Hiawatha Coal Company

P.O. Box 1240
Huntington, UT 84528

(801) 857-0399

C/007/0011
Received 4/10/15
Task ID #4872

April 10, 2015

Dana Dean
Utah Division of Oil, Gas & Mining
1954 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114-5801

Re: **Midterm Permit Review Response to Deficiencies, Hiawatha Mine, C/007/0011, Task ID #4759**

Dear Ms. Dean,

This letter is in response to your deficiencies letter dated January 8, 2015. Hiawatha Coal Company has addressed the deficiencies. The response is attached to this letter.

Hiawatha understands that the Division may or may agree with some of the line item calculations contained in the spreadsheets. Hiawatha is interested in resolving any questions or discrepancies the Division may have through a meeting with the Division staff at their convenience which would allow Hiawatha, if it is determined to be necessary, to adjust the calculations during the course of the review of this amendment in an effort to avoid further deficient responses so that a final bond amount can be determined by the Division in as little time as possible. I look forward to working with your staff to accomplish this.

If you have any questions, please call me at (801) 857-0399 or email me at charles.reynolds@hiawathacoal.com.

Sincerely,

Charles Reynolds

Charles Reynolds, PE
Mine Manager

Deficiency Response List
Task ID #4759
Midterm Permit Review

R645-301-231.200
The statement on page 2-4 has been updated to include the requisite commitment.

R645-301-800
The line item calculations for the bond has been updated using 2014 RS Means and other data. These updates are shown on pages 8-9 through 8-76, as well as changes to pages 8-2 and 8-4. The total has been escalated through 2019. Although the deficiency letter requested that an escalation factor of 1.9% be used, a copy of a clarifying email from Division staff was received by Hiawatha on February 19th, 2015, which clarified that the correct factor to use was actually 1.2%. Therefore 1.2% factor was used to escalate the bond amount. In addition, Hiawatha has found that the foundation demolition cost contained in RS Means is not representative of the demolition method used by local contractors. Therefore, a representative quote was obtained from Nielson Construction on April 7, 2015, following a site visit and detailed evaluation of the foundations to be reclaimed. A copy of this quote has been attached for the Division's records. The deficiency letter stated that the Division was requiring a bond increase of $1,800,000, which amount was determined by calculating Hiawatha's bond utilizing updated 2014 cost data. However, upon review of the calculations, Hiawatha has discovered that the spreadsheets that the Division was using to calculate the bond did not conform with the currently approved calculations in the MRP, but rather appeared to be old data which was incorrect and was corrected in 2008 during the Phase 1 Bond Release application which was approved on January 13, 2009, by the Division. In addition, an error was found in the demolition swell factor used in the Division's calculations which also affected the amount calculated. Hiawatha's calculations show that the existing bond currently filed with the Division is more than adequate to cover reclamation costs through 2019. Hiawatha also discovered a description of the potential reclamation process involving the borrow areas which was inconsistent with current site conditions that we had previously included calculations for. The reclamation plan description on pages 5-107 through 5-109 has been updated to address the changed conditions and reflect an accurate description of the future reclamation which may potentially be required. In addition, calculations which had previously been included regarding reclamation conditions which are not expected but may materialize in the future were removed from the calculations, which is consistent with the Division's Technical Directive 007 regarding bond calculations.

Subject: Estimated production rate for concrete demo
From: "Eric Luke" <eluke@nielsonconstruction.com>
Date: 4/7/2015 10:58 AM
To: <charles.reynolds@hiawathacoal.com>
CC: "Devin Leroy" <devin@nielsonconstruction.com>

Charles, as per our phone discussion, here are our estimated production rates for the demolition of concrete using a hydraulic hoe-ram or headache ball.
For estimated budgetary purposes only.

For retaining walls, building walls and flat work less than 15" thick: Estimate 20 cubic yards per hour. At a cost of $275.00 per hour
For thicker foundations and bases, estimate 10 cubic yards per hour at a cost of $360.00 per hour

Eric A. Luke
Lead Estimator
Nielson Construction
Office 435-687-2494
Fax 435-687-9721
Mobil 435-749-0432

APPLICATION FOR COAL PERMIT PROCESSING

X Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: HIAWATHA COAL CO.
Mine: HIAWATHA COMPLEX **Permit Number:** C/007/011
Title: Task 4759 Midterm Review Submittal
Description, Include reason for application and timing required to implement:
Update bond calculations and provide commitment for suitable soil protection, per Midterm review TA.

Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

No 1. Change in the size of the Permit Area? Acres: Disturbed Area: increase decrease.
No 2. Is the application submitted as a result of a Division Order? DO#
No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
No 4. Does the application include operations in hydrologic basins other than as currently approved?
Yes 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
No 6. Does the application require or include public notice publication?
No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
No 9. Is the application submitted as a result of a Violation? NOV #
No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain:
No 11. Does the application affect the surface landowner or change the post mining land use?
No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
No 13. Does the application require or include collection and reporting of any baseline information?
No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
Yes 15. Does the application require or include soil removal, storage or placement?
No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
No 17. Does the application require or include construction, modification, or removal of surface facilities?
No 18. Does the application require or include water monitoring, sediment or drainage control measures?
No 19. Does the application require or include certified designs, maps or calculation?
No 20. Does the application require or include subsidence control or monitoring?
Yes 21. Have reclamation costs for bonding been provided?
No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

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.

NJ Finley
Print Name

N J Finley 4-10-2015
Sign Name, Position, Date

Subscribed and sworn to before me this 10th day of April, 2015

Elaine Crossley
Notary Public

My commission Expires: 11-21, 2017

Attest: State of Utah } ss:
County of Salt Lake

Notary Public
ELAINE CROSSLEY
Commission Number 672213
My Commission Expires
November 21, 2017
State of Utah

For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining

Form DOGM- C1 (Revised March 12, 2002)

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

Permittee: HIAWATHA COAL CO.
Mine: HIAWATHA COMPLEX **Permit Number:** ACT/007/011
Title: Task 4759 Midterm Review Submittal

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
	X Replace		Pages 2-4, 5-107, thru 5-109, 8-2, 8-4, 8-8 thru 8-76
Add	Replace	Remove	
Add	Replace	Remove	
Add	Replace	Remove	
Add	Replace	Remove	
Add	Replace	Remove	
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Add	Replace	Remove	

Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.	**Received by Oil, Gas & Mining**

Topsoil will be removed in a separate layer unless substitute or supplemental materials are approved. If supplemental material is approved, all materials to be redistributed will be removed. Subsoil horizons or other underlying layers will be removed and segregated if necessary or desirable to ensure soil productivity. Soil will be sampled according to DOGM'S guidelines or recommendations. In some cases, such as very rocky or limited access areas, or where meager or poor quality soil makes removal unfeasible, substitute materials will be used upon approval. If the topsoil is less than six inches thick, a six inch layer that includes the topsoil and unconsolidated material immediately below the topsoil will be removed and later redistributed as the surface soil layer. In situations such as road cuts on steep slopes, it would be very difficult to remove topsoil in advance of road development due to inaccessibility. In such cases, especially if soils are thin, it may be more feasible to provide substitute materials upon final reclamation.

If removal of vegetation or topsoil results in erosion that causes air or water pollution, the size of the area from which topsoil is removed at any one time will be limited and the soil will be redistributed at a time when physical and chemical properties can be protected and erosion minimized.

Topsoil Storage

Topsoil and other materials will be stockpiled only when it is impractical to promptly redistribute such materials on regraded areas. Existing and proposed topsoil storage sites are shown on Exhibits II-4.

Stockpiled materials will be selectively placed on a stable surface area, not disturbed and protected from wind and water erosion, unnecessary compaction and contaminants that would interfere with revegetation. Protection will be accomplished by loosely piling soil materials, then constructing a temporary berm or diversion around the pile to prevent soil loss and planting an effective cover of non-noxious, quick growing plants during the first normal planting period for favorable planting conditions after removal. The seed mix to be used on the stockpiled topsoil will be determined based on its location. However, it will be one of the four seed mixes designated for final reclamation. No fertilizer has been necessary to establish vegetative cover on the topsoil piles and will not be applied in the future unless deemed necessary. Side slopes of storage piles will be kept to a minimum. Stockpiles will be marked with identification signs to help prevent unnecessary disturbance. Stockpiled topsoil will not be moved until required for redistribution unless approved.

Currently, five topsoil stockpiles containing 8,556 cubic yards of topsoil exist within the permit area. These stockpiles are identified on Exhibits II-4 and discussed individually under R645-301-231.400 "Topsoil Construction, Modification and Maintenance".

In 2012, the Sealy Forest Fire impacted the permit and adjacent areas. This impact resulted in a significant amount of suitable growth material being washed from offsite locations onto Middle Fork area in 2013 and 2014. ANR Company, the surface owner, has informed the Permittee that they intend to use this material to restore offsite impacted areas, develop food plots for wildlife in an attempt to mitigate the property damage from the fire, and repair the Middle Fork Access Road located in the watershed above the Middle Fork pad. In addition, some of the material has already been used by the Permittee to repair onsite erosion in Middle Fork. Excess material not used in 2014 was temporarily stockpiled on the Middle Fork pad pending use by ANR Company in the Spring, 2015. Any of this material left through the winter will be protected by a containment berm to prevent additional erosion until it is used. In the event ANR Company does not use all of the material for their purposes, any material remaining onsite will be added to the Middle Fork Topsoil Stockpile and stored in accordance with this section. At that time, the Permittee will calculate the volume of material and update the MRP to include the new volumes. Material will be sampled and analyzed for the parameters outlined in Tables 3 and 7 of the 2008 Division Guidelines for topsoil and Overburden.

Upon final reclamation, after topsoil has been spread over regraded surfaces, random samples will be collected to determine the required amounts of nutrients and soil amendments for the redistributed topsoil. A minimum of 12 random samples of the top 12 inches of topsoil will be collected and composited for each reclamation site. Each composite sample will then be submitted for laboratory analyses to determine the availability of macronutrients: nitrogen, phosphorus, and potassium; and micronutrients,

RECLAMATION OF SUBSTITUTE TOPSOIL BORROW AREAS

All potential topsoil borrow areas are shown on Exhibits 2-4. However, it is anticipated that there will be sufficient topsoil material available in borrow areas A, F, the Lower Preparation Plant Area, the Upper Rail Yard and the mine pads that no other borrow areas will be needed. However, several areas have been evaluated as potential borrow areas which can be utilized if needed. Reclamation cost estimates can be found in R645-301-830 in Chapter 8, (Bonding).

If needed, access to the borrow areas would be accomplished by using existing ancillary roads. A stream crossing (ford) currently exists between borrow areas B and C and Borrow area D. This crossing has been upgraded by Conoco-Philips in coordination with the land owner to a permanent concrete crossing in order to provide access to permanent methane gas wells which have been installed in the vicinity of borrow areas C and E, creating a permanent access to these areas which will remain post-mining. If borrow area D was needed, HCC would use the access as it exists and no additional improvement or reclamation of the stream crossing would be required. ~~improve this crossing by installing a 30 inch corrugated metal culvert capable of passing a one year six hour runoff event of 10.8 CFS as required for temporary culverts (see calculations in Appendix 5-12). Installation of the culvert would be initiated with emplacement of a silt fence across the channel below a gravel pad to be placed in the bottom of the channel. The culvert would be laid on the pad and the gravel fill material would be placed on both sides of the culvert and compacted in 8 inch lifts. The stream crossing would be brought to a level grade with the flood plain surfaces on both sides of the creek and would have a top width of 16 feet. Sediment control for the crossing would consist of both berms and straw bale dikes. The 12 inch berms would be placed one on each side of the top of the stream crossing pad to contain runoff on the road and possible spillage from the haul trucks from entering the creek. The straw bale dikes would be emplaced in the face of the embankments above the culverts on both the upstream and downstream sides. These dikes would protect against significant sedimentation problems from the small areas of the embankment faces. The stream crossing would be strictly temporary and would only be in place during the removal of the~~

~~borrow materials from areas B and C. After the needed volumes of borrow materials are obtained, the fill materials and culvert would be removed and the area reclaimed. The thin gravel layer emplaced directly on the stream bottom would be left in place to help protect the existing stream bottom.~~ Reclamation of the borrow area access roads would be carried out as described in; R645-301-240 of Chapter 2 under Substitute Topsoil Haul roads.

Borrow areas A, B, C, D and E are on tributaries of, or adjacent to Miller Creek, a perennial stream. Borrow Area A is located on an ephemeral tributary of Miller Creek with Borrow Areas B, C and D located on an alluvial terrace contiguous to Miller Creek. It is planned to utilize Borrow Areas B, C, D or E only if there is not sufficient substitute topsoil material available in borrow areas A, F, the Lower Preparation Plant Area, and the Upper Rail Yard. In any case, erosion control plans have been formulated to limit the amount of sediment delivered to Miller Creek.

The top 12 inches of soil from all borrow sites will be salvaged and returned to it's respective site to expedite reclamation of the borrow area.

Sedimentation from the borrow areas will be controlled using a combination of straw bale dikes, silt fencing or sediment ponds. If the runoff from the borrow area is not directed to a sediment pond, straw bale dikes or silt fencing will be constructed immediately down slope from the borrow area. These structures will be keyed and anchored into the soil.

For Borrow Area A, the plan is to remove soil in the area below Sediment Pond 006 running east

to the property boundary. This will allow Sediment Pond 0006 to remain in place and also allow for protection of a high-tension power line running across the west end of the proposed borrow area. The proposed area of removal is shown on Exhibit 2-4A. Runoff controls and post-mining topography are detailed in Appendix 8-18.

For Borrow Area D, a sedimentation pond would be constructed to contain a runoff volume of 0.84 acre-feet and a sediment volume of 0.05 acre-feet. Runoff from the borrow area would be conveyed to the pond by a berm and trapezoidal ditch along the edge of the Miller Creek buffer zone. A 50 foot buffer zone would be maintained between the borrow site and the creek. Water running off the undisturbed drainage above the borrow site would be diverted around the borrow site by a trapezoidal channel and conveyed to Miller Creek.

Borrow Areas B and C would require 1.95 acre-feet of storage for runoff and sediment storage. Runoff from the borrow area would be conveyed to the pond by a berm and trapezoidal ditch. A 50 foot buffer zone would be maintained between the borrow site and Miller Creek. Undisturbed area drainage would be diverted around the borrow site by a trapezoidal channel.

After borrowing is completed, any borrow sites utilized will be graded to suitable contours (see Exhibit 5-13) ripped, disked, raked, seeded, fertilized and mulched. Seed mixture number 1 will be utilized (see Table 3-5 under R645-301-331 in Chapter 3) with application rates of 28.8 pounds per acre (pure live seed). Since no trees are presently found in the borrow areas, no nursery stock will be planted. The seed mixtures contain seed for shrubs and therefore no nursery stock for shrubs will be utilized either.

Bonding costs have been determined by reference to current (2014~~08~~) editions of the Rental Rate Blue Book, the Means Site Work Cost Data Book and the Caterpillar Performance Handbook. Other costs, not defined in these books, such as seed mixtures, fertilizer and revegetation equipment are obtained from regional suppliers. Table VIII-1 gives a listing of demolition and equipment unit costs. Hourly equipment costs were derived by dividing the Blue Book monthly rental rates by an average 22 days per month, and eight hours per day. Estimated hourly operating costs, also provided in the Blue Book, and hourly operator costs including profit and overhead provided in the Means Site Work Cost Data book are then added to the hourly rental rates to give the unit costs. Structure removal costs, taken from the 2014~~08~~ Means Site Work Cost Data book (where listed) are also given in Table VIII-1.

As noted in the reclamation plan, structures such as concrete foundations and slabs and sewer and water lines which exist beneath or will be covered by the final graded surface will be left in place. Building demolition costs expressed in cubic yards of steel or concrete also include disposal costs. (No disposal costs are included for concrete footers or walls which can be easily backfilled along with other material in the cut and fill process.)

The remaining Earthwork area-volume balance calculations for each site are given in Appendix VIII-1. Maps showing existing structures, final surface configurations and final surface cross sections are included in Chapter V (Engineering). Reclamation plans given Under R645-301-240 (Soils), 340 (Biology) and 540 (Engineering) discuss backfilling operations, topsoil removal, storage and replacement and revegetation procedures.

Reclamation areas specified in the cost estimate may not agree exactly with the areas described in the reclamation plans given in other chapters. This is because specific reclamation operations overlap in some cases and in other cases larger areas have been assumed to allow for unforeseen conditions which may occur at the time of reclamation.

Structure removal costs are given in Table VIII-1 and summarized on Page 8-8. Some structures have been added and others removed since the original plan approval. The unit train loading facility, included in the original bond estimate, was never built and is no longer proposed. A few small buildings in the vicinity of the preparation plant have been removed. A stacking conveyor extending north of the preparation plant and an aerial pipeline between the preparation plant and the resin plant have been added. Additional portals and supporting conveyor structures originally proposed for the Middle Fork mine yard were not constructed and are no longer proposed. Several conveyor support trusses, the belt transfer building and the Foreman's building in the Middle Fork Mine yard have been removed. A new screening, crushing and truck loading silo facility has been added in the Middle Fork truck loadout area. The dimensions of existing structures have been re-examined and cubic foot volumes may differ from the original values in some cases.

TABLE VIII-1

UNIT COST REFERENCE FOR BOND ESTIMATE
(RSMEANS 201408)

	ITEM	UNIT COST	
1. STRUCTURAL REMOVAL			
02 41 16.13 0020	A. STEEL (DEMOLITION&DISPOSAL)	~~0.23~~ 0.27	/CF
02 41 16.13 0050	B. CONCRETE (DEMOLITION)	~~7.7~~ 0.39	/CF~~Y~~
02 41 13.33 1000	D. MASONARY WALL	~~1.75~~ 2.05	/CF
02 41 13.60 1700	E. CHAINLINK FENCE	~~2.66~~ 2.98	/LF
02 41 13.80 0100	F. POWER POLES	~~191.67~~ 199.5	EA
02 41 13.33 4450	G. DISPOSAL ONSITE	~~6.83~~ 8.65	/CY
Nielson Quote	H. FOUNDATION DEMOLITION <15" Thick	13.75	/CY
Nielson Quote	I. FOUNDATION DEMOLITION >15" Thick	36.00	/CY

	ITEM	HOURLY OPER. COST	RENT PER MONTH	EQUIP COST/HR
2. EQUIPMENT COSTS				
01 54 33.20 4380	A. D-11R	~~204.15~~ 261.35	~~46405~~ 35900	~~263.66~~ 203.98
01 54 33.20 4360	B. D-9R	~~95.30~~ 135.65	~~19405~~ 19900	~~110.26~~ 113.07
01 54 33.20 4260	C. D-6R	~~48.90~~ 77.35	~~10295~~ 10600	~~58.49~~ 60.23
	D. 631G SERIES II	121.80	~~22980~~ 16500	~~130.57~~ 93.75
01 54 33.20 1920	E. 14H	~~29.85~~ 64.65	~~10655~~ 9050	~~60.54~~ 51.42
01 54 33.20 4810	F. 988G	~~77.35~~ 116.25	~~15505~~ 15900	~~88.10~~ 90.34
01 54 33.20 5600	G. 769D	~~52.25~~ 83.10	11580	65.80
	H. WATER TRUCK 5000GAL	~~35.70~~ 43.75	~~5170~~ 7700	~~29.38~~ 43.75
01 54 33.40 7200	I. PICKUP 4X4	~~14.50~~ 15.55	~~1060~~ 660	~~6.02~~ 3.75
	J.DOZER RIPPER/SCARIFIER	9.35	3065	17.41
01 54 33.20 4310	K. DISC HARROW (D8 DOZER)	~~0.39~~ 100.55	~~580~~ 15200	~~3.30~~ 86.36
	L. HYDROMULCHER	15.95	2300	13.07
	M. 330D	~~75.95~~ 68.90	~~12900~~ 15415	~~73.30~~ 87.59
	N. GRADER RIPPER/SCARIFIER	7.9	2440	13.86

3. CREW HOURLY RATES	COST/HR INCL. O & P
A. EQUIP. OPER. (MED)	~~28.13~~ 50.25
B. EQUIP. OPER. (LGHT)	~~26.65~~ 48.90
C. TRUCK DRIVER (HVY)	~~22.16~~ 51.38
D. TRUCK DRIVER (LGHT)	~~21.29~~ 37.55
E. FOREMAN AVG. (2 DOLLARS OVER TRADE)	~~29.06~~ 73.88

Bonding Calculations

Direct Costs

Subtotal Demolition and Removal		~~$333,328.00~~	$341,691.00
Subtotal Backfilling and Grading		~~$494,513.00~~	$489,751.00
Subtotal Revegetation		~~$432,442.00~~	$327,217.00
Direct Costs		~~$1,260,283.00~~	$1,158,659.00
Indirect Costs			
Mob/Demob	$115,866.00	~~$126,028.00~~	10.0%
Contingency	$57,933.00	~~$63,014.00~~	5.0%
Engineering Redesign	$28,966.00	~~$31,507.00~~	2.5%
Main Office Expense	$78,789.00	~~$85,699.00~~	6.8%
Project Mainagement Fee	$28,966.00	~~$31,507.00~~	2.5%
Subtotal Indirect Costs	$310,520.00	~~$337,755.00~~	26.8%
Total Cost		~~$1,598,038.00~~	$1,469,179.00
Escalation factor			0.012 ~~0.032~~
Number of years			5 ~~1~~
Escalation		~~$51,137.00~~	$90,292.00
Reclamation Cost Escalated	$1,559,471.00	~~$1,649,175.00~~	
Phase I Bond Remaining Dollars		$478,833.00	
		$2,038,000.00	
Bond Amount (rounded to nearest $1,000)		~~$2,128,000.00~~	
2009 Dollars			
Posted Bond 2008		$3,005,000.00	
		$967,000.00	
Difference Between Cost Estimate and Bond		~~$877,000.00~~	
Percent Difference		67.8%~~41.21%~~	

Ref.	Description	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	PHASE I BOND RELEASE	ADJUSTED COST
	Machine Shop 01																		48237	0	48237
	Warehouse 02																		30330	0	30330
	Tipple 2 Operator Bld 03																		464	464	0
	Resin Plant 04																		1824	1824	0
	Tipple Office Scalehouse 05																		1101	0	1101
	Heavy Equipment Shop 06																		6105	0	6105
	Fuel Tank 07																		652	0	652
	Haul Truck Maintenance Shop 08																		6922	0	6922
	Haul Truck Office 09																		637	0	637
	Haul Truck Fuel Containment 10																		574	0	574
	Explosives Magazine Two 11																		1149	1149	0
	Culverts12																		5033	0	5033
	Power Lines 13																		8051	0	8051
	Water Tank A 14																		237	0	237
	Bath House A 15																		91085	0	91085
	Bath House Shed 16																		936	0	936
	Rock Dust Bin 17																		1901	0	1901
	King 4 Steam Cleaner Bld 18																		392	0	392
	Main Substation 19																		326	0	326
	Secondary Substation 20																		27	0	27
	Switch Bld Lower 21																		1271	0	1271
	Switch Buildings Upper 22																		962	0	962
	Fan Drive Bld 23																		1024	1024	0
	King 5 Fan 24																		647	0	647
	King 5 Steam Cleaner 25																		118	0	118
	King 5 Shop 26																		2464	0	2464
	King 5 Substation 27																		5631	0	5631
	Conveyor Control Bld 28																		1022	0	1022
	Rail into Mine 29																		5	5	0
	Stacking Conveyor 30																		69934	69934	0
	Stockpile Reclaim Facility 31																		9100	0	9100
	Galley 32																		24143	24143	0
	Screen Crusher Silo Facility 33																		1194	0	1194
	Removed During Backfilling 34																		5264	5264	0
	Power Lines 35																		9975	0	9975
	Miscellaneous Equipment 36																		3780	0	3780
	Water Tank B 37																		1792	0	1792
	Bath House B 38																		33537	0	33537
	Storage Shed 39																		3479	0	3479
	Upper Retaining Wall 40																		419	419	0
	Shop 41																		15774	0	15774
	Fan 42																		24125	0	24125
	Pump Station 43																		237	0	237
	Substation Shed 44																		734	0	734
	Substation 45																		1550	0	1550
	Overland Conveyor Shed 46																		3911	3911	0
	Stacking Conveyor 47																		16316	0	16316
	Stockpile Reclaim Conveyor 48																		5437	0	5437
	North Fork Pipeline 51																		7965	7965	0
	Total																		457793	116102	341691

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Machine Shop 01																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	42	240	12								FT		120960	CF	36288
	Structure's Vol. Demolished																0.35	1568	CY	
	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	City Service Price	5.07	/CY													1568	CY	7950
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			44238
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	42	90	0.5								FT		70	CY	963
	Concrete's Vol. Demolished																1.3	91	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													91	CY	86
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													91	CY	268
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													91	CY	787
	Subtotal																			2104
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	36	144	0.33								FT		63	CY	866
	Concrete's Vol. Demolished																1.3	82	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													82	CY	78
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													82	CY	242
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													82	CY	709
	Subtotal																			1895
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			48237

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Warehouse 02																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	36	150	15								FT		81000	CF	24300
	Structure's Vol. Demolished																0.35	1050	CY	
	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	City Service Price	5.07	/CY													1050	CY	5324
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			29624
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	32	52	0.08								FT		5	CY	69
	Concrete's Vol. Demolished																1.3	7	CY	
	Loading Cost	3.5' below ground - Abandon in place																		
	Transportation Cost																			
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													7	CY	61
	Subtotal																			130
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	32	58	0.33								FT		23	CY	316
	Concrete's Vol. Demolished																1.3	30	CY	
	Loading Cost	3.5' below ground - Abandon in place																		
	Transportation Cost																			
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													30	CY	260
	Subtotal																			576
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			30330

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Tipple 2 Operator Bld 03																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	11	11	9								FT		1089	CF	327
	Structure's Vol. Demolished																0.35	14	CY	
	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	City Service Price	5.07	/CY													14	CY	71
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			398
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	11	11	0.5								FT		2	CY	28
	Concrete's Vol. Demolished																1.3	3	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													3	CY	3
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													3	CY	9
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													3	CY	26
	Subtotal																			66
	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																			464

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Resin Plant 04																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF			16	16							FT		3217	CF	869
	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																			869
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	28	40	0.5								FT		21	CY	289
	Concrete's Vol. Demolished																1.3	27	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													27	CY	26
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													27	CY	80
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													27	CY	234
	Subtotal																			629
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	190	1.5	1								FT		11	CY	151
	Concrete's Vol. Demolished																1.3	14	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													14	CY	13
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													14	CY	41
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													14	CY	121
	Subtotal																			326
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			1824

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Tipple Office Scalehouse 05																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	12	28	8								FT		2688	CF	806
	Structure's Vol. Demolished																0.35	35	CY	
	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	City Service Price	5.07	/CY													35	CY	177
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			983
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	12	28	0.33								FT		4	CY	55
	Concrete's Vol. Demolished																1.3	5	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													5	CY	5
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													5	CY	15
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													5	CY	43
	Subtotal																			118
	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																			1101

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Heavy Equipment Shop 06																			
	Structure's Demolition Cost 1	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	21	65	14.5								FT		19793	CF	5938
	Structure's Demolition Cost 2	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	12.5	23.5	14.5								FT		4259	CF	1278
	Structure's Vol. Demolished																0.35	312	CY	
	Structure has no interior walls	For bldgs with no int walls, deduct 50%	02 41 16.13 5000																	-3608
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel	City Services	City Service Price	5.07	/CY													312	CY	1582
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			5190
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	21	65	0.5								FT		25	CY	344
	Concrete's Vol. Demolished																1.3	33	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													33	CY	31
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													33	CY	97
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													33	CY	285
	Subtotal																			757
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	12.5	23.5	0.5								FT		5	CY	69
	Concrete's Vol. Demolished																1.3	7	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													7	CY	7
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													7	CY	21
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													7	CY	61
	Subtotal																			158
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			6105

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Fuel Tank 07																			
	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 Headache Ball	Nielson Quote	13.75	/CY	20	30	0.5								FT		11	CY	151
	Concrete's Vol. Demolished																1.3	14	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													14	CY	13
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													14	CY	41
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													14	CY	121
	Subtotal																			326
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	100	3	1								FT		11	CY	151
	Concrete's Vol. Demolished																1.3	14	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													14	CY	13
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													14	CY	41
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													14	CY	121
	Subtotal																			326
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			652

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Haul Truck Maintenance Shop 08																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	22	80	15								FT		26400	CF	7920
	Structure's Vol. Demolished																0.35	342	CY	
	Structure has no interior walls	For bldgs with no int walls, deduct 50%	02 41 16.13 5000																	-3960
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel	City Services	City Service Price	5.07	/CY													342	CY	1734
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			5694
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	22	100	0.5								FT		41	CY	564
	Concrete's Vol. Demolished																1.3	53	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													53	CY	50
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													53	CY	156
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													53	CY	458
	Subtotal																			1228
	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																			6922

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Haul Truck Office 09																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	14	14	8								FT		1568	CF	470
	Structure's Vol. Demolished																0.35	20	CY	
	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	City Service Price	5.07	/CY													20	CY	101
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			571
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	14	14	0.33								FT		2	CY	28
	Concrete's Vol. Demolished																1.3	3	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													3	CY	3
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													3	CY	9
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													3	CY	26
	Subtotal																			66
	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																			637

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Haul Truck Fuel Containment 10																			
	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 Headache Ball	Nielson Quote	13.75	/CY	14	33	0.5								FT		9	CY	124
	Concrete's Vol. Demolished																1.3	12	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													12	CY	11
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													12	CY	35
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													12	CY	104
	Subtotal																			274
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	94	3	1								FT		10	CY	138
	Concrete's Vol. Demolished																1.3	13	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													13	CY	12
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													13	CY	38
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													13	CY	112
	Subtotal																			300
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			574

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Explosives Magazine Two 11																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	14	14	8							2	FT		3136	CF	941
	Structure's Vol. Demolished																0.35	41	CY	
	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	City Service Price	5.07	/CY													41	CY	208
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			1149
	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																			1149

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Culverts12																			
	Undisturbed Drain (3)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	725	4	8								FT		859	CY	1220
	North Ramp & Ditch (4)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	28	2	4								FT		8	CY	11
	Ball Field Road & South Fork (14)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	28	6	12								FT		75	CY	107
	So. Load Track & Ditch (2)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	110	3	6								FT		73	CY	104
	Right fork Undisturbed Drain (24)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	330	2	4								FT		98	CY	139
	Left Fork Undisturbed Drain	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	80	2	4								FT		24	CY	34
	Main Undisturbed Drain (25)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	1640	3	6								FT		1093	CY	1552
	Lower Road (55)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	95	2	4								FT		28	CY	40
	Lower Raod (56)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	80	2	4								FT		24	CY	34
	Yard Disturbed Drain (62)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	675	2	4								FT		200	CY	284
	Upper Drop Drain (52)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	150	1	2								FT		11	CY	16
	Lower Drop Drain (53)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	120	1	2								FT		9	CY	13
	Upper Truck Entrance (48)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	65	2	4								FT		19	CY	27
	Lower Truck Entrance (47)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	55	2	4								FT		16	CY	23
	Portal Area Undisturbed Drain (26)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	235	6	12								FT		627	CY	890
	Loadout Undisturbed Drain (60)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	260	2	4								FT		77	CY	109
	D009 Undisturbed Drain (36)	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	250	4	8								FT		296	CY	420
	Upper Ramp to Water Tank	Excavation Bulk Bank 2 CY (322BL)	31 23 16 42 0260	1.42	/CY	22	2	4								FT		7	CY	10
	Total																			5033

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Power Lines 13																			
	Structure's Demolition Cost	Powerpole	02 41 13.80 0100	199.5	EA										40	EA		40	EA	7980
	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	City Service Price	5.07	/CY						14					CY		14	CY	71
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			8051
	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																			8051

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Water Tank A 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 Headache Ball	Nielson Quote	13.75	/CY			0.5	24							FT		8	CY	110
	Concrete's Vol. Demolished																1.3	10	CY	0
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													10	CY	10
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													10	CY	30
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													10	CY	87
	Subtotal																			237
	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																			237

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Bath House A 15																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	83	150	19								FT		236550	CF	70965
	Structure's Vol. Demolished																0.35	3066	CY	
	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	City Service Price	5.07	/CY													3066	CY	15545
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			86510
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	83	150	0.33								FT		152	CY	2090
	Concrete's Vol. Demolished																1.3	198	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													198	CY	188
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													198	CY	584
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													198	CY	1713
	Subtotal																			4575
	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																			91085

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Bath House Shed 16																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	16	18	10								FT		2880	CF	778
	Structure's Vol. Demolished																0.35	37	CY	
	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																			778
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	16	18	0.5								FT		5	CY	69
	Concrete's Vol. Demolished																1.3	7	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													7	CY	7
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													7	CY	21
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													7	CY	61
	Subtotal																			158
	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																			936

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Rock Dust Bin 17																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	9	14	55								FT		6930	CF	1871
	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																			1871
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	1.5	1.5	3							4	FT		1	CY	14
	Concrete's Vol. Demolished																1.3	1.3	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													1.3	CY	1
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													1.3	CY	4
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													1.3	CY	11
	Subtotal																			30
	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																			1901

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	King 4 Steam Cleaner Bld 18																			
	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 Headache Ball	Nielson Quote	13.75	/CY	22	50	0.33								FT		13	CY	179
	Concrete's Vol. Demolished																1.3	17	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													17	CY	16
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													17	CY	50
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													17	CY	147
	Subtotal																			392
	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																			392

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Main Substation 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																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	20	45	0.33								FT		11	CY	151
	Concrete's Vol. Demolished																1.3	14	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													14	CY	13
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													14	CY	41
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													14	CY	121
	Subtotal																			326
	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																			326

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Secondary Substation 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																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	10	10	0.33								FT		1	CY	14
	Concrete's Vol. Demolished																1.3	1	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													1	CY	1
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													1	CY	3
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													1	CY	9
	Subtotal																			27
	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																			27

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Switch Bld Lower 21																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	17.5	18	10								FT		3150	CF	945
	Structure's Vol. Demolished																0.35	41	CY	
	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	City Service Price	5.07	/CY													41	CY	208
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			1153
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	17.5	18	0.33								FT		4	CY	55
	Concrete's Vol. Demolished																1.3	5	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													5	CY	5
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													5	CY	15
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													5	CY	43
	Subtotal																			118
	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																			1271

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Switch Buildings Upper 22																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	12	17	12								FT		2448	CF	734
	Structure's Vol. Demolished																0.35	32	CY	
	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	City Service Price	5.07	/CY													32	CY	162
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			896
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	12	17	0.33								FT		2	CY	28
	Concrete's Vol. Demolished																1.3	3	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													3	CY	3
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													3	CY	9
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													3	CY	26
	Subtotal																			66
	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																			962

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Fan Drive Bld 23																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	14.5	17	14								FT		3451	CF	932
	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																			932
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	14.5	17	0.33								FT		3	CY	41
	Concrete's Vol. Demolished																1.3	4	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													4	CY	4
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													4	CY	12
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													4	CY	35
	Subtotal																			92
	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																			1024

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	King 5 Fan 24																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	12	12	11								FT		1584	CF	475
	Structure's Vol. Demolished																0.35	21	CY	
	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	City Service Price	5.07	/CY													21	CY	106
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			581
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	12	12	0.33								FT		2	CY	28
	Concrete's Vol. Demolished																1.3	3	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													3	CY	3
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													3	CY	9
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													3	CY	26
	Subtotal																			66
	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																			647

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	King 5 Steam Cleaner 25																			
	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 Headache Ball	Nielson Quote	13.75	/CY	12	26	0.33								FT		4	CY	55
	Concrete's Vol. Demolished																1.3	5	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													5	CY	5
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													5	CY	15
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													5	CY	43
	Subtotal																			118
	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																			118

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	King 5 Shop 26																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	22	40	9								FT		7920	CF	2138
	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																			2138
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	22	40	0.33								FT		11	CY	151
	Concrete's Vol. Demolished																1.3	14	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													14	CY	13
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													14	CY	41
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													14	CY	121
	Subtotal																			326
	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																			2464

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	King 5 Substation 27																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	15	25	25								FT		9375	CF	2531
	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																			2531
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	15	15	0.33								FT		3	CY	41
	Concrete's Vol. Demolished																1.3	4	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													4	CY	4
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													4	CY	12
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													4	CY	35
	Subtotal																			92
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	15	15	12								FT		100	CY	1375
	Concrete's Vol. Demolished																1.3	130	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													130	CY	124
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													130	CY	384
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													130	CY	1125
	Subtotal																			3008
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			5631

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Conveyor Control Bld 28																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	14	17	9								FT		2142	CF	643
	Structure's Vol. Demolished																0.35	28	CY	
	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	City Service Price	5.07	/CY													28	CY	142
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			785
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	14	17	0.33								FT		3	CY	41
	Concrete's Vol. Demolished																1.3	4	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													4	CY	4
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													4	CY	12
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													4	CY	35
	Subtotal																			92
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	12.5	16.5	0.5								FT		4	CY	55
	Concrete's Vol. Demolished																1.3	5	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													5	CY	5
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													5	CY	15
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													5	CY	43
	Subtotal																			118
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	5	15	0.5								FT		1	CY	14
	Concrete's Vol. Demolished																1.3	1	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													1	CY	1
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													1	CY	3
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													1	CY	9
	Subtotal																			27
	Total																			1022

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Rail into Mine 29																			
	Structure's Demolition Cost	Rail Road Removal	34 11 13.23 1000	35	/Mi	700										FT		0.13	Mi	5
	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																			5
	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																			5

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Stacking Conveyor 30																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	7.5	175	9								FT		11813	CF	3190
	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																			3190
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	23	23	112								FT		2194	CY	30168
	Concrete's Vol. Demolished																1.3	2852	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													2852	CY	2709
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													2852	CY	8413
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													2852	CY	24670
	Subtotal																			65960
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	25	28	1								FT		26	CY	358
	Concrete's Vol. Demolished																1.3	34	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													34	CY	32
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													34	CY	100
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													34	CY	294
	Subtotal																			784
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			69934

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Stockpile Reclaim Facility 31																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF	10	16	2								FT		320	CF	96
	Structure's Vol. Demolished																0.35	4	CY	
	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	City Service Price	5.07	/CY													4	CY	20
	Subtotal																			116
	Structure's Demolition Cost	City Services	City Service Price	5.07	/CY	7.5	166	9								FT		415	CY	2104
	Structure's Vol. Demolished																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			2104
	Structure's Demolition Cost	City Services	City Service Price	5.07	/CY	14	17	9								FT		79	CY	401
	Structure's Vol. Demolished																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			401
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	14	17	0.33								FT		3	CY	41
	Concrete's Vol. Demolished																1.3	4	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													4	CY	4
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													4	CY	12
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													4	CY	35
	Subtotal																			92
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Hoe Ram	Nielson Quote	36	/CY	8	16	9								FT		43	CY	1548
	Concrete's Vol. Demolished																1.3	56	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													56	CY	53
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													56	CY	165
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													56	CY	484
	Subtotal																			2250
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Hoe Ram	Nielson Quote	36	/CY	14	17	9								FT		79	CY	2844
	Concrete's Vol. Demolished																1.3	103	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													103	CY	98
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													103	CY	304
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													103	CY	891
	Subtotal																			4137
	Total																			9100

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Galley 32																			
	Structure's Demolition Cost	Concrete Bld. Large	02 41 16 13 0050	0.39	/CF	27.5	100	12								FT		33000	CF	12870
	Structure's Vol. Demolished																0.35	428	CY	
	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	City Service Price	5.07	/CY													428	CY	2170
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			15040
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	12	126	1								FT		56	CY	770
	Concrete's Vol. Demolished																1.3	73	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													73	CY	69
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													73	CY	215
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													73	CY	631
	Subtotal																			1685
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	20	126	1.17								FT		109	CY	1499
	Concrete's Vol. Demolished																1.3	142	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													142	CY	135
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													142	CY	419
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													142	CY	1228
	Subtotal																			3281
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Hoe Ram	Nielson Quote	36	/CY	14	17	9								FT		79	CY	2844
	Concrete's Vol. Demolished																1.3	103	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													103	CY	98
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													103	CY	304
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													103	CY	891
	Subtotal																			4137
	Total																			24143

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Screen Crusher Silo Facility 33																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	4	16	0.5								FT		1	CY	14
	Concrete's Vol. Demolished																1.3	1	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													1	CY	1
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													1	CY	3
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													1	CY	9
	Subtotal																			27
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	8	12	0.5								FT		2	CY	28
	Concrete's Vol. Demolished																1.3	3	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													3	CY	3
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													3	CY	9
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													3	CY	26
	Subtotal																			66
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	22	22	1								FT		18	CY	248
	Concrete's Vol. Demolished																1.3	23	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													23	CY	22
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													23	CY	68
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													23	CY	199
	Subtotal																			537
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	4	8	0.5								FT		1	CY	14
	Concrete's Vol. Demolished																1.3	1	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													1	CY	1
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													1	CY	3
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													1	CY	9
	Subtotal																			27
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	22	22	1								FT		18	CY	248
	Concrete's Vol. Demolished																1.3	23	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													23	CY	22
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													23	CY	68
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													23	CY	199
	Subtotal																			537
	Total																			1194

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Removed During Backfilling 34																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF						15687					FT		15687	CF	4235
	Structure's Vol. Demolished																0.35	203	CY	
	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	City Service Price	5.07	/CY													203	CY	1029
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			5264
	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																			5264

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Power Lines 35																			
	Structure's Demolition Cost	Powerpole	02 41 13.80 0100	199.5	EA										50	EA		50	EA	9975
	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																			9975
	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																			9975

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Miscellaneous Equipment 36																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF						13500					FT		13500	CF	3645
	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																			3645
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF						500					FT		500	CF	135
	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																			135
	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																			3780

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Water Tank B 37																			
	Structure's Demolition Cost	Mixed Materials Large Building	02 41 16.13 0100	0.3	/CF			14	20							FT		4398	CF	1319
	Structure's Vol. Demolished																0.35	57	CY	
	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	City Service Price	5.07	/CY													57	CY	289
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			1608
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY			0.5	20							FT		6	CY	83
	Concrete's Vol. Demolished																1.3	8	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													8	CY	8
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													8	CY	24
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													8	CY	69
	Subtotal																			184
	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																			1792

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Bath House B 38																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	40	160	18.5								FT		118400	CF	31968
	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																			31968
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	40	107	0.33								FT		52	CY	715
	Concrete's Vol. Demolished																1.3	68	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													68	CY	65
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													68	CY	201
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													68	CY	588
	Subtotal																			1569
	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																			33537

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Storage Shed 39																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	31	31	12								FT		11532	CF	3114
	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																			3114
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	31	31	0.33								FT		12	CY	165
	Concrete's Vol. Demolished																1.3	16	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													16	CY	15
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													16	CY	47
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													16	CY	138
	Subtotal																			365
	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																			3479

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Upper Retaining Wall 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 Headache Ball	Nielson Quote	13.75	/CY	38	1	10								FT		14	CY	193
	Concrete's Vol. Demolished																1.3	18	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													18	CY	17
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													18	CY	53
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													18	CY	156
	Subtotal																			419
	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																			419

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Shop 41																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	60	62	14								FT		52080	CF	14062
	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																			14062
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	75	62	0.33								FT		57	CY	784
	Concrete's Vol. Demolished																1.3	74	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													74	CY	70
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													74	CY	218
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													74	CY	640
	Subtotal																			1712
	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																			15774

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Fan 42																			
	Structure's Demolition Cost	Concrete Bld. Large	02 41 16 13 0050	0.39	/CF	60	62	14								FT		52080	CF	20311
	Structure's Vol. Demolished																0.35	675	CY	
	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	City Service Price	5.07	/CY													675	CY	3422
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			23733
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	10	10	0.33								FT		1	CY	14
	Concrete's Vol. Demolished																1.3	1	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													1	CY	1
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													1	CY	3
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													1	CY	9
	Subtotal																			27
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	30	32	0.33								FT		12	CY	165
	Concrete's Vol. Demolished																1.3	16	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													16	CY	15
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													16	CY	47
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													16	CY	138
	Subtotal																			365
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			24125

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Pump Station 43																			
	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 Headache Ball	Nielson Quote	13.75	/CY	64	10	0.33								FT		8	CY	110
	Concrete's Vol. Demolished																1.3	10	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													10	CY	10
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													10	CY	30
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													10	CY	87
	Subtotal																			237
	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																			237

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Substation Shed 44																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.29	/CF	14	16	10								FT		2240	CF	650
	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																			650
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	9.92	/CY	14	16	0.33								FT		3	CY	30
	Concrete's Vol. Demolished																1.3	4	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.98	/CY													4	CY	4
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23 18 0320	3.73	/CY													4	CY	15
	Disposal Costs	Disposal on site	02 41 16 17 4200	8.8	/CF													4	CY	35
	Subtotal																			84
	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																			734

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Substation 45																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	12	18	25								FT		5400	CF	1458
	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																			1458
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	12	18	0.33								FT		3	CY	41
	Concrete's Vol. Demolished																1.3	4	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													4	CY	4
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													4	CY	12
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													4	CY	35
	Subtotal																			92
	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																			1550

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Overland Conveyor Shed 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	Concrete Demolition Hoe Ram	Nielson Quote	36	/CY	4.5	6.5	3							17	FT		55	CY	1980
	Concrete's Vol. Demolished																1.3	72	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													72	CY	68
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													72	CY	212
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													72	CY	623
	Subtotal																			2883
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Hoe Ram	Nielson Quote	36	/CY	5	20	3								FT		11	CY	396
	Concrete's Vol. Demolished																1.3	14	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													14	CY	13
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													14	CY	41
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													14	CY	121
	Subtotal																			571
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	30	40	0.33								FT		15	CY	206
	Concrete's Vol. Demolished																1.3	20	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													20	CY	19
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													20	CY	59
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													20	CY	173
	Subtotal																			457
	Total																			3911

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Stacking Conveyor 47																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	10	275	10								FT		27500	CF	7425
	Structure's Vol. Demolished																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			7425
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	0.5	5	20							4	FT		200	CF	54
	Structure's Vol. Demolished																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			7479
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	1.5	24	70								FT		2520	CF	680
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			680
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Hoe Ram	Nielson Quote	36	/CY			3	3						8	FT		6	CY	216
	Concrete's Vol. Demolished																1.3	8	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													8	CY	8
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													8	CY	24
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													8	CY	69
	Subtotal																			317
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Hoe Ram	Nielson Quote	36	/CY	3	24	3								FT		8	CY	288
	Concrete's Vol. Demolished																1.3	10	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													10	CY	10
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													10	CY	30
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													10	CY	87
	Subtotal																			415
	Total																			16316

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Stockpile Reclaim Conveyor 48																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	8	110	8								FT		7040	CF	1901
	Structure's Vol. Demolished																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			1901
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	0.67	8	15								FT		80	CF	22
	Structure's Vol. Demolished																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			22
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.27	/CF	55	3	15								FT		2475	CF	668
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			668
	Structure's Demolition Cost																			
	Structure's Vol. Demolished	Concrete Bld. Large	02 41 16 13 0050	0.39	/CF	12	42	12								FT		6048	CF	2359
	Rubble's Weight (exclude steel)																0.35	78	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel	City Services	City Service Price	5.07	/CY													78	CY	395
	Subtotal																			2754
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition Headache Ball	Nielson Quote	13.75	/CY	1.5	10	5								FT		3	CY	41
	Concrete's Vol. Demolished																1.3	4	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1601	0.95	/CY													4	CY	4
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1014	2.95	/CY													4	CY	12
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	/CY													4	CY	35
	Subtotal																			92
	Total																			5437

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	North Fork Pipeline 51																			
	Structure's Demolition Cost	Concrete Pipe 12"	02 41 13 38 0480	5.31	/LF	1500										FT		1500	FT	7965
	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																			7965
	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																			7965

	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.	Units	Cost	Phase I Bond Release	Adjusted Cost
Backfill and Grade South Fork 001															17727	0	17727
Topsoil South Fork 003															6975	0	6975
Stream South Fork 004															12499	0	12499
Backfill Middle Fork 005															30069	0	30069
Timber Yard Middle Fork 006															3360	0	3360
Topsoil Middle Fork 008															4300	0	4300
Backfill Prep Plant 009															211216	87123	124093
Topsoil Prep Plant 011															288215	134718	153497
Topsoil Borrow Area 012															24806	24806	0
Support 013															153940	51564	102377
Middle Fork Stream 014															34854	0	34854
Total															787961	298211	489751

	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.	Units	Cost
Backfill and Grade South Fork 001															
Remove Containinated Material															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	5147	CY	2322	cy/hr	2.2	HR	1234
Remove and Stockpile Topsoil															
1.5' Deep from Areas A & B															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	5506	CY	2322	cy/hr	2.4	HR	1346
Cut and Fill Site															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	42300	cy	1569	cy/hr	27	HR	15147
Subtotal															17727

	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.	Units	Cost
Topsoil South Fork 003															
Mine Site Only															
Grade															
D6R XL Series III (9-51) (2nd 2007)	10600	77.35	0.1	48.9	200.2	1	200	$/HR	6712	CY	415	cy/hr	16.2	HR	3240
Area RA-17 and RA-19															
Load Topsoil on Dump Truck															
988G EROPS (9-35) (2nd2007) 2005	15900	90.34	0.1	50.25	249	1	249	$/HR	1206	CY	340	cy/hr	3.5	HR	872
Haul Topsoil to South Fork Pad															
769D (20-11) (2nd2007)	12100	83.1	0.1	37.55	204.6	4	818	$/HR	1206	CY	340	cy/hr	3.5	HR	2863
Subtotal															6975

	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.	Units	Cost
Stream South Fork 004															
Place Rip Rap															
CAT 330D L (10-24) (2nd2007)	15415	68.9	0.1	50.25	222.4	1	222	$/HR	373	sy	53	sy/day	56.3	HR	12499
Subtotal															12499

	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.	Units	Cost
Backfill Middle Fork 005															
Remove Contaiminated Material (6" deep)															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	7583	CY	2322	cy/hr	3.3	HR	1851
Remove and Stockpile Topsoil															
1.5 feet deep from Areas A, B and C															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	7229	CY	2322	cy/hr	3.1	HR	1739
Cut and Fill Site															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	74115	CY	1569	cy/hr	47.2	HR	26479
Subtotal															30069

	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.	Units	Cost
Timber Yard Middle Fork 006															
Remove And Stockpile Topsoil (6" deep)															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323	$/HR	2420	CY	747	cy/hr	3.2	HR	1034
RA-25															
Cut and Fill Sites															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323	$/HR	3000	CY	747	cy/hr	4	HR	1292
Replace Topsoil															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323	$/HR	2420	CY	747	cy/hr	3.2	HR	1034
Subtotal															3360

	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.	Units	Cost
Topsoil Middle Fork 008															
Grade															
D6R XL Series III (9-51) (2nd 2007)	10600	77.35	0.1	48.9	200.2	1	200	$/HR	7583	cy	415	ac/hr	18.3	HR	3660
Load Topsoil on Dump Truck															
988G EROPS (9-35) (2nd2007) 2005	15900	90.34	0.1	50.28	249	1	249	$/HR	354	CY			0.6	HR	149
Haul Topsoil to Middle Fork Pad															
769D (20-11) (2nd2007)	12100	83.1	0.1	37.55	204.6	4	818	$/HR	354	CY	552	cy/hr	0.6	HR	491
Subtotal															4300

adjusted after bond release	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.	Units	Cost
Backfill Prep Plant 009															
Cut and fill Sites															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	513648	cy	2322	cy/hr	221.2	hr	124093
Sediment Pond Regrading															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	0	cy	2322	cy/hr	0	hr	0
Subtotal															124093

Adjusted after 2008 bond release	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.	Units	Cost
Topsoil Prep Plant 011															
Waste Removal Nonrefuse Areas															
Cut and Fill Sites															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	28177	cy	2322	cy/hr	12.1	HR	6788
Ripping (nonrefuse areas)															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323	$/HR	31.21	ac	1.56	ac/hr	20	HR	6460
Multi-Shank Ripper 360-519 P (9-58) (2nd2007)	3065	9.35	0.1		29.4	1	29	$/HR	31.21	ac	1.56	ac/hr	20	HR	580
Topsoil Placement (refuse areas)															
remove and stockpile 18 inch topsoil from borrow area															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	46440	cy	2322	cy/hr	20	HR	11220
Haul Topsoil to Borrow Area F and															
to Pond 4 and Refuse Pile 2															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323	$/HR	0	ac	1.56	ac/hr	0	HR	0
Multi-Shank Ripper 360-519 P (9-58) (2nd2007)	3065	9.35	0.1		29.4	1	29	$/HR	0	ac	1.56	ac/hr	0	HR	0
631G (9-49) (2nd2007)	16500	121.8	0.1	50.25	287.4	4	1150	$/HR	0	cy	1512	cy/hr	0	HR	0
Haul Topsoil to Borrow Area A and															
to Pond 5 and Pond 5 A															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323	$/HR	11.59	ac	1.56	ac/hr	7.4	HR	2390
Multi-Shank Ripper 360-519 P (9-58) (2nd2007)	3065	9.35	0.1		29.4	1	29	$/HR	11.59	ac	1.56	ac/hr	7.4	HR	215
631G (9-49) (2nd2007)	16500	121.8	0.1	50.25	287.4	4	1150	$/HR	46601	cy	1512	cy/hr	30.8	HR	35420
Haul Topsoil to Borrow Area at Prep Plant to															
Refuse Pile 1															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323	$/HR	3.72	ac	1.56	ac/hr	2.4	HR	775
Multi-Shank Ripper 360-519 P (9-58) (2nd2007)	3065	9.35	0.1		29.4	1	29	$/HR	3.72	ac	1.56	ac/hr	2.4	HR	70
631G (9-49) (2nd2007)	16500	121.8	0.1	50.25	287.4	4	1150	$/HR	24300	cy	2384	cy/hr	10.2	HR	11730
Haul from Upper Rail Yard to Pond 1															
RA10 RA11 and RA12															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323	$/HR	6.3	ac	1.56	ac/hr	4	HR	1292
Multi-Shank Ripper 360-519 P (9-58) (2nd2007)	3065	9.35	0.1		29.4	1	29	$/HR	6.3	ac	1.56	ac/hr	4	HR	116
631G (9-49) (2nd2007)	16500	121.8	0.1	50.25	287.4	4	1150	$/HR	75543	cy	1460	cy/hr	51.7	HR	59455
Replace topsoil from borrow areas															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561	$/HR	46440	cy	2322	cy/hr	20	HR	11220
Spread topsoil to grade stakes (3 passes)															
14H EROPS (9-11)(2H2007)	9050	64.65	0.1	50.25	177.9	1	178	$/HR	60.71	ac	5.6	ac/hr	10.8	HR	1922
14H EROPS (9-11)(2H2007)	9050	64.65	0.1	50.25	177.9	1	178	$/HR	60.71	ac	5.6	ac/hr	10.8	HR	1922
14H EROPS (9-11)(2H2007)	9050	64.65	0.1	50.25	177.9	1	178	$/HR	60.71	ac	5.6	ac/hr	10.8	HR	1922
Subtotal															153497

All regrading completed in Borrow Area	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.	Units	Cost
Topsoil Borrow Area 012															
Grading															
D9R Semi-U EROPS (9-52) (2H2007)	22900	130.11	0.1	48.9	335.1	1	335	$/HR	0	cy	1106	CY/HR	0	HR	0
Install Channel Collector in Borrow Area															
D6R XL Series III (9-51) (2nd 2007)	10800	61.36	0.1	48.9	183.9	1	184	$/HR					0	HR	0
24" Riprap									0	CY			15.05	/CY	0
Filter Gravel									0	CY			13.85	/CY	0
Subtotal															0

Adjusted for 2008 Bond Release	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.	Units	Cost
Support 013															
South Fork															
5,000 gal H2O truck Diesel (20-17) (2nd2006)	7700.00	43.75	0.10	51.38	147.6	1	148	$/HR					27	HR	3996
Pickup Crew 4x4 1 ton 340 hp (20-17) (2nd2007)	660.00	15.55	0.10	0.00	21.23	1	21	$/HR					27	HR	567
Foreman Average, Outside					73.88	1	74	$/HR					27	HR	1998
Middle Fork															
5,000 gal H2O truck Diesel (20-17) (2nd2006)	7700.00	43.75	0.10	51.38	147.6	1	148	$/HR					80.4	HR	11899
Pickup Crew 4x4 1 ton 340 hp (20-17) (2nd2007)	660.00	15.55	0.10	0.00	21.23	1	21	$/HR					80.4	HR	1688
Foreman Average, Outside					73.88	1	74	$/HR					80.4	HR	5950
North Fork															
5,000 gal H2O truck Diesel (20-17) (2nd2006)	7700.00	43.75	0.10	51.38	147.6	1	148	$/HR					0	HR	0
Pickup Crew 4x4 1 ton 340 hp (20-17) (2nd2007)	660.00	15.55	0.10	0.00	21.23	1	21	$/HR					0	HR	0
Foreman Average, Outside					73.88	1	74	$/HR					0	HR	0
Prep Plant															
5,000 gal H2O truck Diesel (20-17) (2nd2006)	7700.00	43.75	0.10	51.38	147.6	1	148	$/HR					221.2	HR	32738
Pickup Crew 4x4 1 ton 340 hp (20-17) (2nd2007)	660.00	15.55	0.10	0.00	21.23	1	21	$/HR					221.2	HR	4645
Foreman Average, Outside					73.88	1	74	$/HR					221.2	HR	16369
Topsoil															
5,000 gal H2O truck Diesel (20-17) (2nd2006)	7700.00	43.75	0.10	51.38	147.6	1	148	$/HR					92.7	HR	13720
Pickup Crew 4x4 1 ton 340 hp (20-17) (2nd2007)	660.00	15.55	0.10	0.00	21.23	1	21	$/HR					92.7	HR	1947
Foreman Average, Outside					73.88	1	74	$/HR					92.7	HR	6860
Subtotal															102377

	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.	Units	Cost
Middle Fork Stream 014															
Place Rip Rap															
CAT 330D L (10-24) (2nd2007)	15415	68.9	0.1	50.25	222.4	1	222	$/HR	1040	sy	53	sy/day	157	HR	34854
Subtotal															34854

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	PHASE I BOND RELEASE	ADJUSTED COST
	South Fork Veg 001																			26664	0	26664
	Middle Fork Veg 002																			72814	0	72814
	North Fork Veg 003																			10304	10304	0
	Prep Plant Veg 004																			416828	232900	183926
	Topsoil Borrow 005																			72879	29056	43813
	Total																			599489	272260	327217

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	South Fork Veg 001																			
	Scarify total area to be reclaimed	75 HP Dozerw/scarifiers	32 91 13 23 3100	4.24	/MSF					12.63						AC		550	MSF	2332
	Apply Fertilizer	Fertilizer Tractor Spread	32 01 90 13 0130	3.54	/MSF					12.63						AC		550	MSF	1947
	Disc harrow along contour	300 H. P. (D8)	01 54 33 20 4310	1817	/day									1.9		HR		0.2	day	363
		Eq. Op., Medium Equipment (Eqmd)	Eq. Op. Med.	61.72	/HR									1.9		HR		1.9	HR	117
	Drill Seeding	Tractor Spreader (equip. & labor) B-66	SRCE	15	/AC					11.58						AC		11.6	AC	174
		South and Middle Forks	HiawathaVeg003	726	/AC					11.58						AC		11.6	AC	8422
		#3 SEED MIX																		
	Mulch																			
	2 tons per acre	Hay bale	Reveg007	170	/ton					12.63						AC		25.3	tons	4301
	Hydroseed steep areas	Hydro Spreader (equip. & labor) B-81	Reveg005	223	/AC					1.05						AC		1.1	AC	245
		Riparian South and Middle Forks	HiawathaVeg004	385	/AC					1.05						AC		1.1	AC	424
		#4 SEED MIX																		
	Plant Nursery Grown Trees	Bare root seedlings, 11" to 16" med. soil	32 93 43 10 0140	1.4	Ea										312	EA		312	EA	437
		Transplants South and Middle Fork	Reveg005	1252	/AC					0.58						AC		0.6	AC	751
		ASSUME MIX #3																		
	Plant Nursery Grown Shrubs	Bare root seedlings, 11" to 16" med. soil	32 93 43 10 0140	1.4	Ea										1272	EA		1272	EA	1781
		Transplants Riparian South and Middle Fort	HiawathaVeg006	74	/AC					0.48						AC		0.5	AC	37
		ASSUME MIX #4																		
	Subtotal																			21331
	Reveg Assume 25% reseeding																			5333
	Subtotal																			5333
	Total																			26664

	DENSITY/ACRE
#3 TREES &SHRUBS	538
#4 TREES & SHRUBS	2650

			#3	#4	#3 TREES	#4 TREES
RA-17	LOADOUT	1.94	1.94	0	0	0
RA-18	CONVEYOR	1.84	1.84	0	0	0
RA-19	MINE PAD	6.38	6.38	0	0.58	0
RA-20	WTER TANK	0.6	0.6	0	0	0
RA-21	SED PONDS	1.87	0.82	1.05	0	0.48
	TOTAL ACREAGE	12.63	11.58	1.05	0.58	0.48

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Middle Fork Veg 002																			
	Scarify total area to be reclaimed	75 HP Dozerw/scarifiers	32 91 13 23 3100	4.24	/MSF					16.31						AC		710	MSF	3010
	Apply Fertilizer	Fertilizer Tractor Spread	32 01 90 13 0130	3.54	/MSF					16.31						AC		710	MSF	2513
	Drill Seeding	Tractor Spreader (equip. & labor) B-66	SRCE	15	/AC					15.09						AC		15.1	AC	227
		South and Middle Forks	HiawathaVeg003	726	/AC					15.09						AC		15.1	AC	10963
		#3 SEED MIX																		
	Mulch																			
	2 tons per acre	Hay bale	Reveg007	170	/ton					16.31						AC		32.6	Tons	5542
	Hydroseed steep areas	Fertilizer Hydro Spread Mat. Only	32 01 90.13 0180	4.52	/MSF					1.22						AC		53	MSF	240
		South and Middle Forks	HiawathaVeg003	726	/AC					1.22								1.2	AC	871
		#4 SEED MIX																		
	Plant Nursery Grown Trees	Bare root seedlings, 11" to 16" med. soil	32 93 43 10 0140	1.4	Ea										8118	EA		8118	EA	11365
		Transplants South and Middle Fork	Reveg005	1252	/AC					15.09								15.1	AC	18905
	Plant Nursery Grown Shrubs	Bare root seedlings, 11" to 16" med. soil	32 93 43 10 0140	1.4	Ea										3233	EA		3233	EA	4526
		Transplants Riparian South and Middle For	HiawathaVeg006	74	/AC					1.22								1.2	AC	89
	Subtotal																			58251
	Reveg Assume 25% reseeding																			14563
	Subtotal																			14563
	Total																			72814

	DENSITY/ACRE
#3 TREES &SHRUBS	538
#4 TREES & SHRUBS	2650

			#3	#4	#3 TREES	#4 TREES
RA-15	RUNAWAY LANE	1.51	1.51	0	0	0
RA-22	MINE PAD	9.4	9.4	0	4.14	0
RA-23	SED PONDS	1.22	0	1.22	0	1.22
RA-24	WTER TANK	1.18	1.18	0	0.56	0
RA-25	TIMBER STORAGE	3	3	0	0	0
	TOTAL ACREAGE	16.31	15.09	1.22	4.7	1.22

FOR REFERENCE
RA-16 MAIN ROAD 11.6
TO BE LEFT IN PLACE POST MINING AS PER AGREEMENT

Ref.	Description 2008 Bond Release Approval	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	North Fork Veg 003	PHASE I BOND RELEASE																		
	Scarify total area to be reclaimed	75 HP Dozerw/scarifiers	32 91 13 23 3100	4.24	/MSF					0						AC		0	MSF	0
	Apply Fertilizer	Fertilizer Tractor Spread	32 01 90 13 0130	3.54	/MSF					0						AC		0	MSF	0
	Drill Seeding	Tractor Spreader (equip. & labor) B-66	SRCE	15	/AC					0						AC		0	MSF	0
		South and Middle Forks	HiawathaVeg003	726	/AC															
		Fertilizer Tractor Spread	32 01 90 13 0130	3.54	/MSF															
	Mulch																			
	2 tons per acre	Hay bale	Reveg007	170	/ton					0						AC		0	tons	0
	Subtotal																			0
																				0
	Reveg Assume 25% reseeding																			
	Subtotal																			0
	Total																			0

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Prep Plant Veg 004	ADJUSTED COSTS 2008 BOND RELEASE																		
	Scarify total area to be reclaimed	75 HP Dozerw/scarifiers	32 91 13 23 3100	4.24	/MSF					93.25						AC		4062	MSF	17223
	Apply Fertilizer	Fertilizer Tractor Spread	32 01 90 13 0130	3.54	/MSF					93.25						AC		4062	MSF	14379
	Disc harrow along contour	300 H. P. (D8)	01 54 33 20 4310	1817	/day									15.5		HR		1.9	Day	3452
		Eq. Op., Medium Equipment (Eqmd)	Eq. Op. Med.	61.72	/HR									15.5		HR		1.9	Day	117
	Drill Seeding	Tractor Spreader (equip. & labor) B-66	SRCE	15	/AC					86.3						AC		86.3	AC	1295
		Ponds, Refuse Area	HiawathaVeg002	855	/AC					86.3						AC		86.3	AC	73787
	Mulch																			
	2 tons per acre	Hay bale	Reveg007	170	/ton					86.3						AC		172.6	tons	29342
	Hydroseed steep areas	Hydro Spreader (equip. & labor) B-81	Reveg005	223	/AC					7						AC		7	AC	1561
		Ponds, Refuse Area	HiawathaVeg002	855	/AC					7						AC		7	AC	5985
	Subtotal																			147141
																				36785
	Reveg Assume 25% reseeding																			
	Subtotal																			36785
	Total																			183926

Ref.	Description ADJUSTED COSTS	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Topsoil Borrow 005																			
	Scarify total area to be reclaimed	75 HP Dozerw/scarifiers	32 91 13 23 3100	4.24	/MSF					21.61						AC		941	MSF	3990
	Apply Fertilizer	Fertilizer Tractor Spread	32 01 90 13 0130	3.54	/MSF					21.61						AC		941	MSF	3331
	Disc harrow along contour	300 H. P. (D8)	01 54 33 20 4310	1817	/day									5.2		HR		0.7	Day	1272
		Eq. Op., Medium Equipment (Eqmd)	Eq. Op. Med.	61.72	/HR									5.2		HR		5.2	HR	321
	Drill Seeding	Tractor Spreader (equip. & labor) B-66	SRCE	15	/AC					21.61						AC		21.6	AC	324
		Ponds, Refuse Area	HiawathaVeg002	855	/AC					21.61						AC		21.6	AC	18468
	Mulch																			
	2 tons per acre	Hay bale	Reveg007	170	/ton					21.61						AC		43.2	tons	7344
	Subtotal																			35050
	Reveg Assume 25% reseeding																			8763
	Subtotal																			8763
	Total																			43813