



C/015/0025
Received 6/22/18
Task #5697

May 8, 2018

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

Re: Permit Completion of Midterm Review, Task ID #5616, Castle Valley Mining, LLC, Bear Canyon Mine, C/015/00025.

Mr Haddock,

Castle Valley Mining LLC located in Huntington, Utah would like to submit requested information to the Division for the Midterm Review for the Bear Canyon Mine. This package includes notarized C1C2 forms, and copies of the information below. Please review and provide us with your comments.

Deficiency R645-301-121 & R645-301-422-

Appendix 4G modified with the current Air Quality Order.

Deficiency R645-301-121 & R645-301-234-

Table 2-5 modified to correct the correct Topsoil volumes
5-2F Modified to show the correct WHR Topsoil outline

Deficiency R645-301-521-

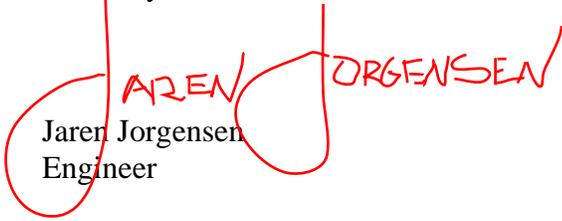
2-3G Modified with the correct boundary shown to match 5-2G

Deficiency R645-301-830-

Updated bonding information for the estimated bonding costs with supporting calcs for all the cost estimates with O&P applied to the direct unit costs and escalated to 2023. The updated escalation factor to be used in the bonding calculations is 1.78%

Any questions please feel free to contact me (435) 687 2178

Sincerely,

A handwritten signature in red ink that reads "JAREN JORGENSEN". The signature is written in a cursive style with a large, looped initial "J".

Jaren Jorgensen
Engineer

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: Castle Valley Mining LLC
Mine: Bear Canyon Mine **Permit Number:** C/015/0025
Title: 2018 Mid-Term Review Amendment

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

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

- Yes No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ increase decrease.
- Yes No 2. Is the application submitted as a result of a Division Order? DO# _____
- Yes No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes No 6. Does the application require or include public notice publication?
- Yes No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes No 9. Is the application submitted as a result of a Violation? NOV # _____
- Yes No 10. Is the application submitted as a result of other laws or regulations or policies?

Explain: _____

- Yes No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes No 13. Does the application require or include collection and reporting of any baseline information?
- Yes No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes No 15. Does the application require or include soil removal, storage or placement?
- Yes No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes No 19. Does the application require or include certified designs, maps or calculation?
- Yes No 20. Does the application require or include subsidence control or monitoring?
- Yes No 21. Have reclamation costs for bonding been provided?
- Yes No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes No 23. Does the application affect permits issued by other agencies or permits issued to other entities?
- Yes No 24. Does the application include confidential information and is it clearly marked and separated in the plan?

Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) 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.

Jaren Jorgensen Engineer 5-9-2018 JAREN JORGENSEN
 Print Name Position Date Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 9 day of May, 2018

Notary Public: _____, state of Utah.

My commission Expires: 2-27-2019 }
 Commission Number: 682453 } ss:
 Address: 110 East Main }
 City: Castle Dale State: UT Zip: 84513 }



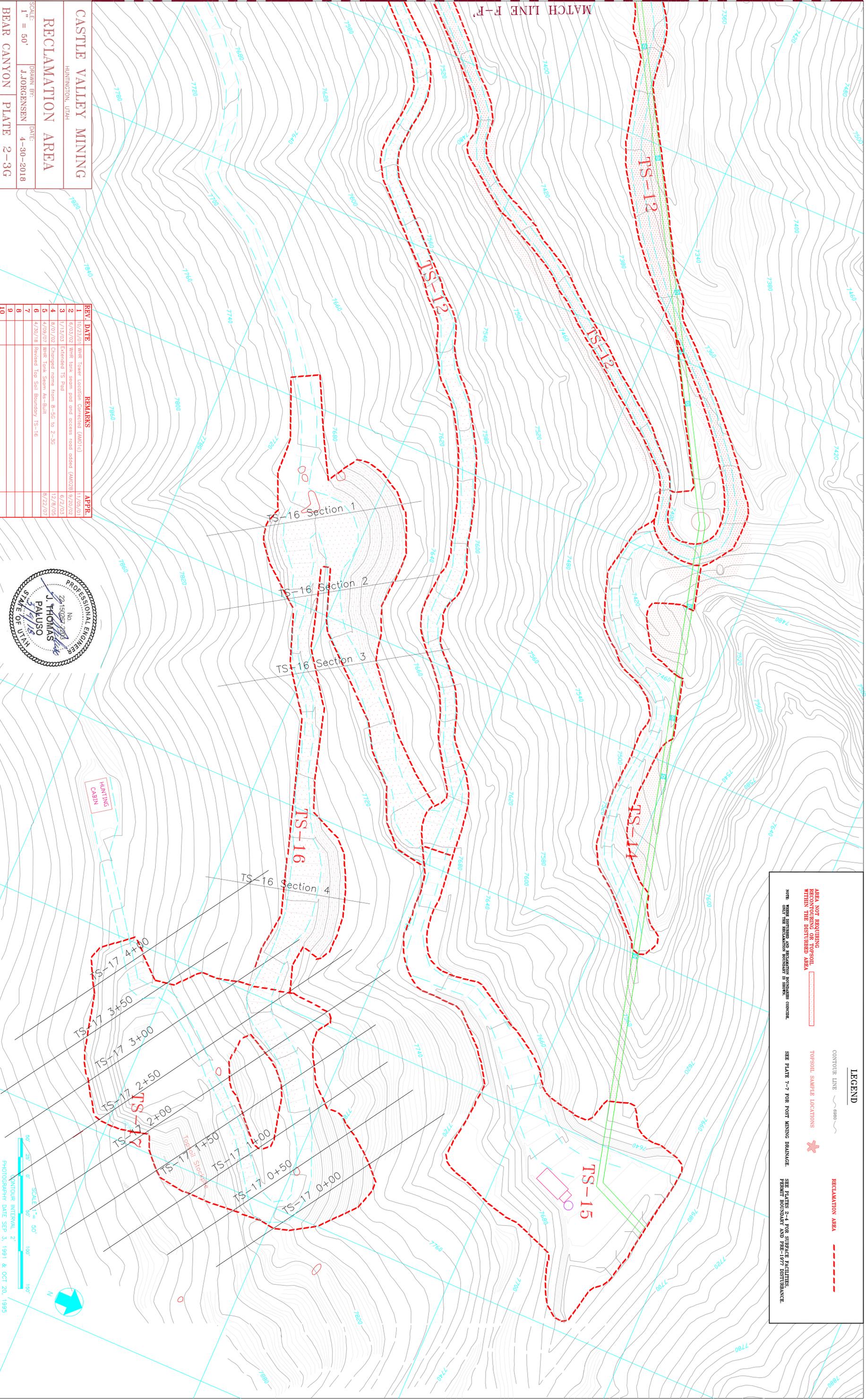
For Office Use Only: 	Assigned Tracking Number: 	Received by Oil, Gas & Mining
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The following table summarizes the volumes of topsoil being stored.

Table 2-5 Topsoil Summary Table

<u>Description</u>	<u>cu yd</u>
Main Topsoil Pile	1,480
Wild Horse Ridge Topsoil Pile	10,679
Wild Horse Ridge Tank Seam Topsoil Pile	<u>1,400</u>
Subtotal	13,561
On-site Material (Substitute Topsoil)	<u>52,341</u>
Total	65,902

REV.	DATE	REMARKS	APPR.
1	10/23/01	WHF Tower Location Corrected (AM01C)	11/15/01
2	6/03/02	WHF Tank, Seam pad and access road added (AM02B)	9/29/02
3	1/13/03	Extended TS Pad	6/27/03
4	6/20/03	Changed name from 8-36 to 2-36	12/8/03
5	4/09/07	WHF Tank Seam As-Built	9/22/07
6	4/30/18	Revised Top Soil Boundary TS-16	
7			
8			
9			
10			



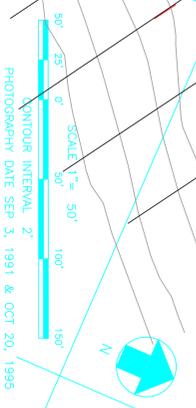
LEGEND

- RECLAMATION AREA (Red dashed line)
- TOPSOIL SAMPLE LOCATIONS (Red star symbol)
- CONTOUR LINE (Blue line with elevation)
- AREA NOT REQUIRING RECONTOURING OR TOPSOIL WITHIN THE DISTURBED AREA (Red hatched area)

NOTE: THESE DISTURBED AND RECLAMATION BOUNDARIES CONFORM TO THE RECLAMATION PERMITS BY 2008M.

SEE PLATE 7-7 FOR POST MINING DRAINAGE.

SEE PLATES 2-4 FOR SURFACE FACILITIES, PERMIT BOUNDARY AND PER-1977 DISTURBANCE.





State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-GN0102400005-10

September 20, 2010

Joseph R. Miller
Castle Valley Mining LLC
424 Lewis Hargett Circle, Suite 250
Lexington, KY 40503

Dear Mr. Miller:

RE: Notification of Company Name and Ownership Change for DAQE-AN0102400003-10, dated June 17, 2010 Castle Valley Mining LLC: Bear Canyon Mine
Project Number: N010240-0005

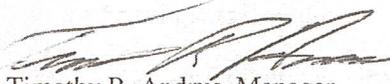
The Utah Division of Air Quality (DAQ) has received your request on September 7, 2010 for a name and ownership change for the holder of the above-referenced Approval Order (AO). This AO can be found online at <http://www.airquality.utah.gov/Permits/DOCS/AOs%202010/AN0102400003-10.pdf>.

According to your request, we have noted in our records that the holder and party responsible for complying with the terms and conditions contained in the above-referenced AO has been changed to 'Castle Valley Mining LLC'. This change took effect on the date of this letter.

The charge for the review done in making this change is a flat fee plus a filing fee as authorized by the Utah Legislature. You will receive an invoice for these charges shortly. If you have any questions, please contact Chad Harris, who may be reached at (801) 536-4069.

Sincerely,

M. Cheryl Heying, Executive Secretary
Utah Air Quality Board


Timothy R. Andrus, Manager
New Source Review Section

TRA:CDH:sa



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-AN0102400003-10

June 17, 2010

Mark Reynolds
Hiawatha Coal Company
P.O. Box 1240
Huntington, UT 84528

Dear Mr. Reynolds:

Re: Approval Order: Modification to AO (DAQE-145-02) to Increase Coal Production
Project Number: N010240-0003

The attached document is the Approval Order for the above-referenced project. Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Enqiang He, who may be reached at (801) 536-4010.

Sincerely,


M. Cheryl Heying, Executive Secretary
Utah Air Quality Board

MCH:EH:sa

cc: Southeastern Utah District Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**APPROVAL ORDER: Modification to AO (DAQE-145-02)
to Increase Coal Production**

Prepared By: Enqiang He, Engineer
Phone: (801) 536-4010
Email: ehe@utah.gov

APPROVAL ORDER NUMBER

DAQE-AN0102400003-10

Date: June 17, 2010

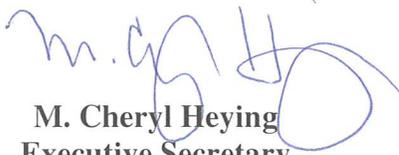
Hiawatha Coal Company

Bear Canyon Mine

Source Contact:

Mr. Mark Reynolds

Phone: (435) 687-5777



**M. Cheryl Heying
Executive Secretary
Utah Air Quality Board**

Abstract

Hiawatha Coal Company operates an underground mine located in Emery County, which is an attainment area for all criteria pollutants. The company has requested a modification to its existing AO (DAQE-145-02), dated February 22, 2002, to increase production from 1.95 to 5 million tons of coal per year. NSPS Subpart Y (Standards of Performance for Coal Preparation Plants) regulations apply to this source. NESHAP and MACT regulations do not apply to this source. Title V regulations apply to this source.

There will be 2.91 tons per year increase in PM₁₀ emissions. The potential to emit totals, in tons per year, will be as follows: PM₁₀ 16.00, NO_x 0.31, SO₂ 0.61, CO 0.36, and VOC 2.44. The totals do not include emissions from off-highway mobile equipment.

This air quality AO authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order. This AO is issued to, and applies to the following:

Name of Permittee:

Hiawatha Coal Company
P.O. Box 1240
Huntington, UT 84528

Permitted Location:

Bear Canyon Mine
Eleven miles west of Huntington, Utah on state
Highway 31
Huntington, UT

UTM coordinates: 491,700 m Easting, 4,361,900 m Northing, UTM Zone 12
SIC code: 1241 (Coal Mining Services)

Section I: GENERAL PROVISIONS

- I.1 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]
- I.2 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
- I.3 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
- I.4 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
- I.5 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
- I.6 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable

operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded.
[R307-401-4]

- I.7 The owner/operator shall comply with UAC R307-150 Series. Inventories, Testing and Monitoring. [R307-150]

Section II: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

- II.A.1 **Bear Canyon Mine**
Underground coal mining with surface loadout facility
- II.A.2 **South Crusher***
Type: Primary Crushing, Hammer Mill, max. capacity rated at 450 tons per hour (tph)
- II.A.3 **Wildhorse Crusher***
Type: Primary Crushing, rated capacity unknown
- II.A.4 **Lump Crusher (high ash)**
Type: Primary Crushing, Granulator, rated at 300 tph
- II.A.5 **Lump Screenage Crusher**
Type: Primary Crushing, rated at 50 tph
- II.A.6 **Gundlach Crusher**
Type: Primary Crushing, max. capacity rated at 700 tph
- II.A.7 **Oversize Crusher**
Type: Secondary Crushing, rated at 50 tph
- II.A.8 **Secondary Picking Screen**
Max. capacity rated at 450 tph
- II.A.9 **Wildhorse Screen**
Max. capacity rated at 900 tph
- II.A.10 **Upper Screen**
Max. capacity rated at 900 tph
- II.A.11 **Lower Screen**
Max. capacity rated at 900 tph
- II.A.12 **Storage Tank***
One (1) vertical above-ground unleaded gasoline storage tank rated at 11,000 gallons

- II.A.13 **Storage Tank***
One (1) above-ground diesel storage tank rated at 11,000 gallons
- II.A.14 **Storage Tank***
One (1) above-ground diesel storage tank rated at 16,000 gallons
- II.A.15 **Storage Tanks***
Two (2) above-ground stoker oil storage tanks rated at 14,000 gallons
- II.A.16 **Storage Tank***
One (1) above-ground diesel storage tank rated at 1,000 gallons
- II.A.17 **Storage Tank***
One (1) above-ground diesel storage tank rated at 8,000 gallons (installed in 1999)
- II.A.18 **Storage Tank***
One (1) above-ground anti-freeze storage tank rated at 2,000 gallons
- II.A.19 **Space Heaters**
Four (4) space heaters located at Shower House, Scale House, Shop Building and the Coal Stoker, rated at 225,000 Btu/h, 225,000 Btu/h, 150,000 Btu/h and 250,000 Btu/h, respectively
- II.A.20 **Miscellaneous Equipment**
Including conveyors*, diesel fired front-end loaders, oil burner/space heater and other mobile equipment necessary for facility management

*Not subject to 40 CFR 60 Subparts OOO or Kb

II.B Requirements and Limitations

II.B.1 Production and Consumption Limitations

- II.B.1.a The production limit of 5 million tons of coal per rolling 12-month period shall not be exceeded. [R307-401-8]
- II.B.1.b Coal consumption in the Shower House, Scale House, Shop Building and Coal Stoker space heaters shall not exceed 65 tons per rolling 12-month period. [R307-401-8]
- II.B.1.c To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of production/consumption shall be kept for all periods when the plant is in operation. Coal consumption shall be measured by the number of loader buckets put in the bin (the loader bucket capacity is known). Production/consumption shall be recorded on an operations log. The records of production/consumption shall be kept on a daily basis. [R307-401-8]

II.B.2 **Requirements on Fugitive Dust Sources**

II.B.2.a Hiawatha Coal Company shall comply with a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Bear Canyon Mine. Hiawatha Coal Company shall submit the fugitive dust control plan to the Executive Secretary, attention: Compliance Section, for approval within 30 days of the date of this AO. [R307-205]

II.B.2.b Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity at any point. Visible emission determinations shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Visible emissions shall be measured at the densest point of the plume but at a point not less than 1/2 vehicle length behind the vehicle and not less than 1/2 the height of the vehicle. [R307-205]

II.B.2.c The following haul road lengths shall not exceed

- A. 1.40 miles in length for unpaved access roads
- B. 0.24 miles in length for paved haul roads. [R307-401-8]

II.B.2.d The owner/operator shall cover all unpaved haul roads and wheeled-vehicle operational areas with road base material. [R307-401-8]

II.B.2.e The owner/operator shall use chemical suppressant and/or water to maintain opacity limits from the haul roads and wheeled-vehicle operational areas. Application frequencies for chemical treatment and water spray shall follow the requirements in the fugitive dust control plan. If the temperature is below freezing, the owner/operator may stop applying water to the haul roads and wheeled-vehicle operational areas.

Records of water application shall be kept for all periods when the plant is in operation. The records shall include the following items:

- A. Date and time treatments were made
- B. Number of treatments made and quantity of water applied
- C. Rainfall amount received, if any
- D. Records of temperature, if the temperature was below freezing. [R307-401-8]

II.B.2.f Water sprays or chemical dust suppression sprays shall be installed at the following points to control fugitive dust emissions:

- A. All crushers
- B. All screens
- C. All conveyor transfer points

The sprays shall operate to meet the opacity limits or as determined by the Executive Secretary. [R307-401-8]

II.B.2.g The storage piles shall be watered and/or chemically treated to maintain 20% opacity limit. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation. Records of water and/or chemical treatment shall be made available to the Executive Secretary or Executive Secretary's representative upon request. [R307-401-8]

II.B.3 **Limitations on Fuels**

II.B.3.a The owner/operator shall use only diesel fuel not to exceed 0.05% sulfur by weight or gasoline in stationary equipment or mobile equipment operated onsite. [R307-401-8]

II.B.3.a.1 Sulfur content shall be determined by ASTM Method D2880-71 or D-4294-89, or approved equivalent. The sulfur content for diesel fuel shall be tested if directed by the Executive Secretary. The percent by weight of the sulfur contained in the fuel can be obtained from the fuel oil certifications. Certifications of fuels shall be either by Hiawatha Coal Company's own testing or test reports from the fuel marketer. Records of fuel test reports on sulfur content shall be available on-site for each load delivered. [R307-401-8]

II.B.3.b The owner/operator shall use coal in the coal-fired space heaters. [R307-401-8]

II.B.3.b.1 The sulfur content of the coal shall not exceed 0.60%. Sulfur content in coal shall be determined by ASTM Methods D3177-75 or D4239-85, or approved equivalent. The sulfur content shall be tested if directed by the Executive Secretary. Records of coal test reports on sulfur content, if any, shall be available on-site. [R307-401-8]

Section III: APPLICABLE FEDERAL REQUIREMENTS

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

NSPS (Part 60), A: General Provisions
NSPS (Part 60), Y: Coal Preparation Plants

PERMIT HISTORY

This AO is based on the following documents:

Incorporates	modeling analysis dated December 28, 2009
Incorporates	additional information dated December 14, 2009
Incorporates	additional information dated September 2, 2009
Is Derived From	revised Notice of Intent dated July 21, 2009

Incorporates	additional information dated June 23, 2009
Incorporates	additional information dated April 6, 2009
Incorporates	additional information dated January 4, 2009
Incorporates	Notice of Intent dated November 17, 2008
Supersedes	the AO (DAQE-145-02) dated February 22, 2002

ADMINISTRATIVE CODING

The following information is for UDAQ internal classification use only:

Emery County
CDS B
Attainment Area, NSPS (Part 60), Title V (Part 70) Area source

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
COM	Continuous opacity monitor
DAQ	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
FDCP	Fugitive Dust Control Plan
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO _x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM ₁₀	Particulate matter less than 10 microns in size
PM _{2.5}	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO ₂	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds

CASTLE VALLEY MINING
HUNTINGTON, OPH

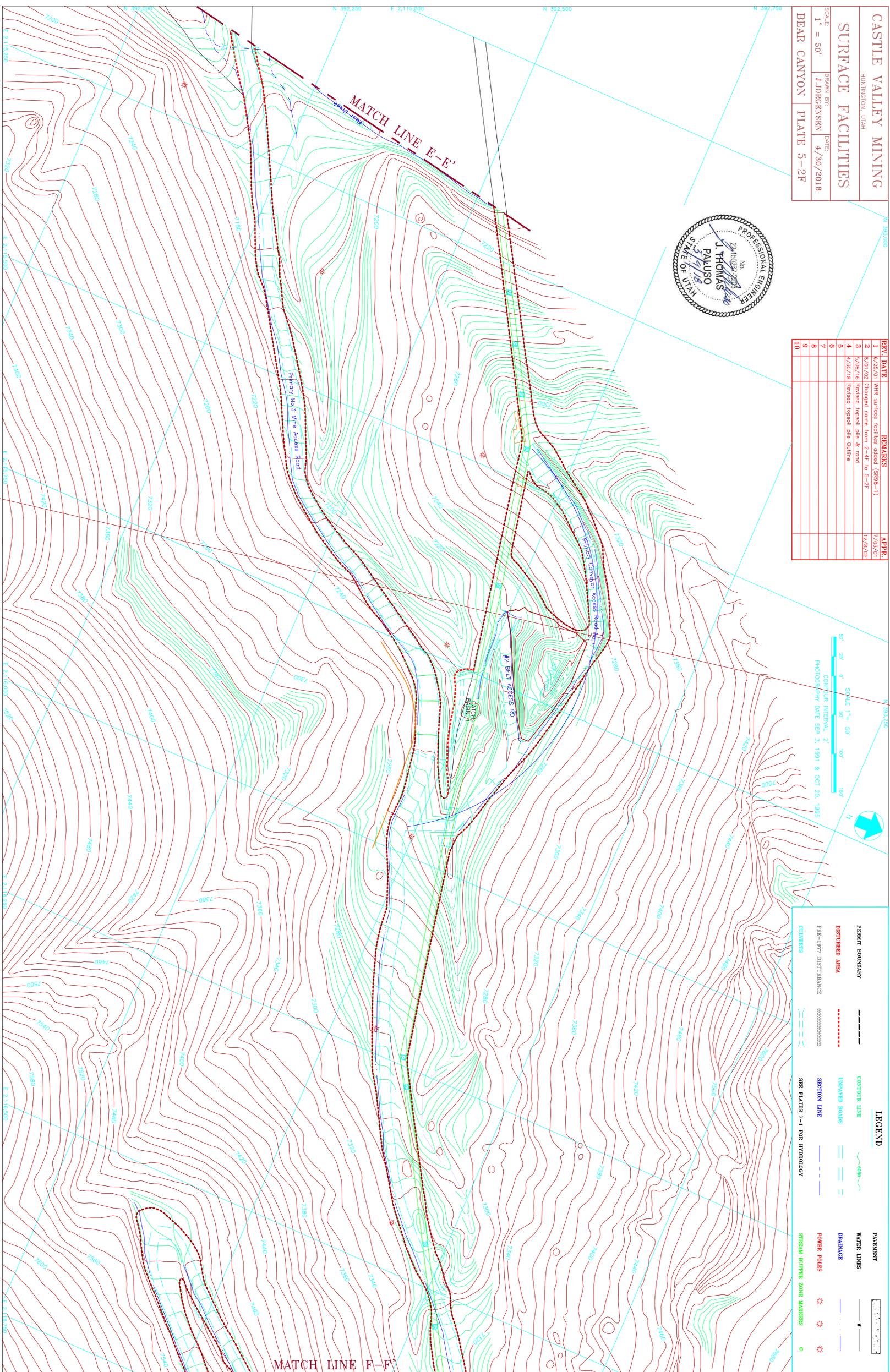
SURFACE FACILITIES

SCALE: 1" = 50'
DRAWN BY: J.JORGENSEN
DATE: 4/30/2018
BEAR CANYON PLATE 5-2F

REV.	DATE	REMARKS	APP.
1	6/25/01	WIR surface facilities added (Sheet-1)	7/03/01
2	8/01/02	Changed name from 2-f to 5-2f	12/8/05
3	5/09/16	Revised topsoil pile & road	
4	4/20/18	Revised topsoil pile Outline	
5			
6			
7			
8			
9			
10			



LEGEND	
	PERMIT BOUNDARY
	DISTURBED AREA
	PRE-1977 DISTURBANCE
	CULVERTS
	CONTOUR LINE
	UNPAVED ROADS
	SECTION LINE
	SEE PLATES 7-1 FOR HYDROLOGY
	PAVEMENT
	WATER LINES
	DRAINAGE
	POWER POLES
	STREAM BUFFER ZONE MARKERS



Shrubs, Forbs, Grasses & Trees

	lbs./ac.	Great Basin	Maple Leaf	Granite	Cost
		Cost	Cost	Cost	Cost
Shrubs					
Big Sagebrush	0.2	\$55.00	\$52.00	\$45.00	\$9.00
Prairie Sage	0.2	\$100.00	\$120.00	\$125.00	\$25.00
Mtn. Mahogany	1	\$39.00	\$37.50	\$75.00	\$75.00
Skunkbush	1	\$24.00	\$22.00	\$45.00	\$45.00
Utah Serviceberry	1	\$65.00	\$75.00	\$75.00	\$75.00
Total		\$159.00	\$168.90		\$229.00
Forbs					
Yarrow	0.1	\$28.00	\$28.00	\$0.00	\$0.00
Blueleaf Aster	0.2	\$75.00	\$200.00	\$0.00	\$0.00
Northern Sweetvetch	1.5	\$75.00	\$72.00	\$75.00	\$112.50
Lewis Flax	0.5	\$7.50	\$7.25	\$15.00	\$7.50
Firecracker Penstemon	0.5	\$7.50	\$75.00	\$90.00	\$45.00
Palmer's Penstemon	0.5	\$28.00	\$32.00	\$45.00	\$22.50
Western Sweetvetch	0.5	\$75.00	\$80.00	\$0.00	\$0.00
Total		\$151.80	\$207.93		\$187.50
Grasses					
Gt. Basin Wildrye	3	\$6.80	\$6.75	\$15.00	\$45.00
Sandberg's Bluegrass	0.4	\$8.00	\$7.90	\$8.00	\$3.20
Western Wheatgrass	3	\$5.00	\$4.75	\$6.00	\$18.00
Bluebunch Wheatgrass	3	\$6.50	\$6.50	\$10.00	\$30.00
Indian Ricegrass	2	\$5.75	\$5.75	\$9.00	\$18.00
Salina Wildrye	2	\$0.00	\$0.00	\$0.00	\$0.00
Total		\$69.60	\$68.66		\$114.20

EIS ENVIRONMENTAL & ENGINEERING CONSULTING

435-472-3814 / 800-641-2927 / FAX 435-472-8780 / tompaluso@precisecom.net / 31 NORTH MAIN STREET HELPER, UTAH 84526

MEMO

MEMO TO: Jason Stevens (Great Basin)

MEMO FROM: Gary Taylor

DATE: 16 April 2018

SUBJECT: Cost Per Pound of Seed

I am working on bond cost and I need a cost per pound for the following seeds and return the information on your company letter head. Thank you for providing this information.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Price</u>
SHRUBS		
<u>Artemisia tridentate</u>	Big Sagebrush	\$55.00 PLS
<u>Artemisia ludoviciana</u>	Prairie Sage	NA
<u>Cercocarpus ledifolius</u>	Mtn. Mahogany	\$39.00
<u>Rhus trilobata</u>	Skunkbush	\$24.00
<u>Amelanchier utahensis</u>	Utah Serviceberry	NA
FORBS		
<u>Achillea millefolium</u>	Yarrow	\$28.00
<u>Aster glaucodes</u>	Blueleaf Aster	NA
<u>Hedysarum boreale</u>	Northern Sweetvetch	\$75.00
<u>Linum lewisii</u>	Lewis Flax	\$7.50
<u>Penstemon catorii</u>	Firecracker Penstemon	NA
<u>Penstemon palmeri</u>	Palmer's Penstemon	NA
<u>Hedysarum Occidentals var. Canyon</u>	Western Sweetvetch	NA
GRASSES		
<u>Elymus cinereus</u>	Gt. Basin Wildrye	\$6.80
<u>Poa secunda</u>	Sandberg's Bluegrass	\$8.00
<u>Elymus smithii</u>	Western Wheatgrass	\$5.00
<u>Elymus spicatus</u>	Bluebunch Wheatgrass	\$6.50
<u>Stipa hymenoides</u>	Indian Ricegrass	\$5.75
<u>Elymus salinus</u>	Salina Wildrye	NA

gtaylor@emerytelcom.net

From: Jason Stevens <jason@haystackmtn.com>
Sent: Friday, April 27, 2018 7:45 AM
To: gtaylor@emerytelcom.net
Subject: Re: Seed Cost

Gary,

When the following species are available they generally run the following prices:

Prairie Sage	\$100.00 PLS
Utah Service berry	\$65.00 PLS
Blue leaf Aster	\$75.00 PLS
Eaton's Penstemon	\$55.00 PLS
Palmer's Penstemon	\$28.00 PLS
Western Sweetvetch	NA...I have Northern Sweetvetch at \$75.00 PLS, in stock
Salina Wildrye	NA...no longer produced

On Apr 26, 2018, at 1:29 PM, <gtaylor@emerytelcom.net> <gtaylor@emerytelcom.net> wrote:

Jason,

I know the following seeds are not presently available but please provide me the last cost for these seeds.

Prairie Sage
Utah Service berry
Blue leaf Aster
Firecracker Penstemon or Eaton's Penstemon
Palmer's Penstemon
Western Sweetvetch
Salina Wildrye

Thank you for your help.

Gary



THE MAPLE LEAF CO.
SEED DIVISION

450 South 50 East
Ephraim, Utah, 84627
P) 435.283.4400

<u>Scientific Name</u>	<u>Common Name</u>	<u>Price</u>
SHRUBS		
Artemisia tridentate	Big Sagebrush	\$52.00
Artemisia ludoviciana	Prairie Sage	Not Available
Cercocarpus ledifolius	Mtn. Mahogany	\$37.50
Rhus trilobata	Skunkbush	\$22.00
Amelanchier utahensis	Utah Serviceberry	Not available
FORBS		
Achillea millifolium	Yarrow	\$28.00
Aster glaucodes	Blueleaf Aster	Not available
Hedysarum boreale	Northern Sweetvetch	\$72.00
Linum lewisii	Lewis Flax	\$7.25
Penstemon catonii	Firecracker Penstemon	Not available
Penstemon palmeri	Palmer's Penstemon	\$32.00
Hedysarum Occidentals var. Canyon	Western Sweetvetch	Not available
GRASSES		
Elymus cinereus	Gt. Basin Wildrye	\$6.75
Poa secunda	Sandberg's Bluegrass	\$7.90
Elymus smithii	Western Wheatgrass	\$4.75
Elymus spicatus	Bluebunch Wheatgrass	\$6.50
Stipa hymenoides	Indian Ricegrass	\$5.75
Elymus salinus	Salina Wildrye	Not available

Following will be available with new crop seed
Prairie Sage
Utah Service berry
Eatons Penstemon

Lloyd Stevens, Maple Leaf Seed

gtaylor@emerytelcom.net

From: Lloyd Stevens <snowman@haystackmtn.com>
Sent: Tuesday, May 1, 2018 7:45 AM
To: gtaylor@emerytelcom.net
Subject: Re: Seed Cost

This is just a best guess effort on prices.

On Apr 26, 2018, at 1:25 PM, <gtaylor@emerytelcom.net> <gtaylor@emerytelcom.net> wrote:

Lloyd,

I know the following seeds are not presently available but please provide me the last cost for these seed.

Prairie Sage	#120.00
Utah Service berry	\$75.00
Blue leaf Aster	\$200.00
Firecracker Penstemon or Eatons Penstemon	\$75.00
Western Sweetvetch	Utah sweet vetch is available at \$80.00
Salina Wildrye	Never been avilable is my 45 years in the seed business. Whom ever keeps recommending this need a reality check

Thank you for your help.

Gary

EIS ENVIRONMENTAL & ENGINEERING CONSULTING

435-472-3814 / 800-641-2927 / FAX 435-472-8780 / tompaluso@preciscom.net / 31 NORTH MAIN STREET HELPER, UTAH 84526

MEMO

MEMO TO: Ryan Timoney (Granite)

MEMO FROM: Gary Taylor

DATE: 16 April 2018

SUBJECT: Cost Per Pound of Seed

I am working on bond costs and I need a cost per pound for the following seeds and return the information on your company letter head. Thank you for providing this information.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Price</u>
SHRUBS		
Artemisia tridentate	Big Sagebrush	45.00
Artemisia ludoviciana	Prairie Sage	125.00
Cercocarpus ledifolius	Mtn. Mahogany	75.00
Rhus trilobata	Skunkbush	45.00
Amelanchier utahcnsis	Utah Serviceberry	75.00
FORBS		
Achillea millifolium	Yarrow	
Aster glaucodes	Blueleaf Aster	N/A
Hedysarum boreale	Northern Sweetvetch	75.00
Linum lewisii	Lewis Flax	15.00
Penstemon catonii	Firecracker Penstemon	90.00
Penstemon palmeri	Palmer's Penstemon	45.00
Hedycarun Occidentals var. Canyon	Western Sweetvetch	N/A
GRASSES		
Elymus cinereus	Gt. Basin Wildrye	15.00
Poa secunda	Sandberg's Bluegrass	8.00
Elymus smithii	Western Wheatgrass	6.00
Elymus spicatus	Bluebunch Wheatgrass	10.00
Stipa hymenoides	Indian Ricegrass	9.00
Elymus salinus	Salina Wildrye	N/A

gtaylor@emerytelcom.net

From: admin@sevenoaksnativenursery.com on behalf of SevenOaks Native Nursery
<info@sevenoaksnativenursery.com>
Sent: Friday, April 20, 2018 2:09 PM
To: Gary Taylor
Subject: Re: Plant Cost

We do not have bareroot plants anymore this year. They would normally run \$.70-\$.85 each.

Thanks,
Scott

average 0.70

--
Sevenoaks Native Nursery
Phone: 541-757-6520
Fax: 541-738-2607
www.SevenoaksNativeNursery.com

On Fri, Apr 20, 2018 at 12:35 PM, <gtaylor@emerytelcom.net> wrote:

Scott,

I do need to know if you have plants. All need is the cost of the plants.

Gary

From: admin@sevenoaksnativenursery.com <admin@sevenoaksnativenursery.com> **On Behalf Of** SevenOaks Native Nursery

Sent: Friday, April 20, 2018 12:57 PM

To: Gary Taylor <gtaylor@emerytelcom.net>

Subject: Re: Plant Cost

Hi Gary,

If this list is for this year we are pretty much done with our bareroot season at this point, sorry about that.

EIS ENVIRONMENTAL & ENGINEERING CONSULTING

435-472-3814 / 800-641-2927 / FAX 435-472-8780 / tompaluso@preciscom.net / 31 NORTH MAIN STREET HELPER, UTAH 84526

MEMO

MEMO TO: Lawyer Nursery
MEMO FROM: Gary Taylor
DATE: 20 April 2018
SUBJECT: Plant Cost

The table below shows a list of plants that I need your company to develop a cost per plant. The plants will be between 11" to 16" in height.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Quantity</u>	<u>Price</u>
Populus anquistifolia	Cottonwood	300	n/a
Populus trichocarpa	Black cottonwood	220	\$1.36
		300(2-3')	\$1.80
Populus x canadensis 'Robusta'	Cottonless Cottonwood	150	\$1.36
		300(6-12")	\$1.20
Populus x canadensis 'prairie sky'	Prairie Sky Poplar	300(2-3')	\$2.70
Populus x deltoides 'Siouxland'	Siouxland Poplar	300	\$1.36
Populus nigra 'Italica'	Lombardy poplar	150	\$1.36
		100(18-24")	\$1.68
Prunus virginiana	Chokecherry	300	\$1.10
Rosa woodsia	Wood's Rose	200(18-24")	\$2.55
Sambucus caerulea	Elderberry	200(3-6")	\$0.84

$$\begin{array}{r} 150 \times 1.36 = 204.00 \\ 150 \times 1.10 = 165.00 \\ 100 \times 2.25 = 225.00 \\ 100 \times 0.84 = 84.00 \\ \hline 678.00 \div 500 = 1.36 / \text{PLANT} \end{array}$$

gtaylor@emerytelcom.net

From: Michael Castagnero <mcastagnero@jenmar.com>
Sent: Monday, September 18, 2017 3:41 PM
To: gtaylor@emerytelcom.net
Subject: Re: JENNCHEM JSEAL Quote
Attachments: EIS JSEAL Quote 9-18-17.docx

On Mon, Sep 18, 2017 at 4:42 PM, Michael Castagnero <mcastagnero@jenmar.com> wrote:

----- Forwarded message -----

From: Michael Castagnero <mcastagnero@jenmar.com>
Date: Tue, Sep 12, 2017 at 1:55 PM
Subject: JENNCHEM JSEAL Quote
To: gtaylor@emerytelecom.net

Gary,

Find below the estimated costs for a 120PSI Mainline JSEAL, 8.5'H x 20'W; 76 cubic yards. Depending on site prep and form work materials labor could take 2 -5 shifts. 5 man crew for full turnkey.

\$220/cubic yard plus freight charge.
\$60/hr Supervisor Rate
\$40/hr Laborer Rate

Additional items would vary in cost depending on the scope of work and items requested by customer and location.

Mobilization \$3,000 to \$7,500
Equipment/Supplies \$300 to \$500 per seal
Pump Rental Depending on Scope of work and time frame of project
Water Traps \$1,600 to \$3,000
Water Site Tubes \$125 to \$300
Gas Sampling Pipes \$60 to \$120
Form Materials \$1,000 to \$3,000

Thanks,

--
Michael D. Castagnero
Inside Sales Manager
[412-977-4365](tel:412-977-4365) - Cell
[412-963-5413](tel:412-963-5413) - Office
mcastagnero@jenmar.com



258 Kappa Drive

Seal Costs using Jennechem Numbers
 Sep. 12 2017
 Seal Dimensions

$$6 \text{ FT.} \times 20 \text{ FT} = 120 \text{ SF}$$

$$320.4 \text{ CF} \div 27 \text{ CF/CY} = 11.87 \text{ CY}$$

$$11.87 \text{ CY} \times 2.67 \text{ FT} = 31.69 \text{ FT}$$

$$31.69 \text{ FT} \times 10 \text{ FT} = 316.9 \text{ SF}$$

$$316.9 \text{ SF} \div 12 \text{ CY/Seal} = 26.41 \text{ Seals}$$

Labor

5 man crew

1 Supervisor - \$60.00/Hr
 4 Crew - \$40.00/ Hr/Man
\$220.00

Work a 10hr day

3.5 shifts x 8 Hr = 28 Hr

28 Hr x \$220.00 /HR = \$6,160.00

\$6,160.00 ÷ 12 CY = \$513.33 /CY

Mobilization

\$5,250.00 ÷ 12 = \$437.50 / CY

Equipment and Supplies per seal

$$\$400.00 \div 12 = \$33.33 / \text{CY}$$

Total Cost per Seal

Material	\$220.00
Labor	\$513.33
Mob.	\$437.50
Supplies	<u>\$33.33</u>
	<u>\$1,204.17 / CY</u>

$$\$1,204.17 / \text{CY} \times 12 \text{ CY} = \$14,450.00$$

Escalation

DOGMI Factor = 1.78% per year.

$$\$14,450.00 \times 1.0178 = \$14,707.00$$



CALCULATION SHEET

Project: EIS Environmental	No.	Made by: BNR	Date: 4/24/2018
Area:		Checked by:	Date:
Subject: Concrete Plug in the mine			Sheet 1 of 3
<p>Assume 2 week basis for rentals. Coal: New training for workers? Actual work start to finish assume 2 weeks Concrete plug @ portal 20'w x 6'h x 5' deep</p>		<p>Assume backfill <u>much</u> by others we supply a loader</p>	
2 pickup trucks @ \$1,800/mo x 2 weeks			\$ 1,800 L/S
<p>Travel 1 shift Site orientation 1 shift MSHA-(coal) 1 shift Bulkhead 5 shifts Pour 1 shift Backfill 1 shift Chase Mats 1 shift Contingency 2 shift Trawl 1 shift</p>		<p>(1 each, 4 man crew work 11 hr shifts straight through until work is done)</p>	
14 days ≈ 2 weeks)			
3 hourly @ \$115/hr x 11 hr/day x 14 days =			\$ 53,130 L/S
1 staff @ \$11,100 for the period			\$ 11,100 L/S
Hotel @ 4 rooms @ 14 days @ \$110/night			\$ 6,160 L/S
Lumber for Bulkhead (Estimate \$4,000)			\$ 4,000 L/S
Small Tool Rentals + Purchases (Estimate \$2000)			\$ 2000 L/S
Small generator rental (2 weeks) (Estimate \$800)			\$ 800 L/S



CALCULATION SHEET

Project: EIS Environmental	No.	Made by: BNR	Date: 4/24/2018
Area:		Checked by:	Date:
Subject: Concrete Plug in the Mine			Sheet 2 of 3
Air Compressor Rental (1 week) (Estimate \$1800)			\$1800 L/S ✓
Diesel fuel allowance (80 gal @ \$4.00/gal)			\$320 L/S ✓
Gasoline allowance (450 gal @ \$3.50/gal)			\$1,575 L/S ✓
Jackleg drill rent + drilling (assume 400 ft drilling @ 75 \$/hr + \$500 L/S rent)			\$800 L/S ✓
Jackleg supply (Hose, oil, oil, bits, steel)			\$800 L/S ✓
Concrete Pump Rent for 1 day (assume local pump + opp)			\$2000 L/S ✓
30 yards concrete @ \$175/yd (Estimate)			\$5,250 L/S ✓
Front end loader rent to backfill @ \$600/day x 2 days			\$1200 L/S ✓
pickup/delivery			\$600 L/S ✓
Concrete hose + fitting allowance			\$1,400 L/S ✓



CALCULATION SHEET

Project: EIS Environmental	No.	Made by: BUR	Date: 4/24/2018
Area:		Checked by:	Date:
Subject: Concrete Plug in the Mine			Sheet 3 of 3

Labor: \$53,130
 + \$11,100
 \$64,230

$$\frac{\$64,230}{14} = \$4,587/\text{day for labor only}$$

Equip: \$800
 \$1800
 \$800
 \$2,000
 \$1,800
 + \$1,800
 \$9,000

$$\$64,230 + ((\$9,000 + \$21,505) \times 1.24) = \boxed{\$102,056} \quad +/- 10\%$$

Estimate - actual cost will vary.
 Biggest factor is labor. If this can be done faster the cost will go down.
 Assuming 1 shift for MSHA coal training - this may or may not happen since we are on surface. This price also includes 2 days of contingency.

Mats: \$6160
 \$4000
 \$2000
 \$320
 \$1575
 \$800
 \$5250
 \$1400
 \$21,505

LANCASTER DRILLING INC.

P.O. Box 36

Austin, Co. 81410

Ron 970-250-2548, Joe 970-250-4380 Utah well #865

12-1-2018

This is a Quote for abandoning monitoring wells, Prices are subject to change as costs for material fluctuates.

2 inch cased well 1600 feet in depth

10 man hours at \$150 an hour

2 men per diem at \$95 per man

Water to be supplied by Client to site or we can haul for \$300 a day

Materials, cost plus 15%

14 Bags 47lbs Portland cement, \$7.80 per bag cost

8 Bags superplug, 9.70 per bag cost

10 Bags Bentonite medium chips, \$7.80 per bag cost

This quote is due to change if well is not cased with 2 inch casing or if grout hose is needed, Hours based on travel from shop to site, hours spent on site, and travel back to shop.

Hours = \$1500

Per diem = \$190

Materials = \$304.56

Total with client supplying water

1,994.56

Total with us supplying water

Plus 1 for driver

\$2,389.56

Thank you for your business

$2,389.56 \div 1600 = \$1.49$

gtaylor@emerytelcom.net

From: Jaren Jorgensen <JJorgensen@rhinolp.com>
Sent: Tuesday, May 1, 2018 9:55 AM
To: gtaylor@emerytelcom.net
Subject: RE:

\$226.50

7.55

From: gtaylor@emerytelcom.net [mailto:gtaylor@emerytelcom.net]
Sent: Tuesday, May 01, 2018 9:21 AM
To: Jaren Jorgensen
Subject:

Jaren,

What does City Sanitation charge your company for a 30 C.Y. trash container?

Gary

$$226.50 \div 30 \text{ CY} = 7.55/\text{CY}$$

Bonding Calculations
Castle Valley Mining, LLC

Bond Summary

Direct Costs

Subtotal Demolition and Removal	\$979,171.00	
Subtotal Backfilling and Grading	\$863,467.00	
Subtotal Revegetation	\$438,173.00	
Direct Costs	<u>\$2,280,811.00</u>	

Indirect Costs

Mob/Demob	\$228,081.10	10.0%
Contingency	\$114,040.55	5.0%
Engineering Redesign	\$57,020.28	2.5%
Main Office Expense	\$155,095.15	6.8%
Project Management Fee	\$57,020.28	2.5%
Subtotal Indirect Costs	<u>\$611,257.35</u>	26.8%

Total Cost	\$2,892,068.35	
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Escalation factor		0.0178
Number of years		5
Escalation	\$266,722.00	

Reclamation Cost	\$3,158,790.35	
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Bond Amount (rounded to nearest \$1,000) 2023 dollars	\$3,159,000.00	
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R. S. Means Number	Description	Cost	Units
02 41 16.13 0100	Mixture Materials Bld., Large	0.38	C.F.
03 05 05.10 0060	Demolition, Concrete, Reinforcing	169.00	C.Y.
31 23 16 42 1300	Front end loader 3 CY	2.13	C.Y.
31 23 23.20 1020	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	6.40	C.Y.
02 41 16 17 4200	Disposal on site	10.95	C.Y.
01 54 33.20 5300	Dump Truck, 16 ton Payload	542.80	Day
Trhv	Truck Driver, Heavy	69.30	HR
02 41 13.17 5010	Pavement Removal (asphalt) 3 inch	5.75	S.Y.
02 41 16.13 0020	Steel Bld. Large	0.36	C.F.
02 41 19.27 0020	Torch Cutting Steel 1" plate	3.22	L.F.
02 41 19.27 0040	Torch Cutting Steel 1" bar	1.41	EA
01 54 33.60 2500	Truck Mounted Crane 25 ton	590.60	Day
CLAB	Common Building Laborers	60.70	
02 41 13.60 1700	Chain link fence 8'-10'	4.34	L.F.
23 05 05.10 3600	Mechanical equipment heavy	1250.00	Ton
02 41 13.23 3200	Steel Pipe 4" dia.	12.10	L.F.
31 23 16.42 0260	Excavation Bulk Bank 2 CY (322BL)	1.76	C.Y.
31 23 16.13 3080	Backfill Trench Minimal Haul 2 1/4 CY	2.45	C.Y.
02 41 13.80 0100	Utility Pole, Wood, 20'-30' High	315.00	EA
02 41 13.56 1900	Electrical Wire Removal	8.70	L.F.
01 54 33.20 0320	Cat 349F-L, 2-1/2 C.Y.	1411.00	Day
01 54 33.20 0320	Hourly Operating Cost	76.90	HR
Eqltv	Equipment Operator Shovel	84.60	HR
01 54 33.20 5310	Four axle dump, 25 ton, 18CY payload, 450HP	706.00	Day
01 54 33.20 5310	Hourly Operating Cost	50.00	HR
01 54 33.20 4810	980 M, EROPS, 7 CY payload	1780.00	Day
01 54 33.20 4810	Hourly Operating Cost	90.60	HR
Eqmd	Equipment Operator, Medium Equipmnet	81.05	HR
01 54 33.20 4360	D9R Semi U-EROPS	2291.00	Day
01 54 33.20 4360	Hourly Operating Cost	109.35	HR
01 54 33.40 7200	Pickup Truck Crew 4x4 1 Ton	126.00	Day
01 54 33.40 7200	Hourly Operating Cost	10.20	HR
01 54 33.40 6950	6,000 gal. H2O Truck Off Highway	1045.00	Day
01 54 33.40 6950	Hourly Operating Cost	70.16	HR
Skwk	Outside Foreman	83.20	HR
31 37 13.10 0200	Place riprap, 18" min. thickness mat only	103.00	S. Y.
02 41 13.15 0420	Hydrodemolition, concrete pavement 6"	8.90	S.F.
Mapel Leaf	Bear Canyon Grass	68.66	AC
Great Basin	Bear Canyon Forbs	151.90	AC
Great Basin	Bear Canyon Shrubs	159.00	AC
31 23 16.32 2830	300 HP Dozer w/ripper	0.55	C.Y.

31 25 14.16 0120	Revegetation mat, webbed	4.17 S.Y.
32 91 13.16 0200	Hay 1" Power mulcher, small	62.50 M.S.F.
32 93 43.10 0562	Bare Root Seedlings 11"to16" med. Soil	1.87 EA
32 22 19.14 0100	Tractor Spreader	28.50 MSF
32 22 19.14 0200	Hydro Spreader (equip & labor) B81 80MSF/Day	41.50 MSF
32 22 19.14 0400	Hand spread Seed (CLAB)	65.00 MSF
Sevenoaks Native	Bear Canyon Main Transplant	0.46 EA
Lancaster Drilling	Plug Wells	1.49 Ft
Jennchem	Seal Portals	14707.00 EA
City Sanitation	Current CVM Price	7.55 CY

Ref.	Description		Cost
	Scale House 01		25388
	Scalehouse Pavement 02		10854
	Shower House 03		177905
	Shop 04		33906
	Machine Shop 05		10107
	WHR Shop 06		7731
	Tipple 07		27220
	Substation 08		24370
	Coal Storage Bin 09		17224
	Lump Coal 10		10326
	Coal Recovery Bin 11		1170
	WHR Surge Bin 12		28482
	Ditch D 8D 13		1943
	Lump Coal Storage Pad 14		17886
	Equipment Wash Pad 15		3698
	Transformer Pad Shop 16		396
	Water Tanks 17		2228
	Fuel Tanks 18		3470
	Fuel Lines 19		4840
	Fans 20		11566
	Conveyor 21		122229
	Bld Tank Seam 22		0
	Septic Tanks 23		1355
	Culverts 24		15728
	Watchman Trailer 25		0
	Cap and Powder Mag 26		173
	Conveyor Tunnel 27		50733
	Plug Well 28		14304
	Seal Portals 29		176484
	Power Lines and Poles 30		91440
	Portals AMO2A No 31		58828
	Culvert Removal No 32		5270
	Portals No 33		15600
	Hilfiker Retaining Wall No. 34		5740
	Sampling Station No. 35		577
	Total		979171

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	
	Scale House 01																				
	Structure's Demolition Cost	Mixed Materials Bld. Large	02 41 16.13 0100	0.38	/CF	34	83	16								FT		45152	CF	17158	
	Structure's Vol. Demolished																0.33	552	CY		
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel	Current CVM Price	City Sanitation	7.55	/CY													552	CY	4168	
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck										S										
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				21326
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	234	2	0.67								FT		12	CY	2028	
	Concrete's Vol. Demolished																1.3	16	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													16	CY	34	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY													16	CY	102	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													16	CY	175	
	Subtotal																				2339
	Concrete Demolition																				
	Demolition Cost	Concrete demolition	ConcreteDemo1	9.82	/CY	234	4	0.67								FT		23	CY	226	
	Concrete's Vol. Demolished																1.3	30	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	1.64	/CY													30	CY	49	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	5.48	/CY													30	CY	164	
	Disposal Costs	Disposal on site	02 41 16 17 4200	8.61	/CF													30	CY	258	
	Subtotal																				697
	Concrete Demolition																				
	Demolition Cost	Concrete demolition	ConcreteDemo1	9.82	/CY	83	34	0.33								FT		34	CY	334	
	Concrete's Vol. Demolished																1.3	44	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	1.64	/CY													44	CY	72	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	5.48	/CY													44	CY	241	
	Disposal Costs	Disposal on site	02 41 16 17 4200	8.61	/CF													44	CY	379	
	Subtotal																				1026
	Total																				25388

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	
	Scalehouse Pavement 02																				
	Structure's Demolition Cost	Pavement removal (asphalt) 3 inch	02 41 13.17 5010	5.75	/SY					1450								1450	SY	8338	
	Structure's Vol. Demolished							0.083										1.3	156	CY	
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	542.8	/day									1.22		DAY		1.22	DAY	662	
	Transportation Cost Non Steel Drive	Truck Driver, Heavy	Trhv	\$69.30	HR									9.76		HR		9.76	HR	676	
	Disposal Cost Non Steel	Current CVM Price	City Sanitation	7.55	/CY													156	CY	1178	
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				10854
	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																				10854

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	
	Shower House 03																				
	Structure's Demolition Cost																				
	Structure's Vol.	Mixed Materials Bld. Large	02 41 16.13 0100	0.29	/CF	92	50	8								FT		36800	CF	10672	
	Structure's Vol. Demolished																	0.33	450	CY	
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel	Current CVM Price	City Sanitation	7.55	/CY														450	CY	3398
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				14070
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	284	2	0.67								FT			14	CY	2366
	Concrete's Vol. Demolished																	1.3	18	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														18	CY	38
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY														18	CY	115
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														18	CY	197
	Subtotal																				2716
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	319	2	0.67								FT			16	CY	2704
	Concrete's Vol. Demolished																	1.3	21	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														21	CY	45
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY														21	CY	134
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														21	CY	230
	Subtotal																				3113
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	92	50	0.33								FT			56	CY	9464
	Concrete's Vol. Demolished																	1.3	73	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														73	CY	155
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY														73	CY	467
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														73	CY	799
	Subtotal																				10885
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	12	5.5	0.33								FT			1	CY	169
	Concrete's Vol. Demolished																	1.3	1	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														1	CY	2
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY														1	CY	6
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														1	CY	11
	Subtotal																				188
	Pavement Demolition																				
	Demolition Cost	Hydrodemolition, concrete pavement 6"	02 41 13.15 0420	8.9	/SF					0.36						AC			15682	SF	139570
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														1.3	378	CY
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY														378	CY	805
	Disposal Costs	Disposal on site	02 41 16.17 4200	10.95	/CY														378	CY	2419
	Subtotal																				4139
	Total																				146933
																					177905

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 04																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.36	/CF	40	93	14								FT		52080	CF	18749
	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																			18749
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	197.5	4	0.67								FT		20	CY	3380
	Concrete's Vol. Demolished																1.3	26	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													26	CY	55
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY													26	CY	166
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													26	CY	285
	Subtotal																			3886
	Concrete Demolition																			
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	266	2	0.67								FT		13	CY	2197
	Concrete's Vol. Demolished																1.3	16.9	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													16.9	CY	36
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY													16.9	CY	108
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													16.9	CY	185
	Subtotal																			2526
	Concrete Demolition																			
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	40	93	0.33								FT		45	CY	7605
	Concrete's Vol. Demolished																1.3	58.5	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													58.5	CY	125
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY													58.5	CY	374
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													58.5	CY	641
	Subtotal																			8745
	Total																			33906

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 05																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.36	/CF	30	45	10								FT		13500	CF	4860	
	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																				4860
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	135	1	0.67								FT		3	CY	507	
	Concrete's Vol. Demolished																1.3	4	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY															9	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY															26	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF															44	
	Subtotal																				586
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	150	2	0.67								FT		7	CY	1183	
	Concrete's Vol. Demolished																1.3	9	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY															19	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY															58	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF															99	
	Subtotal																				1359
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169	/CY	30	45	0.33								FT		17	CY	2873	
	Concrete's Vol. Demolished																1.3	22	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY															47	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.4	/CY															141	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF															241	
	Subtotal																				3302
	Total																				10107

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	
	WHR Shop 06																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.36	/CF	20	40	14								FT		11200	CF	4032	
	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																				4032
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	120	1	0.67								FT		3	CY	507	
	Concrete's Vol. Demolished																1.3	4	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													4	CY	9	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													4	CY	26	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													4	CY	44	
	Subtotal																				586
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	120	2	0.67								FT		6	CY	1014	
	Concrete's Vol. Demolished																1.3	8	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													8	CY	17	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													8	CY	51	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													8	CY	88	
	Subtotal																				1170
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	20	40	0.33								FT		10	CY	1690	
	Concrete's Vol. Demolished																1.3	13	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													13	CY	28	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													13	CY	83	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													13	CY	142	
	Subtotal																				1943
	Total																				7731

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 07																				
	Structure's Demolition Cost																				
	Structure's Vol.	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	27	10	25								FT		6750	CF	2430	
	Structure's Vol.	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	27	20	17								FT		9180	CF	3305	
	Structure's Vol.	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	27	10	8								FT		2160	CF	778	
	Structure's Vol.	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	20	30	51								FT		30600	CF	11016	
	Structure's Vol.	Mixed Materials Bld. Large	02 41 16 13 0100	0.38	/CF	12	20	10								FT		2400	CF	912	
	Structure's Vol. Demolished																0.3	568	CY		
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel	Current CVM Price	City Sanitation	7.55	/CY													568	CY	4288	
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																			22729	
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	2	2	1.5								11 FT		2	CY	338	
	Concrete's Vol. Demolished																1.3	3	CT		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														3	CT	6
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY														3	CT	19
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														3	CT	33
	Subtotal																			396	
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	3	3	2								4 FT		3	CY	507	
	Concrete's Vol. Demolished																1.3	4	CT		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														4	CT	9
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY														4	CT	26
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														4	CT	44
	Subtotal																			586	
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	27	40	0.29								1 FT		12	CY	2028	
	Concrete's Vol. Demolished																1.3	16	CT		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														16	CT	34
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY														16	CT	102
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														16	CT	175
	Subtotal																			2339	
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	20	30	0.29								1 FT		6	CY	1014	
	Concrete's Vol. Demolished																1.3	8	CT		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														8	CT	17
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY														8	CT	51
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														8	CT	88
	Subtotal																			1170	
	Total																			27220	

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 08																					
	Structure's Demolition Cost																					
		Torch Cutting Steel 1" plate	02 41 19 27 0020	3.22	/LF	26.6										LF		27	LF	87		
		Torch Cutting Steel 1" bar	02 41 19 27 0040	1.41	/EA									0.77	1	Day		0.8	DAY	1		
		Truck Mounted Crane 25 ton	01 54 33 60 2500	590.60	/day									6.2	1	HR		6.2	HR	3662		
		Eq. Op., Crane or Shovel (Eqhv)	Eqhv	60.70	HR									0.77	2	DAY		1.5	DAY	91		
		Truck dump 16 ton payload	01 54 33 20 5300	542.8	/day									6.2	2	HR		12.4	HR	6731		
		Truck Driver, Heavy	Trhv	\$69.30	HR									6.2	2	HR		12.4	HR	859		
		CLAB	Clab	\$60.70	HR																	
	Steel's Weight																					
	Truck's Capacity																					
	Haulage																					
	Transportation Cost Steel Truck																					
	Transportation Cost Steel Truck Drive																					
	Disposal Cost Steel																					
	Subtotal																			11431		
	Equipment's Disposal Cost																					
	Dismantling Cost	Chain link remove 8'-10'	02 41 13 60 1700	4.34	/LF	224.25										LF		224.25	LF	973		
	Equipment's Vol. Demolished																					
	Loading Costs																					
	Transport Costs																					
	Disposal Costs																					
	Subtotal																			973		
	Transformers																					
	Equipment's Disposal Cost																					
	Dismantling Cost	Mechanical equipment heavy	23 05 05.10 3600	1250.00	/ton							7.4				EA		7.4	EA	9250		
	Equipment's Vol. Demolished																					
	Loading Costs																					
	Transport Costs																					
	Disposal Costs																					
	Subtotal																			9250		
	Concrete Demolition																					
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	19	19	0.5								2	FT		13	CY	2197	
	Concrete's Vol. Demolished																	1.3		17	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY															17	CY	36
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. m	31 23 23.20 1020	6.40	/CY															17	CY	109
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF															17	CY	186
	Subtotal																				2528	
	Concrete Demolition																					
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	12	4	0.67												1	CY	169
	Concrete's Vol. Demolished																	1.3		1	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY															1	CY	2
	Transportation Cost	12 CY (16 Tong) Dump Truck 1/2 mi.	31 23 23.20 1020	6.40	/CY															1	CY	6
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CY															1	CY	11
	Subtotal																				188	
	Total																				24370	

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	
	Coal Storage Bin 09																				
	Structure's Demolition Cost																				
		Torch Cutting Steel 1" plate	02 41 19 27 0020	3.22	/LF	163.3										LF		163	LF	525	
		Torch Cutting Steel 1" bar	02 41 19 27 0040	1.41	/EA																
		Truck Mounted Crane 25 ton	01 54 33 60 2500	590.60	/day									0.66	1	DAY		0.7	DAY	1	
		Eq. Op., Crane or Shovel (Eqhv)	Eqhv	60.70	HR									5.3	1	HR		5.3	HR	3130	
		Truck dump 16 ton payload	01 54 33 20 5300	542.80	/day									0.66	2	DAY		1.3	DAY	79	
		Truck Driver, Heavy	Trhv	\$69.30	HR									5.3	2	HR		10.6	HR	5754	
		CLAB	Clab	\$60.70	HR										2	HR		10.6	HR	735	
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				10224
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	60	1	6								FT		13	CY	2197	
	Concrete's Vol. Demolished																1.3	17	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													17	CY	36	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													17	CY	109	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													17	CY	186	
	Subtotal																				2528
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	3	3	1								4 FT		1	CY	169	
	Concrete's Vol. Demolished																1.3	1	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													1	CY	2	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													1	CY	6	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													1	CY	11	
	Subtotal																				188
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	30	30	0.67								FT		22	CY	3718	
	Concrete's Vol. Demolished																1.3	29	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													29	CY	62	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													29	CY	186	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													29	CY	318	
	Subtotal																				4284
	Total																				17224

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
	Lump Coal 10																			
	Structure's Demolition Cost																			
		Torch Cutting Steel 1" plate	02 41 19 27 0020	3.22	/LF	225										LF		225	LF	725
		Torch Cutting Steel 1" bar	02 41 19 27 0040	1.41	/EA										0.55	1 DAY		0.55	DAY	1
		Truck Mounted Crane 25 ton	01 54 33 60 2500	590.60	/day										4.4	1 HR		4.4	HR	2599
		Eq. Op., Crane or Shovel (Eqhv)	Eqhv	60.70	HR										0.55	2 DAY		1.1	DAY	67
		Truck dump 16 ton payload	01 54 33 20 5300	542.80	/day										4.4	2 HR		8.8	HR	4777
		Truck Driver, Heavy	Trhv	\$69.30	HR										4.4	2 HR		8.8	HR	610
		CLAB	Clab	\$60.70	HR															
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			8779
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	102	2	1								FT		8	CY	1352
	Concrete's Vol. Demolished																1.3	10	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													10	CY	21
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													10	CY	64
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													10	CY	110
	Subtotal																			1547
	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																			10326

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	
	Coal Recovery Bin 11																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	12	2.5	1							4	FT		4	CY	676	
	Concrete's Vol. Demolished																1.3	5	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													5	CY	11	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													5	CY	32	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													5	CY	55	
	Subtotal																				774
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	12	12	0.33								FT		2	CY	338	
	Concrete's Vol. Demolished																1.3	3	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													3	CY	6	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													3	CY	19	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													3	CY	33	
	Subtotal																				396
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				1170

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	
	WHR Surge Bin 12																				
	Structure's Demolition Cost																				
		Torch Cutting Steel 1" plate	02 41 19 27 0020	3.22	/LF	458										LF		458	LF	1475	
		Torch Cutting Steel 1" bar	02 41 19 27 0040	1.41	/EA									0.85	1	DAY		0.85	DAY	1	
		Truck Mounted Crane 25 ton	01 54 33 60 2500	590.60	/day									6.8	1	HR		6.8	HR	4016	
		Eq. Op., Crane or Shovel (Eqhv)	Eqhv	60.70	HR									0.85	2	DAY		1.7	DAY	103	
		Truck dump 16 ton payload	01 54 33 20 5300	542.80	/day									6.8	2	HR		13.6	HR	7382	
		Truck Driver, Heavy	Trhv	\$69.30	HR									6.8	2	HR		13.6	HR	942	
		CLAB	Clab	\$60.70	HR																
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																			13919	
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	120	6	0.67								FT		18	CY	3042	
	Concrete's Vol. Demolished																	1.3	23	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														23	CY	49
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	31 23 23.20 1020	6.40	/CY														23	CY	147
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														23	CY	252
	Subtotal																				3490
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	3	3	1								4 FT		1	CY	169	
	Concrete's Vol. Demolished																	1.3	1	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														1	CY	2
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	31 23 23.20 1020	6.40	/CY														1	CY	6
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														1	CY	11
	Subtotal																				188
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	60	50	0.5								FT		56	CY	9464	
	Concrete's Vol. Demolished																	1.3	73	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														73	CY	155
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	31 23 23.20 1020	6.40	/CY														73	CY	467
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														73	CY	799
	Subtotal																				10885
	Total																				28482

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	
	Ditch D 8D 13																				
	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	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	35	12	0.67								FT		10	CY	1690	
	Concrete's Vol. Demolished																	1.3	13	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														13	CY	28
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY														13	CY	83
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														13	CY	142
	Subtotal																				1943
	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																				1943

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	
	Lump Coal Storage Pad 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	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	118	4	1								FT		17	CY	2873	
	Concrete's Vol. Demolished																1.3	22	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													22	CY	47	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													22	CY	141	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													22	CY	241	
	Subtotal																				3302
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	38	80	0.67								FT		75	CY	12675	
	Concrete's Vol. Demolished																1.3	98	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													98	CY	209	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													98	CY	627	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													98	CY	1073	
	Subtotal																				14584
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				17886

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	
	Equipment Wash Pad 15																				
	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	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	40	25	0.5								FT		19	CY	3211	
	Concrete's Vol. Demolished																	1.3	25	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														25	CY	53
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY														25	CY	160
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														25	CY	274
	Subtotal																				3698
	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																				3698

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	
	Transformer Pad Shop 16																				
	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	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	11	9	0.5							FT			2	CY	338	
	Concrete's Vol. Demolished																1.3		3	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														3	CY	6
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY														3	CY	19
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														3	CY	33
	Subtotal																				396
	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																				396

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 Tanks 17																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	10			14						3	FT		4618	CF	1662
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	20			10						1	FT		1571	CF	566
	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																			2228
	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																			2228

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 Tanks 18																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	10			13.5							2	FT	2863	CF	1031
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	23			11.5							1	FT	2389	CF	860
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	19			9							3	FT	3626	CF	1305
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	11			4							1	FT	138	CF	50
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	7			7							1	FT	269	CF	97
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	5			9.5							1	FT	354	CF	127
	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																			
	Disposal Cost Steel																			
	Subtotal																			3470
	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																			
	Total																			3470

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 Lines 19																				
	Structure's Demolition Cost	Pipe Steel 4" dia	02 41 13 33 3200	12.10	LF	400										LF		400	LF	4840	
	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																				4840
	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																				4840

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 21																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	6230	5	5								FT		155750	CF	56070
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	60	8	8								39 FT		149760	CF	53914
	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																			109984
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	3	3	1								188 FT		63	CY	10647
	Concrete's Vol. Demolished																	1.3	82	CY
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY														82	CY
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY														82	CY
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF														82	CY
	Subtotal																			12245
	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																			122229

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
	Septic Tanks 23																			
	Structure's Demolition Cost																			
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			
	Excavation of Septic Tanks																			
	Excavation	Excavation Bulk Bank 2 CY (322BL)	31 23 16.42 0260	1.76	/CY	10	10	3							4	FT		44	CY	77
	Backfill	Backfill Trench Mininal Haul 2 1/4 CY	31 23 16 13 3080	2.45	/CY	10	10	3							4	FT		44	CY	108
	Subtotal																			185
	Concrete Demolition																			
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY						1.5				4	CY		6	CY	1014
	Concrete's Vol. Demolished																1.3	8	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													8	CY	17
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													8	CY	51
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													8	CY	88
	Subtotal																			1170
	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																			1355

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	
	Watchman Trailer 25																				
	Structure's Demolition Cost																				0
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				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	
	Cap and Powder Mag 26																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	5	6	8								2 FT		480	CF	173	
	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																				173
	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																				173

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 Tunnel 27																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	470	7	0.5							2	FT		122	CY	20618	
	Concrete's Vol. Demolished																1.3	159	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													159	CY	339	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													159	CY	1018	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													159	CY	1741	
	Subtotal																				23716
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	470	8	0.5							2	FT		139	CY	23491	
	Concrete's Vol. Demolished																1.3	181	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													181	CY	386	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													181	CY	1158	
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													181	CY	1982	
	Subtotal																				27017
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				50733

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	
	Plug Well 28																				
	Structure's Demolition Cost	Plug Well	Lancaster Drilling	1.49	EA.	1600									6	EA		9600	EA	14304	
	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																				14304
	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																				14304

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
	Seal Portals 29																			
	Structure's Demolition Cost	Seal Portals	Jenncern	14707.00	EA.										12	EA		12	EA	176484
	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																			176484
	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																			176484

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 and Poles 30																			
	Structure's Demolition Cost																			
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			
	Equipment's Disposal Cost	Electrical Wire Removal	02 41 13.56 1900	8.70	L.F.	8700										FT		8700	LF	75690
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			75690
	Equipment's Disposal Cost	Utility Pole, Wood, 20'-30' High	02 41 13.80 0100	315.00	EA											50 EA		50	EA	15750
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			15750
	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																			91440

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	
	Portals AM02A No 31																				
	Structure's Demolition Cost	Seal Portals	Jennchem	14707.00	EA											4 EA		4 EA		58828	
	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																				58828
	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																				58828

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
	Culvert Removal No 32																			
	Structure's Demolition Cost																			
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			0
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY						27.15					CY		27.15	CY	4588
	Concrete's Vol. Demolished																1.3	35	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY													35	CY	75
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY													35	CY	224
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF													35	CY	383
	Subtotal																			5270
	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																			5270

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
	Portals No 33																			
	Structure's Demolition Cost	Seal Portals	AML1	5200	EA.										3	EA		3	EA	15600
	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																			15600
	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																			
	Total																			15600

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
	Hilfiker Retaining Wall No. 34																			
	Structure's Demolition Cost																			
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			
	Crane	Truck Mounted Crane 25 ton	01 54 33 60 2500	\$90.60	/day										2	1 days		2 days		1181
	Truck	Truck dump 16 ton payload	01 54 33 20 5300	\$42.80	/day										2	2 days		4 days		2171
	Crane Operator	Eq. Op., Crane or Shovel (Eqhv)		\$84.60	HR										2	1 days		2 days		169
	Truck Driver	Truck Driver, Heavy	Trhv	\$69.30	HR										2	2 days		4 days		277
	Labors	CLAB	Clab	\$60.70	HR										16	2 hrs		32 hr		1942
	Subtotal																			5740
	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																			5740

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	
	Sampling Station No. 35																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0012	0.36	/CF	9	12	10								FT		1080	CF	389	
	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																				389
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Demolition, Concrete, Reinforcing	03 05 05.10 0060	169.00	/CY	10	7	0.5								FT					169
	Concrete's Vol. Demolished																	1.3			1 CY
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.13	/CY																2
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	6.40	/CY																6
	Disposal Costs	Disposal on site	02 41 16 17 4200	10.95	/CF																11
	Subtotal																				188
	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																				577

	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
Bear Canyon Mine															
Grading RECLAIMED															
Tank Seam No 01 YS-10 & TS-11															
Tank Seam Access Road and Portal Pad Area															
Direct Cut and Fill															
CAT 345BL II (10-24)(2nd2006) 2005															
Load and Haul															
CAT 345BL II (10-24)(2nd2006) 2005															
6X4 50,000lbs 10-12 CY (20-15) (2nd2006)															
Place Hauled Material															
CAT 345BL II (10-24)(2nd2006) 2005															
Volume															
Total															0

	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
Bear Canyon Mine Grading RECLAIMED															
Upper Storage Pad No 02 TS-8															
Direct Cut and Fill CAT 345BL II (10-24)(2nd2006) 2005															
Place Hauled Material From TS-5 and TS-6															
Volume															
Total															0

	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
Bear Canyon Mine Grading															
Portal Pad Area No 03 TS-7															
Direct Cut and Fill															
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	5578	CY	478	CY/HR	11.7	HR	3451
Place Hauled Material From TS-5															
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	7405	CY	478	CY/HR	15.5	HR	4572
Volume									12983						
Total															8023

Note:

1. Equipment cost is divided by 12 Hours to get a cost per hour.

	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
Bear Canyon Mine Grading															
Portal Access Road No 04															
Direct Cut and Fill															
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	5573	CY	478	CY/HR	11.7	HR	3451
Load and Haul															
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	2553	CY	478	CY/HR	5.3	HR	1563
6,000 gal. H2O Truck Off Highway	1045.00	70.16	0.1	81.05	254.02	2	508.04	\$/HR					5.3	HR	2693
Place Hauled Material															
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	2553	CY	478	CY/HR	5.3	HR	1563
Volume									8126						
Total															9270

Note:

1. Equipment cost is divided by 12 Hours to get a cost per hour.

	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
Bear Canyon Mine Grading															
Coal Storage Pad No. 5															
Load and Haul Soil to other sites															
980H Series II EROPS (9-34) (2nd2006)	1780.00	90.60	0.1	81.05	343.88	1	343.88	\$/HR	15428	CY	577	CY/HR	26.7	HR	9182
6,000 gal. H2O Truck Off Highway	1045.00	70.16	0.1	81.05	254.02	2	508.04	\$/HR					26.7	HR	13565
Place Hauled Material															
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	15428	CY	478	CY/HR	32.3	HR	9528
Move material on sitePlace Hauled Material															
D9R Semi-U EROPS (9-50) (2H2006)	2291.00	109.35	0.1	81.05	411.34	1	411.34	\$/HR	25157	CY	500	CY/HR	50.3	HR	20690
Volume									40585						
Total															52965

Note:

1. Equipment cost is divided by 12 Hours to get a cost per hour.

	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
Bear Canyon Mine Grading															
Scale House No.6															
D9R Semi-U EROPS (9-50) (2H2006)	2291.00	109.35	0.1	81.05	411.34	1	411.34	\$/HR	1454	CY	500	CY/HR	2.9	HR	1193
Volume									1454						
Total															1193

Note:

1. Equipment cost is divided by 12 Hours to get a cost per hour.

	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
Bear Canyon Mine Grading															
Sediment Ponds No.7															
Sediment Ponds "A"															
D9R Semi-U EROPS (9-50) (2H2006)	2291.00	109.35	0.1	81.05	411.34	1	411.34	\$/HR	3460	CY	500	CY/HR	6.9	HR	2838
Sediment Ponds "B"															
D9R Semi-U EROPS (9-50) (2H2006)	2291.00	109.35	0.1	81.05	411.34	1	411.34	\$/HR	0	CY	500	CY/HR	0	HR	0
Sediment Ponds "C"															
D9R Semi-U EROPS (9-50) (2H2006)	2291.00	109.35	0.1	81.05	411.34	1	411.34	\$/HR	0	CY	500	CY/HR	0	HR	0
Volume															
Total															2838

Note:

1. Equipment cost is divided by 12 Hours to get a cost per hour.

	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
Bear Canyon Mine Grading															
Shower House No.08															
D9R Semi-U EROPS (9-50) (2H2006)	2291.00	109.35	0.1	81.05	411.34	1	411.34	\$/HR	6141	CY	500	CY	12.3	HR	5059
													0		
Volume									6141						
Total															5059

Note:

1. Equipment cost is divided by 12 Hours to get a cost per hour.

	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
Bear Canyon Mine Grading															
Wild Horse Ridge No. 09															
WHR Portal Area															
Rough Backfilling and Grading															
D9R Semi-U EROPS (9-50) (2H2006)	2291.00	109.35	0.1	81.05	411.34	1	411.34	\$/HR	10288	CY	500	CY/HR	20.6	HR	8474
Haul and Place Topsoil															
980H Series II EROPS (9-34) (2nd2006)	1780.00	90.60	0.1	81.05	343.88	1	343.88	\$/HR	4860	CY	577	CY/HR	8.4	HR	2889
6,000 gal. H2O Truck Off Highway	1045.00	70.16	0.1	81.05	254.02	2	508.04	\$/HR					8.4	HR	4268
D9R Semi-U EROPS (9-50) (2H2006)	2291.00	109.35	0.1	81.05	411.34	1	411.34	\$/HR	4860	CY	500	CY/HR	9.7	HR	3990
Subtotal															19621
WHR Upper Access Road															
Cut and Fill Material															
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	1912	CY	478	CY/HR	4	HR	1180
Haul and Place Topsoil															
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	2171	CY	478	CY/HR	4.5	HR	1327
6,000 gal. H2O Truck Off Highway	1045.00	70.16	0.1	81.05	254.02	2	508.04	\$/HR					4.5	HR	2286
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	2171	CY	478	CY/HR	4.5	HR	1327
Subtotal															6120
WHR Lower Access Road															
Load and Haul Material with															
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	1473.5	CY	478	CY/HR	3.1	HR	914
D9R Semi-U EROPS (9-50) (2H2006)	2291.00	109.35	0.1	81.05	411.34	1	411.34	\$/HR	1473.5	CY	500	CY/HR	2.9	HR	1193
Subtotal															2107
Volume									20704.5						
Total															27848

Note:

1. Equipment cost is divided by 12 Hours to get a cost per hour.

	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
Bear Canyon Mine Grading															
Borehole No 10															
Load and Haul Material															
980H Series II EROPS (9-34) (2nd2006)	1780.00	90.60	0.1	81.05	343.88	1	343.88	\$/HR	10560	CY	498	CY/HR	21.2	HR	7290
6,000 gal. H2O Truck Off Highway	1045.00	70.16	0.1	81.05	254.02	2	508.04	\$/HR					21.2	HR	10770
Cat 349F-L, 2-1/2 C.Y.	1411.00	76.90	0.1	81.05	294.98	1	294.98	\$/HR	10560	CY	478	CY/HR	22.1	HR	6519
Volume									10560						
Total															24579

Note:

1. Equipment cost is divided by 12 Hours to get a cost per hour.

	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
Bear Canyon Mine Grading Support No.11															
Foreman Average, Outside					83.20	1	83.2	\$/HR					245.5	HR	20426
6,000 gal. H2O Truck Off Highway	1045.00	70.16	0.1	81.05	254.02	1	254.02	\$/HR					26	HR	6605
Pickup Truck Crew 4x4 1 ton (20-17) (2nd2006)	126.00	10.20	0.1	0	12.32	1	12.32	\$/HR					245.5	HR	3025
Total															30056

Note:

1. Equipment cost is divided by 12 Hours to get a cost per hour.

	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
Bear Canyon Mine Grading															
Riprap No.12															
Place rep-rap 18" min.thickness mat only															
31 37 13.10 0200					103.00			\$/SY	6812			S.Y.			701636
Total															701636

AREA	TOTAL LENGTH	RECLAIMED LENGTH	& COMP	TOTAL RIPRAP (SY)	RECLAIMED RIPRAP (SY)
RC-1	320	320	100	125	125
RC-2	640	190	30	289	80
RC-3	1030	140	14	432	59
					264

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 Mine Site 01																			
	Revegetation																			
	Drill Seeding																			
	Drill Seeding	Tractor Spreader (equip. & labor) B-66	32 22 19.14 0100	28.50	/MSF					13.4						AC		584	MSF	16644
	Seed Material	Bear Canyon Shrubs	Great Basin	159.00	\$/AC					13.4						AC		13	AC	2067
	Seed Material	Bear Canyon Forbs	Great Basin	151.90	\$/AC					13.4						AC		13	AC	1975
	Seed Material	Bear Canyon Grass	Mapel Leaf	68.66	\$/AC					13.4						AC		13	AC	893
	Drill Seeding	Tractor Spreader (equip. & labor) B-66	32 22 19.14 0100	28.50	/MSF					13.4						AC		584	MSF	16644
	Mulch	Tractor Spreader (equip. & labor) B-66	32 22 19.14 0100	28.50	/MSF					13.4						AC		584	MSF	16644
	Mulch	Hay 1" Power mulcher, small	32 91 13.16 0200	62.50	/MSF					13.4						AC		584	MSF	36500
	Stock Labor	Bare root seedlings, 11" to 16" med. soil	32 93 43.10 0562	1.87	Ea					13.4					500	AC		6700	EA	12529
	Stock Material	Bear Canyon Main Transplants	Sevenoaks Native	0.46	\$/AC					13.4					500	AC		6700	EA	3082
	Ripping	300 HP Dozer w/ Ripper	31 23 16 32 2830	0.55	/CY					13.4						AC		21614	CY	11888
	Subtotal																			11886
	Hydroseeding																			
	Hydroseeding	Hydro Spreader (equip. & labor) B-81 80MSF/day	32 22 19.14 0200	41.50	/MSF					4.13						AC		180	MSF	7470
	Seed Material	Bear Canyon Shrubs	Great Basin	159.00	\$/AC					4.13						AC		4	AC	636
	Seed Material	Bear Canyon Forbs	Great Basin	151.90	\$/AC					4.13						AC		4	AC	608
	Seed Material	Bear Canyon Grass	Mapel Leaf	68.66	\$/AC					4.13						AC		4	AC	275
	Mulch	Tractor Spreader	32 22 19.14 0100	28.50	/MSF					4.13						AC		180	MSF	5130
	Mulch	Hay 1" Power mulcher, small	32 91 13.16 0200	62.50	/MSF					4.13						AC		180	MSF	11250
	Stock Labor	Bare root seedlings, 11" to 16" med. soil	32 93 43.10 0562	1.87	Ea					4.13					500	AC		2065	EA	3862
	Stock Material	Bear Canyon Main Transplants	Sevenoaks Native	0.46	\$/AC					4.13					500	AC		2065	EA	950
	Pocking 340 CY/AC	Excavation Bulk Bank 2 CY (3228L)	31 23 16.42 0260	1.76	/CY					4.13						AC		1404	CY	2471
	Subtotal																			32652
	Riparian Planting Area																			
	Plant Stock	Bear Canyon Grass	Mapel Leaf	68.66	\$/AC					1						AC		1	AC	69
	Plant Stock	Bare root seedlings, 11" to 16" med. soil	32 93 43.10 0562	1.87	Ea					1					1000	AC		1000	EA	1870
	Subtotal																			1939
	Matting																			
	Matting	Revegetation mat, webbed	31 25 13 10 0120	4.17	SY					2.96						AC		14326	SY	59739
	Subtotal																			59739
	Total																			213196
	Reseed																			
	Assume 25% reseeding																			53299
	Subtotal																			266495
	Total																			266495

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	
	Wild Horse Ridge 02																				
	Revegetation																				
	Drill Seeding																				
	Drill Seeding																				
	Drill Seeding																				
	Mulch																				
	Mulch																				
	Stock																				
	Ripping																				
	Subtotal																				
	Hydroseeding																				
	Hydroseeding	Hydro Spreader (equip & labor) B81 80MSF/Day	32 22 19.14 0200	41.50	/MSF					3.74						AC		163	MSF	6765	
	Hydroseeding	Bear Canyon Shrubs	Great Basin	159.00	\$/AC					3.74						AC		4	AC	636	
	Hydroseeding	Bear Canyon Forbs	Great Basin	151.90	\$/AC					3.74						AC		4	AC	608	
	Hydroseeding	Bear Canyon Grass	Mapel Leaf	68.66	\$/AC					3.74						AC		4	AC	275	
	Mulch	Tractor Spreader	32 22 19.14 0100	28.50	/MSF					3.74						AC		163	MSF	4646	
	Mulch	Hay 1" Power mulcher, small	32 91 13.16 0200	62.50	/MSF					3.74						AC		163	MSF	10188	
	Stock	Bear Canyon Main Transplants	Sevenoaks Native	0.46	EA					3.74					500	/AC		1870	EA	860	
	Stock (labor cost = material cost)	Bare root seedlings, 11" to 16" med. soil	32 93 43.10 0562	1.87	Ea					3.74					500	/AC		1870	EA	3497	
	Pocking 340 CY/AC	Excavation Bulk Bank 2 CY (322BL)	31 23 16.42 0260	1.76	/CY					3.74						AC		1272	CY	2239	
	Subtotal																			29714	
	Hand Seed	Hand Spread Seed (CLAB)	32 92 19.14 0400	65.00	MSF					1.6						AC		70	MSF	4550	
	Hand Seed	Bear Canyon Shrubs	Great Basin	159.00	\$/AC					1.6						AC		2	AC	318	
	Seed	Bear Canyon Forbs	Great Basin	151.90	\$/AC					1.6						AC		2	AC	304	
	Hydroseeding	Bear Canyon Grass	Mapel Leaf	68.66	\$/AC					1.6						AC		2	AC	137	
	Stock	Bear Canyon Main Transplants	Sevenoaks Native	0.46	EA					1.6					500	/AC		800	EA	368	
	Stock (labor cost + material cost)	Bare rood seedlings, 11' to 16' med. Soil	32 93 43.10 0562	1.87	Ea					1.6					500	/AC		800	EA	1496	
	Matting	Revegetation mat, webbed	31 25 13 10 0120	4.17	SY					1.6						AC		7744	SY	32292	
	Subtotal																			39465	
	Total Vegetation																				69179
	Reseed																				
	Assume 25% reseeding																				2125
	Subtotal																				2125
	Total																				98893