

MINUTES

MONTANA SENATE  
51st LEGISLATURE - REGULAR SESSION

COMMITTEE ON NATURAL RESOURCES

Call to Order: By Thomas F. Keating, on March 8, 1989, at  
1:00 p.m., Room 405, of the State Capitol.

ROLL CALL

Members Present: Senators: Thomas Keating, Larry Tveit,  
Fred Van Valkenburg, Loren Jenkins, Darryl Meyer,  
Lawrence Stimatz, Pete Story, Elmer Severson, Cecil  
Weeding, Dorothy Eck, and Jerry Noble

Members Excused: None

Members Absent: Senator Bill Yellowtail

Staff Present: Bob Thompson and Helen McDonald

HEARING ON HB 540

Presentation and Opening Statement by Sponsor:

Representative Bob Raney, District #82, sponsored this  
bill for the purpose of making the existing law do what  
has always been intended: that approval of the plan  
must be received before construction can begin.

List of Testifying Proponents and What Group they Represent:

Julia Page, Yellowstone Raft Company  
Betty DeWeese, Gardiner, Montana  
Linda Stoll-Anderson, Lewis & Clark County Commissioner  
Dan Frazer, Dept. of Health & Environmental Sciences

List of Testifying Opponents and What Group They Represent:

None

Testimony:

Julia Page submitted written testimony. (Exhibit #1)

Betty DeWeese is deeply disturbed with events that are  
occurring in the upper Yellowstone valley. In the last  
three years the Church Universal and Triumphant has  
applied for sewer and water permits and has proceeded  
to clear, dig, and place piping systems in the upper  
Yellowstone valley without the required environmental

impact statement.

Linda Stoll-Anderson supports this bill because it clarifies an existing law to protect public property.

Dan Fraser submitted written testimony. (Exhibit #2)

Questions From Committee Members:

Senator Jenkins asked why the change from "shall" to "will"?

Bob Thompson said the drafter did that to be consistent with the bill drafting manual.

Closing by Sponsor: Representative Raney closed.

The hearing is closed on HB 540.

HEARING ON HB 482

Presentation and Opening Statement by Sponsor:

Representative Vicki Cocchiarella, Dist #59, introduced this bill with amendments because there is another bill similar to this brought by Representative Wyatt from Great Falls. This bill makes it possible for a small business to go back into operation quickly if it has a failure in the sewer or water system. This bill does not lower standards for small water and sewer systems. The local government agencies can request authority from the Department of Health and Environmental Sciences but only if the agency is doing these kinds of reviews already. Small businesses and contractors will be quickly served and back in business sooner.

List of Testifying Proponents and What Group they Represent:

Dan Fraser, Dept. of Health & Environmental Sciences  
City Engineer from Great Falls

List of Testifying Opponents and What Group They Represent:

None

Testimony:

Dan Fraser submitted written testimony. (Exhibit #3)

The city engineer from Great Falls supports this bill and asks the committee to endorse the legislation.

Questions From Committee Members:

Senator Stimatz asked about the definition of a small public water system as being less than ten service connections?

Representative Cocchiarella said the rulemaking process of the Department of Health and Environmental Services (DHES) will make sure that these are small systems.

Senator Jenkins asked why change "less than ten" to "small"? Why not keep "less than ten" in there?

Dan Fraser said the reason for that language was to make sure that the department was only delegating the review of non-community public systems such as bars, restaurants, etc. The department would also like flexibility to delegate review of extensions of existing public systems. This act only covers public systems which serve at least 25 people a day, for a minimum of 60 days a year.

Senator Keating said the language for the public sewage system says "serves 10 or more or 25 or more". That is almost a dual definition within a single definition. Does the department make a determination of size on its own?

Dan Fraser said there are two types of public systems, community and non-community. A bar or restaurant outside the city limits that has its own water system and serves 25 or more people a day for a minimum of 60 days out of the year would be a non-community system. A subdivision that had 10 or more homes and its own water supply would be a community system.

Mr. Fraser said the department doesn't review anything that isn't public. This bill gives the department more flexibility to delegate more review than it had before.

Senator Eck asked how many local governments have the expertise to do the necessary reviews?

Mr. Fraser answered maybe one or two small governments would be interested and probably a half-a-dozen county health departments have the expertise to do non-community systems and extensions.

Closing by Sponsor: Representative Cocchiarella closed by saying this is a simple small business bill and she hopes that the committee passes it.

The hearing on HB 482 is closed.

Presentation and Opening Statement by Sponsor:

Representative Ed Grady introduced this bill regarding contaminated groundwater and leaking landfills. He stated that cleanup is expensive and time consuming. The potentially hazardous nature of solid waste landfills calls for implementation of systems monitor the extent of groundwater contamination caused by leakage.

Representative Grady said this bill will establish appropriate requirements for groundwater monitoring at municipal solid waste landfills that serve a population of 5,000 or more. The Department of Health and Environmental Sciences (DHES) will establish a priority list identifying sites which pose the greatest risk. This bill will require owners and operators with high priority sites to submit proposed plans to DHES for groundwater monitoring by January 1, 1991. All other sites must comply by January 1, 1992. Representative Grady handed out a list of the present landfill dumps that are monitoring now (the ones that are highlighted) and the ones showing leaking from contaminated groundwater. (Exhibit #4) There was a concern about how the county was going to pay the cost of putting in wells and the monitoring. He thought the cost would be passed on to the people in the landfill district who use the landfill. An amendment was passed out for the committee's consideration. (Exhibit #5)

List of Testifying Proponents and What Group they Represent:

Chris Kaufman, Montana Environmental Information Center  
Will Selser, Lewis & Clark County Health Dept.  
Stan Bradshaw, Trout Unlimited  
Lorna Frank, Farm Bureau  
Max Bauer, Jr., Browning Ferris Industries  
Jim Leiter, Dept. of Health & Environmental Sciences

List of Testifying Opponents and What Group They Represent:

None

Testimony:

Chris Kaufman said this bill will give the community information about the quality of their drinking water. This bill affects landfills serving a population of 5,000, or more which is about 28 of Montana's landfills. Only 11 landfills have a monitoring system in place and about 6 would have a system that would be adequate to meet the requirements of the bill. She assumes that of the 110 landfills operating in Montana,

about 50 or more are leaking. The landfills are not always sited well and contain a certain amount of moisture that leaches through the soil to the groundwater.

Will Selser said Lewis & Clark County is spending \$10,000 a year on monitoring landfills. He thinks this bill addresses a fairness issue to the people running landfills and the people who live around those landfills. When groundwater is contaminated, it is expensive to get cleaned up and to make drinking water safe.

Stan Bradshaw said he has an interest in this bill because groundwater often becomes surface water and poses a threat to fisheries.

Lorna Frank is concerned about groundwater pollution and feels that all reasonable management efforts should be directed to prevent contamination. She said monitoring landfills could prevent contamination.

Max Bauer, Jr.'s company operates 90 landfills in the United States. He supports the bill but not the amendment because of the restriction for wells of 100 foot depths. He doesn't think that is adequate monitoring to protect the environment. Mr. Bauer stated the DHES should evaluate each site separately and based on the hydrology and geology, make recommendations.

Questions From Committee Members:

Senator Stimatz asked if the department prepared the bill.

Jim Leiter said he prepared the fiscal note but not the bill.

Senator Stimatz asked about Butte's landfill.

Mr. Leiter said some tests for contamination were made at Butte's local landfill. Butte's landfill does not have an ongoing monitoring system. If this legislation passes, the city would be required to put in a groundwater monitoring system.

Senator Stimatz wondered if Butte was under any time pressure to close the landfill.

Mr. Leiter said the constraint of the existing Butte landfill is a lack of cover material. If the city has to bring in cover soil from another site, it could be very expensive. He said future federal regulations will require

groundwater monitoring. The urgency in Butte to move to a new site is because the community does not want to spend a lot of money monitoring a site that is full.

Senator Story asked about Helena's landfills.

Will Selser said the city has a landfill inside city limits and the county has one on the west edge of town. They both have used up their capacity. The city and county are in the middle of a joint venture to find a landfill to serve both entities. The commissioners are looking at three sites now and will choose one. The public deserves to know what may have been put into their drinking water. Some of the contaminants coming from landfills can have a very significant impact on people's health. He said if one landfill has to be monitored, then equal treatment should be given to all landfills.

Senator Story asked why a landfill has to be monitored if it is over a thousand feet deep and there are no homes within 10 miles?

Mr. Selser said if a qualified hydrologist or geologist looks at the landfill and finds no reasonable basis for determining that the landfill is polluting groundwater, then the landfill will be exempted.

Senator Story asked if the Drake amendment applies to this bill.

He explained that any law enacted by the legislature that requires a local government unit to perform a service or facility requiring the direct expenditure of additional funds must provide a specific means to finance the service or facility. This law is not effective until funding has been decided.

Mr. Selser said that landfills are set up as districts. If the cost of monitoring is expensive enough to cause the operating to go up significantly, then the county commissioners can set or increase the fees assessed to its customers.

Senator Weeding asked if some contamination was discovered in the monitoring process, then what would happen?

Mr. Selser replied it would depend on the kind of contamination. The worst possible case would be to find volatile organic chemicals in the landfill. If these chemicals are found in significant quantities, that exceed the maximum contaminant levels or even approach them, the operators would have to expand their monitoring, begin to

look at mitigation, and also provide alternate water supplies.

Senator Jenkins asked about the Federal Hazardous Waste Act? Doesn't that act preclude people from putting hazardous waste into landfills?

Mr. Selser answered that it is impossible to control every gallon jug and other material that comes into a landfill. If a person wants to get rid of hazardous material, he can put it inside a black plastic bag inside regular household garbage and the landfill operator won't see it.

Senator Weeding asked who was liable for landfills? If this bill fails, can you monitor your own landfill anyway?

Mr. Selser said the operator could be personally liable for the landfill. In the last few years, the courts have not exempted government officials for their actions. The average person or district generally will not voluntarily monitor landfills because of the cost.

Senator Eck said there was talk about setting up "amnesty days" when people who have small quantities of hazardous waste could bring it to the landfill.

Mr. Selser answered that Seattle tried "amnesty days" and abandoned the idea because people attempt to dump illicit materials in the landfill about three days after a two-day amnesty because they forget to do it during the amnesty period. He said the only way "amnesty days" would work is to have them in conjunction with an ongoing program where people can dump their hazardous waste at a reasonable cost.

Senator Eck said there has been talk about recycling centers taking care of wastes and pesticides?

Mr. Selser said he could not answer about the recycling of pesticides but there are hazardous materials that can be recycled. An example would be a degreaser used in automotive shops. There is a simple, inexpensive distilling process that these businesses can use to recycle the solvent rather than dumping it on the ground or in the landfill.

Senator Jenkins said some small-town dumps have been closed and the waste goes to a larger landfill that serves more than one town.

Jim Leiter said in the last 15 years there has been a lot of consolidation probably from 500 sites to 200 sites.

Senator Keating asked if a corporation was required under the permitting process to put in groundwater monitoring wells for private use.

Max Bauer said his corporate requirements are probably 200% to 300% more stringent than any state or federal standards because of the liability in business. His corporation doesn't buy existing sites anymore. Instead it buys new sites and makes extensive hydrology and geology studies. Landfill businesses cannot afford to make mistakes with groundwater.

Senator Keating Mr. Bauer if he supported the amendment.

Max Bauer said he supported the amendment because he doesn't agree with four wells and hundred foot depth limitations. They are not adequate.

Senator Keating asked if Mr. Bauer would recommend solid waste disposal as an industry for privatization?

Max Bauer said yes.

Senator Keating said this bill gives the department additional authority to require local governments to expend money to monitor groundwater around suspected contaminated landfills. Has the department figured out a way to pay for this service?

Steven Pilcher from the Water Quality Bureau said the costs have to be passed onto the user. There are not any state grant or loan funds available for the solid waste programs.

Senator Keating wanted to know if the Helena Valley or the county landfill made application through the Department of Natural Resources for a resource indemnity trust grant for a hydrology study in the valley?

Mr. Leiter It was a \$100,000 grant from the RIT and is projected for funding.

Senator Keating asked if the department was aware of any other grant applications or requests by local governments for Resource Indemnity Trust or renewable resource interest funds for solid waste reclamation.

Mr. Leiter said the state water quality bureau has \$80,000 in funds from the federal government for groundwater monitoring and several communities are interested in applying for those funds.



Senator Keating wondered if the federal money is for water wells for monitoring or is it federal grant money for landfill monitoring.

Mr. Leiter said these funds are available through the Environmental Protection Agency to administer a groundwater control program in Montana. They could fund some monitoring of ground water in conjunction with mining operations .

Senator Keating noted the price tag in the fiscal note.

Mr. Leiter said the department estimated a hydrologist and a half-time clerical person would be needed in our fiscal note.

Senator Keating asked about the overall program cost for local governments?

Mr. Leiter said the Department of Commerce assisted in doing the fiscal note and they had a figure for a number of different scenarios. Presumably, there are 29 landfills that fall under the 5,000 population requirement. Six are adequately monitoring now. That leaves 23, though some of those would not have to monitor at all.

Senator Keating said to assume 20 sites at \$30,000 a piece.

Mr. Leiter said if all 29 landfills are exempt, it would cost all those communities \$145,000. If all 29 landfills needed monitoring, the cost would be \$890,000 and that is based on a \$30,000 installation cost. Some landfills will be leaking, others won't.

Senator VanValkenberg said if the monthly landfill disposal rate for a residential customer is \$9.20, how much of that amount would be for groundwater monitoring?

Max Bauer said it makes a difference depending on the size of the landfill and the equipment used. The monitoring is the same for 100 acres as for a 400 hundred acre site. His corporation contracts a firm to come in to check its wells, and the yearly operating expense in Missoula is about \$20,000.

Senator Van Valkenburg said he pays \$9.20 a month for services. There are four members in his family so they are each paying 2.5 cents a month for this monitoring.

Max Bauer said his firm has probably 100 projects going on in the United States. The monitoring is a significant factor originally but over the long term, it's not real big compared to other costs.

Senator Jenkins said, in reading Section 3 of the rules, it looks like this bill could have been accomplished with rulemaking authority.

Mr. Leiter said the solid waste program has 1.5 people. The department has known for a year that 25 landfills are probably leaking into the groundwater. To pass these kinds of requirements by rulemaking would be nearly impossible.

Senator Jenkins asked if this bill has been through the appropriations committee?

Mr. Leiter answered no.

Senator Keating said this bill wasn't talked about in the department's current budget either.

Mr. Leiter said HB 752 might advance the department money through a fee system for landfills.

Senator Weeding asked about the subtitle that was mentioned.

Max Bauer said subtitle D is the new federal regulations that will be out by September. The monitoring requirements for landfills will have to be or the landfill will be forced to close.

Senator Weeding asked if this bill is passed, will the state beat the federal rules?

Mr. Bauer said counties will have a chance to get some sites cleaned up. If a site is closed before the subtitle D rules go into effect and nothing shows up, the federal government will forget it existed. If the site is operated past that date, then funds must be furnished to cover 30 years of monitoring.

Hearing is closed on HB 486.

EXECUTIVE ACTION

**HB 540**

HB 540 was sponsored by Representative Raney. Senator Eck moved HB 540 be concurred in. Motion carried unanimously.

**HB 482**

HB 482 was sponsored by Representative Cocchiarella. There was no opposition to allowing the department to make some discretionary determination on public sewers and water systems. Senator Meyer moved HB 482 be concurred in. The motion carried unanimously.

**HB 680** Senator Keating said HB 680 sponsored by Representative

Grady deals with cyanide restrictions for small miners. A letter was received from Arcturus Resources. (Exhibit #7) The small miners have an exemption on five acres of land and the Department of State Lands and the Water Quality Bureau would like to have a better handle on the use of cyanide. The bill was presented at the request of the mining association, which is made up of big and small miners. There is concern about groundwater contamination because of the use of cyanide. The small miner using cyanide currently needs to get a water quality permit. Under this bill, an operating permit from the DSL would be required along with a reclamation plan. The argument against the bill was the length of time it takes to get the permit. A statement of intent was prepared as an amendment. (Exhibit #6)

Senator Keating asked the department to explain how the permitting process works. The department presented a flow chart to show the requirements with regard to an operating plan, reclamation plan, and water quality plan and how the the two departments would work together. (Exhibit #9)

Senator Keating distributed some designs of the heap leaching process. (Exhibit #10)

John North said that when the application is received, the department makes a decision as to whether or not the application is complete. If the application is not complete, the department notifies the company within 30 days.

Senator Keating asked if the application forms were uniform?

John North said there is one form that basically provides legal data such as name, address, and description of the operation. The other main parts of the form are the operation and reclamation plans.

Senator Keating asked where the water quality permit fits in.

John North said if the miner applied for an operating permit, then he is not required to get an underground water discharge permit from the Department of Health & Environmental Sciences.

Steve Pilcher said under the department's groundwater pollution control regulations, some activities are under the direct control of other state authorities. When the Department of State Lands conducts a review of mining operations, part of that review would be the groundwater impact and that mining operation would not need to get two

state permits.

Senator Van Valkenburg would like the committee to know he received in the mail some proposed amendments to this bill from former Representative Hand. He gave them to Bob Thompson for review and editing.

Senator Keating asked if the department has any problems with the statement of intent.

Mr. North said no.

Senator Eck moved the statement of intent. Motion carried. Senator Eck moved HB 680 as amended be concurred in. Motion carried. Senator Tveit and Senator Yellowtail were not present to vote.

HB 679 HB 679 also deals with the small miners exclusion and requires a bond of up to \$5000 depending on the number of acres to be placer or dredge mined.

Bob Thompson prepared an amendment. (Exhibit #11)

Senator Eck moved the amendment. Motion carried.

Senator Keating said the requirement of a maximum bond was to make sure the miner reclaims the land that he disturbs. The bond of \$5,000 might not be very much money if the miner has done a lot of damage. There is a clause that says if the miner doesn't reclaim the land and the department has to clean it up, the cost that is greater than \$5,000 can be assessed against the miner and his equipment can be attached.

Mr. North said the reclamation requirements of the Hardrock Mine Act are less stringent than Coal Strip Mine Act. The Strip Mine Act predominately requires native species and fragile soil handling, etc. All the hardrock act requires that the land be returned to comparable stability .

Senator Eck said most of the small mining areas she has seen won't require a lot of reclamation. A good many areas are old dredge piles.

Senator Severson thinks this bill goes too far.

Senator Eck moved that HB 679 be concurred in as amended. Roll Call vote was taken. Motion carried (Exhibit #12)

ADJOURNMENT

Adjournment At: 2:55 p.m.

  
THOMAS F. KEATING, Chairman

TFK/hmc

senmin.308

ROLL CALL

NATURAL RESOURCES COMMITTEE

5054 LEGISLATIVE SESSION -- 1989

Date 3-8-89

| NAME                       | PRESENT | ABSENT | EXCUSED |
|----------------------------|---------|--------|---------|
| Chairman Tom Keating       | ✓       |        |         |
| Vice-Chairman Larry Tveit  | ✓       |        |         |
| Senator Fred VanValkenburg | ✓       |        |         |
| Senator Loren Jenkins      | ✓       |        |         |
| Senator Darryl Meyer       | ✓       |        |         |
| Senator Lawrence Stimatz   | ✓       |        |         |
| Senator Pete Story         | ✓       |        |         |
| Senator Bill Yellowtail    |         | ✓      |         |
| Senator Elmer Severson     | ✓       |        |         |
| Senator Cecil Weeding      | ✓       |        |         |
| Senator Dorothy Eck        | ✓       |        |         |
| Senator Jerry Noble        | ✓       |        |         |
|                            |         |        |         |
|                            |         |        |         |
|                            |         |        |         |

Each day attach to minutes.

SENATE STANDING COMMITTEE REPORT

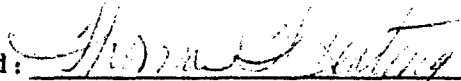
March 8, 1989

MR. PRESIDENT:

We, your committee on Natural Resources, having had under consideration HB 540 (third reading copy -- blue), respectfully report that HB 540 be concurred in.

Sponsor: Raney (Story)

BE CONCURRED IN

Signed:   
Thomas F. Keating, Chairman

4/10/89  
3/9/89  
11:21  
H.A.M.

SENATE STANDING COMMITTEE REPORT

March 8, 1989

MR. PRESIDENT:

We, your committee on Natural Resources, having had under consideration HB 482 (third reading copy -- blue), respectfully report that HB 482 be concurred in.

Sponsor: Cocchiarella (Meyer)

BE CONCURRED IN

Signed: *Thomas F. Keating*  
Thomas F. Keating, Chairman

*U.C.  
3/9/89  
11:21  
a.m.*



SENATE STANDING COMMITTEE REPORT

March 8, 1989

MR. PRESIDENT:

We, your committee on Natural Resources, having had under consideration HB 680 (third reading copy -- blue), respectfully report that HB 680 be amended and as so amended be concurred in:

Sponsor: Grady (Noble)

1. Page 1.

Following: line 11

Insert: " Statement of Intent

A statement of intent is provided for this bill to elaborate on the type and extent of review that the department of state lands shall give to a small-miner application for an operating permit for a cyanide ore-processing facility. Moreover, the legislature anticipates that implementation of this bill shall require rulemaking by the board of land commissioners.

While an operating permit is required for these operations, the legislature intends that, because of the size and limited scope of the operation, the application requirements in general may be substantially less rigorous than the requirements for larger proposed mine operations not under the small miner exclusion. The department of state lands shall also attempt to review these applications in a shorter timeframe than currently needed to review operating permit applications for larger mines.

To encourage expedited review, the department of state lands shall provide clear guidance to permit applicants concerning requirements for a complete application. In particular, the guidance must help applicants prepare adequate operating and reclamation plans. While the legislature recognizes plan requirements may vary with the site and characteristics of the proposed operation, the department shall attempt to guide the applicant in a manner that minimizes applicant costs while also meeting metal-mine reclamation requirements.

Finally, [section 4 of this act] exempts an existing cyanide ore-processing facility if the operator registers the facility by January 1, 1990. In order to provide ample notice to existing operators the legislature intends that the department shall prepare the form and notify affected small-miners of the form's availability and purpose as soon as possible by mail or publication or both."

AND AS AMENDED BE CONCURRED IN

Signed: Thomas F. Keating  
Thomas F. Keating, Chairman

Statement of intent adopted.

4/10/89  
3/9/89  
11:21 a.m.

SENATE STANDING COMMITTEE REPORT

page 1 of 2  
March 8, 1989

MR. PRESIDENT:

We, your committee on Natural Resources, having had under consideration HB 679 (third reading copy -- blue), respectfully report that HB 679 be amended and as so amended be concurred in:

Sponsor: Grady (Noble)

1. Title, line 9.

Following: "TO THE"

Insert: "STATE'S ACTUAL"

2. Title, line 10.

Following: line 9

Strike: "TO THE STATE"

Following: "LANDS"

Insert: ", ALTHOUGH THE BOND MAY NOT EXCEED \$5,000 PER OPERATION; AUTHORIZING THE DEPARTMENT OF STATE LANDS TO COLLECT ALL ITS REASONABLE COSTS OF RECLAMATION IF A SMALL MINER FAILS TO RECLAIM THE PLACER OR DREDGE MINING OPERATION"

3. Page 7, line 3.

Following: "IN"

Strike: "SUBSECTION"

Insert: "subsections"

Following: "(3)"

Insert: "through (6)"

4. Page 8, line 22.

Following: "TO THE"

Insert: "state's actual"

5. Page 8, line 23.

Following: "COST"

Strike: "TO THE STATE"

Following: "LAND"

Insert: ", although the bond may not exceed \$5,000 per operation"

Following: "."

Insert: "However, if the small miner has posted a bond for reclamation with another government agency, he is exempt from the requirement of this subsection.

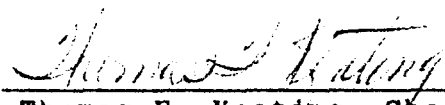
(4) If a small miner who conducts a placer or dredge mining operation fails to reclaim the operation, he is liable to the department for all its reasonable costs of reclamation, including a reasonable charge for services performed by state personnel and state materials and equipment used. If the small miner posts a surety bond, the surety is liable to the

state to the extent of the bond amount and the small miner is liable for the remainder of the reasonable costs to the state of reclaiming the operation.

(5) If a small miner who conducts a placer or dredge mining operation fails to commence reclamation of the operation within 6 months after cessation of mining or within an extended period allowed by the department for good cause shown or if the small miner fails to diligently complete reclamation, the department shall notify the small miner by certified mail that it intends to reclaim the operation unless the small miner commences reclamation within 30 days and diligently completes the reclamation. The notice must be mailed to the address stated on the small miner exclusion statement or, if the small miner has notified the department of a different address by letter or in the annual certification form, to the most recent address given to the department. If the small miner fails to commence reclamation within 30 days or to diligently complete reclamation, the department may revoke the small miner exclusion statement, forfeit any bond that has been posted with the department, and enter and reclaim the operation. If the small miner has not posted a bond with the department or if the reasonable costs of reclamation exceed the amount of the bond, the department may also collect additional reclamation costs, as set forth in subsection (6), before or after it incurs those costs.

(6) To collect additional reclamation costs, the department shall notify the small miner by certified mail to the address determined under subsection (5) of the additional reasonable reclamation costs and request payment within 30 days. If the small miner does not pay the additional reclamation costs within 30 days, the department may bring an action in district court for payment of the estimated future costs and, if the department has performed any reclamation, of its reasonable actual costs. The court shall order payment of costs it determines to be reasonable and shall retain jurisdiction until reclamation of the operation is completed. Upon completion of reclamation, the court shall order payment of any additional costs it deems reasonable or the refund of any portion of any payment for estimated costs that exceeds the actual reasonable costs incurred by the department."

AND AS AMENDED BE CONCURRED IN

Signed: 

Thomas F. Keating, Chairman

Main Office:  
(Year round)  
Box 46  
Gardiner, MT 59030  
(406) 848-7777



SENATE NATURAL RESOURCES  
EXHIBIT NO. 1 Big Sky Office:  
DATE 3-8-89 (Summer only) Box 262  
BILL NO. H540 Big Sky, MT 59716  
(406) 995-4613

Mr. Chairman, Members of the Committee;

My name is Julia Page. I own and run a business in Gardiner known as the Yellowstone Raft Company. I am also president of the Gardiner Chamber of Commerce. Gardiner is a tourist town, one of 3 Montana entrances to Yellowstone Park, and as such we are very dependent on the pristine quality of our surroundings. In my own business I am particularly concerned with water quality in the Yellowstone River.

We wholeheartedly agree that it is in the public interest that sewer and water systems be designed to standards that will protect the public health. In the last couple of years our community has been upset by the massive developments of the Church Universal and Triumphant on land adjacent to Yellowstone National Park and the Yellowstone River. Relative to this bill, we saw construction initiated on three water systems before design work was completed or approval gained for those systems. Construction is now on hold pending an evaluation of the impact of the developments and we are left with a mess of torn up ground, flying dust and increased sediment contributed to the river along a corridor that all those tourists use on their way in or out of the Park.

This bill closes loopholes in the existing law which allows construction of such systems before the permits have actually been issued. We urge your support of HB-540 with a DO PASS recommendation. Thank you.

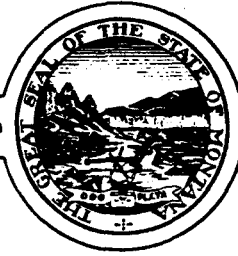
DEPARTMENT OF  
HEALTH AND ENVIRONMENTAL SCIENCES

SENATE NATURAL RESOURCES

SENATE BILL NO. ~~NR 540~~ 2

DATE 3-8-89

BILL NO. ~~NR 540~~ 192  
COGSWELL BUILDING



STAN STEPHENS, GOVERNOR

STATE OF MONTANA

FAX # (406) 444-2606

HELENA, MONTANA 59620

DHES Testimony on HB 540

The Montana Department of Health and Environmental Sciences (DHES) is the agency charged with implementation of Montana's Laws Regarding Public Water Supply. One important responsibility under that law is the review of plans and specifications for public water and sewer systems to ensure they will meet current public health and engineering standards.

This bill simply provides clarification as to the intent of the Public Water Supply Law. The intent is to prohibit any construction on new or modified systems until the plans and specifications are approved by DHES. This clarification is needed because some persons have interpreted the current language to allow construction to proceed as soon as plans and specifications are submitted for department review.

The purpose of approval prior to construction is quite simple. First, it is intended to ensure the construction of a good system from a public health and engineering standpoint and, secondly, it is intended to prevent wasted expenditures on systems that do not meet minimum standards and would require rebuilding at a later date.

(please see attached list.)

*Don Zick*

Ex. #2  
3-8-89

HB 540

2 of 2

Partial Summary of Water and/or Sewer Systems  
Constructed Without Approval by DHES

Big Sky, Hidden Village and Mountain Village  
Darwin Johnson, Wheatland Condos, Billings  
Sunset Point Condos, Kalispell  
Blaine View Estates, Flathead County  
Gores Water System, Missoula  
Wyola Estates, Big Horn County  
Timbers Condos, Billings  
DY Mobile Home Park, Phillips County  
Clinton Addition, Manhattan  
Mountain View Addition, Manhattan  
Extensions to the City of Whitefish  
Extensions to the city of Chinook  
East Gate Work Camp Water System, Corwin Springs, Corwin Springs  
Hildreth II Subdivision Water System, Beaverhead County  
Diamond K RV Park, Flathead County

DEPARTMENT OF  
HEALTH AND ENVIRONMENTAL SCIENCES

SENATE NATURAL RESOURCES

EXHIBIT NO. 3  
DATE 3-8-89  
BILL NO. HB 482



STAN STEPHENS, GOVERNOR

COGSWELL BUILDING

STATE OF MONTANA

FAX # (406) 444-2606

HELENA, MONTANA 59620

DHES TESTIMONY ON HB 482

The Department of Health and Environmental Sciences (DHES) is the agency charged with implementation of Montana's Laws Regarding Public Water Supply. One important responsibility under that law is the review of plans and specifications for construction and modifications of public water and sewer systems to ensure they will meet current minimum public health and engineering standards. This bill would allow the department to delegate part of that review authority and responsibility to local divisions of government which have the proper expertise on staff and have established satisfactory review programs.

We are in agreement with the intent of and the need for this legislation. In many cases this will eliminate the current duplication of review and confusion associated with the need for review and approval of both local and state agencies. It is our belief that this bill will provide for public health protection while making government more responsive to the needs of the public.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Dan L. Fraser".

Dan L. Fraser, P.E., Supervisor,  
Public Water Supply Section

NO = NO MONITORING  
 YES = ADEQUATE MONITORING FOR THIS BILL  
 PARTIAL = SOME MONITORING, BUT NOT ADEQUATE FOR THIS BILL

L = Leaking to ground  
 Susp = Suspected leaks

SENATE NATURAL RESOURCES

EXHIBIT NO. 4  
 DATE 3-8-89  
 BILL NO. HB 486

| record# | COUNTY          | CITY              | POPULATION    | SITENAME                         | DEPTHGW | NEARWATER |
|---------|-----------------|-------------------|---------------|----------------------------------|---------|-----------|
| 39      | GLACIER         | CUT BANK          | NO 5000       | CUT BANK                         | 18      | 1+ MI     |
| 14      | CARBON          |                   | NO 5500       | CARBON CO. LANDFILL              | 0       | 2 MI      |
| 50      | LAKE            | POLSON            | NO 6000       | POLSON LANDFILL                  | 200     | 1/2 MI    |
| 59      | MADISON         | ENNIS             | NO 6000       | ENNIS                            | 50      | 1 MI      |
| 2       | BEAVERHEAD      | DILLON            | NO 6500       | DILLON                           | 0       | 1/2 MI    |
| 34      | FERGUS          |                   | NO 7500       | W.A. SPOJA JR. LANDFILL          | 65      | 1/2 MI    |
| 90      | RICHLAND        | SIDNEY            | NO 9000       | SIDNEY LANDFILL                  | 35      | 1/4 MI    |
| 17      | CASCADE         | GREAT FALLS       | NO 10000      | CITY TRANSFER AND DISPOSAL       | 200     | 4 MI      |
| 24      | CUSTER          | MILES CITY        | NO 10000      | CUSTER CO. LANDFILL              | 95      | 1/2 MI    |
| 54      | LEWIS AND CLARK | HELENA VALLEY     | YES 10000     | SCRATCH GRAVEL - (L)             | 65      | 1/4 MI    |
| 95      | ROSEBUD         | COLSTRIP          | PARTIAL 10000 | COLSTRIP LANDFILL                | 15      | 1/2 MI    |
| 113     | VALLEY          |                   | PARTIAL 10250 | VALLEY CO. LANDFILL              | 60      | 2 MI      |
| 27      | DAWSON          | GLENDDIVE         | NO 11000      | GLENDDIVE LANDFILL               | 100     | 1/2 MI    |
| 37      | GALLATIN        | LOGAN             | PARTIAL 12000 | LOGAN LANDFILL                   | 60      | 1/4 MI    |
| 69      | PARK            | LIVINGSTON        | NO 12000      | PARK CO. LANDFILL                | 65      | 1/2 MI    |
| 88      | RAVALLI         | BITTERROOT VALLEY | PARTIAL 12000 | BITTERROOT VALLEY LANDFILL - (L) | 59      | 1,000'    |
| 117     | YELLOWSTONE     | LAUREL            | NO 12000      | LAUREL                           | 6       | 9/10 MI   |
| 58      | LINCOLN         | LIBBY             | NO 13000      | LIBBY LANDFILL                   | 160     | 2 MI      |
| 29      | DEER LODGE      | ANACONDA          | NO 15000      | ANACONDA LANDFILL - (SUSP)       | 20      | 5 MI      |
| 84      | POWELL          | DEER LODGE        | NO 15000      | DEER LODGE LANDFILL              | 20      | 5 MI      |
| 32      | FERGUS          |                   | NO 18000      | MR. "M" DISPOSAL                 | 100     | 1,500'    |
| 12      | BLAINE          |                   | PARTIAL 23000 | UNIFIED DISPOSAL DIST. LANDFILL  | 60      | 1 MI      |
| 36      | GALLATIN        | BOZEMAN           | YES 35000     | BOZEMAN LANDFILL - (L)           | 50      | 1/4 MI    |
| 51      | LEWIS AND CLARK | HELENA            | YES 35000     | HELENA - (L)                     | 20      | 1/4 MI    |
| 35      | FLATHEAD        | KALISPELL         | PARTIAL 45000 | FLATHEAD CO. LANDFILL - (SUSP)   | 146     | 300'      |
| 102     | SILVER BOW      | BUTTE             | NO 45000      | BUTTE                            | 25      | 3/4 MI    |
| 19      | CASCADE         | GREAT FALLS       | YES 65000     | GREAT FALLS LANDFILL             | 30      | 1/4 MI    |
| 67      | MISSOULA        | MISSOULA          | YES 67000     | BFI OF MONTANA LANDFILL - (CONT) | 65      | 2 MI      |
| 118     | YELLOWSTONE     | BILLINGS          | YES 100000    | BILLINGS - (L)                   | 50      | 1,000'    |

3 week leak

30

7,000  
 2,000



Amendments to House Bill No. 486  
Third Reading CopyRequested by Rep. Grady  
For the Senate Committee on Natural Resources

March 8, 1989

1. Page 4, lines 23 through 25.  
Following: "monitoring"  
Strike: "--" on line 23 through "OWNERS" on line 25  
Insert: ". (1) Owners"
2. Page 5, line 19 through line 1, page 6.  
Strike: subsection (3) in its entirety  
Renumber: subsequent subsections
3. Page 6, line 19.  
Strike: "(4)"  
Insert: "(3)"
4. Page 6, line 24.  
Strike: "(4)"  
Insert: "(3)"
5. Page 7, line 24.  
Strike: "[SECTION 2(4)]"  
Insert: "[section 2(3)]"

E:\EQC\HB0486XX.AHZ

Rep. Grady -  
Will Selsey

2-15-89

Ex. 5a HB 486  
3-8-89



City-County Building  
316 North Park  
Helena, Montana 59623  
Telephone 406/443-1010

# LEWIS AND CLARK COUNTY

## Scratch Gravel Landfill District

I have given this information and a short note to Roney, Gilbert, Hannah and O'Keefe on the committee. I will try and talk to them sometime today ~~or tomorrow~~.  
Will

HB 486

Initial cost to install groundwater monitoring wells at Scratch Gravel Landfill, Helena Valley, Montana in 1983.

|   |                   |
|---|-------------------|
| Cost of 3 monitor wells finished at 65-70' deep   | - \$ 5,000        |
| Cost of initial sampling, analysis and report prep for<br>(6) wells (3 monitor, 3 domestic) | - <u>\$ 2,600</u> |
| Total 1st year cost (1983)  | \$ 7,600          |

Even in today's dollars, this should be less than \$10,000.

Call if you have others I should talk to about this.

(WJS)  
02/10/89

Will

SENATE NATURAL RESOURCES

EXHIBIT NO. H 6

DATE 2-8-89

BILL NO. HB 486

FIGURE 1

*operational  
BFI*

1. BFI Landfills
2. BFI Landfill Map
3. BFI Landfill Operating Contracts

BROWNING-FERRIS INDUSTRIES  
LANDFILL DATA SUMMARY  
AS OF FVE 09/30/87

| (1)              | (20)            | (2)                           | (21)                    | (4)               | (19)                |
|------------------|-----------------|-------------------------------|-------------------------|-------------------|---------------------|
| STATE PROVINCE   | LANDFILL NAME   | CITY / COUNTY                 | FY1987 YARDAGE DISPOSED | OWN LEASE OPERATE | CONTRACTING PARTIES |
| Alabama          | ANNISTON        | Anniston                      | 342,320                 | Operate           | City of Anniston    |
| TOTAL Alabama    |                 |                               | 342,320                 |                   |                     |
| Alberta          | CALGARY         | Calgary                       | 577,250                 | Lease             |                     |
| TOTAL Alberta    |                 |                               | 577,250                 |                   |                     |
| California       | FRESNO          | Fresno                        | 707,441                 | Own               |                     |
| California       | OX MOUNTAIN     | Half Moon Bay (Ox Mountain)   | 2,926,302               | Own               |                     |
| California       | AZUSA           | Los Angeles (Azusa)           | 0                       | Own               |                     |
| California       | SUNSHINE CANYON | Los Angeles (Sunshine Canyon) | 7,401,764               | Own               |                     |
| California       | NEWBY ISLAND    | San Jose (Newby Island)       | 3,670,322               | Own               |                     |
| TOTAL California |                 |                               | 14,705,829              |                   |                     |
| Colorado         | TOWER           | Adams County (Tower)          | 1,249,341               | Own               |                     |
| Colorado         | BOULDER         | Boulder                       | 529,591                 | Lease             |                     |
| Colorado         | MESA COUNTY     | Grand Junction (Mesa County)  | 343,926                 | Operate           | Mesa County         |
| TOTAL Colorado   |                 |                               | 2,122,858               |                   |                     |
| Georgia          | ROBERTS ROAD    | Fayette (Evans)               | 768,050                 | Lease             |                     |
| TOTAL Georgia    |                 |                               | 768,050                 |                   |                     |

3/8/89

BROWNING-FERRIS INDUSTRIES  
 LANDFILL DATA SUMMARY  
 AS OF FYE 09/30/87

| (1)            | (20)              | (2)                            | (21)                    | (4)                   | (19)                |
|----------------|-------------------|--------------------------------|-------------------------|-----------------------|---------------------|
| STATE PROVINCE | LANDFILL NAME     | CITY / COUNTY                  | FY1987 YARDAGE DISPOSED | OWN, LEASE OR OPERATE | CONTRACTING PARTIES |
| Illinois       | MODERN            | Bellville (Modern)             | 754,577                 | Own                   |                     |
| Illinois       | HILLSIDE          | Hillside                       | 2,400,452               | Own (50%)             |                     |
| Illinois       | MALLARD LAKE      | Mallard Lake                   | 3,820,979               | Own                   |                     |
| Illinois       | QUAD CITIES       | Milan (Quad Cities)            | 345,491                 | Own                   |                     |
| Illinois       | ROCKFORD          | Rockford                       | 432,621                 | Own                   |                     |
| Illinois       | WINTHROP HARBOR   | Waukegan                       | 1,339,345               | Own                   |                     |
| TOTAL Illinois |                   |                                | 9,093,465               |                       |                     |
| Indiana        | LAUBSCHER MEADOWS | Evansville (Laubscher Meadows) | 857,328                 | Lease                 |                     |
| TOTAL Indiana  |                   |                                | 857,328                 |                       |                     |
| Kentucky       | FRANKFORT         | Frankfort                      | 261,836                 | Lease                 |                     |
| Kentucky       | LEXINGTON         | Lexington                      | 1,174,988               | Operate (50%)         | Lafayette County    |
| TOTAL Kentucky |                   |                                | 1,436,824               |                       |                     |
| Louisiana      | COLONIAL          | Baton Rouge (Colonial)         | 503,288                 | Own                   |                     |
| Louisiana      | HAMMOND           | Baton Rouge (Hammond)          | 123,817                 | Operate               | City of Hammond     |
| Louisiana      | CRESCENT ACRES    | New Orleans (Crescent Acres)   | 1,556,601               | Own                   |                     |
| Louisiana      | SHREVEPORT        | Shreveport                     | 0                       |                       | City of Shreveport  |

BROWNING-FERRIS INDUSTRIES  
LANDFILL DATA SUMMARY  
AS OF FYE 09/30/87

| (1)                 | (20)              | (2)                     | (21)                          | (4)                     | (19)                   |
|---------------------|-------------------|-------------------------|-------------------------------|-------------------------|------------------------|
| STATE<br>PROVINCE   | LANDFILL NAME     | CITY / COUNTY           | FY1987<br>YARDAGE<br>DISPOSED | OWN<br>LEASE<br>OPERATE | CONTRACTING<br>PARTIES |
| Louisiana           | LAKE CHARLES      | Sulphur (Woodland Hill) | 845,762                       | Own                     |                        |
| Louisiana           | WHITE OAKS        | White Oaks              | 268,711                       | Own                     |                        |
| TOTAL Louisiana     |                   |                         | 3,298,179                     |                         |                        |
| Maryland            | OAKS LANDFILL     | Laytonsville (Oaks)     | 2,228,528                     | Operate                 | Montgomery County      |
| TOTAL Maryland      |                   |                         | 2,228,528                     |                         |                        |
| Massachusetts       | EAST BRIDGEWATER  | East Bridgewater        | 1,172,800                     | Own                     |                        |
| Massachusetts       | FALL RIVER        | Fall River              | 1,227,152                     | Own                     |                        |
| Massachusetts       | HALIFAX           | Halifax                 | 529,080                       | Own                     |                        |
| Massachusetts       | CLAYPIT           | Marshfield (Clay Pit)   | 428,752                       | Lease                   |                        |
| Massachusetts       | RANDOLPH          | Randolph                | 178,148                       | Own                     |                        |
| Massachusetts       | CHICOPPE          | Springfield             | 587,792                       | Own                     |                        |
| TOTAL Massachusetts |                   |                         | 4,123,724                     |                         |                        |
| Michigan            | ARBOR HILLS       | Detroit (Arbor Hills)   | 2,498,936                     | Own                     |                        |
| Michigan            | TOLEDO            | Erie Twnshp (Toledo)    | 1,216,097                     | Own                     |                        |
| Michigan            | C & C             | Marshall (C&C)          | 830,519                       | Lease                   |                        |
| Michigan            | LYON DEVELOPEMENT | New Hudson (Lyon)       | 1,858,361                     | Own                     |                        |
| TOTAL Michigan      |                   |                         | 6,403,913                     |                         |                        |

BROWNING-FERRIS INDUSTRIES  
LANDFILL DATA SUMMARY  
AS OF FVE 09/30/87

| (1)               | (20)            | (2)                             | (21)                          | (4)                     | (19)                   |
|-------------------|-----------------|---------------------------------|-------------------------------|-------------------------|------------------------|
| STATE<br>PROVINCE | LANDFILL NAME   | CITY / COUNTY                   | FV1987<br>YARDAGE<br>DISPOSED | OWN<br>LEASE<br>OPERATE | CONTRACTING<br>PARTIES |
| Minnesota         | FLYING CLOUD    | Eden Prairie                    | 53,724                        | Own                     |                        |
| Minnesota         | PINE BEND       | Inver Grove Heights (Pine Bend) | 3,119,126                     | Own                     |                        |
| Minnesota         | HAMEL           | Medina (Hamel)                  | 463,733                       | Own                     |                        |
| TOTAL Minnesota   |                 |                                 | 3,636,583                     |                         |                        |
| Mississippi       | GREENVILLE      | Greenville                      | 262,233                       | Own                     |                        |
| Mississippi       | GULF PINES      | Harrison (Gulf Pines Regional)  | 470,780                       | Own                     |                        |
| Mississippi       | JACKSON         | Jackson                         | 450,826                       | Lease                   |                        |
| TOTAL Mississippi |                 |                                 | 1,183,839                     |                         |                        |
| Missouri          | SPRINGFIELD     | Springfield                     | 25,624                        | Own                     |                        |
| Missouri          | ST LOUIS COUNTY | St. Louis (County Landfill)     | 30,453                        | Own                     |                        |
| TOTAL Missouri    |                 |                                 | 56,077                        |                         |                        |
| Montana           | MISSOULA        | Missoula                        | 257,773                       | Own                     |                        |
| TOTAL Montana     |                 |                                 | 257,773                       |                         |                        |
| Montreal          | LACHENAIE       | Montreal Canada (Lachenaie)     | 532,911                       | Own                     |                        |
| TOTAL Montreal    |                 |                                 | 532,911                       |                         |                        |

BROWNING-FERRIS INDUSTRIES  
LANDFILL DATA SUMMARY  
AS OF FYE 09/30/87

| (1)                  | (20)                 | (2)                           | (21)                          | (4)                     | (19)                   |
|----------------------|----------------------|-------------------------------|-------------------------------|-------------------------|------------------------|
| STATE<br>PROVINCE    | LANDFILL NAME        | CITY / COUNTY                 | FY1987<br>YARDAGE<br>DISPOSED | OWN<br>LEASE<br>OPERATE | CONTRACTING<br>PARTIES |
| Nebraska             | OMAHA                | Omaha (Douglas County)        | 1,590,712                     | Operate                 | Douglas County         |
| TOTAL Nebraska       | *                    |                               | 1,590,712                     |                         |                        |
| New Jersey           | PINELANDS PARK       | Atlantic City (Pinelands Pk.) | 958,851                       | Own                     |                        |
| TOTAL New Jersey     | *                    |                               | 958,851                       |                         |                        |
| New York             | PINE AVENUE          | Niagara Falls (Pine Ave.)     | 1,064,886                     | Own                     |                        |
| New York             | ONTARIO COUNTY       | Ontario New York              | 252,200                       | Operate                 | Ontario County         |
| New York             | TONAWANDA            | Tonawanda                     | 1,699,008                     | Lease                   |                        |
| TOTAL New York       | *                    |                               | 3,016,094                     |                         |                        |
| North Carolina       | CHARLOTTE MOTER SPDW | Charlotte (Motor Speedway)    | 1,646,295                     | Lease                   |                        |
| TOTAL North Carolina | *                    |                               | 1,646,295                     |                         |                        |
| Ohio                 | WEIBUSH              | Akron                         | 1,075,218                     | Own                     |                        |
| Ohio                 | BOND ROAD            | Cincinnati (Bond Road)        | 341,696                       | Operate                 | Monsanto Chemical Co   |
| Ohio                 | GLENWILLOW           | Glen Willow                   | 748,687                       | Lease/Operate           | Austin Powder Co       |
| Ohio                 | CLD/LEWIS            | Green Twnshp (CLD)            | 691,235                       | Own/Lease               |                        |
| Ohio                 | LORAIN COUNTY II     | Lorain (Lorain County #2)     | 1,419,305                     | Lease                   |                        |



BROWNING-FERRIS INDUSTRIES  
LANDFILL DATA SUMMARY  
AS OF FVE 09/30/87

| (1)<br>STATE<br>PROVINCE | (20)<br>LANDFILL NAME | (2)<br>CITY / COUNTY          | (21)<br>FY1987<br>YARDAGE<br>DISPOSED | (4)<br>OWN<br>LEASE<br>OPERATE | (19)<br>CONTRACTING<br>PARTIES |
|--------------------------|-----------------------|-------------------------------|---------------------------------------|--------------------------------|--------------------------------|
| Ohio                     | CARBON POLAND         | Poland Twnshp (Carbon Poland) | 1,117,614                             | Own/Lease                      |                                |
| Ohio                     | SANDUSKY              | Port Clinton (Sandusky)       | 782,987                               | Own                            |                                |
| Ohio                     | BIG FOOT RUN          | Warren (Big Foot Run)         | 1,391,565                             | Own                            |                                |
| TOTAL Ohio               |                       |                               | 7,568,307                             |                                |                                |
| Oklahoma                 | FILLSAND              | Oklahoma City (Filliland)     | 757,113                               | Own (50%)                      |                                |
| Oklahoma                 | PERKINS               | Perkins                       | 57,571                                | Lease                          |                                |
| Oklahoma                 | SHAWNEE               | Shawnee                       | 192,690                               | Own                            |                                |
| Oklahoma                 | TULSA                 | Tulsa                         | 781,593                               | Lease                          |                                |
| TOTAL Oklahoma           |                       |                               | 1,788,967                             |                                |                                |
| Ontario                  | RIDGE                 | Harwich Twnshp (Ridge)        | 314,669                               | Own                            |                                |
| TOTAL Ontario            |                       |                               | 314,669                               |                                |                                |
| Oregon                   | ST. JOHNS             | Portland (St. Johns)          | 597,961                               | Operate                        | City of Portland               |
| TOTAL Oregon             |                       |                               | 597,961                               |                                |                                |
| Pennsylvania             | FORESTLAWN            | Clearfield                    | 162,075                               | Own                            |                                |
| Pennsylvania             | GREENTREE             | Dubois                        | 203,020                               | Own                            |                                |

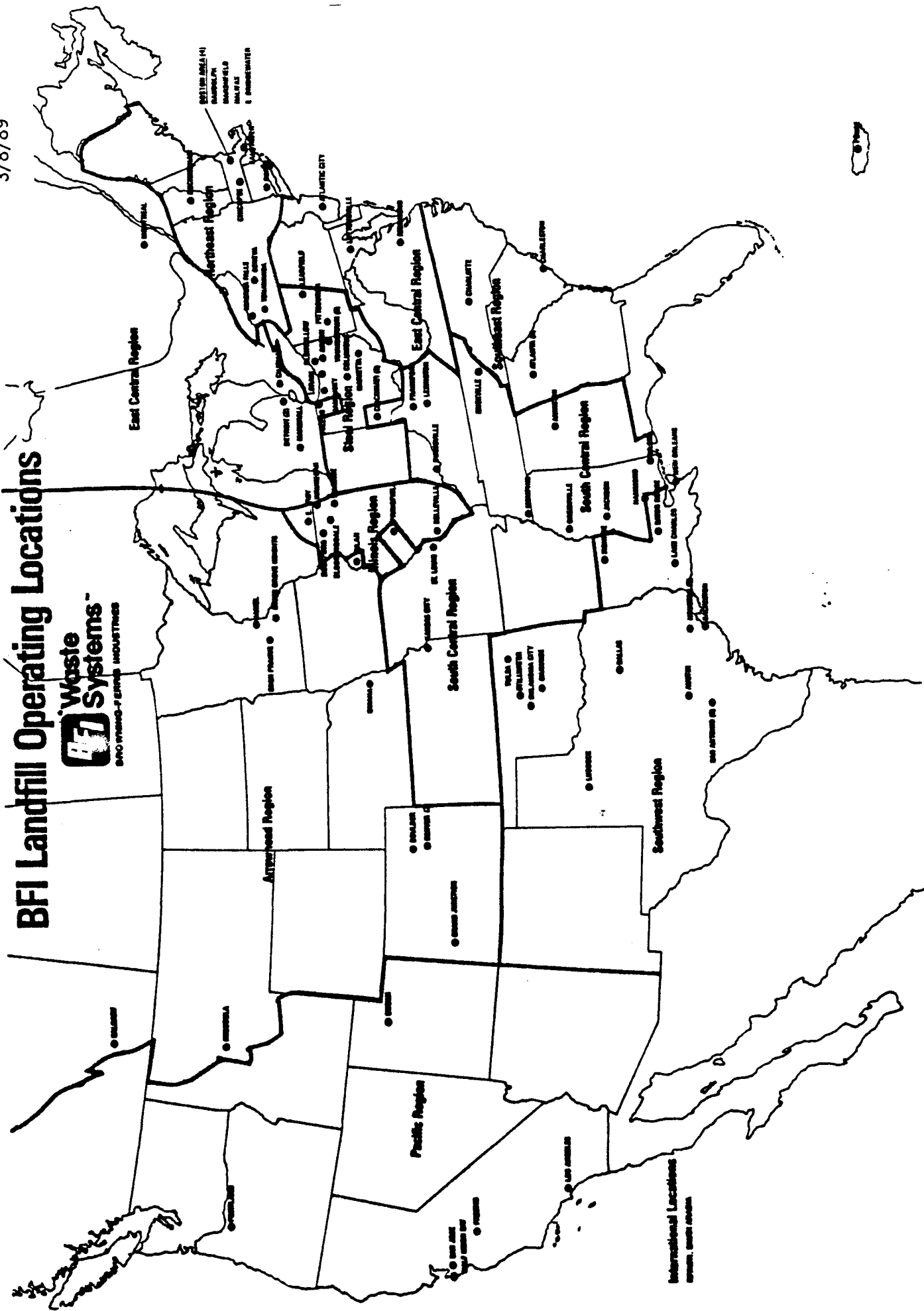
BROWNING-FERRIS INDUSTRIES  
LANDFILL DATA SUMMARY  
AS OF FYE 09/30/87

| (1)                  | (20)             | (2)                        | (21)                          | (4)                     | (19)                   |
|----------------------|------------------|----------------------------|-------------------------------|-------------------------|------------------------|
| STATE<br>PROVINCE    | LANDFILL NAME    | CITY / COUNTY              | FY1987<br>VARDAGE<br>DISPOSED | OWN<br>LEASE<br>OPERATE | CONTRACTING<br>PARTIES |
| Pennsylvania         | IMPERIAL         | Findlay Twnshp (Imperial)  | 1,114,180                     | Lease                   |                        |
| TOTAL Pennsylvania   |                  |                            | 1,479,275                     |                         |                        |
| Puerto Rico          | PONCE            | Ponce                      | 216,896                       | Own                     | City of Ponce          |
| Puerto Rico          |                  | Ponce                      | 0                             | Lease/Operate           |                        |
| TOTAL Puerto Rico    |                  |                            | 216,896                       |                         |                        |
| South Carolina       | CHARLESTON       | Jedburg (Charleston)       | 372,332                       | Lease                   |                        |
| TOTAL South Carolina |                  |                            | 372,332                       |                         |                        |
| Tennessee            | KNOXVILLE        | Knoxville                  | 808,064                       | Lease                   |                        |
| Tennessee            | HOLMES ROAD      | Memphis (Holmes Road)      | 3,369,499                     | Lease                   |                        |
| TOTAL Tennessee      |                  |                            | 4,177,563                     |                         |                        |
| Texas                | GALVESTON        | Alta Loma (Galveston)      | 743,852                       | Own/Lease               |                        |
| Texas                | HUTCHINS         | Dallas                     | 1,853,640                     | Own                     |                        |
| Texas                | MCCARTY ROAD     | Houston (McCarty Drive)    | 4,586,855                     | Own                     |                        |
| Texas                | WHISPERING PINES | Houston (Whispering Pines) | 999,214                       | Own                     |                        |
| Texas                | KERRVILLE        | Kerrville                  | 0                             |                         | City of Kerrville      |

BROWNING-FERRIS INDUSTRIES  
LANDFILL DATA SUMMARY  
AS OF FYE 09/30/87

| (1)             | (20)               | (2)                           | (21)                    | (4)               | (19)                |
|-----------------|--------------------|-------------------------------|-------------------------|-------------------|---------------------|
| STATE PROVINCE  | LANDFILL NAME      | CITY / COUNTY                 | FY1987 YARDAGE DISPOSED | OWN LEASE OPERATE | CONTRACTING PARTIES |
| Texas           | LUBBOCK            | Lubbock (Quail Canyon)        | 300,444                 | Own               |                     |
| Texas           | SUNSET FARMS       | Manor (Sunset Farm)           | 1,181,424               | Lease             |                     |
| Texas           | TESSMAN ROAD       | Martinez (Tessman Road)       | 1,875,096               | Own/Lease         |                     |
| Texas           | OKLAHOMA CITY      | Oklahoma City                 | 0                       |                   |                     |
| Texas           | PINN ROAD II       | San Antonio (Pinn Rd. #2)     | 391,008                 | Own               |                     |
| TOTAL Texas     |                    |                               | 11,931,533              |                   |                     |
| Utah            | WEBER COUNTY       | Salt Lake City (Weber County) | 589,380                 | Operate           | Weber County        |
| TOTAL Utah      |                    |                               | 589,380                 |                   |                     |
| Vermont         | ROCKINGHAM         | Rockingham                    | 167,732                 | Own               |                     |
| TOTAL Vermont   |                    |                               | 167,732                 |                   |                     |
| Virginia        | RICHMOND           | Henrico (Richmond)            | 795,526                 | Own               |                     |
| TOTAL Virginia  |                    |                               | 795,526                 |                   |                     |
| Wisconsin       | TROY AREA LANDFILL | Troy Wisconsin                | 0                       | Own               |                     |
| TOTAL Wisconsin |                    |                               | 0                       |                   |                     |
| GRAND TOTAL     |                    |                               | 88,837,544              |                   |                     |

# BFI Landfill Operating Locations



LANDFILL OPERATING CONTRACTS

| <u>(6A)<br/>NAME AND LOCATION</u>                          | <u>(6B)<br/>PERMITTED PARTY</u> | <u>(6C)<br/>OWNER</u> | <u>ACREAGE</u> | <u>TONNAGE<br/>Tons/Day</u> | <u>(6D)<br/>CONTRACT ADMINISTRATOR<br/>(Name and Address)</u>  |
|--|---------------------------------|-----------------------|----------------|-----------------------------|--|
| San Mateo Landfill<br>San Mateo, California                | City of San Mateo               | City of San Mateo     | 100            | 2,500                       | County of San Mateo<br>County Govt. Center<br>Redwood City, Calif. 94065                                 |
| *Saudi Arabia - Riyadh                                     | City of Riyadh                  | City of Riyadh        | 390            | 1,500                       | Public Works Dept.<br>Riyadh, Saudi Arabia   |
| Franklin County Landfill<br>Columbus, Ohio                 | Franklin County                 | Franklin County       | 220            | 1,300                       | James Mentel<br>Franklin County Landfill Admin.<br>3851 Landon-Grove Port Road<br>Grove City, Ohio 43123 |
| *Montgomery County Landfill<br>Montgomery County, Maryland | Montgomery County               | Montgomery County     | 350            | 1,200                       | Alan Hertzstein<br>Dept. of Environ. Protection<br>16101 Fredrick, Berwyn, Maryland 20855                |
| *Shreveport Landfill<br>Shreveport, Louisiana              | City of Shreveport              | City of Shreveport    | 425            | 1,000                       | Mike Strong<br>Solid Waste Manager<br>City of Shreveport<br>1234 Texas Avenue<br>Shreveport, LA 71101    |
| *Douglas County Landfill<br>Omaha, Nebraska                | Douglas County                  | Douglas County        | 160            | 950                         | Jerry Leahy<br>Douglas County Special Services<br>3015 Menke Circle, Omaha, Neb. 68151                   |
| *Lafayette County Landfill<br>Lexington, Kentucky          | Lafayette County                | Lafayette County      | 350            | 700                         | Scotty Raeslen<br>Mayor of Lexington<br>Lexington, Kentucky  |
| *Glenwillow Landfill<br>Glenwillow, Ohio                   | Austin Powder Company           | Austin Powder Company | 175            | 625                         | Jeff Sternhilber<br>3690 Orange Place<br>Cleveland, Ohio 44122   |
| *Mesa County Landfill<br>Grand Junction, Colorado          | Mesa County                     | Mesa County           | 180            | 500                         | Mark Eckert<br>Asst. County Administrator<br>515 Patterson Road<br>Grand Junction, Colorado 81501        |
| Irrington Landfill<br>Mobile, Alabama                      | City of Irrington               | City of Irrington     | 150            | 375                         | Mobile County Commissioners<br>Mobile, Alabama   |
| Edwards Landfill<br>Peoria, Illinois                       | County of Peoria                | County of Peoria      | 400            | 350                         | Dept. of Solid Waste<br>City of Peoria<br>Rosefield Township   |
| *Ponce Landfill<br>Ponce, Puerto Rico                      | City of Ponce                   | City of Ponce         | 125            | 350                         | Orlando Rivera<br>Dir. of Budgeting and City Admin.<br>P.O. Box 1709, Ponce, Puerto Rico 00732           |

\*NOTE: Current Landfill Operating Contract

Jeff  
Commissioner of Public Works  
County Office Bldg. #2  
3907 County Road No. 46  
Canadaiqua, NY 14424

275  
City of Annilston  
City of Quincy  
Weber County  
City of Chunchula  
City of Shawnee  
City of Hammond  
City of Kerrville  
Kings County  
Kings County  
Town of Plymouth  
Monsanto Chemical Company  
City of Burlingame  
U.S. Army  
City of Portland

City of Annilston  
City of Quincy  
Weber County  
City of Chunchula  
City of Shawnee  
City of Hammond  
City of Kerrville  
Kings County  
Kings County  
Town of Plymouth  
Monsanto Chemical Company  
City of Burlingame  
U.S. Army  
City of Portland

Public Works Director  
Anniston County, Alabama  
Paul Anderson  
Commissioner of Public Works  
Quincy, Massachusetts  
Attn: Chairman, Weber County Comm.  
Weber County Utah Municipal Bldg.  
2549 Washington Blvd.  
Ogden, Utah 84401  
Mobile County Commissioners  
Mobile, Alabama  
Engineering Dept.  
16 West 9th St.  
Shawnee, Oklahoma 74801  
Debbie Pope  
Mayor of Hammond  
Hammond, Louisiana  
William Bart Hines, County Commissioner  
800 Junction Hwy., Kerrville, TX 78028  
Attn: Dan Huffman  
Solid Waste  
11815 11th Avenue  
Hanford, California 93230  
Attn: Dan Huffman  
Solid Waste  
11815 11th Avenue  
Hanford, California 93230  
Board of Health  
Town of Plymouth  
Monsanto Chemical Company  
Addition, Ohio 45001  
Asst. City Engineer  
The City of Burlingame  
City Hall - 501 Primrose Road  
Burlingame, Calif. 94010  
Dept. of Solid Waste  
Grafton, Virginia  
Norm Wietting  
Solid Waste Dept. - Metro  
577 W. Hall St., Portland, Oregon 97201

|   |                           |                           |     |                 |   |
|---|---------------------------|---------------------------|-----|-----------------|---|
| Anniston Landfill<br>Anniston County, Alabama | City of Anniston          | City of Anniston          | 300 | 235             | Public Works Director<br>Anniston County, Alabama   |
| Quincy Landfill<br>Boston, Massachusetts      | City of Quincy            | City of Quincy            | 45  | 200             | Paul Anderson<br>Commissioner of Public Works<br>Quincy, Massachusetts  |
| Weber County Landfill                         | Weber County              | Weber County              | 105 | 150             | Attn: Chairman, Weber County Comm.<br>Weber County Utah Municipal Bldg.<br>2549 Washington Blvd.<br>Ogden, Utah 84401 |
| Chunchula Landfill<br>Mobile, Alabama         | City of Chunchula         | City of Chunchula         | 100 | 125             | Mobile County Commissioners<br>Mobile, Alabama  |
| Shawnee Landfill<br>Shawnee, Oklahoma         | City of Shawnee           | City of Shawnee           | 55  | 125             | Engineering Dept.<br>16 West 9th St.<br>Shawnee, Oklahoma 74801   |
| Hammond Landfill<br>Baton Rouge, Louisiana    | City of Hammond           | City of Hammond           | 88  | 110             | Debbie Pope<br>Mayor of Hammond<br>Hammond, Louisiana   |
| Kerrville Landfill<br>Kerrville, Texas        | City of Kerrville         | City of Kerrville         | 160 | 100             | William Bart Hines, County Commissioner<br>800 Junction Hwy., Kerrville, TX 78028                                     |
| Hanford Landfill<br>Kings County, California  | Kings County              | Kings County              | 70  | 100<br>Tons/Day | Attn: Dan Huffman<br>Solid Waste<br>11815 11th Avenue<br>Hanford, California 93230                                    |
| Corcoran Landfill<br>Kings County, California | Kings County              | Kings County              | 50  | 100<br>Tons/Day | Attn: Dan Huffman<br>Solid Waste<br>11815 11th Avenue<br>Hanford, California 93230                                    |
| Plymouth Landfill<br>Plymouth, Massachusetts  | Town of Plymouth          | Town of Plymouth          | 40  | 90              | Board of Health<br>Town of Plymouth   |
| Bond Road<br>Harrison, Ohio                   | Monsanto Chemical Company | Monsanto Chemical Company | 112 | 60              | Monsanto Chemical Company<br>Addition, Ohio 45001   |
| Burlingame Landfill<br>Burlingame, California | City of Burlingame        | City of Burlingame        | 47  | 50              | Asst. City Engineer<br>The City of Burlingame<br>City Hall - 501 Primrose Road<br>Burlingame, Calif. 94010            |
| Grafton Landfill<br>Grafton, Virginia         | U.S. Army                 | U.S. Army                 | 25  | 50              | Dept. of Solid Waste<br>Grafton, Virginia   |
| Metro Landfill<br>Portland, Oregon            | City of Portland          | City of Portland          |     |                 | Norm Wietting<br>Solid Waste Dept. - Metro<br>577 W. Hall St., Portland, Oregon 97201                                 |

NOTE: Current Landfill Operating Contract

JONES AND ASSOCIATES, a division of ARCTURUS RESOURCES INC.  
Environmental, Exploration, Mining, and Water Resources Consulting  
314 North Last Chance Gulch, Helena, Montana 59601 (406)443-2031

March 5, 1989

SENATE NATURAL RESOURCES

EXHIBIT NO. #17

DATE 3-8-89

Members of the Senate Natural Resources Committee  
Capital Station  
Helena, MT 59620

BILL NO. HB 680

Re: House Bill 680

Dear Senator Keating and members of the Committee,

Thank you for giving me the time at the hearing on March 1, 1989 to testify in opposition to House Bill 680. During the question and answer period that followed there were several questions concerning the requirements of an Operating Permit, the economics of the small operation with a five acre facility, and the cost of permitting a small operation. I would like to present the following information on these questions from the perspective of the small operation. While Mr. Fitzpatrick is well acquainted with permitting, the experience of Pegasus Mining is much different than the small company's.

It must also be stated that the small miner really covers three separate groups under the same exclusion. These groups are:

1)The individual claim holder that does not really mine his property but holds the SMES to cover themselves if they decide to do anything.

2)The individual who is trying to make wages from their small mine. These are the people who are more likely to be placer miners or are trying to ship high grade ore to a custom mill, because they do not have the capital to build their own plant.

3)The small to medium size mining company that is working the small deposits and attempting to expand the reserves of those deposits into a larger mine. These companies generally go out and raise capital and must strive to make a return on that capital on the average of 15%.

For the first two groups the change in the law will not have an effect. For the third it takes away the important tool of being able to bring a site into production quickly and efficiently on a small pilot scale. It is important to note that for this group the SMES is only one step in the process of bring the mine fully on line. Because of the investment involved it is nearly impossible to turn a profit unless the operation grows beyond the five acre size. This is an important point. We are not talking about the small under capitalized Mom and pop mining operations. We are



talking about companies that have access to capital and must strongly manage that capital. If these companies can demonstrate some cash flow from a project early (not necessarily a profit) the financing becomes much easier to obtain. For the responsible company a spill or leak jeopardizes that funding and they will do everything they can to prevent any regulatory problems.

This law does not address the problem of the irresponsible operator such as the one mentioned who had the tailings spill near Clancy and left for Canada. This operation was under an Operating Permit. A spill and leaking ponds left by another operator near Lewistown was under an Operating Permit and again when faced with the problem the operator disconnected its phones, didn't pay its bills and left the state. Stringent enforcement of the existing laws prevent these problems, new laws with the same level of enforcement do not help.

#### REQUIREMENTS OF AN OPERATING PERMIT

During the hearing the impression was left that the only requirements for an operating permit was a reclamation plan. I have attached a copy of the Department of State Lands Guidelines which clearly demonstrate that much more than a simple reclamation plan is required. Each Operating Permit must have a section covering:

- 1) The Environmental Baseline,
- 2) The Operating Plan, and a
- 3) Reclamation Plan.

The major work area in developing the Operating Permit for submission to the DSL is the collection of Environmental Baseline. This work can be completed fairly quickly if environmental work has been completed in an area previously, however, much of Montana does not have the kind of detailed study that is required. For example as a minimum a detailed soil survey, vegetation survey, water quality survey, cultural resources survey, range survey, and wildlife overview survey must be completed. The lead time for generating this information ranges from 3 months to 1 year. A further complicating factor for the small company is the financing of these studies and the hiring of a consultant to complete the permit package. A large company such as Pegasus Mining can afford to have a full time government affairs coordinator to coordinate this effort, while a small company cannot.

The requirements for an Operating Permit are not that complicated, but they are specialized. While a mining engineer or a geologist can understand the finding of a vegetation survey they do not have the skill necessary to carry out that survey. Further in some instances, such as the cultural resources survey, the person performing the survey must be recognized by the State Historic Preservation

Office. The absorbing of these costs are harder for the small firm than the large firm, again due to the capital supply.

The time of processing and receiving an Operating Permit will vary from site to site and operator to operator. In the case cited by Mr. Fitzpatrick the work necessary for obtaining that operating permit had been on-going since 1983 under a previous operator and later through Pegasus. To state that the permit took five months to obtain ignores the time in preparation and the amount of environmental work that was purchased with the mine. Further a large company is able to assign a person whose only job is to work with the state on a daily basis if necessary to push the permit through.

Another way to look at the timing issue is to consider what an operator must do prior to even beginning the permit process. The miner must:

- 1) Acquire the property,
- 2) Invest in the exploration for the minerals
- 3) Invest in the necessary metallurgical testing, and,
- 4) Design a mine and a process for the recovery of the minerals.

At this point the miner can begin the necessary permitting studies. After a period of three months (best case) he can submit his permit application and wait six months. During

this time no cash flow is generated. All of his costs are coming from the working capital. In this the large company has a great advantage in that their resources are greater. Under the current system the operator can start the operation on a small pilot scale and begin to see some cash flow from the mine while obtaining a permit. This pilot scale operation will not generate a profit for the company or probably even pay for the remaining steps in the process but it does lighten the burden.

#### ECONOMICS OF THE SMALL OPERATION

The economics of the individual operation will vary from site to site, however, it is fair to state that the majority of cyanide operations limited to five acres will not turn a profit. Based upon costs taken from the Mining Cost Service (Western Mine Engineering, 1989) the small operation can expect to have capital costs for the recovery portion of the operation (the cyanide plant, leach pads, construction) of \$175,000 to \$225,000. Working capital of \$75,000 to \$100,000 is also needed to cover the initial operational costs as money will not come into the operation until production is well underway. If the operator installs a laboratory (highly recommended) and a small smelting operation an additional \$113,000 to \$220,000 should be added on to the capital costs. These capital costs are exclusive of engineering/metallurgical costs and exploration costs. Exploration costs prior to any production will again vary

from site to site but will range from \$20,000 to \$50,000 for the small deposit. If we look at recovering those costs with a desired rate of return of 15% and the minimum capital investment, considering that 30,000 tons of material (0.05oz./ton) can be processed within the 5 acres, the net present value of the property is \$ -395,619. Clearly the company must be able to process more ore than is possible within the restrictions of the SMES if it intends to make a return on the investment.

#### PERMITTING COSTS

Direct permitting costs for the small operation will range from \$20,000 to \$30,000. based upon our own company's experience. This cost in itself is not excessive. However if the cost is combined with the cost of the delay in initiating operations (5 to 6 months minimum) it quickly becomes a problem. Again the problem is not a matter of costs, it is a matter of timing. Under the current regulations, which require a site plan, an operations plan, and a waste disposal plan (which is similar to a reclamation plan) the permitting time is sixty to ninety days from submission to approval. It is important to note that this permit is subject to public notice and comment.

Thank you for the opportunity to provide you with this information and your consideration. I think a question that must be asked prior to action on this bill is whether or not

the Water Quality Bureau's Discharge Permit program is inadequate. If it is then perhaps this bill is needed. However, I feel that the requirements are adequate and the enforcement provisions strong enough to protect Montana's resources. New regulations will not get rid of the poor operators, only stringent enforcement of the existing regulations will.

Sincerely,

A handwritten signature in cursive script that reads "Kevin Jones".

Kevin R. Jones

PLAN OF OPERATIONS  
GUIDELINES

Introduction

General discussion of proposal with map showing location of project with respect to nearest towns.

I. Environmental Information Guidelines

A. Maps

A standard U.S. Geological Survey 7.5 minute (1:24,000) topographic base map(s) is recommended as the optimum scale for most of the informational needs of the application. In some cases, the map scale will have to be reduced or enlarged for specific maps as the level of detail dictates. Multiple items may be shown on one map as long as the map does not become "too noisy."

Some maps may not require topographic base and can be handled on a case-by-case basis.

The types of maps normally required for an application are included in the outline below.

B. Air Resources/Climatology

1. Climatology

- a. precipitation zone, annual and monthly
- b. number of frost free days (average) mean annual temperature average January, average July

2. Quality

- a. air shed classifications of project area and adjacent areas. Contact with Air Quality Bureau regarding determination of possible need for Air Quality permits and monitoring data.

C. Hydrology

Available information including contact with appropriate agencies: Water Quality Bureau, Montana Bureau of Mines & Geology, U.S. Geological Survey, Bureau of Land Management.

1. Surface water resources

- a. map of affected watershed(s) (scale 1:24,000)
- b. flow estimates of affected watershed(s)
- c. sampling locations for baseline information

- d. contact with Water Quality Bureau regarding possible permit requirements

2. Groundwater

- a. discussion relating geologic setting to groundwater regime
- b. water table/potentiometric surface map
- c. delineation of the hydrostratigraphic units
- d. cross-section thru the affected area, showing the hydrostratigraphic units
- e. sampling (locations shown on map) test wells/geotechnic studies
- f. hydrologic inventory (registered wells and springs including: depth of completion, gallons per minute, quality) also include non-registered wells and springs in affected areas
- g. contact with Water Quality Bureau regarding possible permit requirements

D. Wildlife

Available information including contact with local wildlife agencies (e.g. Montana Fish, Wildlife & Parks, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service), University and Community college system.

Information should include:

1. Terrestrial

- a. wildlife habitat types of include important seasonal ranges (if any)
- b. discussion of the types of wildlife occurring in the affected area (species list - common and binomial names)
- c. known or suspected occurrence of threatened and endangered species

2. Avian

- a. known or suspected nesting sites of threatened and endangered species
- b. discussion of Avian habitat including wetlands and raptor
- c. known species list (common and binomial names)



3. Fisheries and Aquatic Biology (aquatic insects, algae, etc.) discussion to include:
  - a. known species occurrence and distribution within affected area to include critical habitat (if any)

E. Vegetation/Agriculture

Available information including contact with Agricultural Experiment Station, U.S. Forest Service, Bureau of Land Management. Information should include:

1. Discussion of community type based on two-dominant species to include productivity, cover and density for rangeland or U.S. Forest Service habitat types for timberland
2. Taxonomic list of species by morphologic class
3. Map indicating range site, and community type (1:4800 scale)
4. Discussion of AUM and range condition

F. Geology

1. Geologic map indicating known stratigraphy, structure and fault system
2. Narrative of geologic history
3. Discussion of the ore body to include mineralogic and chemical nature of the ore and waste rock
4. Geologic stability of the affected area to include regional seismicity, known landslides and fault systems
5. Unique geological features
6. Identification of other potential mineral resources in the area
7. Other information as determined necessary through consultation or application review

G. Soils

Available information including contact with Soil Conservation Service, University system.

Information should include:

1. Map delineating soil map units (scale 1:4800)
  - a. use Order 1 soil survey for actual disturbed areas
  - b. use Order 3 soil survey for areas within permit area which will not be disturbed

- c. use the National Cooperative Soil Survey for classification of soils
- 2. Soils description
  - a. analysis of: texture, chemistry, pH, Ec, SAR, porosity, permeability, (standard soil analysis)
  - b. determine salvage depths and suitability for reclamation and construction
    - salvage depths should be delineated for each soil map unit (see topsoil and subsoil salvage, section II(L), Operating Plan Guidelines)

H. Land Use

Discussion of the current land use of the proposed affected area and adjacent areas.

The following information is to aid the Department in completion of its' Preliminary Environmental Review (PER) process as required by the Montana Environmental Policy Act:

I. Energy

Discussion of any existing power corridors, portable generators, or other energy generating facilities currently supplying power to the project area.

J. Transportation

Map and discussion of the existing transportation network in and to the proposed affected area.

K. Aesthetics

Discussion of the existing aesthetic values of the proposed affected area including adjacent areas.

L. Noise Levels

Discussion of predicted noise level compared to existing noise levels in adjacent areas; especially nearby schools, hospitals, library or residential areas.

M. Socioeconomic Human Environment

Information indicating compliance with HB718 process (Hardrock Impact Board), contact with Department of Community Affairs.

- 1. Discussion of the socioeconomic history of the area

2. Discussion of the current socioeconomic baseline information
3. Discussions should include:
  - a. social (structures and mores)
  - b. cultural uniqueness, diversity
  - c. population, quantity and distribution
  - d. housing; quantity and distribution
  - e. human health and safety
  - f. community and personal income
  - g. employment, quantity and distribution
  - h. tax base; local and state tax revenue
  - i. demand on government services
  - j. industrial and commercial activities
  - k. environmental plans and goals (local and regional)

N. Cultural Resources

1. Historic, Archeologic, Paleontologic
  - a. available information including contact with State Historic Preservation Office, U.S. Forest Service, Bureau of Land Management, and State University system
  - b. discussion of Historic, Archeologic, Paleontologic, site importance in relation of the proposed activities, including: applicability of the Federal 106 regulations (i.e. eligibility for National Register) and the State Antiquities Act

II. General Operating Plan

Introduction

General discussion of proposal with map showing location of project with respect to nearest towns.

A. Maps

A standard U.S. Geological Survey 7.5 minute (1:24,000) topographic base map(s) is recommended as the optimum scale for most of the informational needs of the application. In some cases, the map scale will have to be reduced or enlarged for specific maps as the level of detail dictates. Multiple items may be shown on one map as long as the map does not become "too noisy."

Some maps may not require topographic base and can be handled on a case-by-case basis.

Included in this section is a general listing of the types of maps normally required for an application.

1. Location of mine, mill, tailings impoundments, heap leach areas, placer pit, etc.
  2. Mine layout for life of operation plus any incremental changes to layout (e.g. relocation of roads, corridors, changes in waste rock dump, changes in pit, placer mining, etc.)
    - a. delineation of surface support facilities (e.g. warehouses, mill buildings thickener tanks, water tanks, power substations, change houses, powder magazines, portals, waste dumps, tailings impoundments, office buildings, parking areas, loadout facilities, conveyor systems pipelines, corridors, haul roads, access roads, diversions, etc.)
  3. Proposed permit area boundary plus legal description (show location of permanent monuments)
  4. Delineation of disturbed vs. nondisturbed areas within the proposed permit area; include acreage amount for each
  5. Surface ownership and mineral ownership of permit area
  6. Topsoil stockpile locations
  7. Additional maps as determined necessary through consultation or application review
- B. Equipment List: by location and task (vehicles and earthmoving equipment)
1. Mining (surface and underground)
  2. Topsoil salvage and replacement
  3. Ore processing (milling, concentrating, heap leach)
  4. Tailing disposal
  5. Special equipment
  6. Ore/concentrate shipment to market
- C. Personnel Requirements: (by location and task) for construction and operational phases
1. Mine site
  2. Ore processing

3. Tailing disposal
4. Identify work shifts: employees/shift, shifts/day, days/week
5. Total anticipated employment

D. Water Consumption and Source

1. Mine site
2. Ore processing
3. Tailing disposal
4. Total predicted make-up water needs
5. Total water consumption

E. Power Consumption and Source

1. Mine site
2. Ore processing
3. Tailing disposal
4. Total power needs

F. Sewage Treatment

1. System type (description)
2. Capacity
3. Location

G. Solid Waste Disposal

1. Local ordinances
2. Toxic waste disposal

H. Transportation (Roads)

1. Construction design and methods
2. Cross-section of typical road
3. Typical grade (%)
4. Drainage design (culverts, design capacity, and bridges)
5. Road base and road surface materials
6. Maintenance

7. Life of road network
8. Relocations
- I. Special Systems (e.g. conveyor, pipeline, water recycle system, tailings lines, etc.)
  1. Location and extent
  2. Capacity
  3. Specifications
  4. Spill and cleanup procedures
  5. Seasonal considerations (e.g. freezing, flooding, etc.)
- J. Fire Protection
  1. Local ordinances
  2. U.S. Forest Service requirements
  3. Other
- K. Impoundments and Diversions
  1. Impoundments
    - a. pond sizing calculations (design capacity for 100 year flood event and construction technique)
    - b. safety of impoundments (regional seismicity, proximity to flood plain, etc.)
    - c. life of impoundments
    - d. discharge system (if any) contact with Department of Health and Environmental Sciences - Water Quality Bureau, Montana Pollutant Discharge Elimination System (MPDES) and/or Montana Ground Water Pollution Control System (MGWPCS) permits
    - e. anticipated seepage volumes and seepage reduction (if proposed)
  2. Diversions
    - a. cross-section of typical diversion
    - b. grade and profile
    - c. design capacity
    - d. erosion control (e.g. riprap, sealing methods)

- e. life of diversion(s)
- 3. Provisions to avoid accumulation of stagnant water
- L. Topsoil and Subsoil Salvage
  - 1. Slvage depths by soil type
  - 2. Volumes of salvageable soil by type
  - 3. Total volume of soil materials
  - 4. Soil stockpile configuration (include cross-sections)
  - 5. Soil stockpile stabilization: techniques, revegetation or other methods
  - 6. Life of soil stockpile
- M. Public Nuisance
  - 1. Commitment and procedures to avoid foreseeable situations of public nuisance
- N. Noise
  - 1. Discussion of predicted noise levels by activity during construction and operational phase
- O. Procedures for Protection of Historical and Archaeological Values
  - 1. Avoidance
  - 2. Salvage
- P. Procedures for Prevention of Wind Erosion
- Q. Commitment and Procedures to avoid Disturbance or Impacts to Offsite Flora and Fauna
- R. Identification of the Activities which are to take place on the "Non-disturbed" Acreages within the permit area boundary
- S. Water Monitoring Programs (surface and groundwater)
  - 1. Consultation with Montana Department of State Lands, Water Quality Bureau, Montana Department of Health and Environmental Sciences for design of monitoring program
    - a. map locations of proposed monitoring sites
    - b. parameters to be analyzed
    - c. schedule and duration of monitoring

T. Mining Plan

1. Type of mine (e.g. underground, open pit, placer, other)
2. Life of mine (at proposed production)
3. Extraction methods
  - a. narrative describing methods: (e.g. shrinkage stopping, shovel-truck, placer, etc.)
  - b. cross-sections
  - c. plan view (underground configuration, surface open pit, placer)
  - d. dimensions of proposed disturbances
  - e. blasting - type of explosive, solubility of explosive
4. Tonnage/day, and production schedule (hrs/day, days/wk)
  - a. tonnage/day of waste rock, including waste rock dump configuration (e.g. height and slope)
  - b. tonnage/day of ore

U. Ore Processing

1. Description of the ore processing method (e.g. milling, concentration by flotation, heap leach)
2. Life of ore processing operation (e.g. will ore processing operation extend beyond the life of the mine to process ore from other locations)
3. Nominal and maximum capacity (input and output)
4. Special information needs for the ore processing method
  - a. heap leach
    - i. leach pad design: capacity, stability, size, sealing methods, waste rock disposal
    - ii. barren and pregnant pond design: capacity, stability, size, sealing methods, capacity vs. process volume, sediment disposal
    - iii. run-off control system
    - iv. contingency plan: pond failure, leach pad excursion, spill and neutralization procedures
    - v. water loss and source



- vi. cyanide: recovery system, container disposal, concentration, consumption (annual), estimated annual loss, etc.
- b. flotation (list of reagent and their function)
  - i. dosage lb/ton
  - ii. spill procedures
  - iii. worker exposure limits
  - iv. toxicity range
  - v. amount of each reagent that will report to tailings impoundment
  - vi. chemical or biological breakdown period of the various reagents
  - vii. reagent storage and packaging
- c. ore sorting discussion to include type of equipment
- d. wash plants discussion to include type of equipment

V. Tailing Disposal

- 1. General description of type of tailing dam construction method: (e.g. upstream, downstream, center line, multi-cell, or other)
  - a. disposal methods
    - i. design of impoundment including but not limited to:
      - dam stability details (engineers report)
      - method of construction, starter dam, use of borrow material, cyclone tailings, toe drains, cell systems, inspection schedule failure contingencies, lined or unlined bottom, 100 year flood event, design, freeboard, foundation preparation
    - ii. operation of dam to include stability monitoring
- 2. Expected life of impoundment
  - a. capacity vs. surface area computations
  - b. expansion potential
- 3. Tailing water

- a. special monitoring systems
  - i. piezometers
  - ii. discussion of hydrologic balance in tailing impoundment cross-section showing phreatic surface
  - iii. tailing decant/water recycle system
- b. MPDES or MGWPCS discharge permit
- c. expected quality and quantity of liquids percolating from the impoundment

III. Reclamation Plan

A. Introduction

- 1. Objectives of the reclamation plan
  - a. identify the postmining land use of permit area and adjacent lands
  - b. postmining topography maps (1:4800) or appropriate scale
    - i. cross-sections of reclaimed surface
    - ii. horizontal:vertical slope measurements
  - c. reclamation of mining level disturbances
  - d. reclamation time table

B. Waste Materials/Overburden

- 1. Grading
  - a. grading techniques
  - b. slope configuration
  - c. subsidence
  - d. quantity of waste material
  - e. scarification prior to retopsoiling
  - f. suitability of waste materials as a plant growth media

C. Soils (subsoil and topsoil)

- 1. Replacement volumes
- 2. Average replacement depths

3. Soil amendments (e.g. fertilizer, lime, mulch, jute netting, etc.)
4. Scarification prior to topsoil replacement
5. Grading techniques/compaction
6. Special handling techniques (if any)

D. Vegetation

1. Seed mix and rates (lbs. PLS/acre)
2. Method of seeding (e.g. drill, broadcast, hydroseeding, etc.)
3. Use of containerized shrubs or tublings
4. Contingency plans for revegetation failures
5. Fencing to insure reclamation success (if appropriate)
6. Reclamation monitoring plan

E. Hydrology

1. Surface water
  - a. compliance with water quality standards
  - b. water treatment methods (if any) life of treatment method
  - c. commitment and provisions to avoid accumulation of stagnant water
  - d. discussion of permanent diversions and impoundments
    - i. cross-sections
    - ii. longitudinal profiles
    - iii. total length
    - iv. use of riprap or sealants
  - e. stream channel reclamation
    - i. methods
    - ii. engineering design
    - iii. stability
    - iv. length and sinuosity
  - f. safety of diversions, impoundments, and other water treatment facilities

2. Groundwater

- a. monitoring program to establish postmining groundwater quality
- b. compliance with water quality standards
- c. mitigation of postmining groundwater discharge including underground workings, tailing impoundment seepage, etc.

F. Stability

1. Monitoring program to establish post-reclamation soils and geologic stability
  - a. wind erosion
  - b. soil loss
  - c. subsidence

G. Postmining Solid Waste Disposal

1. Burial of mining debris
2. Compliance with local and state ordinances

H. Reclamation of Surface Support Facilities

1. Removal of buildings at the site
2. Road network removal and reclamation
3. Conveyor systems, pipelines, power corridors, etc.

HARDROCK GUIDELINES  
GROUNDWATER HYDROLOGY ADDENDUM

16.20.1013 PERMIT APPLICATIONS

(1) All operation permit applications must contain the following information as deemed necessary by the Department of State Lands and the Water Quality Bureau:

- (a) A specific site plan, indicating topography;
- (b) Location of treatment works and disposal systems;
- (c) Location of adjacent state surface waters;
- (d) List of surface owners and lessees of land within one mile of the proposed source;
- (e) Location of water supply wells and springs within one mile;
- (f) Description of waste or process solutions to be contained onsite; and
- (g) Information describing existing groundwater quality and uses within one mile of the site.

(5) The Department may require the submission of additional data and information with permit application where warranted by the potential impacts of a source including but not limited to the following:

(a) Specific design conditions and process descriptions, proposed alternatives, soil conditions, descriptions in areas proposed for location of treatment ponds and land disposal, geological conditions, groundwater characteristics, local hydrogeology, discussion of potential for and measures to be taken for emergency and accidental spills, chemical and physical characteristics of process water and wastewater, nature of proposed pond sealants and linings.

(b) For industrial wastes, waste flow diagrams showing water and material balances, chemical additions, and waste volumes and concentrations before and after treatment, including but not limited to oil and other floating material, biochemical oxygen demand, settleable and suspended solids, acids, alkalis, dissolved salts, organic materials, toxic materials, compounds producing taste and odor in water and colored materials and dyes.

(c) Proposed measures to be taken to provide alternative water supplies or treatment in the event any domestic, municipal, agricultural, or commercial/industrial well is adversely affected by the operation of the source; and

(d) A written evaluation of alternative disposal practices for maximization of environmental protection.

Amendments to House Bill No. 680  
Third Reading Copy

Requested by Representative Grady  
For the Senate Committee on Natural Resources

Prepared by Bob Thompson  
March 4, 1989

1. Page 1.  
Following: line 10  
Insert: " Statement of Intent

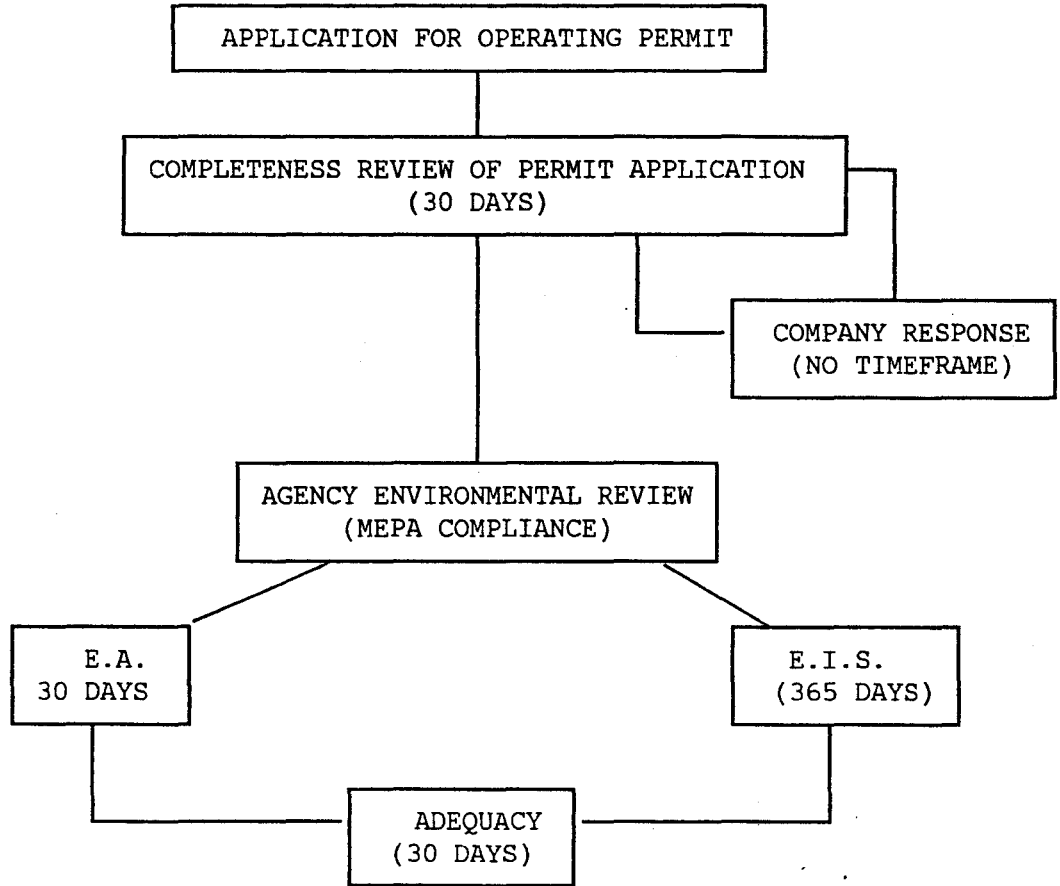
A statement of intent is provided for this bill in order to elaborate on the type and extent of review that the department of state lands should give to a small-miner application for an operating permit for a cyanide ore-processing facility. Moreover, the legislature anticipates that implementation of this bill will require rulemaking by the board of land commissioners.

While an operating permit is required for these operations, the legislature intends that, because of the size and limited scope of the operation, the application requirements should in general be substantially less rigorous than the requirements for larger proposed mine operations not under the small miner exclusion. The department of state lands should also attempt to review these applications in a shorter timeframe than currently needed to review operating permit applications for larger mines.

To encourage expedited review, the department of state lands should provide clear guidance to permit applicants concerning requirements for a complete application. In particular, the guidance should help applicants prepare adequate ~~design~~, operating, and reclamation plans. While the legislature recognizes plan requirements will vary with the site and characteristics of the proposed operation, the department should attempt to guide the applicant in a manner that minimizes his costs while also meeting metal-mine reclamation requirements.

Finally, [section 4 of this bill] exempts an existing cyanide ore-processing facility if the operator registers the facility by January 1, 1990. In order to provide ample notice to existing operators, the legislature intends that the department shall prepare the form and notify affected small-miners, by mail or publication or both, of the form's availability and purpose as soon as possible."

HARD ROCK MINE OPERATING PERMIT  
FLOW CHART FOR PERMITTING



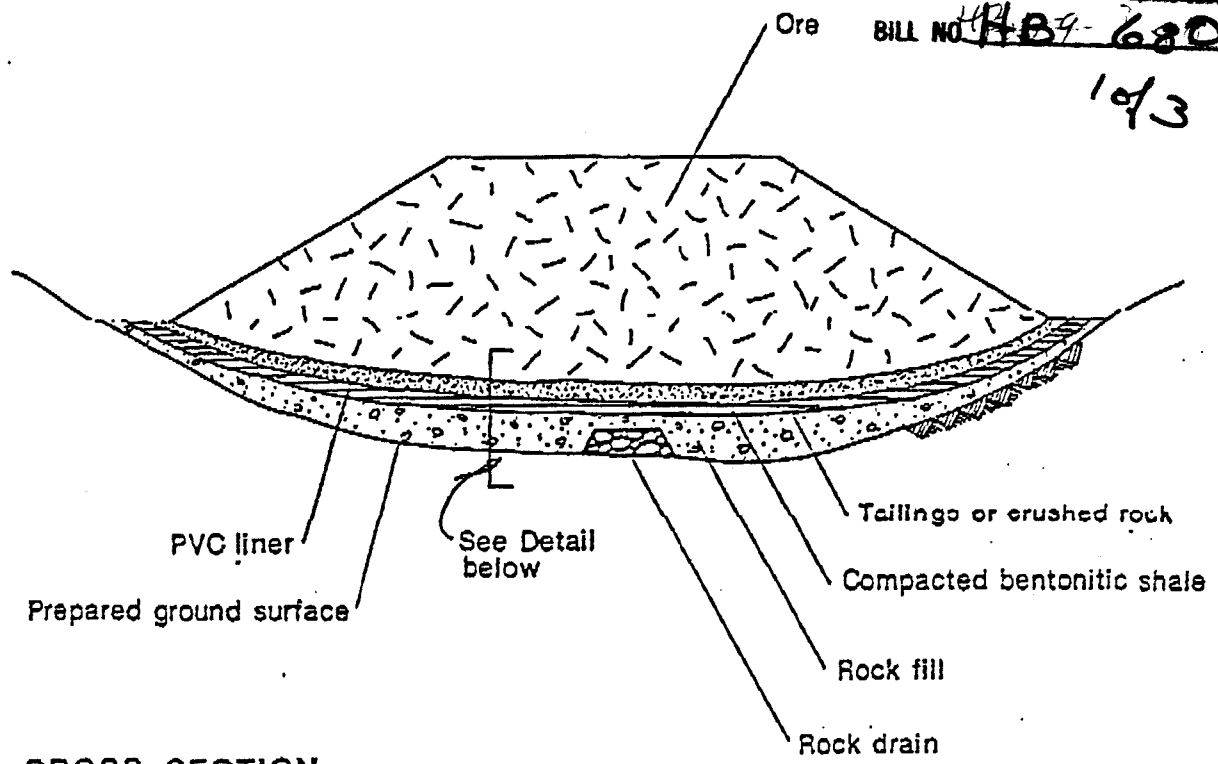
SENATE NATURAL RESOURCES

EXHIBIT NO. 8/10

DATE 3-8-80

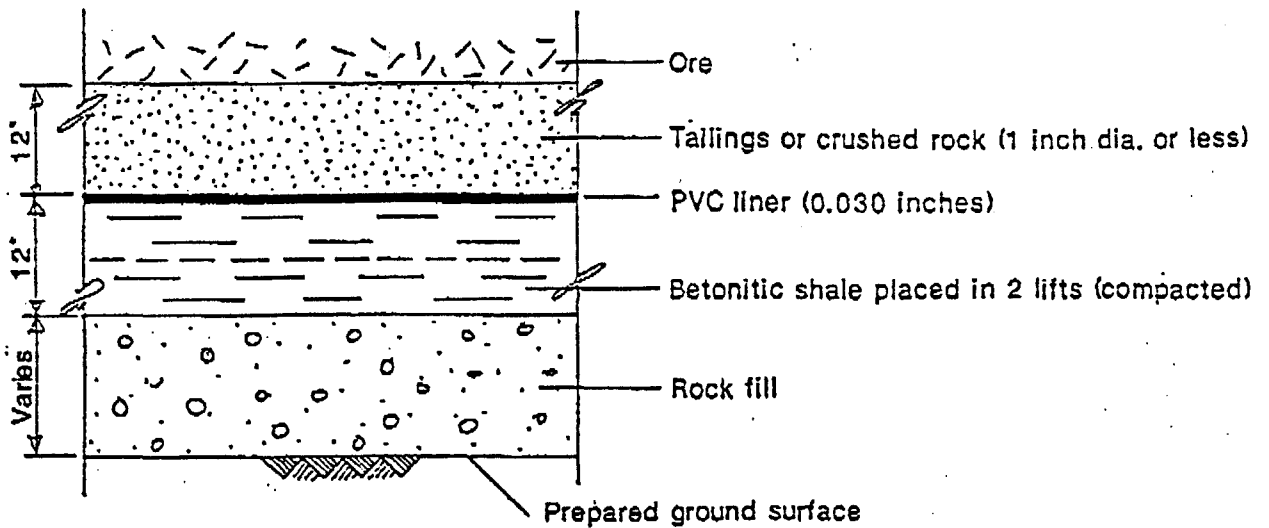
BILL NO. HB 9-680

193



CROSS-SECTION

No Scale



PAD DETAIL

No Scale

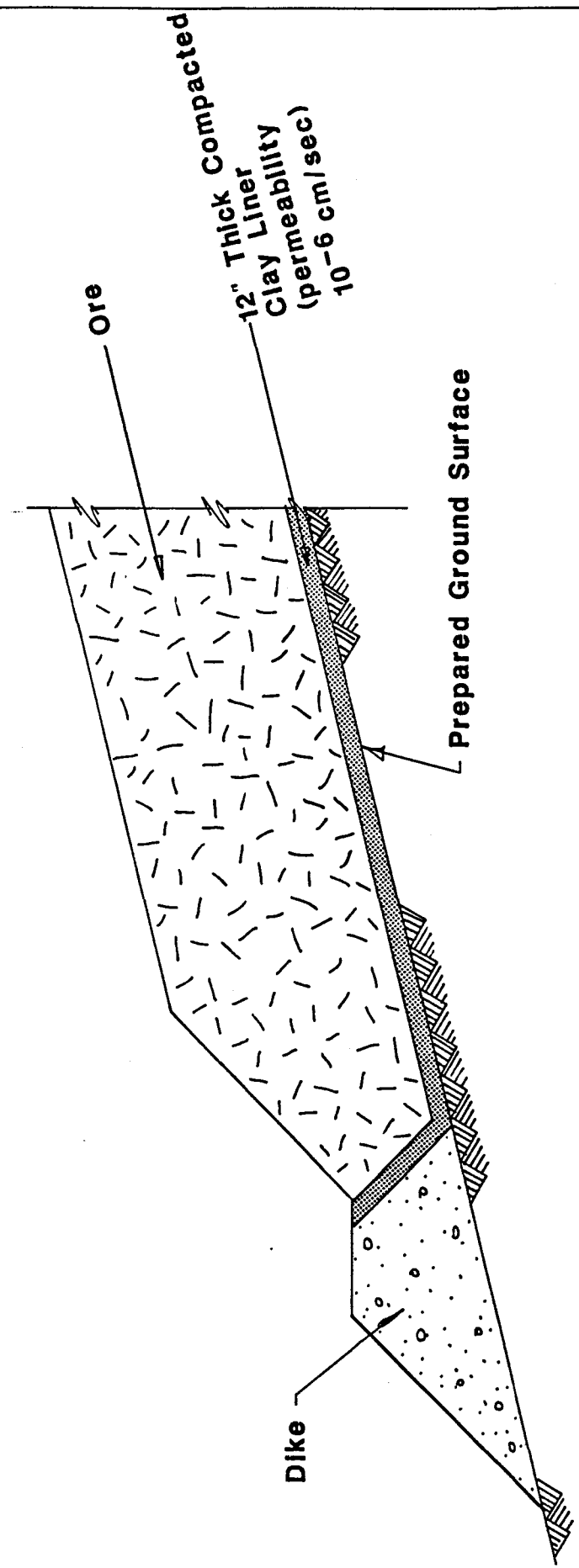
2-3

Figure 14

Typical Leach Pad Cross-section



Ex #10 HB 680  
3-8-89 2 of 3

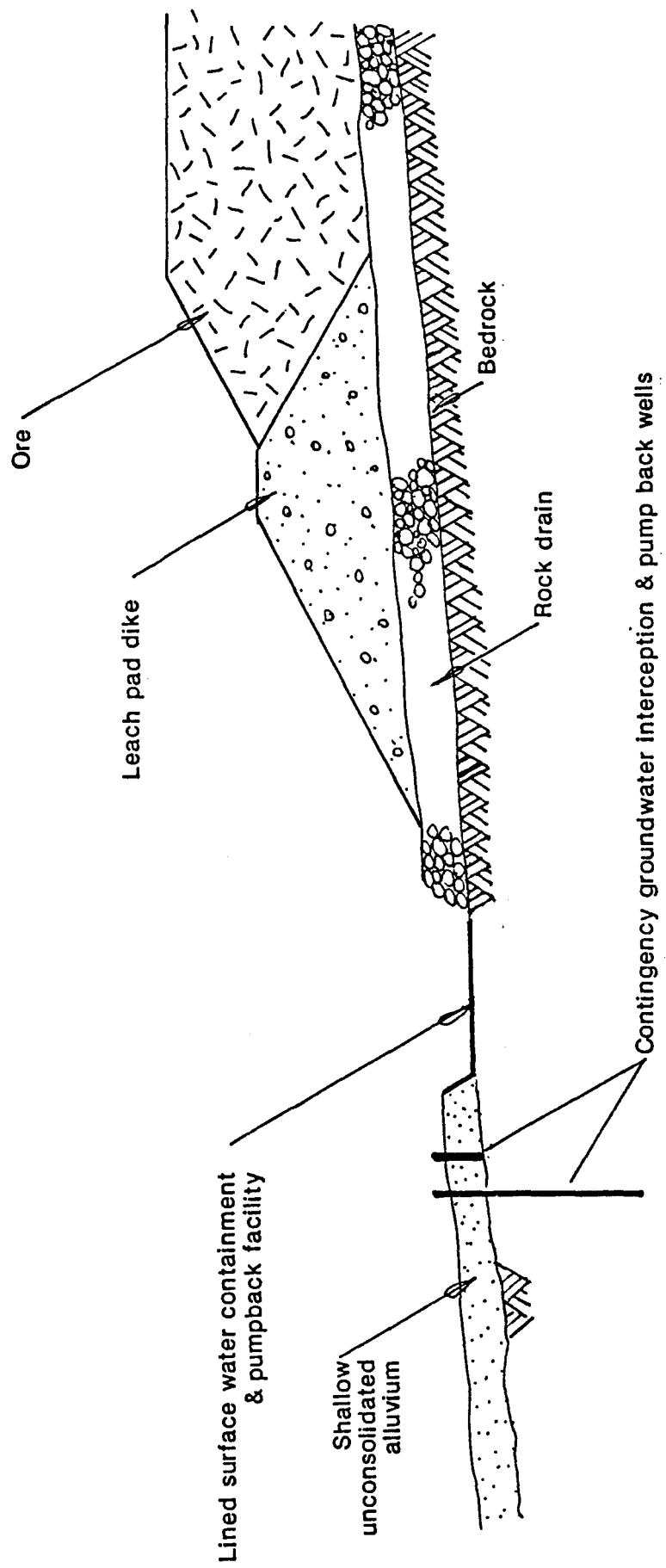


**CROSS-SECTION VIEW**

No Scale

EX #10 HB680  
3-8-89

3063



- NOTES: 1) Surface water containment facility includes the capacity for two 800 gpm pumps & pipeline to leach pad  
2) Groundwater wells equipped with submersible pump tied into surface water pump back facility  
3) Relationship of dike, rock drain, alluvium, & containment system is not to scale

Figure 15  
Cross-section of Contingency Containment System

Amendments to House Bill No. 679  
Third Reading Copy

Requested by Representative Grady  
For the Senate Committee on Natural Resources

Prepared by Bob Thompson  
March 4, 1989

1. Title, line 9.  
Following: "TO THE"  
Insert: "STATE'S ACTUAL"
  
2. Title, line 10.  
Following: line 9  
Strike: "TO THE STATE"  
Following: "LANDS"  
Insert: ", ALTHOUGH THE BOND MAY NOT EXCEED \$5,000 PER OPERATION; AUTHORIZING THE DEPARTMENT OF STATE LANDS TO COLLECT ALL ITS REASONABLE COSTS OF RECLAMATION IF A SMALL MINER FAILS TO RECLAIM THE PLACER OR DREDGE MINING OPERATION"
  
3. Page 7, line 3.  
Following: "IN"  
Strike: "SUBSECTION"  
Insert: "subsections"  
Following: "(3)"  
Insert: "through (6)"
  
4. Page 8, line 22.  
Following: "TO THE"  
Insert: "state's actual"
  
5. Page 8, line 23.  
Following: "COST"  
Strike: "TO THE STATE"  
Following: "LAND"  
Insert: ", although the bond may not exceed \$5,000 per operation"  
Following: "."  
Insert: "However, if the small miner has posted a bond for reclamation with another government agency, he is exempt from the requirement of this subsection.  
(4) If a small miner who conducts a placer or dredge mining operation fails to reclaim the operation, he is liable to the department for all its reasonable costs of reclamation, including a reasonable charge for services performed by state personnel and state materials and equipment used. If the small miner posts a surety bond, the surety is liable to the state to the extent of the bond amount and the small miner is liable for the remainder of the reasonable costs to the state of reclaiming the operation.  
(5) If a small miner who conducts a placer or dredge

3-8-89

mining operation fails to commence reclamation of the operation within 6 months after cessation of mining or within an extended period allowed by the department for good cause shown or if the small miner fails to diligently complete reclamation, the department shall notify the small miner by certified mail that it intends to reclaim the operation unless the small miner commences reclamation within 30 days and diligently completes the reclamation. The notice must be mailed to the address stated on the small miner exclusion statement or, if the small miner has notified the department of a different address by letter or in the annual certification form, to the most recent address given to the department. If the small miner fails to commence reclamation within 30 days or to diligently complete reclamation, the department may revoke the small miner exclusion statement, forfeit any bond that has been posted with the department, and enter and reclaim the operation. If the small miner has not posted a bond with the department or if the reasonable costs of reclamation exceed the amount of the bond, the department may also collect additional reclamation costs, as set forth in subsection (6), before or after it incurs those costs.

(6) To collect additional reclamation costs, the department shall notify the small miner by certified mail to the address determined under subsection (5) of the additional reasonable reclamation costs and request payment within 30 days. If the small miner does not pay the additional reclamation costs within 30 days, the department may bring an action in district court for payment of the estimated future costs and, if the department has performed any reclamation, of its reasonable actual costs. The court shall order payment of costs it determines to be reasonable and shall retain jurisdiction until reclamation of the operation is completed. Upon completion of reclamation, the court shall order payment of any additional costs it deems reasonable or the refund of any portion of any payment for estimated costs that exceeds the actual reasonable costs incurred by the department."

ROLL CALL VOTE

SENATE NATURAL RESOURCE

SENATE COMMITTEE NATURAL RESOURCES

SENATE NO. 107  
D 3-8-89  
BILL NO. HB 679

Date \_\_\_\_\_ Bill No. HB 679 Time \_\_\_\_\_

| NAME                       | YES | NO |
|----------------------------|-----|----|
| Vice-Chairman Larry Tveit  | ✓   |    |
| Senator Fred VanValkenburg | ✓   |    |
| Senator Loren Jenkins      |     | ✓  |
| Senator Darryl Meyer       | ✓   |    |
| Senator Lawrence Stimatz   | ✓   |    |
| Senator Pete Story         |     | ✓  |
| Senator Bill Yellowtail    |     |    |
| Senator Elmer Severson     |     | ✓  |
| Senator Cecil Weeding      | ✓   |    |
| Senator Dorothy Eck        | ✓   |    |
| Senator Jerry Noble        | ✓   |    |
| Chairman Tom Keating       | ✓   |    |

Secretary \_\_\_\_\_

Chairman \_\_\_\_\_

Motion: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



COMMITTEE ON NATURAL RESOURCES

VISITORS' REGISTER

| NAME                | REPRESENTING           | BILL #           | Check One |        |
|---------------------|------------------------|------------------|-----------|--------|
|                     |                        |                  | Support   | Oppose |
| Lewis R. Hull       | Self                   | HB 679           |           | ✓      |
| Donald Ude          | CENEX                  | HB 327           | ✓         |        |
| Stan Bradshaw       | Treat Unlimited        | HB 679           | ✓         |        |
| Don Jenkins         | MMA                    | HB 679           | ✓         |        |
| Donna Melius        | Montana APT & Co       | HB-327           | ✓         |        |
| Joe Paladichuk      | m.d.u.                 | HB-327           | ✓         |        |
| Ray Brewer          | SEAF                   |                  |           | ✓      |
| John Stockhouse     | "                      |                  |           | ✓      |
| Garrett Silco       | "                      |                  |           |        |
| Carl Voss           | Self                   | HB 679           |           | ✓      |
| Ken Williams        | EpiTech                | HSR-25           | ✓         |        |
| Lee Reynolds        | Reynolds & Assoc       |                  | ✓         |        |
| Jim James           | MEIC                   | HSR 25<br>HB 679 | ✓         |        |
| John S. Fitzpatrick | Pogonus Gold<br>Helena | HB<br>679        | ✓         |        |
| Ray W. Muter        | Self                   | HB 679           | ✓         |        |
| Nancy Cagle         | Montana Mining Assn.   | HB 679           | ✓         |        |
| John North          | Self                   | HB 679           | ✓         |        |
| John North          | Dept of State Lands    | HB-679<br>+327   | ✓         |        |