

THE STATE



OF WYOMING



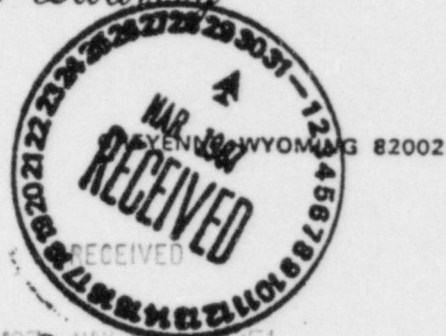
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40-4492  
ED HERSCHLER  
GOVERNOR  
RETURN ORIGINAL TO PDR, HQ.

# Department of Environmental Quality

LAND QUALITY DIVISION

HERSCHLER BLDG. - THIRD FLOOR  
122 WEST 25TH

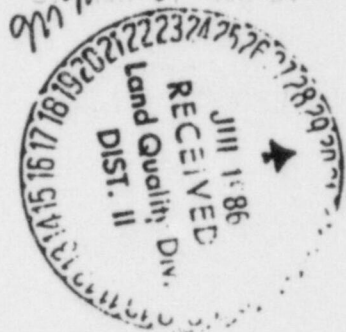
TELEPHONE 307-777-7756



*Amendment Request*

July 28, 1986

Mr. Niles J. Andrus  
Vice-President - Operations  
American Nuclear Corp.  
P.O. Box 2713  
Casper, WY 82602



RE: Bond Amount for Mining Permit No. 352

Dear Mr. Andrus:

The information presented in the April, 1986 annual report for Mine Permit No. 352 has been reviewed by the Land Quality District II staff and an annual inspection conducted on July 18, 1986. In accordance with W.S. 35-11-411(d) the bond amount is set at \$4,081,396. This represents no change from the current amount.

Should you have any questions please contact:

Mr. Mark Moxley  
District II Supervisor  
DEQ - Land Quality Division  
210 Lincoln Street  
Lander, WY 82520

FEE NOT REQUIRED

Sincerely,

Randolph Wood  
Director  
Department Of Environmental Quality

DESIGNATED ORIGINAL  
Certified By Mary C. Ford

RW:MM:dlw  
c: Vicki Bryan  
District II

*87-583*  
This bond will be reevaluated in April  
and will likely be raised to cover  
recent changes per NRC license renewal.

8705130002 860728  
PDR ADOCK 04004492  
C PDR

## ANNUAL INSPECTION REPORT

MINE : Permit No. 352, American Nuclear Corp., Millsite  
DATE OF INSPECTION : July 18, 1986 TIME: 9:30 a.m.  
PARTICIPANTS : Niles Andrus, Ken Watts - American Nuclear Corp.  
INSPECTOR : Mark Moxley, District II Supervisor

### Background and Permit Review

The annual report for this operation was received on April 24, 1986. No mining or milling operations have been conducted on this site since November 1981, when the mill was shut down. No activity has been conducted during the past year except required monitoring activities and operation of the wells below Tailings Pond No. 1.

American Nuclear Corporation's (ANC) present position is that the mill is being maintained in a standby mode in hopes of future operations when the domestic uranium market improves. According to Mr. Andrus, certain portions of the mill are obsolete and will be demolished. The contaminated equipment and structures will be cut up and placed in Tailings Pond No. 1 for disposal.

Reclamation of Tailings Pond No. 1 was to begin in 1986, however, ANC is reluctant to start until a final decision is reached on the disposition of the Riverton Tailings UMTRA Project. The state and local government agencies are pushing for the Dept. of Energy to move the tailings to the ANC site for reclamation. A decision should be forthcoming by the end of the year. This would allow reclamation work to commence in early 1987, with or without the Riverton tailings.

The seepage from Tailings Pond No. 1 continues to be a concern especially if reclamation is to be initiated within the coming year. (See Mr. Finley's memo of October 29, 1985.) Pumping of the recovery wells located below the dam is ongoing during the summer months (see attached photos), however, this will cease once reclamation is started. The only other option would be to construct a new evaporation pond to receive the water.

Another concern that relates to the reclamation of the tailings is the widespread occurrence of acid conditions in the spoil to be used for final cover over the ponds. Mr. Andrus' letter of November 25, 1985 provided data obtained from sampling the overburden cover material. All eleven surface samples from the top of the spoil pile were acidic. Nine of these were also acid at 3-4 foot depth. Fourteen of the twenty samples taken from the side-slopes were also acidic. No specific plan has been developed to assure that a four foot suitable root zone is placed on top of the final tailings cover.

A third outstanding concern is that of the stability of the Willow Springs Draw PMF diversion. The diversion channel itself was completed in early 1984 and is stable. The problem is that just above and below the diversion, there are haul roads that cross the drainage with culverts that create rather significant hydraulic jumps. These are approximately 12 feet on the upper end and 20 feet on the downstream end. The upper end will probably be reworked in conjunction with the construction of the Camp Site Draw PMF diversion, al-

Inspection Report  
ANC, 352  
July 18, 1986  
Page Two

though there are no designs for the confluence. The lower end will require a rather substantial engineered check dam/drop structure. Again, no designs have been developed.

### Inspection

Our inspection started with Tailings Pond No. 1 (see attached photo). The pumpback system was in operation utilizing sprinklers to enhance evaporation. The pumpback system is operational only in the summer months. The pumps operate intermittently, cycling on and off every few minutes.

Next, we looked at the 55 acre reclamation area in the Cal-Sagebrush pit area. This area was seeded early in 1985 and establishment has been very good. Some minor gullies on the east side have been repaired. A diversion ditch was cut above the reclaimed area to keep runoff from adjacent spoils from flowing into the reclaimed area.

We drove through the reclaimed Camp Site which was also seeded in the spring of 1985. Grass establishment is sporadic with bare spots and weedy areas. Most of the trees and shrubs are still surviving.

The exploration shop site was reclaimed in 1985. Grass establishment has been good. The metal shop building still remains on the site. ANC has apparently given the building to an individual in exchange for removing it from the site. This individual loaded the building onto two trucks last year, but it has not been moved. This situation only reinforces our concern relative to the removal/demolition of buildings for salvage value. ANC was requested to get the situation resolved in the near future. It is doubtful that the building can be moved. It should, therefore, be dismantled and either moved or buried in a pit. Disposal of this building will be monitored to insure that it is not simply dumped out on the prairie somewhere.

The last area examined was the Willow Springs Draw diversion. The several erosional problems associated with the culverts above and below the diversion were discussed. No conclusions were reached, however, it is obvious that both areas will have to be addressed prior to final reclamation of the site.

### Bond Evaluation

The reclamation cost estimates for this operation are contained in the document entitled: "Bond Re-evaluations for Permits 323C, 352, 438, 436" dated May 1984. The total estimated reclamation cost is \$3,549,040. A 15% state contingency was added, bringing the bond requirement to \$4,061,395. This bond is adequate at the present time.

MM:mm

xc: Rick Chancellor - Cheyenne DEQ-LQD  
Nuclear Regulatory Comm. - Denver, Colo.  
Niles Andrus - American Nuclear Corp.

CURRENT LAND STATUS

Mill

Permits 352 & 352-A1



April, 1984

The mill began processing uranium ore in mid-1959. Most of the disturbance associated with the mill occurred prior to the development of the Wyoming Department of Environmental Quality. Primarily the obligations for reclamation compliance remain with the Nuclear Regulatory Commission, although compromising actions have transpired uniting the Wyoming DEQ with the NRC in monitoring and administering agency commitments.

Wyoming DEQ, Land Quality Permit 352 was granted in 1975. An Amendment 352-A1 was issued in 1981 to annex the Exploration Shop into a valid mine permit. The first reclamation surety bond was obtained with the approval of the Land Quality Permit in 1975. A total of \$71,000.00 was placed upon the active facilities within the confines of the permit boundary. An increase of one million dollars was made in the surety bond during the process of renewing the Source Material License and gaining Federal & State agency approval of a mill tailings expansion and management plan. With the addition of Permit Amendment 352-A1, an additional \$6,406.00 was added to the reclamation bond. The total reclamation bond for Permits 352 and 352-A1 prior to this bond re-evaluation was \$1,077,406.00.00

There is presently no approved mill decommissioning and reclamation plan for this area, however, ANC/GHP has developed a plan

and this plan forms the basis for the re-evaluated reclamation bond for Permits 352 and 352-A1.

Mill facilities, stockpile areas, roads, shops, waste facilities, the old FAP Campsite, and the Willow Springs Draw (constructed in 1983) occupy a disturbance area of 188.5 acres. These areas will be reclaimed as detailed later in the text, charts, and maps.

The Backfilled Cal and Sagebrush 4 Pits occupy a disturbance area of 28.9 acres within the confines of Permit 352. The disturbance in this area is part of a "total reclamation acreage" commitment in Permits 438 and 438-A1, and is not planned or bonded for in Permits 352 and 352-A1.

There are a total of 10.4 acres of existing reclamation within Permits 352 and 352-A1. For bonding purposes these areas will be maintained to assure vegetation establishment and erosion control.

There are two tailings impoundment structures in Permit 352 and 352-A1, Tailings Pond 1 (T.P. 1) and Tailings Pond 2 (T.P. 2), totaling 123.2 acres of disturbance. In ANC/GHP's reclamation plan for this area the tailings will be covered with approximately six feet of cover with the side slopes constructed to 10:1 slopes (horizontal to vertical). This land disturbance is categorized as "Tailings Impoundment Areas."

The overburden to cover the tailings ponds will be obtained from the "Pre 1973 Act Surface Overburden" area. After all the necessary cover material is removed from this area, the borrow area will be recontoured.

The "Land Status Map - Permit 352 and 352-A1" depicts the present land disturbances in Permits 352 and 352-A1. A total reclamation plan is necessary for bond calculations in this area. Final reclaimed acreages do not correspond directly to current disturbed acreages as reclamation operations transgress current disturbance boundaries. The ANC/GHP "Mill Decommissioning and Reclamation Plan" as set forth in this submittal includes the reclamation of all lands with reclamation responsibilities in Permits 352 and 352-A1.

The "Permits 352 and 352-A1 Reclamation Cost Estimate Chart" should be referenced for reclamation cost and plan details. The following compilations detail the status of disturbed lands in Permits 352 and 352-A1.

DISTURBANCE AREAS - 352 & 352-A1

I. Mill Facilities, Stockpile Areas, Roads

A. Millsite Structures and Foundations -  
This 6.6 acre area of mill facilities will be decommissioned, and covered as part of the reclamation of T.P. 2, topsoiled, reclaimed in accordance with NRC & EPA standards, and fenced.

B. Mill Ore Pad & Concrete Structures--  
This 7.1 acre area will be covered as part of the reclamation of T.P. 2, topsoiled, reclaimed in accordance with NRC & EPA standards, and fenced.

C. Willow Springs Draw and Area Around Tailings - Part of this 117.8 acre area will be reclaimed as part of the 10:1 slope and covering of T.P. 2; this part will be topsoiled and reclaimed. That part not covered with the reclamation of T.P. 2 will be fertilized and seeded with an approved mix.

SUB-TOTAL A, B, C.

131.5 Acres

D. Roads and Sewage Lagoon - Approximately one half of this area will be topsoiled and reclaimed; the remainder is part of the "borrow area" for tailings cover. 17.5 Acres

E. FAP Campsite - The buildings and foundations will be removed for salvage. This area will then be reclaimed. 27.1 Acres

F. Topsoil Stockpile North of Tailings Pond #1 - This area will be reclaimed after the topsoil is used. 0.7 Acres

G. Topsoil Stockpile - Sagebrush 4 Pit - This area will be reclaimed after the topsoil is used. 0.6 Acres

Permit 352 & 352-A1

- H. Topsoil Stockpile - FAP Camp - This area will be reclaimed after the topsoil is used. 1.1 Acres
- I. Exploration Shop - 352-A1 - The shop building will be removed for salvage, the foundation will be broken up and covered and the area will be reclaimed. 10.0 Acres

TOTAL DISTURBANCE 188.5 Acres

- II. Backfilled Cal and Sagebrush 4 Pits
  - A. Cal and Sagebrush 4 Pit - This area and that portion extending to the West into Permits 438 & 438-A1 is part of a total reclamation commitment in Permits 438 & 438-A1 and not part of the Mill Decommissioning and Reclamation Plan of Permit 352. 28.9 Acres

TOTAL DISTURBANCE 28.9 Acres

- III. Existing Reclamation
  - A. Road and Old Trailer Court - This area is seeded primarily with Crested Wheat. 8.3 Acres
  - B. Slope of FAP Camp - This area is presently seeded with a "native grass mix." 2.1 Acres

TOTAL DISTURBANCE 10.4 Acres

Permit 352 & 352-A1

IV. Tailings Impoundment Areas

A. Tailings Pond #1 - This area will be covered "in-place" with approximately 5.5 feet of overburden obtained from the "Pre 1973 Act Surface Overburden" area. The slopes of this cover will be constructed to approximately 10:1 (HORIZONTAL to VERTICAL), the entire area will be covered with a one half foot thickness of topsoil, reseeded with an appropriate seed mix and fenced. 41.1 Acres

B. Tailing Pond #2 - This area will be covered "in-place" with approximately 5.5 feet of overburden obtained from the "Pre 1973 Act Surface Overburden" area. The slopes will be constructed to approximately 10:1 (HORIZONTAL to VERTICAL), the entire area will be covered with a one half foot thickness of topsoil, reseeded with an appropriate seed mix, and fenced. 82.1 Acres

TOTAL DISTURBANCE

123.2 Acres

TOTAL DISTURBANCE IN 352 & 352-A1

351.0 Acres

Permit 352 & 352-A1

V. Pre 1973 Act Surface Overburden

- A. Pre 1973 Act Surface Overburden - 63.4 Acres  
This area has been used for an ore stockpile area, equipment parking and maintenance, and as a source for tailings cover material. This is the "borrow area" for future tailings cover material. This area will be re-contoured and the drainage will be re-established.

TOTAL DISTURBANCE

63.4 Acres

## RECLAMATION BOND FOR PERMITS 352 AND 352-A1

The accompanying "Permit 352 and 352-A1 Reclamation Cost Estimate Chart" should be referenced for specifics in determining the estimated bond necessary to reclaim disturbed lands with reclamation commitments in Permits 352 and 352-A1. Reclamation cost estimates for bonding are divided into eleven work related reclamation activity operations. Each reclamation operation may include different disturbance types; for instance a "Mill Facility" will be reclaimed as part of the reclamation process involved in covering the tailings and recontouring the slopes. Reclamation cost estimates were calculated for the following eleven (11) reclamation operations to derive the re-evaluated bond for all present disturbances with reclamation commitments in Permits 352 and 352-A1.

### I. Removal of Mill and Surrounding Buildings

As part of the bonding cost estimate in this area an approximate bid was solicited from Western States Machinery Company. The bid for the leveling of the mill plus all surrounding structures was submitted in February 1984. For the purpose of this estimate, no investment recovery from salvage was considered. This bid assumed that all non-salvageable wood and metal components would either be buried or burned if burning is permitted. Costs for the covering and reclamation of this area is covered under Section V

"Tailings Pond #2 and Mill Area."

SUB-TOTAL COST

\$ 373,187

II. Campsite Draw

This draw will be constructed directly south of the existing Tailings Pond #2. The structure is part of the NRC stabilization plan for final in-place Reclamation of Pond #2. The draw is designed to protect the tailings area from a Probable Maximum Flood (PMF) event.

SUB-TOTAL COST

\$ 104,091

III. Tailings Pond #1

This pond will be covered with approximately 5.5 feet of overburden material obtained from the "Pre 1973 Act Surface Overburden" area. The North Dike will be reduced by dozer as far as possible to a 10:1 slope. Overburden cover will provide the additional material required for the 10:1 expansion of this slope. The entire area will be covered with approximately .5 feet of topsoil, disced, fertilized and seeded with an approved mixture.

SUB-TOTAL COST

\$ 675,068

IV. Topsoil Stockpile Areas

Three external topsoil piles not covered under another category currently exist within this permit area. Locations for these stockpiles are noted in the "Reclamation Cost Estimate Chart." These stockpiles amount to a total of 2.4 acres and will be removed upon final reclamation of the tailings pond, campsite, and mill areas. These areas will then be disced, fertilized, and seeded in an appropriate manner.

SUB-TOTAL COST

\$ 406

V. Tailings Pond #2 and Mill Area

This area will be covered with approximately 5.5 feet of overburden material obtained from the "Pre 1973 Act Surface Overburden Area." Existing steep slopes will be reduced by dozer as far as possible to a 10:1 slope. The remaining material required for complete slope expansion to 10:1 will be obtained from the nearby overburden area. The mill and surrounding areas will be filled with a minimum of 5.5 feet of cover material. All fill within this area will be designed to provide positive drainage away from the tailings containment area.

The entire area will be topsoiled with approximately .5 foot, disced, fertilized, and seeded in an approved manner.

SUB-TOTAL COST

\$2,327,425

VI. FAP Campsite

The salvageable buildings within the FAP campsite area will be dismantled and sold for investment recovery. Several buildings in the area are currently sold and are being removed by the concerned parties. Once all salvageable buildings are removed, the remaining structures and foundations will be leveled and buried on site. The campsite area will then be disced, fertilized, and seeded in an approved manner.

SUB-TOTAL COST

Jo: v  
\$ 7,654

VII. Haul Roads

Only 10.5 acres of haul roads and related facilities will be covered under this cost estimate. Reclamation of the remaining acreage is covered under other disturbance

headings such as the area titled "Tailings Pond #2 and Mill Area." These haul roads will be ripped where necessary, topsoiled, disced, fertilized, and seeded with an appropriate mixture.

SUB-TOTAL COST

\$ 9,600

VIII. Willow Springs Reroute

This area includes a drainage channel around Tailings Pond #2, a protection dike, and various other areas cleaned-up in conjunction with the interim stabilization plan as constructed in 1983. Portions of this area will be covered and reclaimed in conjunction with the Tailings Pond #2 10:1 slope expansion. The remaining portion of the dike will be removed and recontoured. The part not covered with the reclamation of pond #2 will be disced, fertilized, and seeded with an approved mix.

SUB-TOTAL COST

\$ 17,641

IX. Exploration Shop

The existing shop will be removed for

investment recovery by a salvage company.

No costs will therefore be incurred against this removal. The remaining foundations will be removed and buried on site. The entire shop area will then be disced, fertilized and seeded in an approved manner.

SUB-TOTAL COST

\$ 2,261

X. Existing Reclamation

Two areas have currently been reclaimed within the 352, 352-A1 permit area. Locations of these areas are outlined in the Reclamation Cost Estimate Chart and depicted on the enclosed map. A maintenance bond of \$300.00 per acre is included to assure successful long-term reclamation of the areas.

SUB-TOTAL COST

\$ 3,120

XI. Fencing

Upon reclamation of the areas covered under this permit a restrictive boundary fence will be constructed. This fence will surround all the tailings ponds and campsite areas.

SUB-TOTAL COST

\$ 28,587

The total "Mill Decommissioning and Reclamation Plan" as developed by ANC/GHP for bond re-evaluation purposes is estimated to cost \$3,549,040. A contingency fund of 5% (\$177,452.00) is estimated. The total reclamation bond for Permits 352 and 352-A1 is estimated to be \$3,726,492.00.

## PERMIT 352 and 352-A1 - RECLAMATION COST ESTIMATE CHART

Area of Disturbance	Current Acreage	Projected Acreage	Total Acreage	Equipment Required	Production	Equipment \$/Hr.	Units	Unit Cost	Total Cost	Cost Per Acre
Removal of Mill and Surrounding Buildings									373,187	
Campsite Draw		8.7	8.7							
Excavation				(3) Cat 633 Scrapers	530 CY's/Hr.	397.47	71,000 CY's	0.75	53,246	
				(1) Cat D-9H Dozer		71.90	134 Hrs.		9,634	
				(1) Cat 16G Patrol		55.31	134 Hrs.		7,411	
Compacted Backfill							5,300 CY's	1.00	5,300	
Rip-Rap (D <sub>100</sub> = 18)							2,400 Tons	10.00	24,000	
Rip-Rap Filter							450 CY's	10.00	4,500	
TOTAL									104,091	11,964
Tailings Pond #1		47.0	47.0							
Slope Reduction				(1) D-9 Dozer	405 CY's/Hr.	71.90	16,222 Yds <sup>3</sup>	1.08	2,880	
Slope Expansion				(3) Cat 633 Scrapers	600 CY's/Hr.	397.47	145,555 Yds <sup>3</sup>	0.66	96,423	
				(1) D-9 Dozer		71.90	242 Hrs.		17,400	
				(1) 16G Patrol		55.31	242 Hrs.		13,385	
Slimes Cover & Topsoil Placement (6")		47.0	47.0	(3) Cat 633 Scrapers	600 Yds <sup>3</sup> /Hr.	397.47	657,036 CY's	0.66	433,634	
				(1) D-9 Dozer		71.90	813 Hrs.		58,455	
				(1) Cat 16G Patrol		55.31	813 Hrs.		44,967	
Disc Topsoil				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	47.0 Ac.	34/Ac.	1,598	
Seed & Fertilize Topsoil				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	47.0 Ac.	34/Ac.	1,598	
Seed							47.0 Ac.	94/Ac.	4,418	

PERMIT 352 and 352-A1 - RECLAMATION COST ESTIMATE CHART

Type of Disturbance	Current Acreage	Projected Acreage	Total Acreage	Equipment Required	Production	Equipment \$/Hr.	Units	Unit Cost	Total Cost	Cost Per Acre
Fertilizer					60 Lbs./Ac.		2,820 Lbs.	.11/Lb.	310	
TOTAL									<u>675,068</u>	<u>14,363</u>
<u>Topsail Stockpile Areas</u>										
N. of T.P. #1	0.7									
N. of Cal Pit	0.6									
SW of Campsite	1.1		2.4							
Discing				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	2.4 Ac.	34/Ac.	82	
Seeding & Fertilizing				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	2.4 Ac.	34/Ac.	82	
Seed							2.4 ac.	94/Ac.	226	
Fertilizer					60 Lbs./Ac.		144 Lbs.	.11/Lb.	16	
TOTAL									<u>406</u>	<u>169</u>
<u>Tailings Pond #2 &amp; Mill Area</u>										
Slope Reduction		150.2	150.2	(1) Cat D-9 Dozer	327 CY's/Hr.	71.90	196,667 CY's	0.22	43,242	
Slope Expansion				(3) Cat 633 Scrapers	444 CY's/Hr.	397.47	442,148 CY's	0.90	395,812	
				(1) Cat D-9H		71.90	955 Hrs.		71,540	
				(1) Cat 16G		55.31	955 Hrs.		55,035	
Top & Sides Fill (including topsail)				(3) Cat 633 Scrapers	444 Yds./Hr.	397.47	957,911 CY's	0.90	857,524	
				(1) Cat D-9H		71.90	2,157 Hrs.		155,088	
				(1) Cat 16G		55.31	2,157 Hrs.		119,303	
Mill Area Cover (including Topsoil to provide positive drainage)				(3) Cat 633 Scrapers	444 CY's/Hr.	397.47	511,636 CY's	0.90	458,012	

*include*

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## PERMIT 352 and 352-A1 - RECLAMATION COST ESTIMATE CHART

Type of Disturbance	Current Acreage	Projected Acreage	Total Acreage	Equipment Required	Production	Equipment \$/Hr.	Units	Unit Cost	Total Cost	Cost Per Acre
				(1) Cat D-9H		71.90	1,152 Hrs.		82,829	
				(1) Cat 16G		55.31	1,152 Hrs.		63,717	
Disc Topsoil				(1) John Deere Tractor	2 Ac./Hr.	68.00	150.2 Ac.	34/Ac.	5,107	
Seed & Fertilize Topsoil				(1) John Deere Tractor	2 Ac./Hr.	68.00	150.2 Ac.	34/Ac.	5,107	
Seed							150.2 Ac.	94/Ac.	14,118	
Fertilizer					60 Lbs./Ac.		9,012 Lbs.	.11	991	
TOTAL									<u>2,327,425</u>	<u>15,496</u>
1. FAP Campsite		24.5	24.5							
Building Removal										To be removed for salvage cost.
Foundation Removal/Burial				(2) D-9H Cat	.5 Ac./Hr.	71.90	24.5 Ac.	144/Ac.	3,523	
Disc				(1) John Deere Tractor	2 Ac./Hr.	68.00	24.5 Ac.	34/Ac.	833	
Seed & Fertilize				(1) John Deere Tractor	2/Ac./Hr.	68.00	24.5 Ac.	34/Ac.	833	
Seed							24.5 Ac.	94/Ac.	2,303	
Fertilizer					60 Lbs./Ac.		1,470 Lbs.	.11	162	
TOTAL									<u>7,654</u>	<u>312</u>
2. Haul Roads										
East of Camp	1.4									
West of T.P. #2	9.1		10.5							
Ripping				(1) Cat D-9H Dozer	1 Ac./Hr.	71.90	10.5 Ac.	71.90	755	
Topsoil Placement (6")				(3) Cat 633 Scrapers	621 CY's.Hr.	397.47	8,470 CY's	0.64	5,421	
				(1) Cat D-9H Dozer		71.90	13 Hrs.		935	
				(1) Cat 16G Patrol		55.31	13 Hrs.		719	

## PERMIT 352 and 352-A1 - RECLAMATION COST ESTIMATE CHART

Type of Disturbance	Current Acreage	Projected Acreage	Total Acreage	Equipment Required	Production	Equipment \$/Hr.	Units	Unit Cost	Total Cost	Cost Per Acre
Disc Topsoil				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	10.5	34/Ac.	357	
Seed & Fertilize Topsoil				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	10.5	34/Ac.	357	
Seed							10.5	94/Ac.	987	
Fertilizer					60 Lbs./Ac.		630 Lbs.	.11	69	
TOTAL									9,600	914
I. Willow Springs Re-Route	70.6		70.6							
Dike Removal				(1) Cat D-9H Dozer	451 CY's/Hr.	71.90	36,000 CY's	0.16	5,739	
Discing				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	70.6 Ac.	34/Ac.	2,400	
Seeding & Fertilizing				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	70.6 Ac.	34/Ac.	2,400	
Seed							70.6 Ac.	94/Ac.	6,636	
Fertilizer					60 Lbs./Ac.		4,236 Lbs.	.11	466	
TOTAL									17,641	250
Exploration Shop	10.0		10.0							
Shop Removal										
Foundation Removal/Burial				(1) Cat D-9H Dozer	25 CY's/Hr.	71.90	200 CY's	2.88	575	
Discing				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	10.0 Ac.	34/Ac.	340	
Seed & Fertilize				(1) John Deere Tractor & Implements	2 Ac./Hr.	68.00	10.0 Ac.	34/Ac.	340	
Seed							10.0 Ac.	94/Ac.	940	

PERMIT 352 and 352-A1 - RECLAMATION COST ESTIMATE CHART

Type of Disturbance	Current Acres	Projected Acres	Total Acres	Equipment Required	Production 60 Lbs./Ac.	Equipment \$/hr.	Units 600 Lbs.	Unit Cost .11	Total Cost 66	Cost Per Acre
Fertilizer										
TOTAL									<u>2,261</u>	<u>226</u>
K. Existing Reclamation										
Southwest of Campsite	2.1									
North of T.P.	8.3		10.4				10.4 Ac.	300/Ac.	3,120	
Fencing							17,646 Ft.	1.62 Ft.	28,587	
TOTAL	325.6									
Contingency @ 5%									3,549,040 + 15% = 4,081,396	
TOTAL BOND AMOUNT										
									177,452	
									<u>3,726,492</u>	<u>11,445</u>