the Wolf Watershed Educational Project, a grassroots campaign of Native American, sportfishing, environmental, unionist and student groups, on the web at www.treatyland.com (cyanide info at www.alphacdc.com/treaty/cyanide.html). I am a cartographer and a doctoral candidate in Geography at UW-Madison. I am also a Hungarian-American, and last year my family was horrified to see the destruction of the second-largest river in our homeland from a cyanide spill from a mine waste management area (not a heap leach pile) in neighboring Romania. The spill was the largest environmental disaster in Europe since Chernobyl. That was not because human beings died, but because the fishery and wetlands were destroyed.

The Australian-owned company in Romania might well have claimed that its wastes had no more cyanide than a cup of coffee, and even might have been correct, but that would be a diversion from the real point. It is true that a 2% solution of cyanide is fatal to humans, and that some people have died from cyanide in mining spills. But the real issue of cyanide in mining, and of copper, zinc and gold sulfide mining in Crandon and elsewhere in northern Wisconsin, is and always has been about our valuable natural resources, particularly wild rice and fish.

The Tisza, like the Wolf River here in Wisconsin, figured in many songs and legends. Like the Wolf, its waters fed enormous wetlands rich in migrating birds, and its plentiful fish fed numerous fishing communities. On the first anniversary of the disaster, Hungarians congregated on the Tisza's bridges to read poetry mourning the loss of the fishery. I do not want to one day read poetry on a bridge over the Wolf, because some cyanide-laden truck skidded on an adjacent icy road such as Highway 55, and damaged one of our the state's most pristine fisheries. We don't need up to 200 tons a year of cyanide (according to DNR consultant Andres Trevino) at the headwaters of the Wolf River, nor do we need cyanide used at possible future gold mines in Marathon County or near the Yellow River in Taylor County.

Cyanide in mining has become to environmental politics in Wisconsin what arsenic in drinking water has recently become to the country as a whole. State residents recognize the threat to our water and our fisheries from the use of cyanide in any mining process. This is a unique opportunity for legislators of both parties to prove their commitment to the environment, which has become a major issue for the next election. Already, over 11,000 Wisconsin citizens have signed the petition for a prohibition on cyanide in mining. Of these 11,000, the overwhelming majority are from small and medium-sized rural communities (for example, fewer than 1,000 of the signatures have come from Madison).

Local governments have also endorsed the call, such as Langlade County (downriver from the Crandon site) and Rusk County (which experienced the Ladysmith mine), the cities of Appleton, New London, Franklin and Milwaukee, the villages of Fremont and Combined Locks, and the Forest County town of Nashville, the Langlade County towns of Ainsworth and Wolf River, the Shawano County towns of Westcott and Waukechon, the Waupaca County town of Mukwa, the Outagamie County towns of Ellington, Liberty, and Deer Creek, and the Winnebago County towns of Poygan, Winneconne, and Oshkosh.

The Wisconsin Conservation Congress voted 90.7% for a ban on cyanide in mines, as urged by Trout Unlimited, Walleyes for Tomorrow, and other sportfishing groups. They have been joined by Menominee, Potawatomi, and other tribes, by Steelworkers Local 1527 in Milwaukee, and by many environmental groups, such as the Wolf Watershed Educational Project, Midwest Treaty Network, Mining Impact Coalition of Wisconsin Inc., Wisconsin Resources Protection Council, Northern Thunder, Environmentally Concerned Citizens of Lakeland Areas, Wisconsin's Environmental Decade, EarthWINS, Rusk County Citizens Action Group, Superior Wilderness Action Network, Clean Water Action Council of Northeastern Wisconsin, Wolf River Watershed Alliance, Natural State Water Protection Association, Protect Our Wolf River- Shawano County, Sierra Club-John Muir Chapter, Door County Environmental Council, River Alliance of Wisconsin, Wisconsin Greens, UW Greens, Portage County Greens, and many others. This is the largest upswell in public opinion about mining since the moratorium campaign of 1997-98, and it is growing larger each day.

**Before the Senate
Committee on Environmental Resources
May 10, 2001**

**Testimony of
The Wisconsin Department of Natural Resources
On
Senate Bill 160**

The Department of Natural Resources is appearing today for informational purposes in regard to Senate Bill 160.

The Department cannot support this legislation because we believe that it is fundamentally flawed, yet we also are not opposing the legislation as we understand that it is within the prerogative of the Legislature to adopt such a policy. My purpose in testifying today is to provide information pertaining to the use of cyanide in the mining industry and the Department's perspective on such uses.

The Department readily acknowledges that cyanide is an acutely toxic material that needs to be handled with great care. We further recognize that there have been a number of serious cyanide-related accidents and failures at mining sites in the United States and elsewhere. However, the fact that such accidents have occurred does not mean that all mining-related uses of cyanide pose similar levels of risk.

There are two distinct uses for cyanide compounds in the metallic mining industry; as a leaching agent in gold recovery operations and as a chemical reagent in the froth flotation process.

Most gold mines use a process involving cyanide to recover the gold. Ore materials are exposed to cyanide solutions and the cyanide combines with the gold to form soluble gold-cyanide complexes. The solution is ultimately recovered and treated causing the gold to precipitate out of solution, thereby facilitating its eventual recovery. In vat or column leaching, the process normally takes place within an enclosed building, while heap leaching is conducted over large piles exposed to the environment. In either case, residual material left after the gold is recovered can contain significant levels of cyanide in solution and also can contain various cyanide complexes in solid form. In addition, leaching operations also require the storage of significant volumes of liquids containing high concentrations of cyanide.

Over the past 20 years, as cyanide leaching operations, especially heap leaching, have become more prevalent, so too has the occurrence of accidents and other documented cases of environmental harm as a result of cyanide releases. Such incidents have included catastrophic failure of containment facilities, seepage of cyanide-rich water from storage facilities, and wildlife damage resulting from ingestion or other exposure to cyanide-rich water in water retention ponds or tailings facilities. In addition, there have been at least two transportation accidents, one in eastern Europe and another in Papua New Guinea involving shipments of cyanide reagents.

Occurrence of these incidents has led to a heightened awareness of the threats posed by leaching operations. In response, several states, including Oregon, Washington and Idaho imposed additional restrictions on leaching operations. Furthermore, Montana has enacted a prohibition on any new open pit gold or silver mines that would use cyanide compounds in a heap or vat leaching process. All of these restrictions concerning the use of cyanide pertain only to its use in leaching operations. No similar restrictions or prohibitions have been placed on the use of cyanide compounds in flotation operations such as that proposed for the Crandon Project.

Froth flotation is a physical separation process in which valuable minerals are separated from waste minerals contained in ore. In this process, finely ground ore is mixed with water to create a slurry. Small quantities of chemical reagents are added to the slurry to create conditions under which specific minerals will be attracted to the surface of air bubbles, which are created by agitating the slurry and introducing air. The air bubbles, with the valuable mineral particles attached, are skimmed off the top of the flotation tank and processed further. Other reagents, termed depressants, are also added to the slurry to induce targeted minerals to stay in the solution and not be attracted to the air bubbles. Sodium cyanide has been commonly used as a depressant in froth flotation operations for over 80 years.

In the case of the proposed Crandon Project, sodium cyanide would be used to depress pyrite (iron sulfide) and sphalerite (zinc sulfide) in different phases of the milling operation. The company anticipates adding sodium cyanide to the mill flow stream at a rate of about 70 grams of reagent for every metric ton of ore being processed. The sodium cyanide would act to keep the pyrite in the flotation tanks after recovery of the valuable minerals. In addition to recovering zinc, copper and lead concentrates, Nicolet Minerals Company has also proposed to separate and recover pyrite through an additional flotation step. This is critical in assessing the fate of cyanide in the flow stream for the proposed Crandon Project. In order to recover the pyrite, the surface of the pyrite particles must be treated so that the collector reagents can react appropriately. Pyrite reactivation, achieved through a lowering of the pH of the process stream, would cause most of the cyanide in the system to be released through volatilization and subsequent dissociation. The remaining cyanide complexes would generally be recovered with the pyrite concentrate, which would then be mixed with cement and used as backfill in the underground mine. The level of free cyanide remaining in the process water would be very low and the overall environmental availability of cyanide and cyanide-containing compounds would be reduced to minimal levels.

The bill would prohibit the use of cyanide-containing compounds for any purpose as part of metallic mineral mining operations. It does not distinguish between the use of such materials for leaching operations from use in flotation processes. Leaching operations, especially heap leaching operations, are not as easily controlled or managed, result in higher concentrations of cyanide and pose much greater risk to the environment. The flotation process, in particular one involving pyrite recovery, results in very little risk of cyanide being released to the environment at levels of concern. While the environmental acceptability of leaching operations is a valid subject of debate, a prohibition on the use of cyanide compounds in flotation processes does not appear to be warranted and is inconsistent with the permitted use of the identical compounds by other industries in the state.



John Muir Chapter

May 11, 2001

Testimony to Wisconsin State Senate Committee on Environmental Resources
On Senate Bill 160, Ban on Cyanide in Mining
Dave Blouin, Mining Committee Chair

The Sierra Club and its nearly 10,000 Wisconsin members are part of the statewide Campaign to Ban Cyanide in Mining and we strongly support SB 160 as common sense legislation that strengthens environmental protection for Wisconsin. Current state law exempts the mining industry from hazardous waste restrictions – even if mining wastes contain cyanide. Given that the mining industry is already allowed to legally pollute groundwater at state mine sites, the lack of restrictions on cyanide use in mining is a recipe for disaster. SB 160 would ban cyanide heap and vat leach gold mines in the state – which is what the state of Montana did in 1998 after suffering through millions of gallons of spilled cyanide wastes over the last twenty years. And SB 160 would also ban cyanide at proposals such as Crandon in the Wolf River headwaters area.

It is not simply groundwater pollution by cyanide that concerns us. First, up to ten or more truckloads with 45,000 lbs. of cyanide each will be brought to the Crandon mine site annually. The state of Wisconsin agrees with us that risks of transportation of cyanide on our highways are significant. Last winter, a cyanide tanker overturned in a ditch on its way to a mine in South Dakota; state officials there said that disaster was averted only because the ditch was filled with snow. In 1998, outside the Canadian-owned Kumtor mine in Krygzstan, a cyanide tanker spilled into the Barskoon River. Hundreds of people fell ill and one or more people may have died as a result. A spilled truckload of cyanide here could be catastrophic if it reached any of our rivers or streams or crashed in a populated area. You will hear from others today, what shipping cyanide through their neighborhoods could mean to them.

The mining industry also has repeatedly demonstrated its inability to handle cyanide and other toxics safely at its mine sites. The parent company of Nicolet Minerals, Billiton, reported several spills at other mines it owns last year. The Australian company, BHP is merging with Billiton this spring and it too has caused massive mine waste problems. BHP operates the Ok Tedi mine in Papua New Guinea and has continued to discharge 80,000 tons of untreated mine wastes directly into the Ok Tedi river since 1984. The result is nothing short of an environmental disaster – one that BHP now admits it wishes it was not involved with. In 1998, a pipeline rupture at the BHP San Manuel mine in Arizona spilled 14,308 lbs. of sulfuric acid.

And yet here in Wisconsin, Nicolet Minerals has tried to convince the public that it will not repeat the errors of other mining companies using cyanide such as at heap leach gold mines. But the fact is that hardrock mining, whether for gold or for zinc, utilizes much of the same technologies. A review of the more than fifty cyanide releases in Montana from 1982 to 1998 reveals that 32 or more than half were caused by liner system leaks, waste spills or overflows, human error or accidents, or storm events – all problems with technology shared by that proposed by Nicolet Minerals. The remaining cyanide spills – and I gave them the benefit of the doubt on several examples – were caused by problems specific only to heap leach mining, such as ruptured pipes or hoses containing cyanide solution meant for the ore heaps.

These are examples of modern mines in the so-called enlightened era of mining since the mining industry supposedly got “environmental religion.” Put less cynically, I don’t believe that any of these companies set out to pollute Montana with cyanide on purpose, but a list like from just one state leads me to conclude that mining is inherently messy and difficult to control. Unfortunately Montana learned the hard way before banning cyanide at these kinds of mines – SB 160 will help us avoid these problems.

We are also concerned about the concentrations of cyanide in the wastes to be disposed of above ground at the Crandon site. Dr. Peter Thibodeau, a hydrogeologist and expert ground water modeler is here today in support SB 160 and will talk about these issues in more detail. NMC’s estimates of the concentrations of cyanide in the mine wastes is 14 parts per million. If these mine wastes spill out of the tailings dump or it overflows and the wastes reach the creeks at the mine site, the results could be disastrous. This seemingly small amount of cyanide is more than 1000 times the water quality standard for freshwater aquatic life. As little as 10 parts per billion of cyanide adversely affect fish.

NMC will tell you today that the cyanide in the wastes will break down harmlessly and naturally due to sunlight and warm temperatures. There are fundamental problems with this assumption. Northern Wisconsin has little sunlight or warm temperatures throughout much of the year, and even if the cyanide breaks down, it forms other cyanide compounds that can be just as toxic and are not regulated or monitored for. Threatened and endangered species of birds such as the Bald Eagle, the Osprey, and the Red-Shouldered Hawk are known to frequent the Crandon mine site and could be harmed by ingesting wastewater. Mine wastewaters with cyanide in the small parts per million range can be harmful or fatal to birds and mammals. NMC’s documents state that it will monitor the wastes to determine if anything should be done to discourage wildlife from them – a “wait until we see the bodies” approach that we believe is simply irresponsible.

Finally, I wish to comment on some of the misleading arguments made by the mining industry against SB 160. You will hear today that coffee contains cyanide. This interesting fact is used to imply somehow that cyanide is safe, but has nothing to do with SB 160. You will hear today that road salt contains cyanide, and sometimes it does. But it is iron cyanide that is sometimes used in road salt – a much less soluble form of cyanide than sodium cyanide used in mining. We can all agree that it is necessary to use road salt at times for public safety, but sodium cyanide in Wisconsin mines has little if any public benefit.

You will also hear today that the mining industry is being picked on or singled out for additional regulation, when other state industry use cyanide too. Mining is being singled out, but for good reasons. It is common for legislatures to target regulations and to restrict or prohibit on certain activities related to a broader problem. Courts have repeatedly upheld such regulations. The mining industry would use far more cyanide than any other industry. The Crandon mine alone could use an estimated 200 tons of cyanide or more per year. Other potential Wisconsin mines would also use large amounts of cyanide.

Only three other companies in Wisconsin reported cyanide wastes to the federal Toxic Release Inventory program for 1999. Of those, the largest amount reported was just over 48,000 lbs. Nicolet Minerals could use 10 times that amount or as much as 480,000 lbs. of sodium cyanide at the Crandon proposal in one year. Other companies using cyanide in Wisconsin must also comply with stricter standards than mining. Mining is allowed to discharge cyanide wastes into waste dumps that are allowed to pollute groundwater far in excess of solid waste landfills. Mining is also different than most other industries in that it takes place in the rural natural environment. For example, the Crandon mine would be sited on top of an in the middle of wetlands and is surrounded by lakes and streams that flow through the Mole Lake Sokaogon Community's only wild rice lake and on into one of the state's most treasured resources, the Wolf River – which flows into Lakes Poygan, Butte des Morts and Winnebago.

When I looked at other state industries using sodium cyanide, I was pleased to find that there are no companies using any sodium cyanide in any city north of Rothschild in Marathon County. This means that the northern third of our state is cyanide – free, so far. On behalf of the Sierra Club – John Muir Chapter, I urge you to support SB 160 to help us keep northern Wisconsin cyanide-free.

From: resenergy@mwt.net
Sent: Monday, May 14, 2001 10:35 AM
To: lynchl@dnr.state.wi.us
Cc: Sen.Baumgart@legis.state.wi.us; Sen.Wirch@legis.state.wi.us;
Sen.Cowles@legis.state.wi.us; Sen.Schultz@legis.state.wi.us;
Sen.Hansen@legis.state.wi.us
Subject: Open Records Law Request

Open Records Law Request
Hard copy to follow

May 14, 2001

Tom Wilson
Northern Thunder
416 East Court Street
Viroqua, WI 54665
phone & fax 608-637-3356
Resenergy@mwt.net

TO: Larry Lynch
Department of Natural Resources

This is to request, under the state's Open Records Law (19.35, Wis.State Statutes), access to correspondences and relative background material relating to requests by Senator Baumgart for a DNR response to two issues raised in my testimony before the Senate Environmental Resources Committee on SB 160, Bill to Ban Cyanide in Mining, Thursday May 10, Madison, WI.

Specifically I made two assertions to which Senator Baumgart requested further explanation from your department.:

1) "We have seen how flawed the present mine permitting system is where computer groundwater models under which the Flambeau Mine was permitted were allowed to be modified twice after the fact to meet new lower standards as original projections could not be met and the massive flows of the Flambeau River are allowed to dilute acid mine run off before ground water standards 1,000 feet on the other side of the river are compromised," and

2) "The same technologies, apparently being accepted by our DNR for the perpetual storage of the cyanide-laced tailings (rated toxic waste in any but the federally-exempted mining industry)

facility at Crandon are the same types of configurations typically used in the heap leach facilities elsewhere--though to be built here to less rigorous standards than are required in other states. It should be noted, standards in other states far exceed those in Wisconsin, despite what some DNR officials claim: "Nevada ...has promulgated the most advanced cyanide mill tailings facility regulatory framework. The State of Nevada minimum design criteria for tailings impoundments include a 12 inch thick soil liner with a coefficient of permeability of 10⁻⁶ cm/sec, or equivalent. The design criteria for tailings impoundments under 192 requires three layers of solution containment - two of flexible geomembrane and a bottom liner of 3 feet of compacted soil with a coefficient of permeability no greater than 10⁻⁷ cm/sec, with geotextile leak detection collection system between the liners." (Risks Posed by Beville Wastes, Environmental Protection Agency, 1997)"

As for the first issue, I have in my possession data from the Flambeau mine monitoring wells only as of October 1999, but it is my understanding that the numbers have changed very little since that date. I would appreciate more recent monitoring well numbers, if available, and to be provided with same as future reports are filed by the mining company. I also understand that these numbers were not, in fact, included in the most recent periodic reports from the mining company and would be interested to know why this was not required. Further, the DNR website regarding the Flambeau reclamation states "In addition, as part of its inspection/surveillance program, the Department conducted periodic independent sampling to verify the results obtained by the company. Groundwater monitoring will continue at the site for at least the next 40 years to determine conditions within and around the backfilled pit." All of the data I have seen has been provided by the mining company itself. Is the DNR, in fact, still conducting independent water quality verification sampling and is any of that data available?

As for the second issue, public information provided by 'The Crandon Mining Company' "The Crandon Project Summary Update, 1996" indicates only a single geomembrane with no geotextile leak detection system. Admittedly this is rather dated material and if Nicolet's project plans have been revised and indeed meet the standards of the Nevada minimum design criteria, I would appreciate receiving a copy of these design specifications. Given the heightened vulnerability to ground- and surface water contamination in Wisconsin as opposed

to the relatively arid conditions in Nevada, I would hope that we, at least meet those standards here.

Wisconsin's Open Records Law states, in relevant part: "In recognition of the fact that a representative government is dependent upon an informed electorate, it is declared to be the public policy of this state that all persons are entitled to the greatest possible information regarding the affairs of the government and the official acts of those officers and employees who represent them. Further, providing persons with such information is declared to be an essential function of a representative government and an integral part of the routine duties of officers and employees whose responsibility and duty is to provide such information."

The law continues, "To that end [the Open Records Law] shall be construed in every instance with the presumption of complete public access consistent with the conduct of governmental business. The denial of access generally is contrary to the public interest and only in exceptional cases can access be denied."

If any part of my request is denied, please state what part of the law you believe entities you to do so, and advise me of the process through which I may appeal.

As you know, the law requires you to respond to this request as promptly as possible. Thank you for your time and consideration.

Sincerely

Tom Wilson

Testimony Before
Senate Environmental Resources Committee on
SB 160, Bill to Ban Cyanide in Mining
Thursday May 10, Madison, WI

By
Tom Wilson
Representing Northern Thunder
416 East Court Street
Viroqua, WI 54665
phone & fax 608-637-3356
Resenergy@mwt.net

Thank you for the opportunity to address you today. I would like to start off by congratulating all of us in this room and the many thousands of groups and individuals across the state --legislators (especially those on this committee), Governor McCallum, Secretary Bazzell, sports people, environmental advocates, business leaders, farm groups and just plain folk -- who recently demonstrated an unprecedented show of unified, bipartisan support to restore the authority of the Department of Natural Resources (DNR) to provide oversight over thousands of acres of isolated wetlands in our state. As first in the nation to make this move, this is a model of statesmanship and stewardship of which we can all be proud.

I am speaking to you today representing Northern Thunder, the Western Regional Hub for the Wisconsin Stewardship Network, for whom I am Co-chair of the Metallic Mining Issues Committee. WSN is a network of hundreds of hunting, fishing, environmental and other non-traditional allied groups who have committed themselves to key state-wide issues including the mandate to promote general public education on the mining, strengthen the rules regulating metallic mining in Wisconsin and demand fair and thorough enforcement of existing mining law.

There are undoubtedly several people here today who can speak more eloquently than I to the many historic environmental debacles associated with the use of cyanide in mining, but as one who recently returned from a trip to Austria and Germany where I had a teaching engagement, I can assure you, the historic lesson of their experience with this technology and the devastation wrought upon the Danube River has not been lost on their psyches and regulatory agencies.

Specifically today I would like to focus on a couple of inherent flaws in the defense of the use of this highly toxic material as offered in recent press statements from the Nicolet Minerals Company; namely that this proposed legislation is unfairly directed at a specific project or a specific industry.

The company claims that the vat floatation beneficiation processes proposed for the Crandon/Wolf River mine is inherently different than the heap leach technology associated with many of the worst environmental disasters regarding cyanide spills. Although it is true that many of the *worst* cases of poisoned rivers and aquifers have occurred at heap leach processing facilities, by no means are they the only sites where critical events have occurred.

The proponents of this risky technology seem to want us believe this bill is directed only at the Crandon project. As one whose property in Jackson County has been eminently threatened by minerals development actions by the Kennecott Corporation, let me assure you, there are plenty of hungry international mining conglomerates just waiting in the wings to jump is as soon as they perceive, once again, a favorable political climate, lax environmental standards, or in this case, no authority at all to the regulatory authority to forbid the use of these inherently risky technologies

Kennecott Minerals (A.K.A. Rio Tinto Ltd. or Flambeau Mining) once also proposed the establishment of a massive gold and copper mineral processing facility on the banks of the Flambeau River. Wait you say,

I thought this was just a copper mine? So would Kennecott like us to believe. They, like the public relations folks at the Crandon project, typically characterize the gold component of their operation at Ladysmith as being "a small percentage of the overall yield." With copper selling at a peak price of less than \$3 *per pound* and gold selling in the range of \$300 *per ounce*, it doesn't take a great percentage of gold to be a significant draw for the mining sharks. The bottom line, however, is the Flambeau mine was not only one of the richest copper mines in the world (up to 10% copper content) but also yielded between 1 1/2 and 3 ounces of gold per ton as well.¹ The question I ask this committee --and the DNR officials overseeing the Crandon Project, do you know the economic percentage of the gold versus zinc yield from the proposed mine or how many other potentially gold-rich sites lie throughout this state?

The reason this is important is because cyanide is economically the material of choice (although not the only alternative) for the extraction of gold from crushed ore.² This on-site processing liability was why the people of Rusk County initially rejected Kennecott's proposal to develop the Ladysmith site into a full-blown gold and copper processing facility. The yield in gold and copper was so great at this mine, however, it was economically feasible to ship the raw ore many hundreds of miles by rail to Canadian processing facilities, thus sparing Rusk county the *worst* (but by no means all) of the potential environmental damage from this short-lived resource exploitation effort.

Future project communities, including Forest County, may not be so lucky. When the stakes are so high, as at Ladysmith, the mining companies are willing to spend the extra money and go the extra mile, if you will, to use the safest, if not most economic alternatives to reach their goal. As the gold and other yields go down on future proposed projects, the greater the pressure to use more cyanide in ever-greater bulk processing facilities.

The key point I would like to make here is that *any* use of cyanide for the extraction of minerals, whether it be floatation, vat leaching, heap leach or in-situ solution mining (where they inject cyanide directly into the mine cavity) in the State of Wisconsin is a fully legal process that the DNR has no authority to forbid as long as *the numbers* on the computer modeling and the *promise* that there will be no accidents are offered. The "science" of groundwater modeling, toxic transport flows and their environmental impacts are far less well understood than the mining companies would like us to believe.³ The same technologies, apparently being accepted by our DNR for the perpetual storage of the cyanide-laced tailings (rated toxic waste in any but the federally-exempted mining industry) facility at Crandon are the same types of configurations typically used in the heap leach facilities elsewhere--though to be built here to less rigorous standards than are required in other states.⁴

¹ These data were provided (perhaps inadvertently) by Flambeau's chief information officer and, when pressed, never refuted by other company officials.

² "The Agency recognizes that the vast majority of gold mining in the US now relies on the use of cyanide heap and vat/tank leaching. This significant expansion of this form of chemical extraction presents a range of environmental risks was not well understood in 1985. The gold mining sector is now one of the largest industrial consumers of cyanide. ...The introduction of cyanide heap leach designs which originated in Nevada into dissimilar climates and geologies, also presents different type of risks... and there may not be adequate experience with siting factors to adequately control such issues as snow melt, freeze thaw cycles, and avalanche and seismic threats." (Risks Posed by Beville Wastes, Environmental Protection Agency, 1997)

³ "Although bioleaching is similar to leaching of copper ores with sulfuric acid or the production of acid drainage, the combined environmental impacts of acidic drainage and cyanide have not been examined. For example, the kinetics of formation and the stability of metal-cyanide complexes may be different under acidic, rather than basic, pH values. In addition, the long-term acid generation potential of neutralized and cyanidized sulfidic ore has not been investigated. The long-term environmental impacts of bioleaching and other new techniques for recovering precious metals from sulfide ore bodies need to be investigated." (*Hardrock Mining On Federal Lands*, the National Academy of Sciences, 1999 p. 208.)

⁴ It should be noted, standards in other states far exceed those in Wisconsin, despite what some DNR officials claim: "Nevada ...has promulgated the most advanced cyanide mill tailings facility regulatory framework. The State of Nevada minimum design criteria for tailings impoundments include a 12 inch thick soil liner with a coefficient of permeability of 10^{-6} cm/sec, or equivalent. The design criteria for tailings impoundments under 192 requires three layers of solution containment - two of flexible geomembrane and a bottom liner of 3 feet of compacted soil with a coefficient of permeability no greater than 10^{-7} "

We have seen how flawed the present mine permitting system is where computer groundwater models under which the Flambeau Mine was permitted were allowed to be modified *twice after the fact* to meet new lower standards as original projections could not be met and the massive flows of the Flambeau River are allowed to dilute acid mine run off before ground water standards 1,000 feet on the other side of the river are compromised. Were cyanide also included in the effluent, the impacts could be much more intense.⁵

This is not the time to go into these historic failures of the Flambeau process. The bottom line, however, is that the legislature has not, as yet, given the DNR the authority to forbid these inherently risky cyanide technologies.⁶ As long as any future mining company can appear with good-looking numbers projections—no matter how many other disasters with the technology occur world-wide—the DNR can claim lack of legislative mandate—just as they have done with the Perrier project and just as they were forced to do on wetlands destruction before you so wisely gave them that specific authority.

Now is the time for the legislature to step forward on the cyanide issue while there is but one proposal on the board to use this toxic substance. If the present project gets approved using these technologies, the flood gates will be open and any other fly-by-night mining concern can come in, claim the legal precedent has been set, and legitimately claim bias against any future operation.

The mining industry as a whole is not being singled out here. They have already deselected themselves out from standard groundwater regulations, wetland restrictions, local zoning restrictions (via the so-called “local agreement” law) and even corporate taxation requirements. They themselves have asked for and been granted special consideration in these and many other environmental and corporate areas. Since they *don't* have to play by the same rules as everybody else, it is necessary for the legislature to give the DNR the mandate to provide the specific protection capabilities where potential for abuse is apparent. The inherent dangers associated with *any* use of massive amounts of cyanide in the mining industry deserves the same special legislative oversight you have been asked to offer them in every other regulatory realm. Please take on this enabling legislative authority with the foresight and care it deserves.

cm/sec, with geotextile leak detection collection system between the liners.” (Risks Posed by Bevill Wastes, Environmental Protection Agency, 1997)

⁵ “Although cyanide and some cyanide-metal complexes are susceptible to photolytic degradation in surface water, not much is known about how they behave in down-gradient groundwater that eventually may be discharged to surface water or be used for drinking water or irrigation... Like long-term water quality predictions, the modeling of water quantity and hydrologic processes also contains uncertainties. It may not be known, for example, whether some pit lakes will have closed-basin or flow-through hydrologic features, or whether and under what circumstances they may turn over. Long-term ecological, water quantity, and water quality impacts of pit dewatering and discharge of pit water to streams are beginning to be investigated, but results of these studies are not yet available. Site-specific water balances, which in part were responsible for uncontrolled discharges from the mine at Summitville, Colorado, are not sufficiently understood. The flow of water through and interaction with unsaturated waste rock and saturated fractured media is poorly characterized and affects the validity of models that predict the behavior of groundwater in these media. Water quantity affects water quality, and uncertainties in one area compound uncertainties in the other. The following research areas in hydrology warrant further investigation.” (*Hardrock Mining On Federal Lands*, the National Academy of Sciences, 1999 p. 202.)

⁶ “It is frequently assumed that the relatively new advances in hydrometallurgical systems result in better waste minimization characteristics than the more traditional physical separations. This is true only if leaching agents can be entirely recycled or if discharge streams can be treated effectively to eliminate pollutants before discharge. Toxic leaching agents must be contained if subsequent environmental problems are to be avoided.

“Future mineral processing and extractive metallurgy technologies must improve efficiencies in energy consumption, liberation and process metallurgy (including mathematical modeling for process optimization augmented by better sensors and control mechanisms), and most importantly waste reduction and stable disposal techniques. From an environmental standpoint, future technological advances in process metallurgy must address issues pertaining to methods that... efficiently eliminate cyanide and other troublesome processing chemicals safely and rapidly.” (*Hardrock Mining On Federal Lands*, the National Academy of Sciences, 1999 p. 212.)

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copied*

MIDWEST TREATY NETWORK



BAN CYANIDE at CRANDON MINE

Support 2001 Assembly Bill 95/Senate Bill 160

Background Articles on Cyanide in Mining
in Wisconsin United States Outside the U.S.

2001 Assembly Bill 95 to prohibit cyanide in mining:
Web page - <http://www.legis.state.wi.us/2001/data/AB95hst.html>
Adobe Acrobat - <http://www.legis.state.wi.us/2001/data/AB-95.pdf>

Sen. Decker has introduced the Senate version of the cyanide ban, with a few new cosponsors. <http://www.legis.state.wi.us/2001/data/SB-160.pdf>

Circulate petition against cyanide in mining

Print leaflet to ban cyanide in mining

Groups that have signed:
"BAN CYANIDE IN MINING"

- Wisconsin Should Ban Use Of Cyanide In Mining
- Mining Opponents Seek Legislation to Block Mine
- May 10th State Capitol, Senate Bill 160 to ban cyanide in mining
Contact the State Senators on the Environment Committee to support SB 160
- State Groups Support New Bill Assembly Bill 95/Senate Bill 160
- Senate Bill 160 to Ban use of Cyanide in Mining Applauded by Sportfishers, Environmentalists, and Tribes
- Resolutions passed to ban cyanide in WI mining
- What You Can Do to Ban Cyanide in Mining
- Sample Resolution for Local Governments
- Fact Sheet on Cyanide in Wisconsin Mining
- Citing European Disaster, Environmentalists Call For Ban
- Could Toxic Spills Kill State River

LINK: Cyanide in Gold Mining and Facts <http://www.geocities.com/siyanurlealtin/foreignlinks.html>



Wisconsin legislative e-mails and toll-free numbers



Wisconsin Conservation Congress - Question # 76 Ban Use of Cyanide in Mining:

Total voting YES 4,532 (90.7%)	Total Voting NO 411 (9.3%)
Number of Counties Approving 68	Number of Counties Rejecting 3
	Counties Not Voting 1

Opinion from the May 11, 2001
Milwaukee Business Journal
Comment On Mining

Wisconsin Should Ban Use Of Cyanide In Mining

Zoltán Grossman and Dave Blouin

If you liked arsenic in drinking water, you'll love cyanide in mining. The proposed massive use of cyanide at the Crandon zinc-copper mine and possible future gold mines elsewhere in northern Wisconsin is energizing our state's powerful environmental movement.

Last winter, a spill of cyanide-laced mine wastes in Romania destroyed much of the Tisza River ecosystem in Hungary and Yugoslavia. Dead fish by the thousands floated down the Danube, in what has been described as Europe's worst environmental disaster since Chernobyl.

Due to this and many similar mine disasters, we are urging support for new state legislation to prohibit cyanide in mining. Senate Bill 160 was introduced last month as the companion to Assembly Bill 95 to ban cyanide use in Wisconsin mines and was the subject of a Senate Environmental Resources Committee this week.

Unlike the much smaller amounts of cyanide used by a handful of state manufacturers, cyanide used for processing ores at Wisconsin metallic sulfide mines is exempt from hazardous waste laws.

Metallic mining in Wisconsin has its own regulations that are less stringent than for other industry. This means that the mining industry can dump toxic cyanide into its waste dumps and into groundwater, creating potential long-term pollution of drinking water and fishing streams around mine sites.

Cyanide wastes can cause immense problems in groundwater, as seen in West Allis, where cyanide-contaminated wood chips were moved to a landfill at a cost of \$2.5 million.

However, the greatest source of cyanide accidents worldwide has been the mining industry. In the United States alone, cyanide waste in open mine waste ponds has killed thousands of birds and other wildlife, and hundreds of miles of riverways have been poisoned.

Voters in the pro-mining state of Montana have banned cyanide in mining, as has the Czech Republic and Wisconsin's own Vilas and Oneida counties.

A major problem with cyanide use in mining is how it reaches the mine site. The state of Wisconsin agrees with us that transportation of cyanide to mine site is a public concern. Nicolet Minerals Co. proposes to truck up to 200 tons per year of cyanide to its proposed Crandon mine in the headwaters of the Wolf River.

A cyanide-laden truck recently overturned into a ditch in South Dakota, avoiding disaster only due to a cushion of snow.

The company says that cyanide wastes will break down, but neglects to add that cold weather slows the breakdown or that the resulting compounds are also dangerous to fish.

Many local governments and organizations are not buying the company's claims and are supporting SB-160 and AB-95. More than 11,000 Wisconsin citizens have signed a petition for a cyanide ban in mining. Langlade County, downstream from the Crandon site, and Rusk County, home of the former Ladysmith mine, have passed resolutions for a ban.

Milwaukee, Appleton and other cities have also signed on. The Wisconsin Conservation Congress voted last month to support a ban, joined by sport fishing organizations such as Trout Unlimited and Walleyes for Tomorrow.

Numerous environmental groups and tribes have added their voices to the largest upswell in public opinion about mining since the 1998 Mining Moratorium Law was weakened by the DNR. Elected officials who do not adequately protect the public from toxic chemicals such as arsenic and cyanide may end up poisoning their political futures.

Zoltán Grossman is a University of Wisconsin-Madison doctoral student in geography and a co-founder of the Wolf Watershed Educational Project. Dave Blouin, is state vice chair of the Sierra Club and coordinator of the Mining Impact Coalition.

MINING OPPONENTS SEEK LEGISLATION TO BLOCK MINE

May 10, 2001
Milwaukee Journal Sentinel

MADISON, Wis. (AP) - Mining opponents have a new plan for blocking a proposed mine south of Crandon - pushing for a legislative ban on the use of cyanide, a chemical commonly used in mining metals.

Supporters of the bill are betting that a statute prohibiting the use of cyanide would, in effect, kill plans by Nicolet Minerals Co. for an underground copper and zinc mine at the Forest County site.

The company is seeking local, state and federal permits for the mine. After seven years, a state review of the project is only 75 percent complete.

Rep. Spencer Black, D-Madison, one of the bill's sponsors, said spills of cyanide at other mines, including one last year in Romania that contaminated the Tisza and Danube rivers, prove the ban is needed. "This bill's very simple," Black told members of the Senate Environmental Resources Committee Thursday. "It's a tool for a clean environment."

But a representative for Nicolet, a subsidiary of London-based Billiton Plc, said environmentalists are trying to frighten lawmakers into passing a ban that isn't needed to protect the area or keep pollution from the nearby Wolf River.

Mines where the cyanide spills have occurred used an open-pit mining method where ore is piled into a heap and sprayed with a cyanide solution that separates the metal from the rocks. The solution is recovered at the bottom of the heap and then piped through a process that separates the metals from cyanide. Open-pit mining was banned in Montana by a 1998 voter referendum.

Crandon would not have open pits. Instead, it would use an indoor facility where ore would be treated in a water-based cyanide solution, said Debra Struhsacker, a consultant for Nicolet.

Once the mineral has been collected, bubbles from an agitator would lift the mineral to the top of the tank as froth, where it would be removed. The mining facility will be built to contain any chemical spills, Struhsacker said.

Larry Lynch, mining team leader for the Department of Natural Resources, said the proposed legislative ban on cyanide doesn't distinguish between those two mining methods.

Open-pit mining is difficult to control, while the flotation method, where the chemical is diluted, presents little risk of dangerous levels of cyanide being released into the environment, Lynch said. But several residents said they don't want the poisonous substance coming anywhere near their communities or traveling by truck on their roadways.

"That scares us," Forest County Potawatomi Tribal Chairman Gus Frank said. "We all know too well that truck is going off the road."

Nicolet would transport seven tons of cyanide a month to its mine in the form of solid briquettes that dissolve in liquid, officials said.

In nearby Nashville, the town board is appealing a judge's ruling that found a 1996 agreement between the town and Nicolet Minerals was valid. "The mining company is only responsible for spills inside that fence. The rest of it's ours," Nashville Town Chairman Chuck Sleeter said.

Nicolet Minerals sued the town after mine opponents elected to the board in 1997 rescinded the agreement, which authorized the necessary local permits for the project.

The Senate committee did not vote on the bill Thursday.

THURSDAY, MAY 10

9:30 am

***Room 201 Southeast* in State Capitol
Senate Bill 160 to ban cyanide in mining**

(companion to Assembly Bill 95) will have a hearing in the Senate Environmental Resources Committee. AB- 95 is sponsored by Rep. Spencer Black, and SB-160 by Sen. Russ Decker. Please come to sign in and testify for SB-160! The "Black and Decker" Bill will be the fourth item on the agenda:

SB-15. Prohibits DNR from requesting social security numbers.

SB-156. Exceptions from requirement to obtain a license to practice professional geology, hydrology or soil science.

SB-159. Prohibits drilling beneath beds of the Great Lakes and adjacent waters to explore for or produce oil or gas.

SB-160. Prohibits use of cyanide in metallic mining. (The Committee may go into executive session and take a vote on SB-160.)

Madison people will be meeting Wednesday, May 9, at 7 pm in Catacombs (Pres House basement) to plan for the hearing, upcoming support for AB-95 / SB-160 and other Crandon mine business. At the hearing we will have a banner, signs (no sticks), headstones, etc. This is a chance to show our

alliance to the media and public.



Wisconsin Campaign to Ban Cyanide in Mining Action Alert: Contact the State Senators on the Environment Committee to support SB 160



Senate Bill 160 - Bill to ban cyanide for Wisconsin mines - is the subject of a Senate Environment committee hearing this Thursday, May 10, 9:30 a.m. in Room 411 South in the State Capitol. State Senators on the committee: Jim Baumgart, Robert Wirch, Dave Hansen, Dale Schultz, and Robert Cowles. Each is very willing to hear from his constituents and other state residents about what you think of cyanide in mining. This includes the projected use of up to 200 tons each year of the toxic chemical at the Crandon mine, located at the headwaters of the Wolf River. More background follows below.

Call or email the members of the State Environment committee before this Thursday and urge them to support SB 160.

- Senator Cowles: 800-334-1465, Sen.Cowles@legis.state.wi.us
- Sen. Dale Schultz - 800-978-8008, Sen.Schultz@legis.state.wi.us
- Senator Wirch: 888-769-4724, Sen.Wirch@legis.state.wi.us
- Sen. Jim Baumgart - 888-295-8750, Sen.Baumgart@legis.state.wi.us
- Sen. Dave Hansen - 866-221-9395, Sen.Hansen@legis.state.wi.us

Please call or leave a message before the Thursday hearing, and if you are a constituent of a committee member, be sure to let them know.

Wisconsin Campaign to Ban Cyanide in Mining More info at www.alphacdc.com/treaty/cyanide.html

STATE GROUPS SUPPORT NEW BILL BANNING CYANIDE USE IN WISCONSIN MINES, on First Anniversary of European Mining Disaster

Monday, January 29, 2001

HOW YOU CAN HELP at bottom of article.

Contacts:

- Assembly Representative Spencer Black, 608-266-7521
- Caryl Terrell, Sierra Club-John Muir Chapter, Madison 608-256-0565
- Kenneth Fish, Director, Menominee Treaty Rights and Mining Impacts, Keshena 715-799-5620
- Tom Soles, Executive Director, Walleyes For Tomorrow, Fond du Lac 920-579-7911
- Zoltan Grossman, Midwest Treaty Network/ Wolf Watershed Education Project, Madison 608-246-2256 mtn@igc.org
- Dave Blouin, Mining Impact Coalition 608-233-8455 burroak15@aol.com

Madison, WI --Representatives from several statewide organizations today marked the first anniversary of the horrific mining waste spill in Romania last year, by calling for support for strict legislation that would ban all uses of cyanide in Wisconsin mining. The most recent proposal to mine in Wisconsin, the Crandon proposal, would use as much as 200 tons of cyanide annually.

The legislation states in its entirety: "No person may conduct mining or metallic ore processing using cyanide or a cyanide compound." The Assembly Bill will have a number later this week. Proponents of the legislation already 10,000 signatures on a petition supporting the cyanide prohibition.

In 1999, voters in the state of Montana passed a new law prohibiting cyanide heap and vat leaching after suffering scores of mine waste spills and leaks, unauthorized discharges, and accidents involving millions of gallons of cyanide contaminated wastes. The owner of the proposed Crandon mine, the London-based South African company Billiton, has plans to truck in as much as 200 tons or more of cyanide annually to process ore. In recent years, the mining industry has caused many significant cyanide spills due to transportation and shipping accidents, waste dump spills and leaks, and pipeline and other mechanical failures.

This new bill will address all possible avenues for cyanide contamination by banning all uses in mining. (Cyanide-based mining has also been banned in the Czech Republic, and in Wisconsin's Vilas and Oneida counties.)

On January 30, 2000, Australian mining company Esmeralda spilled 3.5 million cubic feet of cyanide contaminated and heavy metal-laden waste water into Romanian rivers. The pollution flowed through Hungary's Tisza River to Yugoslavia and on into the Danube, killing all aquatic life in a 250-mile stretch of the river system. Four weeks after the spill, the cyanide plume was measurable in the Danube delta of the Black Sea, more than 2,500 miles downstream from the spill. More than 1,200 tons of fish were estimated to have perished. In July last year, the Hungarian government sued Esmeralda for damages in the amount of \$107 million.

State Rep. Spencer Black, author of the Bill to Ban Cyanide in Wisconsin Mines, said, "The residents of Wisconsin were not convinced by mining company promises that new technology would allow them to mine safely when, three years ago they supported my efforts to pass the mining moratorium bill. Sadly, the residents of Romania, Yugoslavia and Hungary learned their lesson the hard way."

Rep. Black continued, "Because of the dangers of cyanide, and the disasters seen across the world, I have introduced a bill in the legislature to ban the use of cyanide in mining operations in Wisconsin. My bill would prevent a disaster such as the recent disaster in Romania and others that have been seen across the country. My goal is to seek passage of the cyanide ban this legislative session. The state of Montana has already adopted a similar law after suffering from widespread environmental damage from mining operations using cyanide."

Caryl Terrell, Legislative Coordinator for the Sierra Club-John Muir Chapter said, "Our rivers, streams, groundwater, and wetlands deserve strong protection, but current state law does not prohibit unsafe mining practices such as cyanide heap leaching that have caused huge problems throughout our western states and around the world. We are very pleased to see strict language in the bill that will ban the use of cyanide in Wisconsin mining and help us avoid the environmental damages others have been forced to suffer."

Tom Soles, Executive Director of Walleyes For Tomorrow said, "Cyanide is simply too dangerous to be used at mines where it can get into streams and rivers. Fish are killed when they come into contact with incredibly small amounts of cyanide, in the parts per billion range. We can't afford to take chances with the Wolf River fisher or any of our resources by allowing cyanide to be used here."

Ken Fish, Director of the Menominee Treaty Rights and Mining Impacts Office said, "It's easy to

wake up and smell the coffee. Citizens need to wake up and understand and realize the use of cyanide in mining has been internationally proven to be dangerous to the health, safety, and welfare of humans and the environment. Policy makers and Lawmakers and their enforcers, need to wake up and smell the coffee and do their JOB in protecting Humans and Natural Resources from uses of various chemicals at sulfide mine sites."

Zoltan Grossman of the Midwest Treaty Network's Wolf Watershed Educational Project said, "Cyanide has already proven its danger, even beyond last year's Romanian mine disaster. The Summitville mine disaster destroyed a river in Colorado, during the watch of our new Interior Secretary Gale Norton. The Wisconsin Energy cyanide disaster contaminated part of West Allis. What more do we need? Wisconsin wants to have the strongest mining laws in the nation, but we are behind others on banning cyanide."

The United Nations Environmental Program published a report detailing the damages caused by the Baia Mare spill in March 2000. The report and other information about the disaster are available at: <http://www.natural-resources.org/environment/baiamare>.

Additional background info on cyanide use in mining can be found in **Background Articles on Cyanide in Mining: in Wisconsin, Unites States, and Outside the U.S.**

HOW YOU CAN HELP

1. Call your Assembly Representative and State Senator today (even if you don't know who they are) toll-free at (800) 362-9472, to vote for the Bill to Ban Cyanide in Wisconsin Mines.
2. Contact Governor Scott McCallum to sign the cyanide ban bill, at (608) 266-1212 or wisgov@mail.state.wi.us. Write him and your two representatives separately at the State Capitol, Madison WI 53702. (If you are from outside Wisconsin, emphasize how you enjoy visiting the clean Wolf River and other state rivers.)
3. Get your county and local governments to pass an anti-cyanide resolution, which you can print out.
4. If you wish to receive alerts on the cyanide prohibition bill, send your e-mail address to mtn@igc.org, or write: Wisconsin Campaign to Ban Cyanide in Mining, c/o Midwest Treaty Network, P.O. Box 14382, Madison, WI 53714-4382 USA.
5. Write letters to newspapers and call radio talk shows about protecting Wisconsin's rivers and roadways from 200 tons of cyanide shipments a year to the Crandon zinc-copper-gold mine, and the certain use of cyanide in any future proposed Wisconsin gold mines.
6. Print out a petition to circulate at <http://www.alphacdc.com/treaty/petition.html> and please send it in soon!
7. For updates on the bill number and progress call the toll-free Hotline at (800) 445-8615, and log on the Midwest Treaty Network website at <http://www.treatyland.com>
8. Have your group join the Wisconsin Campaign to Ban Cyanide in Mining. Simply send an e-mail endorsement to mtn@igc.org.
9. Contact Assembly Committee on the Environment Chairman Neal Kedzie to back AB 95/SB 160 Rep.Kedzie@legis.state.wi.us 888-534-0043
10. **1. We are at a critical point on Assembly Bill 95/Senate Bill 160, to ban cyanide in mining. The bill is in the Assembly Environment Committee chaired by Neal Kedzie (R-Elkhorn) and would move forward to hearing; if we can find Republicans to co-sponsor**

AB 95/SB 160. Please forward this message to friends in the following districts, so their constituents can call:

- Chairman Kedzie 43rd (Walworth County). Everyone should call him at 888-534-0043 to hold hearings on AB95. Some other key prospects with toll-free numbers are:
- Rep. Jerry Petrowski 86th (Wausau area) 888-534-0086 [district includes Reef gold deposit in Easton]
- Rep. Donald Friske 35th (Antigo area) 888-534-0035 [signed our anti-cyanide petition]
- Rep. Alvin Ott 3rd (L. Winnebago area) 888-534-0003 [downstream from Wolf River]
- Rep. DuWayne Johnsrud 96th (Eastman area) 888-534-0096 [on the environment committee]
- Sen. Robert Cowles (Green Bay area) 800-334-1465 Please ask them to contact Committee Chairman Neal Kedzie, and sign on to AB95 to ban cyanide in mining. Let us know if you have any more suggestions for Republican co-sponsors.
- Rep. Dean Kaufert 55th 888-534-0055 [helped on mercury emissions]

Co-sponsors of cyanide prohibition bill, as of April, 2001:

ASSEMBLY (AB-95) Black, Balow, Berceau, Bock, Carpenter, Cullen, Huber, LaFave, Lassa, Lehman (J.), Miller, Plouff, Pocan, Richards, Young, Morris-Tatum, Reynolds, Sherman, Turner, Staskunas, Krawczyk
SENATE (SB-160) Decker, Baumgart, Burke, Risser, Hansen, George

Assembly Bill 95 is being submitted by Rep. Spencer Black to the Assembly Committee on the Environment (Neal Kedzie, Chair).

Senate Bill 160 is being referred by Sen. Russ Decker to the Senate Committee on Environmental Resources (Jim Baumgart, Chair).

SENATE BILL 160 TO BAN USE OF CYANIDE IN MINING APPLAUDED BY SPORTFISHERS, ENVIRONMENTALISTS, AND TRIBES

April 30, 2001,

Contacts:

Dave Blouin, Sierra Club-John Muir Chapter 608/233-8455 burroak15@aol.com

Zoltan Grossman, Midwest Treaty Network/ Wolf Watershed Education Project, 608-246-2256

mtn@igc.org

Bill McClenahan, Martin Schreiber & Associates, 608/259-1212 ext. 4

Tom Wilson, Wisconsin Stewardship Network, 608/637-3356

Wisconsin environmental and conservation groups today applauded the introduction of a bill banning the use of cyanide in mining. Senate Bill 160, was introduced in the state Senate by Sen.

Russ Decker (D-Schofield).

"Cyanide is an incredibly toxic chemical, especially for fish," said Tom Wilson from the Wisconsin Stewardship Network. "Many rivers in the U.S. and around the world have been poisoned by cyanide from mine sites and transportation of cyanide to mines. Wisconsin cannot take that chance, especially when the Crandon mine is proposed near the headwaters of the Wolf River."

"We appreciate Sen. Decker's work on behalf of SB 160 and his continued efforts to safeguard Wisconsin's environment from unsafe mining practices," said Dave Blouin, vice chairman of the state Sierra Club. "SB 160 clearly has strong statewide support; the conservation congress voted more than 10 to 1 in favor of the cyanide ban for mining at its April hearings. The Rusk and Langlade County boards and a number towns and cities have already voted to support the ban. More than 11,000 residents have signed petitions supporting the cyanide ban."

SB 160 will be the subject of a public hearing by the Senate Committee on Environmental Resources, chaired by state Sen. Jim Baumgart (D-Sheboygan), a cosponsor of the bill. SB 160 and its Assembly companion bill, AB 95, would prohibit the use of cyanide and cyanide compounds in mining for metallic minerals and in processing metallic ore.

Among those supporting the bill is the Forest County Potawatomi Community. The tribe's reservation is just east of the proposed Crandon mine. Tribal Chairman Harold "Gus" Frank said, "For generations, our people have depended on the waters and fish of Wisconsin. Mining waste or cyanide spills will poison those waters. Water is precious - more precious than copper or gold or mining company profits."

The Wisconsin Campaign to Ban Cyanide in Mining is urging its supporters to contact their legislators to support both AB 95 and SB 160 and to request public hearings and votes on both bills.

"Cyanide in mining has become to environmental politics in Wisconsin what arsenic in drinking water has become to the country as a whole," said Zoltan Grossman of the Midwest Treaty Network's Wolf Watershed Education Project. "State residents recognize the threat to our drinking water and our fisheries from the use of cyanide in mining. This is a unique opportunity for legislators of both parties to prove their commitment to the environment, which has become a major issue for the next election."

SB 160/AB 95 would ban cyanide use in all Wisconsin mining, including the proposed Crandon mine and possible future gold mines. Cyanide is used to extract gold and other metals from ore.

The Crandon mine, if permitted, would use 200 tons or more of cyanide per year. The mine site is in a wetlands area surrounded by lakes and streams that feed into the pristine wolf river. According to Blouin, as little as a teaspoon of 2% cyanide can kill a human, and much smaller amounts are toxic to fish. The Nicolet Minerals Company claims that the vat flotation process it plans at the Crandon mine is safer than the heap leach process associated with many cyanide disasters. Blouin responded that whatever process the company uses on site, many tons of cyanide will be trucked to the mine, and need to be disposed on the site after use. He added that the company currently has no proposal to deal with the leftover cyanide.

In 1999, voters in the state of Montana passed a law restricting the use of cyanide in mining. Voters acted after the state suffered scores of accidents, unauthorized discharges, and leaks and spills of mine wastes that involved millions of gallons of cyanide contaminated wastes. In recent years, the mining industry has been associated with many more cyanide disasters than any other industry, including many significant cyanide spills due to transportation and shipping accidents, waste dump spills and leaks, and pipeline and other mechanical failures.

On January 30, 2000, Australian mining company Esmeralda spilled 3.5 million cubic feet of cyanide contaminated and heavy metal-laden wastewater into Romanian rivers. The pollution flowed through Hungary to Yugoslavia and on into the Danube, killing all aquatic life in a 250-mile stretch

of the river system. Four weeks after the spill, the cyanide plume was measurable in the Danube delta of the Black Sea, more than 2,500 miles downstream from the spill. More than 1,200 tons of fish were estimated to have perished. In July last year, the Hungarian government sued Esmeralda for damages of \$107 million. In response to the spill, the Czech Republic passed legislation banning the use of cyanide for mining.

Passed resolutions for a ban on cyanide in Wisconsin mining:

- Menominee Indian Tribe
 - City of Franklin
- Town of Ellington, Outagamie County
- Village of Combined Locks, Outagamie Cty.
- Town of Deer Creek, Outagamie Cty.
- Town of Liberty, Outagamie Cty.
- Town of Wolf Riverr, Langlade Cty.
- Town of Nashville, Forest Cty.
- Town of Ainsworth, Langlade Cty.
- Town of Westcott, Shawano Cty.
- Town of Mukwa, Waupaca Cty.
- Village of Fremont, Waupaca Cty.
- City of New London, Waupaca Cty.
- Town of Oshkosh, Winnebago Cty.
- Town of Waukechon, Shawano Cty.
- Town of Poygan, Winnebago Cty.
- Town of Winneconne, Winnebago Cty.
 - Milwaukee City Council
 - Langlade County
 - Appleton City Council
 - Forest County Potawatomi
 - Rusk County
- Clean Water Action Council of Northeastern Wisconsin
 - Door County Environmental Council
 - EarthWINS
 - ECCOLA
 - Northern Thunder
 - Walleyes For Tomorrow
- Mining Impact Coalition of Wisconsin Inc.
- Natural State Water Protection Association
- Protect Our Wolf River- Shawano County
 - Rainforest Information Centre
 - Rusk County Citizens Action Group
 - Sierra Club-John Muir Chapter
 - Superior Wilderness Action Network
 - United Steelworkers Local 1527
 - University of WI Greens
 - Walleyes For Tomorrow
 - Wisconsin Conservation Congress
 - Wisconsin's Environmental Decade
 - Wisconsin Greens
 - Wisconsin Resources Protection Council
 - Wisconsin Trout Unlimited
 - Wolf River Watershed Alliance
- Wolf Watershed Educational Project/Midwest Treaty Network