

GENWAL MINE

015/032

CHANGE TO THE MINING AND RECLAMATION PLAN

for the
CRANDALL CANYON #1 MINE
and the
SOUTH CRANDALL MINE

TO CLARIFY ISSUES REGARDING THE SURFACE
BUILDINGS AND SEDIMENT POND
TASK #2291 and TASK #2350

SUBMITTED: DECEMBER 15, 2005

GENWAL RESOURCES, INC.
PO BOX 1077
PRICE, UTAH 84501

Mine #	<u>C/015/0032</u>
File	<u>Incorporating</u>
Record #	<u>0045</u>
Doc. Date	<u>12.14.05</u>
Recd. Date	<u>12.15.05</u>



P.O. Box 1077, Price, Utah 84501 794 North "C" Canyon Rd, East Carbon, Utah 84520
Telephone (435) 888-4000 Fax (435) 888-4002

October 11, 2005

Utah Division of Oil, Gas & Mining
Utah Coal Program
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Sediment Pond Amendment, C/015/032, Task # 2291

Dear Sirs:

Enclosed please find seven (7) copies of the response to Technical Memorandum of September 9, 2005 (Task # 2291) regarding surface building bonding and sediment pond maps.

Call me at 435-888-4015, or Dave Shaver at 435-888-4017, if you have any questions.

Sincerely

A handwritten signature in cursive script that reads "Dave Shaver". The signature is written in dark ink and is positioned above the typed name and title.

Gary E. Gray
Engineer/Agent

RECEIVED
DEC 15 2005
DIV. OF OIL, GAS & MINING

APPLICATION FOR PERMIT PROCESSING

<input type="checkbox"/> Permit Change	<input type="checkbox"/> New Permit	<input type="checkbox"/> Renewal	<input type="checkbox"/> Transfer	<input type="checkbox"/> Exploration	<input type="checkbox"/> Bond Release	Permit Number: 015/032
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Title of Proposal: Change to the MRP to clarify issues regarding the sediment	Mine: GENWAL Mine
Response to technical memorandum of September 9, 2005 (Task # 2291)	Permittee: GENWAL Resources, Inc.

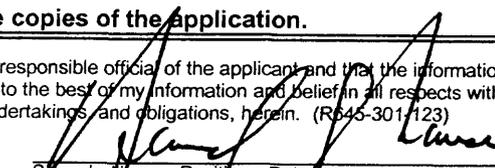
Description, include reason for application and timing required to implement:

Instructions: If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation specialist.

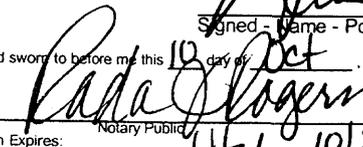
<input type="checkbox"/> Yes	<input type="checkbox"/> No	1. Change in the size of the Permit Area? _____ acres Disturbed Area? _____ acres <input type="checkbox"/> increase <input type="checkbox"/> decrease.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2. Is the application submitted as a result of a Division Order?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	4. Does application include operations in hydrologic basins other than as currently approved?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	6. Does the application require or include public notice/publication?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	9. Is the application submitted as a result of a Violation?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10. Is the application submitted as a result of other laws or regulations or policies? Explain:
<input type="checkbox"/> Yes	<input type="checkbox"/> No	11. Does the application affect the surface landowner or change the post mining land use?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	12. Does the application require or include underground design or mine sequence and timing?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	13. Does the application require or include collection and reporting of any baseline information?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	15. Does application require or include soil removal, storage or placement?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	17. Does the application require or include construction, modification, or removal of surface facilities?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	18. Does the application require or include water monitoring, sediment or drainage control measures?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	19. Does the application require or include certified designs, maps, or calculations?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	20. Does the application require or include subsidence control or monitoring?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	21. Have reclamation costs for bonding been provided for?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

Attach 3 complete copies of the application.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein. (R645-301-123)


 Signed - Name - Position - Date

 for Gary Gray

and sworn to before me this 10 day of Oct 2005

 Rada J. Rogers
 Notary Public
 Utah 10/2/06
 Carbon



RADA J. ROGERS
 NOTARY PUBLIC - STATE OF UTAH
 2150 N. LUNDY LANE
 CLEVELAND, UT 84518
 COMM. EXPIRES 10-2-2006

Received by Oil, Gas & Mining

RECEIVED

DEC 15 2005

DIV. OF OIL, GAS & MINING

ASSIGNED TRACKING NUMBER

Application for Permit Processing Detailed Schedule of Changes to the MRP

Title of Application: Change to the MRP to clarify issues regarding the sediment pond. Response to technical memorandum of September 9, 2005

Permit Number: 015/032

Task #2291

Mine: GENWAL MINE

Permittee: GENWAL RESOURCES

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. Include page, section and drawing numbers as part of the description.

DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED

<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input checked="" type="checkbox"/> REMOVE	Old Appendix 7-4 "Sediment Pond Calculations" by Richard White, 4/9/92. This appendix has been replaced by new Appendix 7-4 "Sediment and Drainage Control Plan", Dan Guy, April 2003
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input checked="" type="checkbox"/> REMOVE	Appendix 7-6, Appendix 7-8, Appendix 7-10
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input checked="" type="checkbox"/> REMOVE	Plate 7-4, Plate 7-4a, Plate 7-6, Plate 7-6a
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	page 7-48, page 7-49
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	page 5-29
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	Plate 5-3, Plate 7-3
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
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<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	

Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

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During the summer of 1990, a power line from Utah Power & Light was brought in across the top of the canyon. At this time the use of the diesel generator was terminated. Presently, a state of the art substation and transformer provide all power needs. The high voltage lines from the substation to the mine are run underground in cement covered conduit thus eliminating the need of overhead power poles and transmission lines.

The oil storage and fuel containment area (80' x 20') is located at the west end of the old loadout area. This containment area is of sufficient volume to hold the volume of the largest storage tank found within the containment area plus any additional storm water. The containment area has a valve connected to the drain inside the wall. The valve and drain will provide a means for removing any spills or water in the containment area. A certified SPCC plan outlining emergency action as per R645-301-730 is available at the mine site (Appendix 5-10). Refer to Plate 5-3 for all surface buildings and structures.

An underground bathhouse has been constructed to provide shower and sanitary facilities for the miners. This underground bathhouse was designed and installed in accordance with all State Health, MSHA, and Forest Service regulations. These agencies were contacted prior to the design and implementation for their input and approval as necessary. The water and sewage plans can be found in Appendix 5-11 and 5-12, respectively.

After the South Crandall portals were constructed, three small material storage sheds were placed on the site near the portals (see Plate 5-3). These sheds are all less than 20' x 25' and are of temporary type construction. They are used to store roof-bolt resin, electrical parts and other miscellaneous items. These sheds will be removed prior to final reclamation.

Two mine fans located on the surface, as shown on Plate 5-3, are used to ventilate the mine workings to insure a sufficient amount of oxygen for mine employees to continue operations within the mine. Other structures such as cement guard rails and cement walls have been constructed, with the Division's approval, and are listed within pages 5-33 and 5-34. This list includes the approximate date of completion of each structure and the description of each construction project.

Shotcrete was sprayed onto the cut-slope above the portals, the portal roads, and the coal storage area, as shown on Plate 5-3. A 4" square wire mesh was used, being spaced approximately 1" to 2" away from the existing slope. The wire mesh was secured to the slope with standard metal clips and bolts. Two-inch PVC pipe, perforated for drainage, was inset 2 to 3 feet into the slope at two different elevations, approximately 6" to 12" from the bottom of the project and 12" to 24" from the top of the project. These pipes were spaced 6 to 10 feet apart for the entire length of the project, with 2" to 4" of shotcrete then being sprayed onto the wire mesh. The intent of the project is to stabilize the cut slope to eliminate sloughage and enhance safety for personnel.

T Bouding
App 5-20

Crandall Canyon Mine C/015/032

Bond Amount

Revised June 2003

Bonding Calculations

Crandall Canyon Mine C/007/032

Revised

June 3, 2003

Bond Summary

Direct Costs

Subtotal Demolition and Removal	\$653,975.00	
Subtotal Backfilling and Grading	\$517,845.00	
Subtotal Revegetation	\$49,310.00	
Direct Costs	\$1,221,130.00	

Indirect Costs

Mob/Demob	\$122,113.00	10.0%
Contingency	\$61,057.00	5.0%
Engineering Redesign	\$30,528.00	2.5%
Main Office Expense	\$83,037.00	6.8%
Project Mainagement Fee	\$30,528.00	2.5%
Subtotal Indirect Costs	\$327,263.00	26.8%

Total Cost in 2005 Dollars	\$1,548,393.00	
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Escalation factor		0.012
Number of years		1
Escalation	\$18,581.00	

Reclamation Cost 2005	\$1,566,974.00	
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Bond Amount (rounded to nearest \$1,000)	\$1,567,000.00	
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Bond Posted 2004	\$1,654,000.00	
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Difference Between Cost Estimate and Bond	\$87,000.00	
Percent Difference		5.55%

Crandell Canyon Mine C/015/032

Earthwork Costs

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Uni
Crandell Canyon Mine														
Backfilling and Grading														
Ripping Fill Area (D9 Dozer)														
D9R Semi-U EROPS (9-54) (2H04)	17115	72.3	0.1	52	238.5	1	238.5\$/HR							
Multi-Shank Ripper 360-519 P (9-61) (2nd2004)	800	8.7	0.1		14.57	1	14.57\$/HR		57387CY		1473CY/HR		39HR	
Subtotal														
Backfill On Site														
Loading														
988G EROPS (9-38) (3Q03)	9010	40.05	0.1	52	152.37	1	152.37\$/HR		70192CY		498CY/HR		140.9HR	
Hauling														
769D (20-11) (1Q04)	10520	40.4	0.1	42	152.19	2	304.38\$/HR		70192CY		498CY/HR		140.9HR	
Place with Excavator														
CAT 385BL (10-23)(2nd2005) (2005)	25485	115.15	0.1	52	337.95	1	337.95\$/HR		12805CY		181.3CY/HR		70.6HR	
Place with Dozer														
D9R Semi-U EROPS (9-54) (2H04)	17115	72.3	0.1	52	238.5	1	238.5\$/HR		57387CY		215CY/HR		266.9HR	
Subtotal														
Backfill Off Site														
Loading														
988G EROPS (9-38) (3Q03)	9010	40.05	0.1	52	152.37	1	152.37\$/HR		66096CY		583CY/HR		113.4HR	
Hauling														
8X4 85,000lbs 15-18 CY (20-11) (1stH05)	4875	50	0.1	42	126.22	17	2145.74\$/HR		66096CY		583CY/HR		113.4HR	
Subtotal														
Miscellaneous Removal/Excavate Stream Channels														
448D 4WD	4935	22.4	0.1	52	52	1	52\$/HR		1560CY		151.1CY/HR		10.3HR	
Subtotal														
Total Backfilling and Grading														

Crandall Canyon Mine C/015/032

Earthwork Costs

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Ds.	Uni
Crandall Canyon Mine														
Support Equipment and Labor														
Backfilling														
5,000 gal H2O truck Diesel (20-17) (1Q04)	4725	28.05	0.1	42	102.39	1	102.39	\$/HR					306	HR
Pickup Truck Crew 4x4 1 ton (20-17) (2N04)	620	7.8	0.1	0	13.71	1	13.71	\$/HR					306	HR
Foreman Average, Outside					57.3	1	57.3	\$/HR					306	HR
Subtotal														
Total														

Crandell Canyon Mine C015/032

Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Ni
01	Shop 01														
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012		0.2/CF	160	20	20							
	Structure's Vol. Demolished														
	Rubble's Weight (exclude steel)														
	Truck's Capacity														
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540		11/CY										
	Transportation Cost Non Steel Truck														
	Transportation Cost Non Steel Drive														
	Disposal Cost Non Steel	Nelson Construction	Nelson Con.		7/TON									1	
	Steel's Weight														
	Truck's Capacity														
	Haulage														
	Transportation Cost Steel Truck														
	Transportation Cost Steel Truck Drive														
	Disposal Cost Steel														
	Subtotal														
	Equipment's Disposal Cost														
	Dismantling Cost														
	Equipment's Vol. Demolished														
	Loading Costs														
	Transport Costs														
	Disposal Costs														
	Subtotal														
	Concrete Demolition														
	Demolition Cost	Concrete demolition	ConcreteDemo1		3.97/CY	160	20	0.5							
	Concrete's Vol. Demolished														
	Loading Cost	Front end loader 3 CY	02315 424 1300		1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320		3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550		7.6/CY										
	Subtotal														
	Concrete Demolition														
	Demolition Cost														
	Concrete's Vol. Demolished														
	Loading Cost														
	Transportation Cost														
	Disposal Costs														
	Subtotal														
	Concrete Demolition														
	Demolition Cost														
	Concrete's Vol. Demolished														
	Loading Cost														
	Transportation Cost														
	Disposal Costs														
	Subtotal														
	Total														

Crandell Canyon Mine C/015/032

Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
02	Ventilation Fan 02													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2/CF		60	20	16.67						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540	11/CY										
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nelson Construction	Nelson Con.	7/TON										1
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		60	20	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
03	Rock Dust Silo 03													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	CF				30	12				
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. md. trip	02315 490 0540	11	CY									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nielson Construction	Nielson Con.	7	TON								1	
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY		2	3	2					
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
04	Concrete Dump Pad 04													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Pavement removal (asphalt) 3 inch	02220 250 5010	3.98/SY		30	25	1						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Asphalt Demolition													
	Demolition Cost	Pavement removal (asphalt) 3 inch	02220 250 5010	3.98/SY		135	130		0.25					
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
05	Power Center 05													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Mechanical Equipment	Mechanical equipment heavy	15055 300 3600		805/ton							5		
	Transformer	Mechanical equipment heavy	15055 300 3600		805/ton							2		
	Underground Wire	Wire Removal	Soldier Creek		4.81/LF	900								
	Aerial Wire	Wire Removal	Soldier Creek		4.81/LF	500								
	Chain Link Fence	Chain link remove 8'-10'	02220 220 1700		2.92/LF	120								
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1		3.97/CY	25	21	0.67						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300		1.39/CY									
	Transportation Cost	12 CY (18 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320		3.44/CY									
	Disposal Costs	On site disposal	02220 240 5550		7.6/CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
06	Power Poles 06													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Remove wire	Wire Removal	Soldier Creek	4.81/LF		180								
	Remove conduit (use wire)	Wire Removal	Soldier Creek	4.81/LF		100								
	Remove Fixtures (use poles)	Powerpole	Hiawatha	100EA										
	Remove Poles	Powerpole	Hiawatha	100EA										
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
07	Underground Bathhouse 07													
	Structure's Demolition Cost	Masonry Bld. Large	02220 110 0080	0.21	CF						14000			
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540		11									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nielson Construction	Nielson Con.		7									1
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	70	20	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.8	CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
08	Portals 08													
	Structure's Demolition Cost	Seal Portals	AML1	5200EA.										
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
09	BeltPortals 09													
	Structure's Demolition Cost	Seal Portals	AML1	5200EA.										
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
10	Crusher Pad 10													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	CF	36	20	1						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540	11	CF									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nielson Construction	Nielson Con.	7	TON								1	
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost	Mechanical equipment heavy	15055 300 3600	805	ton								3	
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CF	36	20	1						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CF									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CF									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CF									
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CF							418		
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CF									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CF									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CF									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
11	Mine Belt 11													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost	Mechanical equipment heavy	15055 300 3600		805/ton								2.5	
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
13	Silo 13													
	Structure's Demolition Cost	Mixed Materials Bid. Large	02220 110 0100	0.21	CF				75	30				
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (18 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540		11									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nielson Construction	Nielson Con.		7									1
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost	Mechanical equipment heavy	15055 300 3600		805							20		
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CF	160	20	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CF									
	Transportation Cost	12 CY (18 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CF									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CF									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
14	Weight Shed 14													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY							2			
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY							235			
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY							80			
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
15	Bulk Oil 15													
	Structure's Demolition Cost	Masonry Bld. Large	02220 110 0080	0.21	CF	55	20	10						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540	11	CY									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nielson Construction	Nielson Con.	7	TON									1
	Subtotal													
	Tank													
	Dismantling Cost	9000 gal to 12000 gal tank	02115 200 0130	1275	Ea.									
	Loading Costs													
	Transport Costs	9000 gal to 12000 gal tank	02115 200 1029	1100	Ea.									
	Disposal Costs	9000 gal to 12000 gal tank	02115 200 0320	310	Ea.									
	Subtotal													
	Slab													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	20	55	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Footings													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	150	2	1						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Slab													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	20	20	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Walls													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	20	0.67	8.4						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
17	Truck Pad 17													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012		0.2/CF									
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1		3.97/CY						750			
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300		1.39/CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320		3.44/CY									
	Disposal Costs	On site disposal	02220 240 5550		7.6/CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
18	General Storage 18													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	CF	20	60	23						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. md. trip	02315 490 0540	11	CY									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nielson Construction	Nielson Con.	7	TON								1	
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	20	67.5	0.67						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
19	Reclaim Hopper Belt 19													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost	Mechanical equipment heavy	15055 300 3800		805/ton							5		
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
20	Visual Disconnect 20													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost	Mechanical equipment heavy	15055 300 3600		805/ton								1	
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1		3.97/CY		4	6	0.5					
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300		1.39/CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320		3.44/CY									
	Disposal Costs	On site disposal	02220 240 5550		7.6/CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
21	New Shop 21													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	CF	20	62.5	20						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540	11	CY									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nielson Construction	Nielson Con.	7	TON								1	
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	20	62.5	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
22	Shop Extension 22													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2/CF		20	30	12						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. md. trip	02315 490 0540	11/CY										
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nelson Construction	Nelson Con.	7/TON									1	
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		20	30	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
23	Shotcrete Slopes 23													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY						46			
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
24	Fan Transformer 24													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost	Mechanical equipment heavy	15055 300 3600	805/ton								0.25		
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		6	8	0.67						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
25	Chain Link Fence 25													
	Structure's Demolition Cost	Chain link remove 8'-10'	02220 220 1700	2.92/LF		120								
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
26	Concrete Guard 26													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		530	2	3						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		250	10	0.67						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
27	Retaining Wall 27													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	530	2	3						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.8	CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
29	Guard Rail 29													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Remove Rails	Guiderail remove	02220 240 0800		11.9LF	120								
	Remove Posts	Guide Posts Remove	02220 240 0880		13.55Ea									
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
30	Inlets 30													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost	Mechanical equipment heavy	15055 300 3600		805/ton								1	
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1		3.97/CY								11	
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300		1.39/CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320		3.44/CY									
	Disposal Costs	On site disposal	02220 240 5550		7.6/CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1		3.97/CY	4	6	0.67						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300		1.39/CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320		3.44/CY									
	Disposal Costs	On site disposal	02220 240 5550		7.6/CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
31	Sed Pond Culvert 31													
	CMP 24	Excavation 1 CY backhoe earth	02315 462 8040		12.8/CY	110	2	4						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
32	Gabion Retaining Wall 32													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY						2000			
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 480 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.8	CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
33	Water Wells 33													
	Structure's Demolition Cost	Plug Well	AML3	5000EA.										
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
34	Headwalls 34													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		18	18	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY							3600			
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
	Overhead Conveyor Supports 35													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		7	7	2						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.8/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		2	2	4						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.8/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
36	Reclaim Tunnel 36													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		170	12	1						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
37	Feeder Boxes 37													
	Structure's Demolition Cost	Concrete Bld. Large	02220 110 0050	0.27	/CF	13.5	16.5	8.5						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. md. trip	02315 490 0540	11	/CY									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nelson Construction	Nelson Con.	7	/TON								1	
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY	8	5	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44	/CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	/CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
38	Reclaim Conveyor Supports 38													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		4.5	4.5	1						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		2	4	2						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
39	Crusher Platform Supports 39													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		8	8	3						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.8/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		4	4	4						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.8/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
40	Feeder Conveyor Supports 40													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	ICY	4.5	4.5	1						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	ICY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	ICY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	ICY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	ICY	2	4	2						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	ICY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	ICY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	ICY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
41	Scale Pads 41													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		20	20	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		12	60	1						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		12	60	2						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
42	New Scale House 42													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	CF	20	20	8						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540	11	CY									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nelson Construction	Nelson Con.	7	TON								1	
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	20	30	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	3	8	1.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	CY	0.66	80	0.66						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44	CY									
	Disposal Costs	On site disposal	02220 240 5550	7.6	CY									
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
43	Proposed Bathhouse 43													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2/CF		60	100	18						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (18 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540	11/CY										
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nelson Construction	Nelson Con.	7/TON									1	
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		60	100	0.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (18 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		3	320	1.5						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (18 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97/CY		1	80	0.66						
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (18 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
44	Coal Silo 44													
	Structure's Demolition Cost	Steel Bid. Large	02220 110 0012	0.2	CF				60	12				
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (16 Ton) Dump Truck 5 mi. rnd. trip	02315 490 0540	11	CY									
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nielson Construction	Nielson Con.	7	TON									1
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
45	Conveyors 45													
	Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	CF	5	780	4						
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage	12 CY (18 Ton) Dump Truck 5 mi. rd. trip	02315 490 0540		11	CY								
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	Nelson Construction	Nelson Con.		7	TON								1
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
46	Parking Lot 46													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Pavement removal (asphalt) 3 inch	02220 250 5010	3.98/SY						4800				
	Concrete's Vol. Demolished								0.25					
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost	Pavement removal (asphalt) 3 inch	02220 250 5010	3.98/SY						4400				
	Concrete's Vol. Demolished								0.25					
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
47	RubberLiner 47													
	Structure's Demolition Cost													
	Structure's Vol. Demolished	Mechanical equipment heavy	15055 300 3600		805/ton							32.5		
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	xxxx													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
48	Culvert Bedding Removal 48													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	Subtotal													
	Stream Bed Sand													
	Demolition Cost	Excavation 1 CY backhoe earth	02315 462 6040	12.8/CY							1296			
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (18 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Culvert Bed Sand													
	Demolition Cost	Excavation 1 CY backhoe earth	02315 462 6040	12.8/CY							3630			
	Concrete's Vol. Demolished													
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39/CY										
	Transportation Cost	12 CY (18 Ton) Dump Truck 1/2 mi. md. trip	02315 490 0320	3.44/CY										
	Disposal Costs	On site disposal	02220 240 5550	7.6/CY										
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	xxxx													
	Total													

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Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
	See Backfilling & Grading Plan													
49	Off Site Dump Fee 49													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel	City Services Clean Dirt Only	City Service Dirt		1/CY						66096			
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Equipment's Disposal Cost													
	Dismantling Cost													
	Equipment's Vol. Demolished													
	Loading Costs													
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	Concrete Demolition													
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	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
	See Backfilling and Grading													
	Drainage Control 50													
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
	Subtotal													
	Filter Material	Silt fence	02370 700 1100		1.05 LF	3000								
	Rip-rap	Rip-Rap dumped 300 lbs. average	02370 450 0370		36/Ton							2100		
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
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	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
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	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

Demolition

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	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
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	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
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	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

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	Rubble's Weight (exclude steel)													
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	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
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	Haulage													
	Transportation Cost Steel Truck													
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	Subtotal													
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	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

Demolition

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	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
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	Disposal Costs													
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	Transportation Cost													
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	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

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	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
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	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
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	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

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	Structure's Vol. Demolished													
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	Truck's Capacity													
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	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steel's Weight													
	Truck's Capacity													
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	Dismantling Cost													
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	Loading Costs													
	Transport Costs													
	Disposal Costs													
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	Concrete's Vol. Demolished													
	Loading Cost													
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Crandell Canyon Mine C/015/032

Demolition

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	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandell Canyon Mine C/015/032

Demolition

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	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
	Haulage													
	Transportation Cost Non Steel Truck													
	Transportation Cost Non Steel Drive													
	Disposal Cost Non Steel													
	Steer's Weight													
	Truck's Capacity													
	Haulage													
	Transportation Cost Steel Truck													
	Transportation Cost Steel Truck Drive													
	Disposal Cost Steel													
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	Loading Costs													
	Transport Costs													
	Disposal Costs													
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	Concrete Demolition													
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	Concrete's Vol. Demolished													
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	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Concrete Demolition													
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	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

Crandall Canyon Mine C/015/032

Demolition

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
	Structure's Demolition Cost													
	Structure's Vol. Demolished													
	Rubble's Weight (exclude steel)													
	Truck's Capacity													
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	Transportation Cost Steel Truck													
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	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	Subtotal													
	Total													

**CHAPTER 7
APPENDICES**

<u>APPENDIX NUMBER</u>	<u>DESCRIPTION</u>
7-1	Water Rights Information
7-2	Crandall Creek Flow Data
7-3	Crandall Creek Water Quality Data
7-4	Sedimentation and Drainage Control Plan
7-5	Crandall Creek Flow Calculations
7-6	Deleted
7-7	Diversion Calculations
7-8	Deleted
7-9	Small Area Exemption Calculations
7-10	Deleted
7-11	Deleted
7-12	Letter from U.S. Soil Conservation Service Concerning Alluvial Valley Floors in the Crandall Canyon Area
7-13	Municipal Watershed Description
7-14	Water Share Certificate
7-15	Probable Hydrologic Consequences Determination
7-16	Geologic Occurrence and Use of Seeps and Springs
7-17	Seep and Spring Flow Rate and Temperature Measurements

**CHAPTER 7
LIST OF PLATES**

<u>PLATE NUMBER</u>	<u>DESCRIPTION</u>
PLATE 7-1	Crandall Creek Plan and Profile
PLATE 7-2	Crandall Creek Cross Sections
PLATE 7-3	Proposed Pond Details
PLATE 7-4	Deleted
PLATE 7-4A	Deleted
PLATE 7-5	Drainage Map
PLATE 7-5A	Cross Sections
PLATE 7-5B	Cross Sections, As Built
PLATE 7-5C	Watershed Boundary Map
PLATE 7-6	Deleted
PLATE 7-6A	Deleted
PLATE 7-7	Exploration Drill Hole and Hiawatha Coal Outcrop Locations
PLATE 7-8	Blind Canyon Watershed Land Types
PLATE 7-9	Terratek Blind Canyon Watershed Subsidence Modeling
PLATE 7-10	Blind Canyon Watershed Land Types & Drainage
PLATE 7-11	Pre & Postmining Blind Canyon Topography
PLATE 7-12	Seep and Spring Locations
PLATE 7-13	Potentiometric Surface of Spring Canyon Member, Star Point Formation
PLATE 7-14	Groundwater Rights

7.31.7 Cross Sections and Maps

Cross sections and maps, as required for R645-301-731.700, are presented within this application.

7.31.8 Water Rights and Replacement

In the event that the monitoring program identifies an impact to the water source in the permit and adjacent areas, the replacement of water rights will be addressed as described in Section 7.27 of this application.

7.3 Sediment Control Measures

The sediment control measures for the Crandall Canyon Mine operations are discussed in Section 7.42 of this application. This includes design, operation and maintenance of applicable siltation structures, sedimentation pond, diversions, and road drainage, as required.

7.33 Impoundments

There are no permanent impoundments associated with GENWAL's operations. Temporary impoundments of water collected for runoff control will occur in the sediment ponds and containment berms. The design of these structures is presented in Section 7.42 and 7.43 of this application.

7.34 Discharge Structures

Discharge from the sediment ponds is conveyed by a 18-inch CMP culvert (principal spillway) and an open channel concrete lined emergency spillway. The outlets of these spillways are protected by riprap. This design complies with R645-301-744.

7.35 Disposal of Excess Spoil

No significant excess spoil has been or will be developed by operating the underground mine. The only anticipated excess material will be from the sediment ponds. This limited volume of material will be removed from the ponds transported to an approved refuse disposal site, disposed of underground or sold with the coal.

7.36 Coal Mine Waste

Any refuse will be disposed of in accordance with the designs presented in Chapter 5 and Section 7.46 of this application.

Runoff- and Sediment-Control Facilities

Results of analyses to determine the required size and hydraulics of the sedimentation pond are included in Appendix 7-4. Details of the sedimentation pond required for compliance with 30 CFR 77.216-1 and 30 CFR 77.216-2 are contained in Appendix 7-8. Permanent disposal of the sediment removed during cleanout will be in accordance with Section 535.

Prior to any discharges through the decant system on the sedimentation pond, a sample will be collected to determine total suspended solids, settleable solids, total dissolved solids, oil and grease, total iron, total manganese concentrations, and pH. The sample will be collected by opening the gate valve on the dewatering device, allowing water to flow from the pond through the primary spillway for a sufficient time to collect a sample of the water, and then immediately shutting the gate valve to prevent further dewatering. This sample will then be submitted to a laboratory for analyses of the indicated parameters.

After receipt of analytical results from the laboratory, if the pH and concentrations of total suspended solids, settleable solids, total dissolved solids, oil and grease, total iron, and total manganese are within the acceptable limits, water will be discharged from the pond through the dewatering device. If the parameters of concern are not within the acceptable limits, no water will be discharged through the device.

During discharge of water to Crandall Creek from the sedimentation pond, samples of the water will be collected at the discharge point at the beginning and end of the discharge time. These samples will be sent to a laboratory following the discharge period for analyses of total suspended solids, settleable solids, total dissolved solids, total iron, total manganese, oil and grease, and pH. Analytical results will be submitted to the Division with the subsequent quarterly report.

The emergency spillway discharges onto the boulder-covered slope adjacent to the sedimentation pond. Boulders that cover this slope were blasted from the cut above the pond during construction of the mine-access road. Due to the large size of the boulders, laboratory size-fraction analyses could not be conducted. However, the boulders are visually estimated to range in size up to at least 10 feet in diameter. It is further estimated that approximately 80 percent of the coarse rock on the slope is finer than 8 feet in diameter, 30 percent is finer than 5 feet in diameter, and 10 percent is finer than 3 feet in diameter.

The blasted rock has an approximate thickness of 15 to 20 feet at the top of the slope and 5 to 6 feet at the bottom of the slope. The soil that underlies the rock is a silty sand. Size-fraction

analyses presented by Delta Geotechnical Consultants (1982) indicate that this soil is 70 percent sand and 30 percent silt and clay (the latter being minus 200 mesh).

The emergency spillway is lined with riprap and a filter blanket to reduce erosion potential. A concrete cutoff has also been installed immediately downstream of the inlet. The concrete cutoff ensures that the emergency spillway will not erode during a discharge event. Grading of the riprap, filter blanket, and embankment materials are shown in Figure 7-10. The spillway will discharge directly onto the boulder-covered slope. Due to the extreme thickness of the boulders and cobbles on the slope, additional erosion protection below the emergency spillway will not be required.

All new fill required to modify the embankment will be placed in 6-inch lifts. This new fill will be compacted in place by repeated passes of a front-end loader or equivalent prior to placing the next lift. Compaction will continue until the density of the material is at least 90 percent of Proctor density (as determined by sandcone density tests in the field).

As included in the original design, the interior of the pond will be lined with a 12-inch thick local, compacted clay to reduce seepage from the pond and, thereby increase the stability of the embankment. The clay liner will be placed in 6-inch lifts and compacted during placement by at least four passes of a front-end loader or equivalent. The initial layer will be disk-harrowed into the bottom of the pond to completion.

After pond cleanout, the thickness of the clay liner will be sampled by means of a bucket auger at 8 locations. Three holes will be placed along the ingress/egress route and five additional holes will be randomly selected from the remaining pond area. If any of the holes penetrates less than 10 inches of clay, additional clay will be compacted into the deficient areas of the pond.

REPLACE THESE PAGES IN APPENDIX 7-4

CRANDALL CANYON MINE
 SEDIMENTATION AND DRAINAGE CONTROL PLAN

TABLE 12
 SEDIMENT POND
 STAGE / VOLUME DATA

<i>Elev.</i>	<i>Area</i>	<i>Volume</i>	<i>Acc. Volume (ac.ft.)</i>	<i>Remarks</i>
7766	1756.67	.0000	.0000	<i>Bottom of Pond</i>
7767	3706.92	2731.80	0.063	
7768	5119.14	4413.03	0.164	
7769	5857.00	5488.07	0.290	<i>Sediment Cleanout Level</i>
7770	6949.54	6403.32	0.437	<i>Maximum Sediment Level</i>
7771	7806.54	7378.14	0.606	
7772	8894.51	8350.53	0.798	
7773	9905.02	9399.77	1.014	
7774	11055.91	10480.47	1.254	
7775	12153.06	11604.49	1.520	
7776	13120.22	12636.64	1.810	
7777	14084.05	13602.14	2.123	
7778	15043.33	14563.69	2.457	
7779	15984.66	15514.00	2.813	
7780	16934.94	16459.15	3.191	
7780.81	17669.26	14014.70	3.513	<i>Principal Spillway</i>
7781	17868.13	3376.05	3.591	
7781.81	18661.53	15028.20	3.936	<i>Emergency Spillway</i>
7782	18848.42	3430.08	4.012	
7783	19886.14	19367.28	4.457	
7784	21113.55	20499.85	4.927	
7785	22110.39	21611.97	5.423	<i>Top of Embankment</i>

STAGE-VOLUME

GENWAL SEDIMENT POND (As-Constructed)

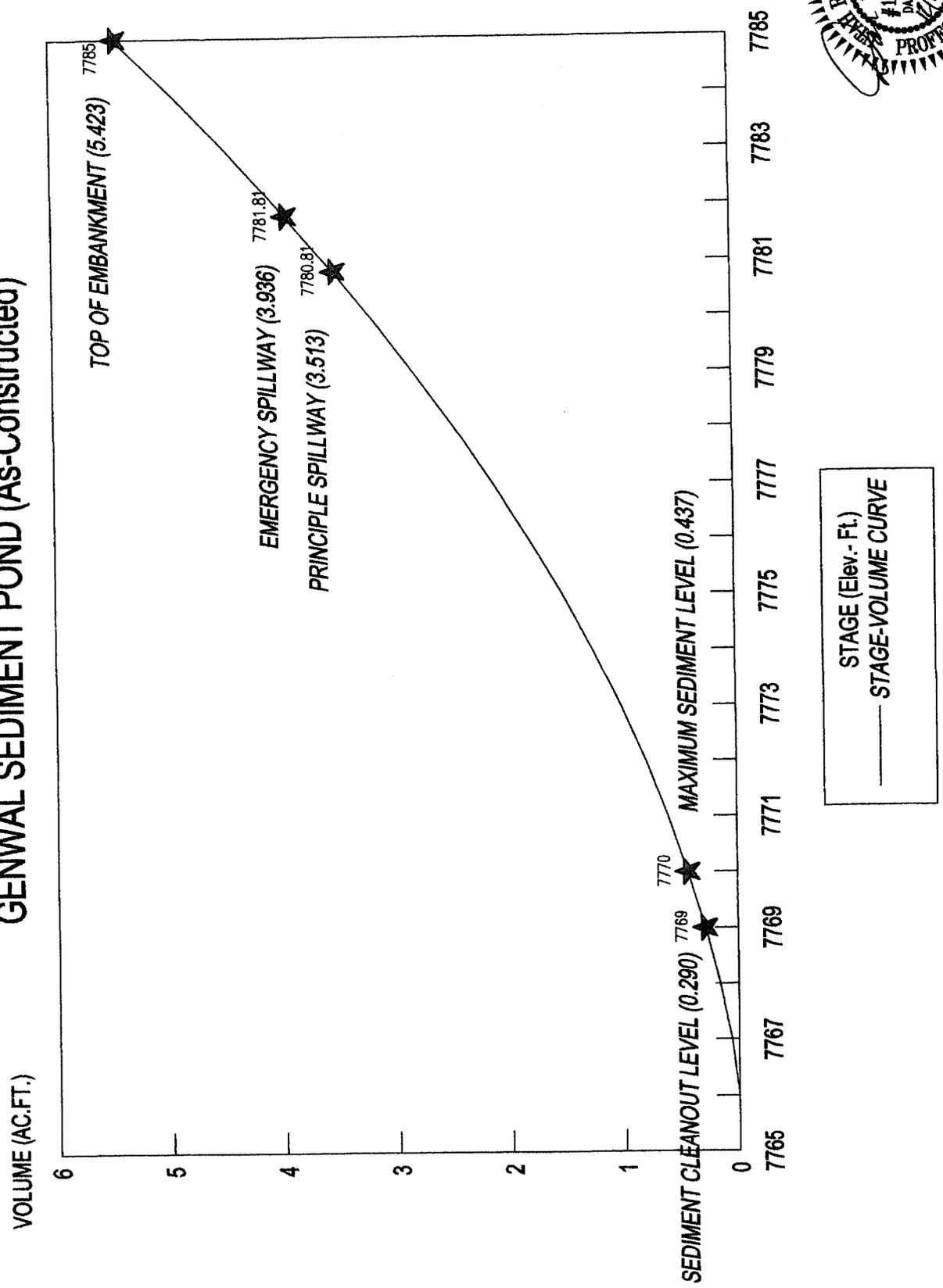
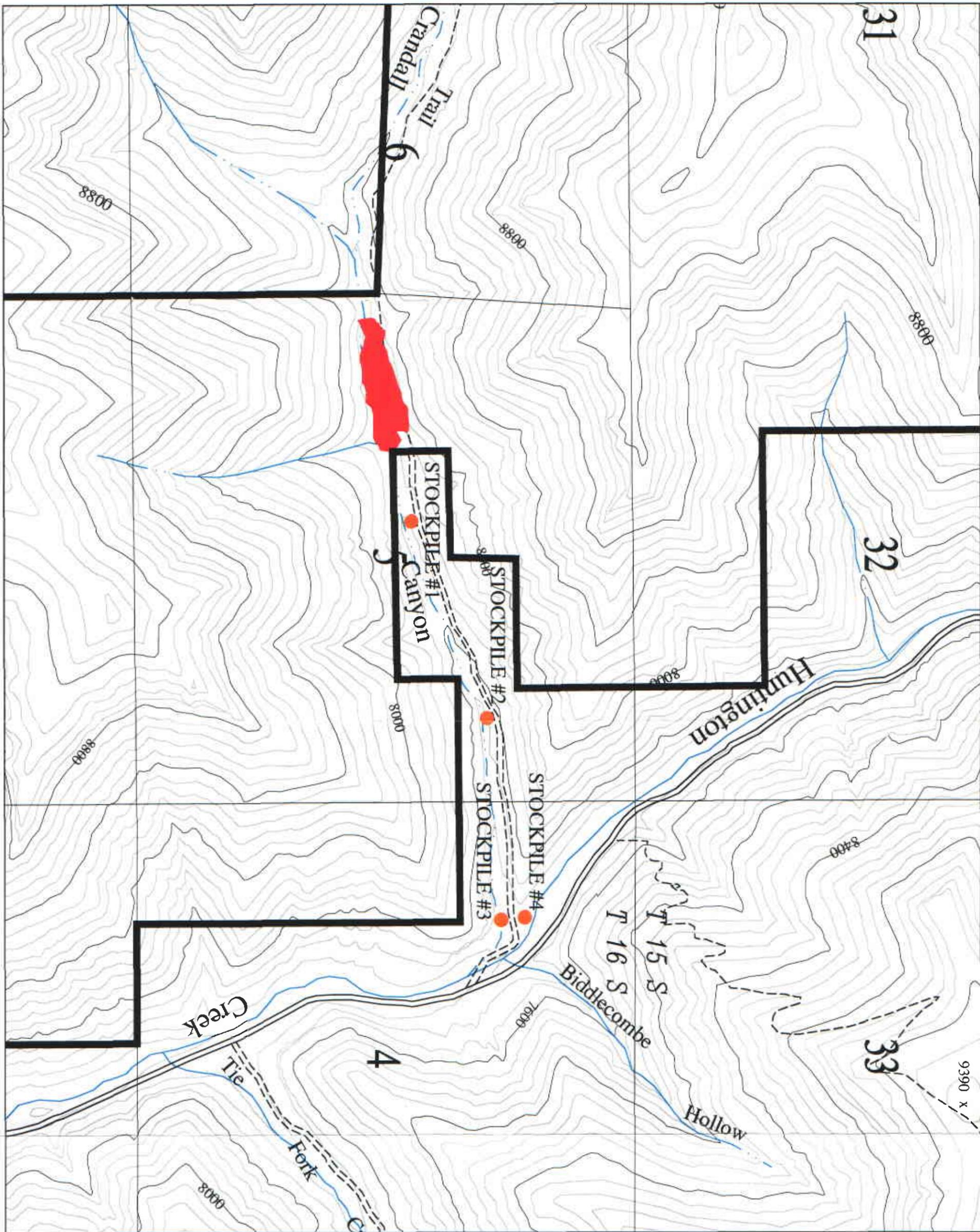


FIGURE 6



LEGEND

- UDOGM PERMIT BOUNDARY 
- MINE SURFACE FACILITIES 
- STOCKPILE LOCATIONS  (PERMIT AREA)

THE PERMIT AREA IS ENTIRELY WITHIN THE MANTI - LA SAL NATIONAL FOREST



RECEIVED
DEC 15 2005

DIV. OF OIL, GAS & MINING

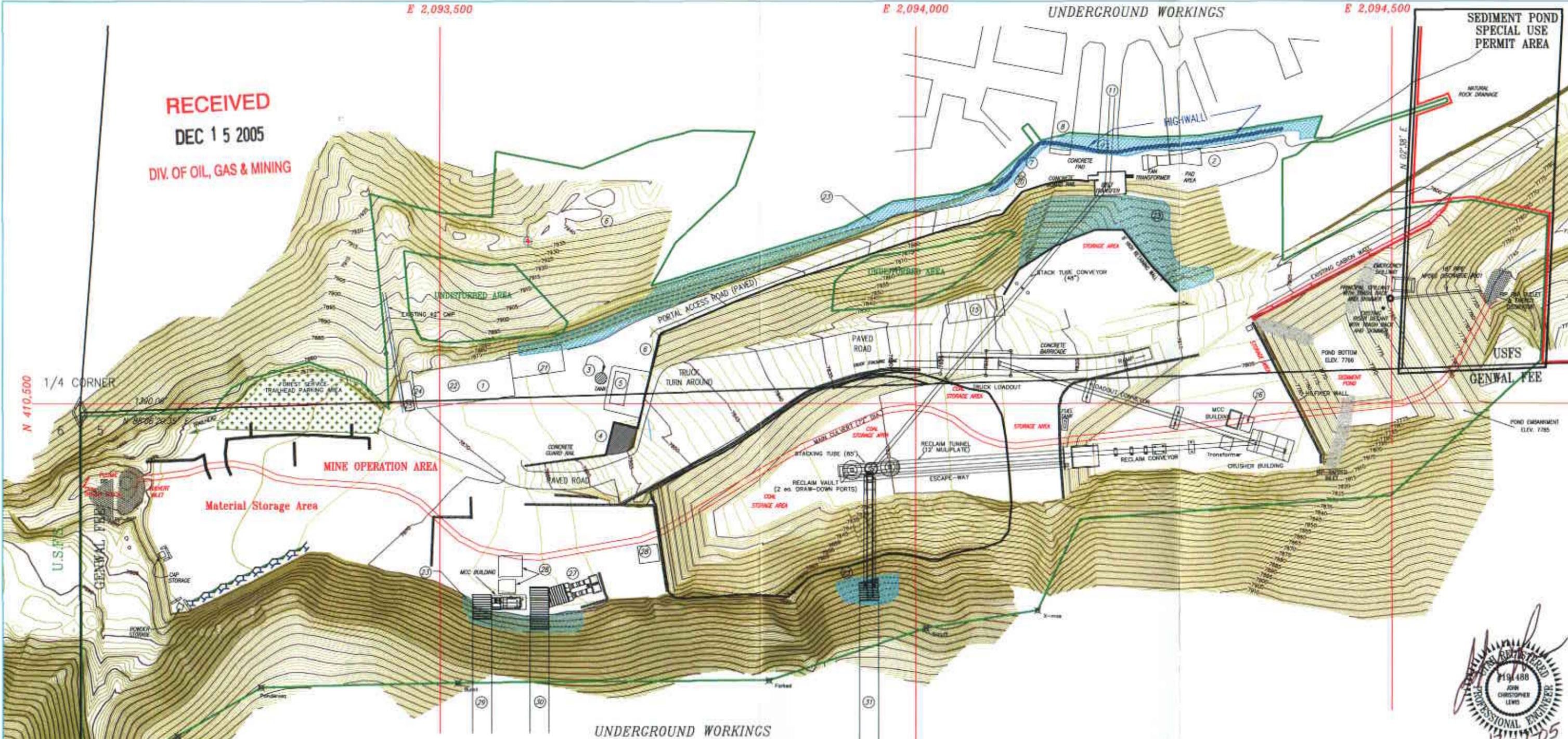


P.O. Box 1077, 794 North "C" Canyon Rd, Price Utah
Telephone: (435) 888-4000

**CRANDALL CANYON MINE
TOPSOIL STOCKPILE LOCATIONS**

REV: 2	ACAD: STOCKPILE LOCATIONS
DATE: 12-05-05	BY: JDS
SCALE: 1"=1000'	PLATE #: 2-3

RECEIVED
DEC 15 2005
DIV. OF OIL, GAS & MINING



UNDERGROUND WORKINGS

FACILITY LEGEND:

1. Shop
2. Ventilation Fan
3. Rockdust Silo
4. Concrete Dumpster Pod
5. Power Center
6. Power Pole
7. Offices & Bathhouse (u'grd)
8. Intake Portal
9. Belt Portal
11. Mine Belt
15. Oil Storage
20. Visual Disconnect
21. New Warehouse and Office Building
22. 4500 Gallon Cullinary Water Tank
23. Shotcrete
25. Parts Shed
26. Portable Shed
27. Ventilation Fan
28. Material Storage Sheds
29. Intake Portal
30. Return Portal
31. Belt Portal

- LEGEND:
- SEDIMENT POND SPECIAL USE PERMIT AREA
 - POTENTIAL EXTENT OF DISTURBANCE
 - 10' CONTOUR
 - JERSEY BARRIERS
 - RE-ESTABLISHED USFS ROAD (DOUBLE-LANE)
 - SAFETY BARRIERS



<REVISIONS>	
07/01/99	G.E.G.
08/26/99	J.C.L.
11/18/02	J.K.S.
05/20/04	J.D.S.
11/05/04	J.D.S.
05/09/05	J.D.S.
07/11/05	J.D.S.



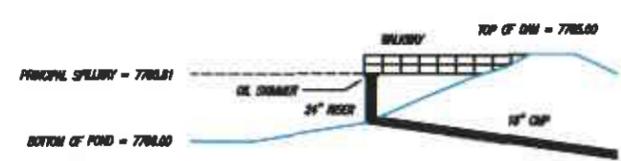
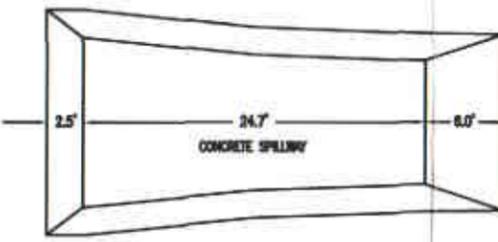
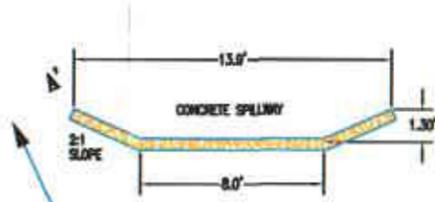
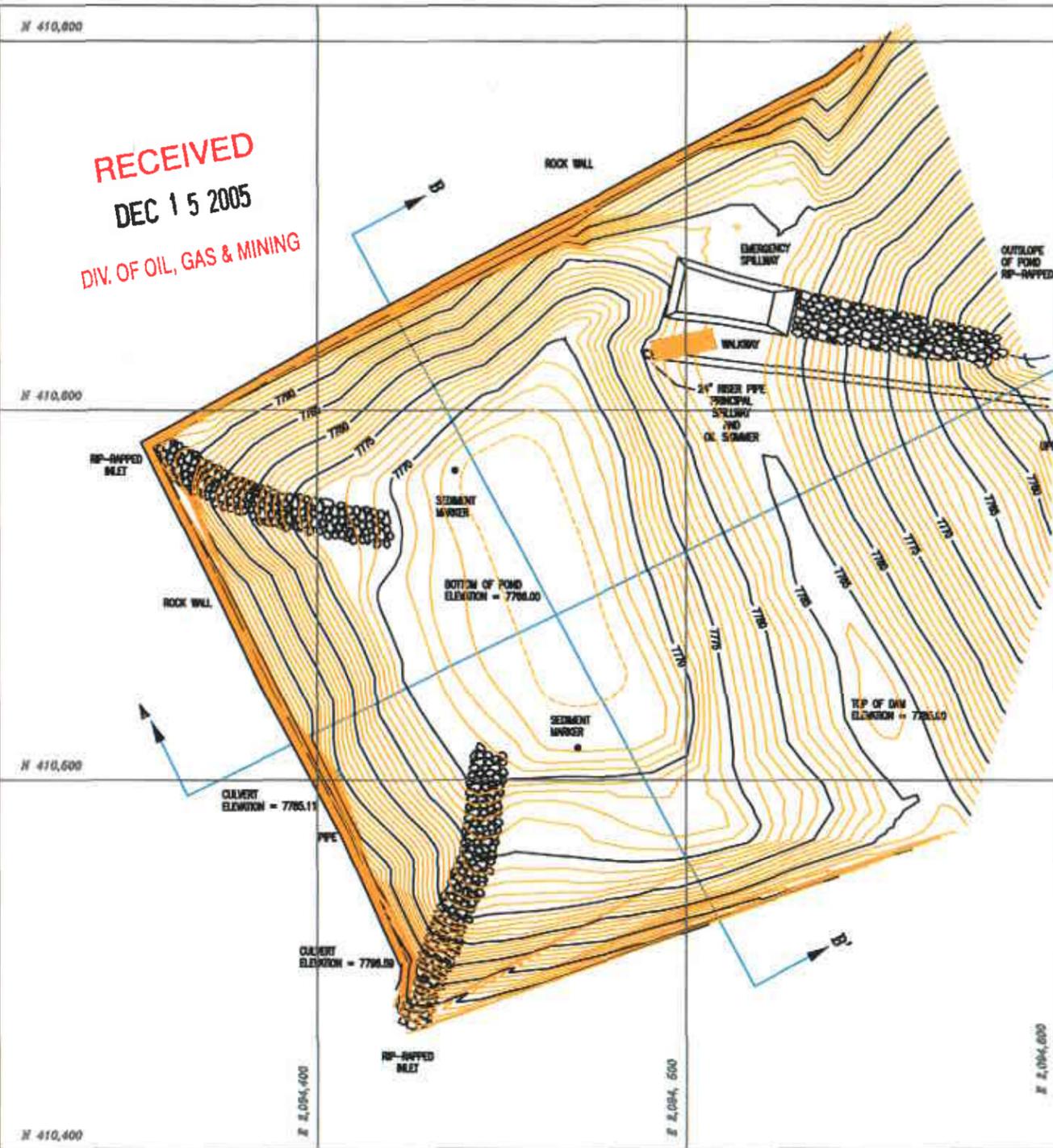
GENWAL
RESOURCES, INC.

P.O. Box 1077 Price, UT
Telephone (435) 888-4000

**CRANDALL CANYON MINE
SURFACE FACILITY MAP**

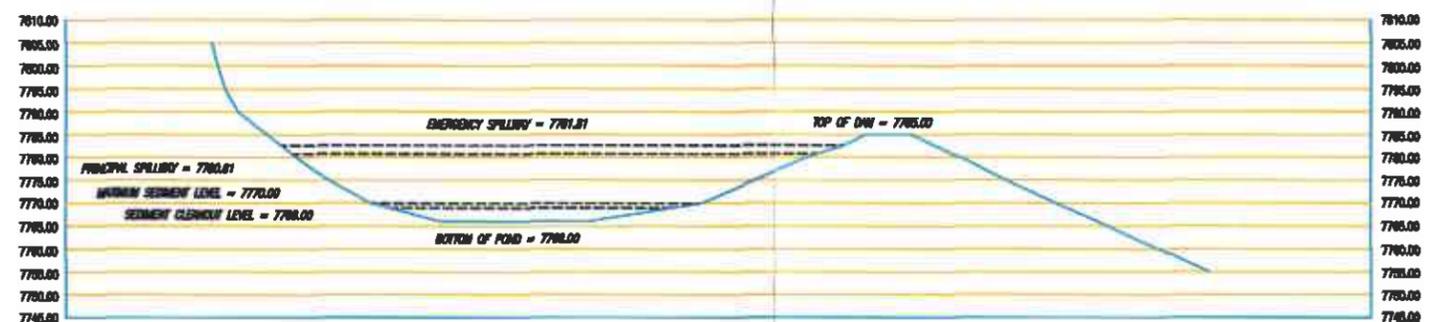
DRAWN BY: JDS	ACAD REF: 5-3
DATE: 07/11/05	PLATE #: 5-3
SCALE: 1" = 100'	

RECEIVED
DEC 15 2005
DIV. OF OIL, GAS & MINING

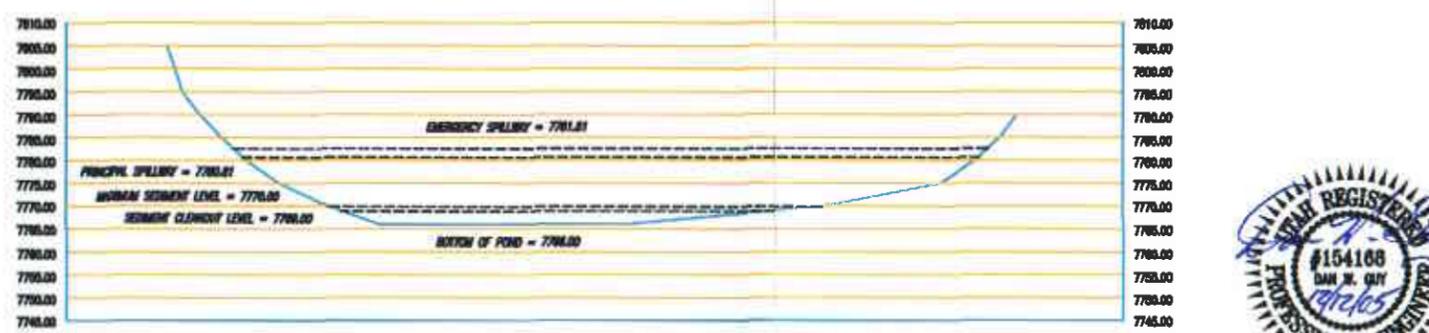


EMERGENCY SPILLWAY DETAIL

PRINCIPAL SPILLWAY DETAIL



SECTION A-A'



SECTION B-B'



AS-BUILT SEDIMENT POND:

LOCATION:	ELEVATION:	VOLUME:
BOTTOM OF POND:	7768.00	0.000 AC. FT.
SEDIMENT CLEANOUT LEVEL:	7768.00	0.290 AC. FT.
MAXIMUM SEDIMENT LEVEL:	7770.00	0.437 AC. FT.
PRINCIPAL SPILLWAY:	7780.81	3.513 AC. FT.
EMERGENCY SPILLWAY:	7781.81	3.936 AC. FT.



CONTOUR INTERVAL = 1'

Note: Pond Cleaned in November 2003.
Survey Made in April 2004.

<REVISIONS>

03/07/01	GEG
03/15/01	BEI
04/2004	GEG
08/2005	BEI

GENWAL RESOURCES, INC.
P.O. Box 1420 196 North 100 West Huntington, Utah
Telephone (435) 987-9813

**CRANDALL CANYON MINE
GENWAL POND (AS-BUILT)**

DRAWN BY: BLACKHAWK ENGINEERING ACAD REF: AS-BUILT
DATE: 06-28-05 PLATE #: 7-3
SCALE: 1" = 40'