



P.O. Box 910, East Carbon, Utah 84520 794 North "C" Canyon Rd, East Carbon, Utah 84520  
Telephone (435) 888-4000 Fax (435) 888-4002

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

September 26, 2016

Attn: Daron Haddock  
Permit Supervisor

Re: Crandall Canyon Mines, C/015/032  
C16-002 Midterm Review Task ID #5190

Dear Mr. Haddock,

Attached you will find the final bonding sheets and the Special Use Permit for the Midterm review of Crandall Canyon Mine.

Please add these to the existing Task to complete the Midterm process.

If you have any questions, or need any additional information regarding this submittal, please contact me directly at 435-888-4026.

Sincerely,

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Karin Madsen  
Engineering Technician  
UtahAmerican Energy, Inc.

# APPLICATION FOR PERMIT PROCESSING

<input checked="" type="checkbox"/> Permit Change	<input type="checkbox"/> New Permit	<input type="checkbox"/> Renewal	<input type="checkbox"/> Transfer	<input type="checkbox"/> Exploration	<input type="checkbox"/> Bond Release	Permit Number: ACT/015/032
Title of Proposal: C16-002 Midterm Review, Task ID #5247						Mine: Crandall Canyon Mine
						Permittee: Genwal Resources, Inc.

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

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

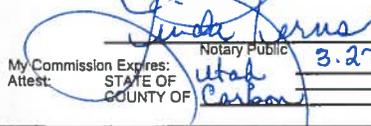
<input type="checkbox"/> Yes	<input type="checkbox"/> No	1. Change in the size of the Permit Area? _____ acres Disturbed Area? _____ acres <input type="checkbox"/> increase <input type="checkbox"/> decrease.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2. Is the application submitted as a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

**X Attach 1 complete digital copy of the application and maps.**

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.

  
 Karin Madsen - Engineering Tech - 9-26-16  
 Signed - Name - Position - Date

Subscribed and sworn to before me this 26<sup>th</sup> day of Sept, 19 2016

  
 Notary Public  
 My Commission Expires: 3.27.17  
 Attest: STATE OF Utah COUNTY OF Carbon



Received by Oil, Gas & Mining
ASSIGNED TRACKING NUMBER

## Application for Permit Processing Detailed Schedule of Changes to the MRP

C16-002 Midterm Review Task ID #5247

Permit Number: ACT/015/032

Mine: Crandall Canyon Mine

Permittee: Genwal Resources, Inc.

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

	DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
<input type="checkbox"/> ADD <input type="checkbox"/> REPLACE <input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD <input type="checkbox"/> REPLACE <input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD <input type="checkbox"/> REPLACE <input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD <input type="checkbox"/> REPLACE <input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD <input type="checkbox"/> REPLACE <input type="checkbox"/> REMOVE	Special Use Permit
<input type="checkbox"/> ADD <input type="checkbox"/> REPLACE <input type="checkbox"/> REMOVE	Bonding Calculations and total sheets
<input type="checkbox"/> ADD <input type="checkbox"/> REPLACE <input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD <input type="checkbox"/> REPLACE <input type="checkbox"/> REMOVE	
<input type="checkbox"/> ADD <input type="checkbox"/> REPLACE <input type="checkbox"/> REMOVE	

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

Authorization ID: PRI1608  
Contact Name: GENWAL RESOURCES  
Expiration Date: 12/31/2022  
Use Code: 521

FS-2700-4 (V. 01/2014)  
OMB 0596-0082

**U.S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE**

**SPECIAL USE PERMIT**

**Authority: ORGANIC ADMINISTRATION ACT June 4, 1897**

Genwal Resources, Inc, a subsidiary of UtahAmerican Energy, Inc, of PO Box 910, East Carbon, Utah 84520 (hereinafter "the holder") is authorized to use and occupy National Forest System lands in the Manti-La Sal National Forest, Ferron-Price Ranger District unit of the National Forest System, subject to the terms and conditions of this special use permit (the permit).

This permit covers 7.53 acres, more or less, and is located in Lots 6 and 9 (SW $\frac{1}{4}$ NW $\frac{1}{4}$ ) of Section 5, Township 16 South, Range 7 East, Salt Lake Base Meridian, Emery County, Utah ("the permit area"), as shown on the attached vicinity map and facilities diagram, Appendix A and B.

This permit is issued to provide right-of-entry for the Crandall Canyon Mine Surface Facilities currently existing on Forest Service property with operations under UDOGM Permit #C/015/032. The facilities are located on a relinquished federal coal lease area (UTSL-062648) and include the following: shop, ventilation fan, rock-dust silo, power center, two power poles, offices and bathhouse (underground), intake portal, belt portal, fan portal, portal access road, mine belt, visual disconnect, warehouse and office building, 4500-gallon culinary water tank, shotcrete, parts shed, mag tank, concrete barricade, concrete dumpster pad, iron treatment shed, water treatment basin, sediment pond, culvert, and energy dissipater for Crandall Creek.

The holder will notify the District Ranger of any changes occurring to the facilities or the reclamation plans.

**TERMS AND CONDITIONS**

**I. GENERAL TERMS**

**A. AUTHORITY.** This permit is issued pursuant to the Organic Administration Act of June 4, 1897 and 36 CFR Part 251, Subpart B, as amended, and is subject to their provisions.

**B. AUTHORIZED OFFICER.** The authorized officer is the Forest Supervisor or a subordinate officer with delegated authority.

**C. TERM.** This permit shall expire at midnight on 12/31/2022.

**D. RENEWAL.** This permit is not renewable. Prior to expiration of this permit, the holder may apply for a new permit that would renew the use and occupancy authorized by this permit. Applications for a new permit must be submitted at least 6 months prior to expiration of this permit. Renewal of the use and occupancy authorized by this permit shall be at the sole discretion of the authorized officer. At a minimum, before renewing the use and occupancy authorized by this permit, the authorized officer shall require that (1) the use and occupancy to be authorized by the new permit is consistent with the standards and guidelines in the

applicable land management plan; (2) the type of use and occupancy to be authorized by the new permit is the same as the type of use and occupancy authorized by this permit; and (3) the holder is in compliance with all the terms of this permit. The authorized officer may prescribe new terms and conditions when a new permit is issued.

**E. AMENDMENT.** This permit may be amended in whole or in part by the Forest Service when, at the discretion of the authorized officer, such action is deemed necessary or desirable to incorporate new terms that may be required by law, regulation, directive, the applicable forest land and resource management plan, or projects and activities implementing a land management plan pursuant to 36 CFR Part 215.

**F. COMPLIANCE WITH LAWS, REGULATIONS, AND OTHER LEGAL REQUIREMENTS.** In exercising the rights and privileges granted by this permit, the holder shall comply with all present and future federal laws and regulations and all present and future state, county, and municipal laws, regulations, and other legal requirements that apply to the permit area, to the extent they do not conflict with federal law, regulation, or policy. The Forest Service assumes no responsibility for enforcing laws, regulations, and other legal requirements that fall under the jurisdiction of other governmental entities.

**G. NON-EXCLUSIVE USE.** The use or occupancy authorized by this permit is not exclusive. The Forest Service reserves the right of access to the permit area, including a continuing right of physical entry to the permit area for inspection, monitoring, or any other purpose consistent with any right or obligation of the United States under any law or regulation. The Forest Service reserves the right to allow others to use the permit area in any way that is not inconsistent with the holder's rights and privileges under this permit, after consultation with all parties involved. Except for any restrictions that the holder and the authorized officer agree are necessary to protect the installation and operation of authorized temporary improvements, the lands and waters covered by this permit shall remain open to the public for all lawful purposes.

**H. ASSIGNABILITY.** This permit is not assignable or transferable.

**I. TRANSFER OF TITLE TO THE IMPROVEMENTS.**

1. Notification of Transfer. The holder shall notify the authorized officer when a transfer of title to all or part of the authorized improvements is contemplated.
2. Transfer of Title. Any transfer of title to the improvements covered by this permit shall result in termination of the permit. The party who acquires title to the improvements must submit an application for a new permit. The Forest Service is not obligated to issue a new permit to the party who acquires title to the improvements. The authorized officer shall determine that the applicant meets requirements under applicable federal regulations.

**J. CHANGE IN CONTROL OF THE BUSINESS ENTITY.**

1. Notification of Change in Control. The holder shall notify the authorized officer when a change in control of the business entity that holds this permit is contemplated.
  - a. In the case of a corporation, control is an interest, beneficial or otherwise, of sufficient outstanding voting securities or capital of the business so as to permit the exercise of managerial authority over the actions and operations of the corporation or election of a majority of the board of directors of the corporation.
  - b. In the case of a partnership, limited partnership, joint venture, or individual entrepreneurship, control is a beneficial ownership of or interest in the entity or its capital so as to permit the exercise of managerial authority over the actions and operations of the entity.

c. In other circumstances, control is any arrangement under which a third party has the ability to exercise management authority over the actions or operations of the business.

2. Effect of Change in Control. Any change in control of the business entity as defined in paragraph 1 of this clause shall result in termination of this permit. The party acquiring control must submit an application for a special use permit. The Forest Service is not obligated to issue a new permit to the party who acquires control. The authorized officer shall determine whether the applicant meets the requirements established by applicable federal regulations.

## **II. IMPROVEMENTS**

**A. LIMITATIONS ON USE**. Nothing in this permit gives or implies permission to build or maintain any structure or facility or to conduct any activity, unless specifically authorized by this permit. Any use not specifically authorized by this permit must be proposed in accordance with 36 CFR 251.54. Approval of such a proposal through issuance of a new permit or permit amendment is at the sole discretion of the authorized officer.

**B. PLANS**. All plans for development, layout, construction, reconstruction, or alteration of improvements in the permit area, as well as revisions to those plans must be prepared by a professional engineer, architect, landscape architect, or other qualified professional based on federal employment standards acceptable to the authorized officer. These plans and plan revisions must have written approval from the authorized officer before they are implemented. The authorized officer may require the holder to furnish as-built plans, maps, or surveys upon completion of the work.

**C. CONSTRUCTION**. Any construction authorized by this permit shall commence by n/a and shall be completed by n/a.

## **III. OPERATIONS**

**A. PERIOD OF USE**. Use or occupancy of the permit area shall be exercised at least 365 days each year.

**B. CONDITION OF OPERATIONS**. The holder shall maintain the authorized improvements and permit area to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the authorized officer and consistent with other provisions of this permit. Standards are subject to periodic change by the authorized officer when deemed necessary to meet statutory, regulatory, or policy requirements or to protect national forest resources. The holder shall comply with inspection requirements deemed appropriate by the authorized officer.

**C. OPERATING PLAN**. The holder shall prepare and annually revise by 12/31/2016 an operating plan. The operating plan shall be prepared in consultation with the authorized officer or the authorized officer's designated representative and shall cover all operations authorized by this permit. The operating plan shall outline steps the holder will take to protect public health and safety and the environment and shall include sufficient detail and standards to enable the Forest Service to monitor the holder's operations for compliance with the terms and conditions of this permit. The operating plan shall be submitted by the holder and approved by the authorized officer or the authorized officer's designated representative prior to commencement of operations and shall be attached to this permit as an appendix. The authorized officer may require an annual meeting with the holder to discuss the terms and conditions of the permit or operating plan, annual use reports, or other concerns either party may have.

**D. INSPECTION BY THE FOREST SERVICE.** The Forest Service shall monitor the holder's operations and reserves the right to inspect the permit area and transmission facilities at any time for compliance with the terms of this permit. The holder's obligations under this permit are not contingent upon any duty of the Forest Service to inspect the permit area or transmission facilities. A failure by the Forest Service or other governmental officials to inspect is not a justification for noncompliance with any of the terms and conditions of this permit.

#### **IV. RIGHTS AND LIABILITIES**

**A. LEGAL EFFECT OF THE PERMIT.** This permit, which is revocable and terminable, is not a contract or a lease, but rather a federal license. The benefits and requirements conferred by this authorization are reviewable solely under the procedures set forth in 36 CFR 251, Subpart C and 5 U.S.C. 704. This permit does not constitute a contract for purposes of the Contract Disputes Act, 41 U.S.C. 601. The permit is not real property, does not convey any interest in real property, and may not be used as collateral for a loan.

**B. VALID OUTSTANDING RIGHTS.** This permit is subject to all valid outstanding rights. Valid outstanding rights include those derived under mining and mineral leasing laws of the United States. The United States is not liable to the holder for the exercise of any such right.

**C. ABSENCE OF THIRD-PARTY BENEFICIARY RIGHTS.** The parties to this permit do not intend to confer any rights on any third party as a beneficiary under this permit.

**D. SERVICES NOT PROVIDED.** This permit does not provide for the furnishing of road or trail maintenance, water, fire protection, search and rescue, or any other such service by a government agency, utility, association, or individual.

**E. RISK OF LOSS.** The holder assumes all risk of loss associated with use or occupancy of the permit area, including but not limited to theft, vandalism, fire and any fire-fighting activities (including prescribed burns), avalanches, rising waters, winds, falling limbs or trees, and other forces of nature. If authorized temporary improvements in the permit area are destroyed or substantially damaged, the authorized officer shall conduct an analysis to determine whether the improvements can be safely occupied in the future and whether rebuilding should be allowed. If rebuilding is not allowed, the permit shall terminate.

**F. DAMAGE TO UNITED STATES PROPERTY.** The holder has an affirmative duty to protect from damage the land, property, and other interests of the United States. Damage includes but is not limited to fire suppression costs, damage to government-owned improvements covered by this permit, and all costs and damages associated with or resulting from the release or threatened release of a hazardous material occurring during or as a result of activities of the holder or the holder's heirs, assigns, agents, employees, contractors, or lessees on, or related to, the lands, property, and other interests covered by this permit. For purposes of clause IV.F and section V, "hazardous material" shall mean (a) any hazardous substance under section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any petroleum product or its derivative, including fuel oil, and waste oils; and (d) any hazardous substance, extremely hazardous substance, toxic substance, hazardous waste, ignitable, reactive or corrosive materials, pollutant, contaminant, element, compound, mixture, solution or substance that may pose a present or potential hazard to human health or the environment under any applicable environmental laws.

1. The holder shall avoid damaging or contaminating the environment, including but not limited to the soil, vegetation (such as trees, shrubs, and grass), surface water, and groundwater, during the holder's use or occupancy of the permit area. If the environment or any government property covered by this

permit becomes damaged during the holder's use or occupancy of the permit area, the holder shall immediately repair the damage or replace the damaged items to the satisfaction of the authorized officer and at no expense to the United States.

2. The holder shall be liable for all injury, loss, or damage, including fire suppression, prevention and control of the spread of invasive species, or other costs in connection with rehabilitation or restoration of natural resources associated with the use or occupancy authorized by this permit. Compensation shall include but not be limited to the value of resources damaged or destroyed, the costs of restoration, cleanup, or other mitigation, fire suppression or other types of abatement costs, and all administrative, legal (including attorney's fees), and other costs. Such costs may be deducted from a performance bond required under clause IV.I.

3. The holder shall be liable for damage caused by use of the holder or the holder's heirs, assigns, agents, employees, contractors, or lessees to all roads and trails of the United States to the same extent as provided under clause IV.F.1, except that liability shall not include reasonable and ordinary wear and tear.

**G. HEALTH, SAFETY, AND ENVIRONMENTAL PROTECTION.** The holder shall promptly abate as completely as possible and in compliance with all applicable laws and regulations any activity or condition arising out of or relating to the authorized use or occupancy that causes or threatens to cause a hazard to public health or the safety of the holder's employees or agents or harm to the environment (including areas of vegetation or timber, fish or other wildlife populations, their habitats, or any other natural resources). The holder shall prevent impacts to the environment and cultural resources by implementing actions identified in the operating plan to prevent establishment and spread of invasive species. The holder shall immediately notify the authorized officer of all serious accidents that occur in connection with such activities. The responsibility to protect the health and safety of all persons affected by the use or occupancy authorized by this permit is solely that of the holder. The Forest Service has no duty under the terms of this permit to inspect the permit area or operations and activities of the holder for hazardous conditions or compliance with health and safety standards.

**H. INDEMNIFICATION OF THE UNITED STATES.** The holder shall indemnify, defend, and hold harmless the United States for any costs, damages, claims, liabilities, and judgments arising from past, present, and future acts or omissions of the holder in connection with the use or occupancy authorized by this permit. This indemnification provision includes but is not limited to acts and omissions of the holder or the holder's heirs, assigns, agents, employees, contractors, or lessees in connection with the use or occupancy authorized by this permit which result in (1) violations of any laws and regulations which are now or which may in the future become applicable, and including but not limited to those environmental laws listed in clause V.A of this permit; (2) judgments, claims, demands, penalties, or fees assessed against the United States; (3) costs, expenses, and damages incurred by the United States; or (4) the release or threatened release of any solid waste, hazardous waste, hazardous materials, pollutant, contaminant, oil in any form, or petroleum product into the environment. The authorized officer may prescribe terms that allow the holder to replace, repair, restore, or otherwise undertake necessary curative actions to mitigate damages in addition to or as an alternative to monetary indemnification.

**I. BONDING.** The authorized officer may require the holder to furnish a surety bond or other security for any of the obligations imposed by the terms and conditions of this permit or any applicable law, regulation, or order. (The State of Utah holds the bond.)

**J. STRICT LIABILITY.** The holder shall be strictly liable (liable without proof of negligence) to the United States for \$ amount up to \$1 million per occurrence for any injury, loss, or damage arising in tort under this

permit. Liability in tort for injury, loss, or damage to the United States exceeding the prescribed amount of strict liability in tort shall be determined under the law of negligence.

**K. INSURANCE.** The holder shall furnish proof of insurance, such as a certificate of insurance, to the authorized officer prior to issuance of this permit and each year thereafter that this permit is in effect. The Forest Service reserves the right to review and approve the insurance policy prior to issuance. The holder shall send an authenticated copy of any insurance policy obtained pursuant to this clause to the authorized officer immediately upon issuance of the policy. Any insurance policies obtained by the holder pursuant to this clause shall name the United States as an additional insured, and the additional insured provision shall provide for insurance coverage for the United States as required under this clause. Such policies also shall specify that the insurance company shall give 30 days prior written notice to the authorized officer of cancellation of or any modification to the policies. The certificate of insurance, the authenticated copy of the insurance policy, and written notice of cancellation or modification of insurance policies should be sent to Manti-La Sal National Forest, Supervisor's Office, 599-A West Price River Drive, Price, UT 84501. Minimum amounts of coverage and other insurance requirements are subject to change at the sole discretion of the authorized officer on the anniversary date of this permit.

1. The holder shall have in force liability insurance covering losses associated with the use or occupancy authorized by this permit arising from personal injury or death and third-party property damage in the minimum amount of \$1,000,000 as a combined single limit per occurrence.

2. Depending on the holder's operations, the Forest Service may require the holder to demonstrate the availability of funds to address any release or threatened release of hazardous materials that may occur in connection with the holder's use or occupancy. Any requirements imposed would be established on a case-by-case basis by the authorized officer based on the degree of environmental risk from the holder's operations. The storage and use of normal maintenance supplies in nominal amounts generally would not trigger financial assurance requirements.

## **V. RESOURCE PROTECTION**

**A. COMPLIANCE WITH ENVIRONMENTAL LAWS.** The holder shall in connection with the use or occupancy authorized by this permit comply with all applicable federal, state, and local environmental laws and regulations, including but not limited to those established pursuant to the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6901 et seq., the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq., the Oil Pollution Act, as amended, 33 U.S.C. 2701 et seq., the Clean Air Act, as amended, 42 U.S.C. 7401 et seq., CERCLA, as amended, 42 U.S.C. 9601 et seq., the Toxic Substances Control Act, as amended, 15 U.S.C. 2601 et seq., the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, 7 U.S.C. 136 et seq., and the Safe Drinking Water Act, as amended, 42 U.S.C. 300f et seq.

**B. VANDALISM.** The holder shall take reasonable measures to prevent and discourage vandalism and disorderly conduct and when necessary shall contact the appropriate law enforcement officer.

**C. PESTICIDE USE.** Pesticides may not be used outside of buildings to control undesirable woody and herbaceous vegetation (including aquatic plants), insects, rodents, fish, and other pests and weeds without prior written approval from the authorized officer. A request for approval of planned uses of pesticides shall be submitted annually by the holder on the due date established by the authorized officer. The report shall cover a 12-month period of planned use beginning 3 months after the reporting date. Information essential for review shall be provided in the form specified. Exceptions to this schedule may be allowed, subject to emergency request and approval, only when unexpected outbreaks of pests or weeds require control measures that were not anticipated at the time an annual report was submitted. Only those materials registered by the

U.S. Environmental Protection Agency for the specific purpose planned shall be considered for use on National Forest System lands. Label instructions and all applicable laws and regulations shall be strictly followed in the application of pesticides and disposal of excess materials and containers.

**D. ARCHAEOLOGICAL-PALEONTOLOGICAL DISCOVERIES.** The holder shall immediately notify the authorized officer of all antiquities or other objects of historic or scientific interest, including but not limited to historic or prehistoric ruins, fossils, or artifacts discovered in connection with the use and occupancy authorized by this permit. The holder shall leave these discoveries intact and in place until directed otherwise by the authorized officer. Protective and mitigative measures specified by the authorized officer shall be the responsibility of the holder.

**E. NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION.** In accordance with 25 U.S.C. 3002(d) and 43 CFR 10.4, if the holder inadvertently discovers human remains, funerary objects, sacred objects, or objects of cultural patrimony on National Forest System lands, the holder shall immediately cease work in the area of the discovery and shall make a reasonable effort to protect and secure the items. The holder shall immediately notify the authorized officer by telephone of the discovery and shall follow up with written confirmation of the discovery. The activity that resulted in the inadvertent discovery may not resume until 30 days after the authorized officer certifies receipt of the written confirmation, if resumption of the activity is otherwise lawful, or at any time if a binding written agreement has been executed between the Forest Service and the affiliated Indian tribes that adopts a recovery plan for the human remains and objects.

**F. PROTECTION OF HABITAT OF THREATENED, ENDANGERED, AND SENSITIVE SPECIES.** The location of sites within the permit area needing special measures for protection of plants or animals listed as threatened or endangered under the Endangered Species Act (ESA) of 1973, 16 U.S.C. 1531 et seq., as amended, or identified as sensitive or otherwise requiring special protection by the Regional Forester under Forest Service Manual (FSM) 2670, pursuant to consultation conducted under section 7 of the ESA, may be shown on the ground or on a separate map. The map shall be attached to this permit as an appendix. The holder shall take any protective and mitigative measures specified by the authorized officer. If protective and mitigative measures prove inadequate, if other sites within the permit area containing threatened, endangered, or sensitive species or species otherwise requiring special protection are discovered, or if new species are listed as threatened or endangered under the ESA or identified as sensitive or otherwise requiring special protection by the Regional Forester under the FSM, the authorized officer may specify additional protective and mitigative measures. Discovery of these sites by the holder or the Forest Service shall be promptly reported to the other party.

**G. CONSENT TO STORE HAZARDOUS MATERIALS.** The holder shall not store any hazardous materials at the site without prior written approval from the authorized officer. This approval shall not be unreasonably withheld. If the authorized officer provides approval, this permit shall include, or in the case of approval provided after this permit is issued, shall be amended to include specific terms addressing the storage of hazardous materials, including the specific type of materials to be stored, the volume, the type of storage, and a spill plan. Such terms shall be proposed by the holder and are subject to approval by the authorized officer.

1. If the holder receives consent to store hazardous material, the holder shall identify to the Forest Service any hazardous material to be stored at the site. Such identification information shall be consistent with column (1) of the table of hazardous materials and special provisions enumerated at 49 CFR 172.101 whenever the hazardous material appears in that table. For hazard communication purposes, the holder shall maintain Material Safety Data Sheets for any stored hazardous chemicals, consistent with 29 CFR 1910.1200(c) and (g). In addition, all hazardous materials stored by the holder

shall be used, labeled, stored, transported, and disposed of in accordance with all applicable federal, state, and local laws and regulations.

2. The holder shall not release any hazardous material as defined in clause IV.F. onto land or into rivers, streams, impoundments, or natural or man-made channels leading to them. All prudent and safe attempts must be made to contain any release of these materials. The authorized officer in charge may specify specific conditions that must be met, including conditions more stringent than federal, state, and local regulations, to prevent releases and protect natural resources.

#### **H. CLEANUP AND REMEDIATION**

1. The holder shall immediately notify all appropriate response authorities, including the National Response Center and the authorized officer or the authorized officer's designated representative, of any oil discharge or of the release of a hazardous material in the permit area in an amount greater than or equal to its reportable quantity, in accordance with 33 CFR Part 153, Subpart B, and 40 CFR Part 302. For the purposes of this requirement, "oil" is as defined by section 311(a)(1) of the Clean Water Act, 33 U.S.C. 1321(a)(1). The holder shall immediately notify the authorized officer or the authorized officer's designated representative of any release or threatened release of any hazardous material in or near the permit area which may be harmful to public health or welfare or which may adversely affect natural resources on federal lands.

2. Except with respect to any federally permitted release as that term is defined under Section 101(10) of CERCLA, 42 U.S.C. 9601(10), the holder shall clean up or otherwise remediate any release, threat of release, or discharge of hazardous materials that occurs either in the permit area or in connection with the holder's activities in the permit area, regardless of whether those activities are authorized under this permit. The holder shall perform cleanup or remediation immediately upon discovery of the release, threat of release, or discharge of hazardous materials. The holder shall perform the cleanup or remediation to the satisfaction of the authorized officer and at no expense to the United States. Upon revocation or termination of this permit, the holder shall deliver the site to the Forest Service free and clear of contamination.

**I. CERTIFICATION UPON REVOCATION OR TERMINATION.** If the holder uses or stores hazardous materials at the site, upon revocation or termination of this permit the holder shall provide the Forest Service with a report certified by a professional or professionals acceptable to the Forest Service that the permit area is uncontaminated by the presence of hazardous materials and that there has not been a release or discharge of hazardous materials upon the permit area, into surface water at or near the permit area, or into groundwater below the permit area during the term of the permit. This certification requirement may be waived by the authorized officer when the Forest Service determines that the risks posed by the hazardous material are minimal. If a release or discharge has occurred, the professional or professionals shall document and certify that the release or discharge has been fully remediated and that the permit area is in compliance with all federal, state, and local laws and regulations.

#### **VI. LAND USE FEE AND ACCOUNTING ISSUES**

**A. LAND USE FEES.** The holder shall pay an initial annual land use fee of \$1,236.32 for the period from 01/01/2017 through 12/31/2017, and thereafter on or before January 1st, shall pay an annual land use fee.

**B. MODIFICATION OF THE LAND USE FEE.** The land use fee may be revised whenever necessary to reflect the market value of the authorized use or occupancy or when the fee system used to calculate the land use fee is modified or replaced.

### **C. FEE PAYMENT ISSUES.**

1. Crediting of Payments. Payments shall be credited on the date received by the deposit facility, except that if a payment is received on a non-workday, the payment shall not be credited until the next workday.

2. Disputed Fees. Fees are due and payable by the due date. Disputed fees must be paid in full. Adjustments will be made if dictated by an administrative appeal decision, a court decision, or settlement terms.

#### **3. Late Payments**

(a) Interest. Pursuant to 31 U.S.C. 3717 et seq., interest shall be charged on any fee amount not paid within 30 days from the date it became due. The rate of interest assessed shall be the higher of the Prompt Payment Act rate or the rate of the current value of funds to the Treasury (i.e., the Treasury tax and loan account rate), as prescribed and published annually or quarterly by the Secretary of the Treasury in the Federal Register and the Treasury Fiscal Requirements Manual Bulletins. Interest on the principal shall accrue from the date the fee amount is due.

(b) Administrative Costs. If the account becomes delinquent, administrative costs to cover processing and handling the delinquency shall be assessed.

(c) Penalties. A penalty of 6% per annum shall be assessed on the total amount that is more than 90 days delinquent and shall accrue from the same date on which interest charges begin to accrue.

(d) Termination for Nonpayment. This permit shall terminate without the necessity of prior notice and opportunity to comply when any permit fee payment is 90 calendar days from the due date in arrears. The holder shall remain responsible for the delinquent fees.

4. Administrative Offset and Credit Reporting. Delinquent fees and other charges associated with the permit shall be subject to all rights and remedies afforded the United States pursuant to 31 U.S.C. 3711 et seq. and common law. Delinquencies are subject to any or all of the following:

(a) Administrative offset of payments due the holder from the Forest Service.

(b) If in excess of 60 days, referral to the Department of the Treasury for appropriate collection action as provided by 31 U.S.C. 3711(g)(1).

(c) Offset by the Secretary of the Treasury of any amount due the holder, as provided by 31 U.S.C. 3720 et seq.

(d) Disclosure to consumer or commercial credit reporting agencies.

### **VII. REVOCATION, SUSPENSION, AND TERMINATION**

**A. REVOCATION AND SUSPENSION.** The authorized officer may revoke or suspend this permit in whole or in part:

1. For noncompliance with federal, state, or local law.
2. For noncompliance with the terms of this permit.
3. For abandonment or other failure of the holder to exercise the privileges granted.
4. With the consent of the holder.
5. For specific and compelling reasons in the public interest.

Prior to revocation or suspension, other than immediate suspension under clause VII.B, the authorized officer shall give the holder written notice of the grounds for revocation or suspension. In the case of revocation or suspension based on clause VII.A.1, 2, or 3, the authorized officer shall give the holder a reasonable time, typically not to exceed 90 days, to cure any noncompliance.

**B. IMMEDIATE SUSPENSION.** The authorized officer may immediately suspend this permit in whole or in part when necessary to protect public health or safety or the environment. The suspension decision shall be in writing. The holder may request an on-site review with the authorized officer's supervisor of the adverse conditions prompting the suspension. The authorized officer's supervisor shall grant this request within 48 hours. Following the on-site review, the authorized officer's supervisor shall promptly affirm, modify, or cancel the suspension.

**C. APPEALS AND REMEDIES.** Written decisions by the authorized officer relating to administration of this permit are subject to administrative appeal pursuant to 36 CFR Part 214 as amended. Revocation or suspension of this permit shall not give rise to any claim for damages by the holder against the Forest Service.

**D. TERMINATION.** This permit shall terminate when by its terms a fixed or agreed upon condition, event, or time occurs without any action by the authorized officer. Examples include but are not limited to expiration of the permit by its terms on a specified date and termination upon change of control of the business entity. Termination of this permit shall not require notice, a decision document, or any environmental analysis or other documentation. Termination of this permit is not subject to administrative appeal and shall not give rise to any claim for damages by the holder against the Forest Service.

**E. RIGHTS AND RESPONSIBILITIES UPON REVOCATION OR TERMINATION WITHOUT RENEWAL.** Upon revocation or termination of this permit without renewal of the authorized use, the holder shall remove all structures and improvements, except those owned by the United States, within a reasonable period prescribed by the authorized officer and shall restore the site to the satisfaction of the authorized officer. If the holder fails to remove all structures and improvements within the prescribed period, they shall become the property of the United States and may be sold, destroyed, or otherwise disposed of without any liability to the United States. However, the holder shall remain liable for all costs associated with their removal, including costs of sale and impoundment, cleanup, and restoration of the site.

## **VIII. MISCELLANEOUS PROVISIONS**

**A. MEMBERS OF CONGRESS.** No member of or delegate to Congress or resident commissioner shall benefit from this permit either directly or indirectly, except to the extent the authorized use provides a general benefit to a corporation.

**B. CURRENT ADDRESSES.** The holder and the Forest Service shall keep each other informed of current mailing addresses, including those necessary for billing and payment of land use fees.

**C. SUPERSEDED PERMIT.** This permit supersedes a special use permit designated #PRI43 under Genwal Resources, dated 2003.

**D. SUPERIOR CLAUSES.** If there is a conflict between any of the preceding printed clauses and any of the following clauses, the preceding printed clauses shall control.

**E. Noxious Weed/Exotic Plant Prevention and Control (R4-D3).** The holder shall be responsible for the prevention and control of noxious weeds and/or exotic plants of concern on the area authorized by this authorization and shall provide prevention and control measures prescribed by the Forest Service. Noxious

weeds/exotic plants of concern are defined as those species recognized by Federal, State, or local agency in which the authorized use is located. The holder shall also be responsible for prevention and control of noxious weed/exotic plant infestations which are not within the authorized area, but which are determined by the Forest Service to have originated within the authorized area. When determined to be necessary by the authorized officer, the holder shall develop a site-specific plan for noxious weed/exotic plant prevention and control. Such plan shall be subject to Forest Service approval. Upon Forest Service approval, the noxious weed/exotic plant prevention and control plan shall become a part of this authorization, and its provisions shall be enforceable under the terms of this authorization.

**F. Ground Surface Protection and Restoration** (D-9). The holder shall prevent and control soil erosion and gullyng on National Forest System lands in and adjacent to the permit area resulting from construction, operation, maintenance, and termination of the authorized use. The holder shall construct authorized improvements so as to avoid accumulation of excessive amounts of water in the permit area and encroachment on streams. The holder shall revegetate or otherwise stabilize (for example, by constructing a retaining wall) all ground where the soil has been exposed as a result of the holder's construction, maintenance, operation, or termination of the authorized use.

**G. Fire Equipment** (F-7). The holder shall install fire extinguishers and firefighting apparatus of types, of capacities, in numbers, and at locations approved by the Authorized Officer. This equipment shall be in readiness at all times for immediate use, and shall be tested each year, at such times as may be required by the Authorized Officer.

**H. Fire-Control Plan** (F-20). The holder shall prepare a fire plan for approval by the Authorized Officer which shall set forth in detail the plan for prevention, reporting, control, and extinguishing of fires on the authorized areas and within the holder's area of responsibility defined on an attached map. Such plans shall be reviewed and revised at intervals of not more than three (3) years.

**I. Signs** (X-29). Signs or advertising devices erected on National Forest System lands shall have prior approval by the Forest Service as to location, design, size, color, and message. Erected signs shall be maintained or renewed as necessary to neat and presentable standards, as determined by the Forest Service.

**J. Improvement Relocation** (X-33). This authorization is granted with the express understanding that should future location of United States Government-owned improvements or road rights-of-way require the relocation of the holder's improvements, such relocation will be done by, and at the expense of, the holder within a reasonable time as specified by the Authorized Officer.

**THIS PERMIT #PRI-1608 IS ACCEPTED SUBJECT TO ALL ITS TERMS AND CONDITIONS.**

**BEFORE ANY PERMIT IS ISSUED TO AN ENTITY, DOCUMENTATION MUST BE PROVIDED TO THE AUTHORIZED OFFICER OF THE AUTHORITY OF THE SIGNATORY FOR THE ENTITY TO BIND IT TO THE TERMS AND CONDITIONS OF THE PERMIT.**

ACCEPTED:

<u>David Hbbs, President</u>	<u>David Hbbs</u>	<u>9/14/16</u>
HOLDER NAME, PRECEDED BY NAME AND TITLE OF PERSON SIGNING ON BEHALF OF HOLDER, IF HOLDER IS AN ENTITY	SIGNATURE	DATE

APPROVED:

<u>Darren Olsen, District Ranger</u>	<u>Darren Olsen</u>	<u>9/22/16</u>
NAME AND TITLE OF AUTHORIZED OFFICER	SIGNATURE	DATE

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082. The time required to complete this information collection is estimated to average one hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

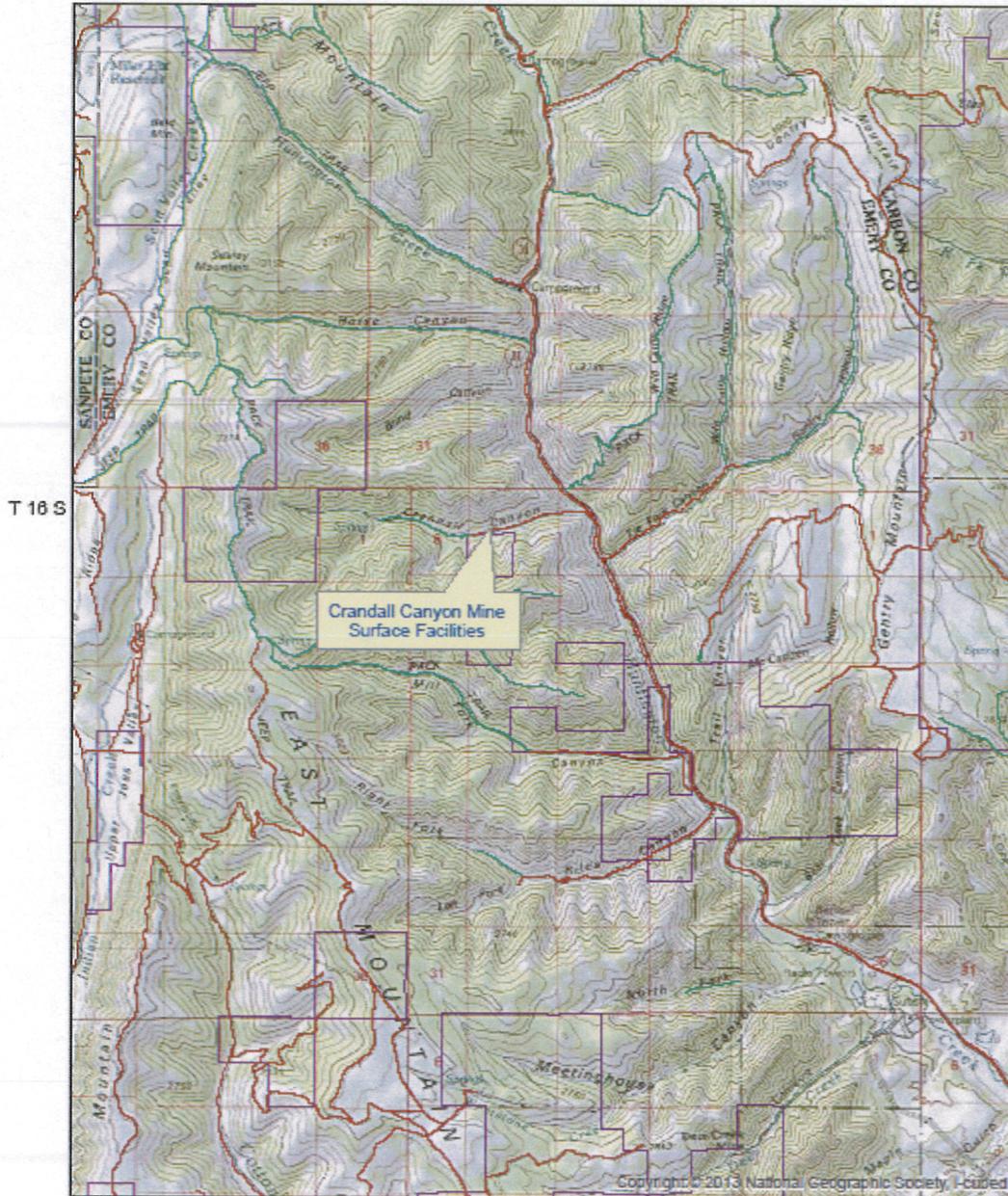
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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (800) 975-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service.

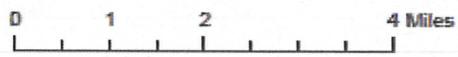
Appendix A: Vicinity Map

### Crandall Canyon Mine Surface Facilities



PRI-1608 Appendix A  
Vicinity Map  
September 2016

R 7 E





<i>Ref.</i>	<i>Description</i>	<i>Materials</i>	<i>Cost</i>
	Shop 01		\$35,947
	Ventilation Fan 02		\$11,346
	Rock Dust Silo 03		\$1,891
	Concrete Dump Pad 04		\$8,765
	Power Center 05		\$21,284
	Power Poles 06		\$5,878
	Underground Bathhouse 07		\$8,878
	Portals 08 Portal Sealing		\$30,086
	BeltPortals 09		\$4,995
	Crusher Pad 10		\$4,694
	Mine Belt 11		\$2,385
	Silo 13		\$47,725
	Weight Shed 14		\$661
	Bulk Oil 15		\$10,392
	Truck Pad 17		\$1,281
	General Storage 18		\$15,889
	Reclaim Hopper Belt 19		\$3,975
	Visual Disconnect 20		\$29
	New Shop 21		\$14,035
	Shop Extension 22		\$4,231
	Shotcrete Slopes 23		\$2,121
	Fan Transformer 24		\$239
	Chain Link Fence 25		\$368
	Concrete Guard 26		\$8,286
	Retaining Wall 27		\$5,423
	Culverts 28		\$6,804
	Guard Rail 29		\$1,589
	Inlets 30		\$2,356
	Sed Pond Culvert 31		\$48
	Gabion Retaining Wall 32		\$3,402
	Water Wells 33		\$0
	Head Walls 34		\$6,404
	Overhead Conveyor Supports 35		\$1,200
	Reclaim Tunnel 36		\$3,502
	Feeder Boxes 37		\$3,736
	Reclaim Conveyor Supports 38		\$140
	Crusher Platform Supports 39		\$1,702
	Feeder Conveyor Supports 40		\$140
	Scale Pads 41		\$8,066
	New Scale House 42		\$2,232
	Proposed Bathhouse 43		\$63,700
	Coal Silo 44		\$3,522
	Conveyors 45		\$8,093
	Parking Lot 46		\$61,331
	RubberLiner 47		\$26,235
	Culvert Bedding Removal 48		\$145,163
	Off Site Dump Fee 49		\$204,237
	Drainage Control 50		\$67,542
	Water Treatment Area		\$10,450
	Burma Basin 52		\$1,080
	Security Fence and Gates 53		\$3,614
	Total		\$887,092



Crandal Canyon Mine Midterm 2015			RSMeans		
Cost Factors			Cost		
Materials	Means Number	2016 Units	was		NOTE: Highlighted cells need quot proof of attempts at contact). For : Bowie Resources Nielson quote in for 2016 billing year
Floor Concrete 6" w/Reinforcement	02 41 16.17 0420	0.90	SF		
Footings Concrete, 2' thick 3' wide	02 41 16.17 1140	16.48	LF		
Footings Concrete 1' thick 2' wide	02 41 16.17 1000	9.64	LF		
Concrete Plain 8" thick w/reinforcing 10%	02 41 16.17 2420	0.83	SF	0.91	
Concrete Plain 12" thick w/reinforcin 10%	02 41 16.17 2500	1.15	SF	1.27	
Concrete 7" to 24" thick, plain	02 41 13.17 5400	91.00	CY		
Concrete 7" to 24" thick, plain w/reinforcement	02 41 13.17 5500	124.50	CY		
Front End Loader 3 CY	31 23 16.42 1300	1.69	CY		
12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.80	CY		
City Sanitation	City Sanitation	3.09	CY		
Steel bldg. Large	02 41 16.13 0020	0.28	CF		
Utility Pole RSMeans	02 41 13.80 0100	205.50	EA	203.8	
Guard Rail	02 41 13.30 0800	12.17	LF		
Guide Post	02 41 13.30 0860	12.92			
Chain link, posts & fabric remove only	02 41 13.60 1700	3.07	LF		
Mechanical equipment heavy	23 05 05.10 3600	795.00	Ton		
Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY		
9000 gal to 12000 gal tank Dismantal and haul	02 65 10.30 1029	1050.00	EA		
9000 gal to 12000 gal tank Disposal of tank (from Permittee)		325.00	EA		
Nielson Construction	Nielson Con (2016 bid)	7.64	Ton		
12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.80	CY		
On Site Disposal	02 41 16.17 4200	9.07	CY		
Wire Removal	02 41 13.56 1900	5.50	LF	5.39	
Wire Removal	23 05 05.10 1900	19.60	LF		
Conduit	26 05 05.10 0160	5.50	LF		
Fixtures	22 05 05.10 1140	94.50	EA		
Masonry bld. Large	02 41 16.13 0080	0.31	CF		
Seal Portals	JennChem (bid 2016)	4320.00	EA		
Mixture of Types; average	02 41 16.13 0100	0.31	CF		
Plug Well	Nielson Con (2016 bid)	170.00	EA		
Concrete Bld. Large	02 41 16.13 0050	0.40	CF		
Pavement Removal, Bituminous 3"	02 41 13.17 5010	4.33	SY		
Silt Fence	31 25 14.16 1000	1.15	LF		
Riprap Dumped 300 lb. average	31 37 13.10 0370	30.52	Ton		
Bare root seedings 11" to 16" med. Soil		1.35	EA		
Hydro Spreader (equip. & labor) Revege 005	Reveg 005	20.40	MSF		
Seed Non Riparian Area	Crandall 15321	281.83	\$/Ac		
Hydro Spreader (equip. & labor) Revege 002	Reveg 002	20.40	MSF		
Hay 1" Material Only	Reveg 001	132.00	MSF		
Transplant Non Riparian	Crandall 15322	206.05	\$/Ac		
Transplant North slope	Crandall 15323	1915.00	\$/Ac		
Seed Riparian Area	Crandall 15324	289.88	\$/Ac		
Transplant Riparian	Crandall 15325	554.39	\$/Ac		
D9R Bulldozer Semi-U EROPS	Scamp Excavation	185.00			
Hourly Cost	01 54 33 4360				
988G II ((6-13) 1H2008) 2005	Scamp Excavation	120.00			
Hourly Cost	01 54 33 4870				
770 Cat Off-Highway Truck	Scamp Excavation	150.00			
Hourly Cost	01 54 33 5600				
Chain link remove 8'-10'	02 41 13.60 1700	3.07	/LF		
Excavate 3 CY excavator	31 23 16.13 0050	7.19	BCY		
Chainlink 6' tall	02 41 13.60 1700	3.07	LF	3.05	
Fence posts in concrete	02 41 13.62 1000	17.07	EA	16.95	
Barbed Wire	02 41 13.62 1200	0.27	LF		
Chainlink gate 10'-12' wide	02 41 13.62 0200	85.00	EA	02 41 13.62 0100	
Metal gate 4'-6' high 3'-4' Wide	02 41 13.66 0600	68.30	EA	67.7	
metal gate 8'x15'	02 41 13.62 0400	136.50	EA	135.5	
Floor Concrete 4" w/Reinforcement	02 41 16.17 0280	0.72	SF		
Concrete Demolition (Scamp)	Concret Demo1	18.00	CY		
CAT 385B	01 54 33.20 0320	102.00			
Hourly Cost	01 54 33 0320				
Dump Truck	Scamp Excavatn	85.00			
Hourly Cost	01 54 33 5300				
416 Backhoe Loaders	Scamp Excavatn	75.00			
Hourly Cost	01 54 33 0470				
6,000 Gal H2O Truck Diesel (2nd2008)	Scamp Excavatn	90.00			
Hourly Cost	01 54 33 6950				
Pick-up Truck 4x4 1 Ton	Scamp Excavatn	40.00			
Hourly Cost	01 54 33 7200				
Foreman Average Outside	RSMeans Back Cover	51.90			
CLAB (Common Building Laborers)	RSMeans Back Cover	37.90			
Truck Driver (Heavy) (Eqmm)	RSMeans Back Cover	43.20			
Heavy Equip. Operator (Med) (Trhv)	RSMeans Back Cover	52.25			
D7R Semi-U EROPS	01 54 33.20 4310	100.25			
Hourly Cost	01 54 33 4310				
Cat 350	Scamp Excavatn	155.00			

Scamp excavation quotes include

Hourly Cost	01 54 33.20 0300		
Cat 420	Scamp Excavaton	140.00	
Hourly Cost	01 54 33 0470		
Demolition 18" CMP	02 41 13.23 2930	17.40	LF
Excavate 3/8 CY excavator	31 23 16.13 0050	7.19	CY
Front end loader, 4WD, 3.5CY., 145 HP	01 54 33 20	33.25	
Environmental Fee ( Per Load )		15.00	Load
Labor	JennChem	265.00	Hr
Cat 390	01 54 33 20 0325	143.70	



the documentation (three references with documentation of  
sack of calculating approximate reclamation cost utilized  
information but Crandall MUST get their own documentation

operator costs



Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
01	<b>Shop 01</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF	160	20	20					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 bid)	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	160	20	0.5		1600			
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details, item 1. Volume of building is reduced by 65% due to no interior walls or insulation.



Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
02	Ventilation Fan 02												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF	60	20	16.57					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	60	20	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.80	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details, see item 2. Volume of building is reduced by 65% due to no interior walls or insulation.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
03	<b>Rock Dust Silo 03</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF			30	12				
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	2	3	2					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details, item 3. See Plate5-7 for more details of the rock dust silo. Volume of building is reduced by 65% due to no interior walls or insulation.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
04	<b>Concrete Dump Pad 04</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	30	25	1			750		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Asphalt Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	135	130	0.25			17550		
	Concrete's Vol. Demolished							0.25					
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details, item 4.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
05	<b>Power Center 05</b>												
	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												
	<b>Subtotal</b>												
	Mechanical Equipment	Mechanical equipment heavy	23 05 05.10 3600	795	Ton							5	
	Transformer	Mechanical equipment heavy	23 05 05.10 3600	795	Ton							2	
	Underground Wire	Wire Removal	02 41 13.56 1900	5.5	LF	900							
	Aerial Wire	Wire Removal	23 05 05.10 1900	19.6	LF	500							
	Chain Link Fence	Chain link remove 8'-10'	02 41 13.60 1700	3.07	/LF	120							
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	25	21	0.67		525	352		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details, item 5. See Plate 5-8 for more details of electrical substation. Chain link removal includes fence and posts





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
06	<b>Power Poles 06</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Remove wire	Wire Removal	23 05 05.10 1900	19.6	LF	180							
	Remove conduit (use wire)	Conduit	26 05 05.10 0160	5.5	LF	100							
	Remove Fixtures (use poles)	Fixtures	22 05 05.10 1140	94.5	EA								
	Remove Poles	Utility Pole RSMMeans	02 41 13.80 0100	205.5	EA								
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details, item 6. Needs reference quote due to no relevant R.S. Means ID





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
07	<b>Underground Bathhouse 07</b>												
	Structure's Demolition Cost	Masonry bld. Large	02 41 16.13 0080	0.31	CF						14000		
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	70	20	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details, item 7. Volume of building is reduced by 65% due to no interior walls or insulation.

















Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
10	<b>Crusher Pad 10</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF	36	20	1					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost	Mechanical equipment heavy	23 05 05.10 3600	795.00	Ton								3
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	36	20	1					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.80	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY						418		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.80	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details, items 17 and 18. Volume of building is reduced by 65% due to no interior walls or insulation.



Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
				720	CF	\$202.00
			0.35	9	CY	
				9	CY	\$97.00
		Ton/CY		9	ton	\$69.00
						\$368.00
		ton		3	ton	\$2,385.00
						\$2,385.00
				27	CY	\$486.00
			1.3	35	CY	
				35	CY	\$59.00
				35	CY	\$378.00
				35	CY	\$317.00
						\$1,240.00
		CF		15	CY	\$270.00
			1.3	20	CY	
				20	CY	\$34.00
				20	CY	\$216.00
				20	CY	\$181.00
						\$701.00
						\$4,694.00

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
11	<b>Mine Belt 11</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost	Mechanical equipment heavy	23 05 05.10 3600	795.00	Ton							2.5	
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details. Cost is per ton so must be rounded up





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
13	<b>Silo 13</b>												
	Structure's Demolition Cost	Mixture of Types; average	02 41 16.13 0100	0.31	CF			75	30				
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.80	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost	Mechanical equipment heavy	23 05 05.10 3600	795.00	Ton							20	
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	160	20	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.80	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details. Volume of building is reduced by 65% due to no interior walls or insulation.



Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		FT		53014	CF	\$16,434.00
			0.35	687	CY	
				687	CY	\$7,420.00
		Ton/CY		687	ton	\$5,249.00
						\$29,103.00
		ton		20	ton	\$15,900.00
						\$15,900.00
				59	CY	\$1,062.00
			1.3	77	CY	
				77	CY	\$130.00
				77	CY	\$832.00
				77	CY	\$698.00
						\$2,722.00
						\$47,725.00

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
14	<b>Weight Shed 14</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY						2		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY						235		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY						80		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details. Volume of building is reduced by 65% due to no interior walls or insulation.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
15	<b>Bulk Oil 15</b>												
	Structure's Demolition Cost	Masonry bld. Large	02 41 16.13 0080	0.31	CF	55	20	10					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Subtotal												
	Tank												
	Dismantling Cost	9000 gal to 12000 gal tank Dismantal and h	02 65 10.30 1029	1050	EA								
	Transport Costs	9000 gal to 12000 gal tank Dismantal and h	02 65 10.30 1029	1050	EA								
	Disposal Costs	9000 gal to 12000 gal tank Disposal of tank (from Permittee)		325	EA								
	<b>Subtotal</b>												
	Slab												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	20	55	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Footings												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	150	2	1					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Slab												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	20	20	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Walls												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	20	0.67	8.4					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Total												

Notes: See Plate 5-3 for surface facilities details. Volume of building is reduced by 65% due to no interior walls or insulation. 3/2016-Old RSM means number 02115 200 0320 was not included in the Cost factors. I looked it up and didn't delete it.



Unsure what Materials this should be.

Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
				11000	CF	\$3,410.00
			0.35	143	CY	
				143	CY	\$1,544.00
		Ton/CY		143	ton	\$1,093.00
						\$6,047.00
	1	Ea		1	EA	\$1,050.00
	1			1	EA	\$1,050.00
	1			1	EA	\$325.00
						<b>\$2,425.00</b>
		FT		20	CY	\$360.00
			1.3	26	CY	
				26	CY	\$44.00
				26	CY	\$281.00
				26	CY	\$236.00
						<b>\$921.00</b>
		FT		11	CY	\$198.00
			1.3	14	CY	
				14	CY	\$24.00
				14	CY	\$151.00
				14	CY	\$127.00
						<b>\$500.00</b>
		FT		7	CY	\$126.00
			1.3	9	CY	
				9	CY	\$15.00
				9	CY	\$97.00
				9	CY	\$82.00
						<b>\$320.00</b>
		FT		4	CY	\$72.00
			1.3	5	CY	
				5	CY	\$8.00
				5	CY	\$54.00
				5	CY	\$45.00
						<b>\$179.00</b>
						\$10,392.00

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
17	<b>Truck Pad 17</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY						750		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
18	<b>General Storage 18</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF	20	60	23					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	20	67.5	0.67					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details. Volume of building is reduced by 65% due to no interior walls or insulation.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
19	<b>Reclaim Hopper Belt 19</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost	Mechanical equipment heavy	23 05 05.10 3600	795	Ton							5	
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
20	<b>Visual Disconnect 20</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost	Mechanical equipment heavy	23 05 05.10 3600	795	Ton							1	
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	4	6	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details. Amendment to 2015 midterm states equipment was moved to Lila Canyon Mine, pad remains on site





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
21	<b>New Shop 21</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF	20	62.5	20					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	20	62.5	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details. Volume of building is reduced by 65% due to no interior walls or insulation.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
22	<b>Shop Extension 22</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF	20	30	12					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	20	30	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details. Volume of building is reduced by 65% due to no interior walls or insulation.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
23	<b>Shotcrete Slopes 23</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY						46		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
24	<b>Fan Transformer 24</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost	Mechanical equipment heavy	23 05 05.10 3600	795.00	Ton							0.25	
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	6	8	0.67					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
25	<b>Chain Link Fence 25</b>												
	Structure's Demolition Cost	Chain link, posts & fabric remove only	02 41 13.60 1700	3.07	LF	120							
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage												
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel												
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
26	<b>Concrete Guard 26</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	530	2	3					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	250	10	0.67					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
27	<b>Retaining Wall 27</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	530	2	3					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
28	<b>Culverts 28</b>												
	UD-1	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	295	3.5	7					
	C2, C4, C8, C10	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	600	2	4					
	C1	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	60	1.5	3					
	C12	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	85	1.25	2.5					
	C3, C7, C9, C11	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	251	1	2					
	UD-3	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	500	1.5	3					
	C-5	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	120	1	2					
	Bypass	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	1400	2	4					
	Main Creek	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	1400	6	12					
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details. NEED TO CHECK COST





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor
29	<b>Guard Rail 29</b>																
	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																
	<b>Subtotal</b>																
	Equipment 's Disposal Cost																
	Remove Rails	Guard Rail	02 41 13.30 0800	12.17	LF	120										LF	
	Remove Posts	Guide Post	02 41 13.30 0860	12.92	EA	24									10	EA	
	Loading Costs																
	Transport Costs																
	Disposal Costs																
	<b>Subtotal</b>																
	Concrete Demolition																
	Demolition Cost																
	Concrete's Vol. Demolished																
	Loading Cost																
	Transportation Cost																
	Disposal Costs																
	<b>Subtotal</b>																
	Concrete Demolition																
	Demolition Cost																
	Concrete's Vol. Demolished																
	Loading Cost																
	Transportation Cost																
	Disposal Costs																
	<b>Subtotal</b>																
	Concrete Demolition																
	Demolition Cost																
	Concrete's Vol. Demolished																
	Loading Cost																
	Transportation Cost																
	Disposal Costs																
	<b>Subtotal</b>																
	<b>Total</b>																

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
30	<b>Inlets 30</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost	Mechanical equipment heavy	23 05 05.10 3600	795.00	Ton							1	
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY						11		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	4	6	0.67					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
31	<b>Sed Pond Culvert 31</b>												
	CMP 24	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	110	2	4					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage												
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel												
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
32	<b>Gabion Retaining Wall 32</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY						2000		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





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	
33	<b>Water Wells 33</b>																				
	Structure's Demolition Cost	No wells on the surface														0 EA			0 EA		\$0.00
	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																				
	<b>Subtotal</b>																				
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	<b>Subtotal</b>																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	<b>Subtotal</b>																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	<b>Subtotal</b>																				
	<b>Total</b>																				\$0.00

Notes: See Plate 5-3 for surface facilities details.



Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
34	<b>Headwalls 34</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	18	18	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY						3600		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
	<b>Overhead Conveyor Supports 35</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	7	7	2					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	2	2	4					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time
36	<b>Reclaim Tunnel 36</b>													
	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													
	<b>Subtotal</b>													
	Equipment 's Disposal Cost													
	Dismantling Cost													
	Equipment 's Vol. Demolished													
	Loading Costs													
	Transport Costs													
	Disposal Costs													
	<b>Subtotal</b>													
	Concrete Demolition													
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	170	12	1						
	Concrete's Vol. Demolished													
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY									
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY									
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY									
	<b>Subtotal</b>													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	<b>Subtotal</b>													
	Concrete Demolition													
	Demolition Cost													
	Concrete's Vol. Demolished													
	Loading Cost													
	Transportation Cost													
	Disposal Costs													
	<b>Subtotal</b>													
	<b>Total</b>													

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
37	<b>Feeder Boxes 37</b>												
	Structure's Demolition Cost	Concrete Bld. Large	02 41 16.13 0050	0.4	CF	13.5	16.5	8.5					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	8	5	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
38	<b>Reclaim Conveyor Supports 38</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	4.5	4.5	1					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	2	4	2					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
39	<b>Crusher Platform Supports 39</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	8	8	3					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	4	4	4					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.



Couldn't find any RSMeans that are 3 or 4 ft thick used the one that is 24" thick. 02 41 13.17 5500



Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
40	<b>Feeder Conveyor Supports 40</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	4.5	4.5	1					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	2	4	2					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
41	<b>Scale Pads 41</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	20	20	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	12	60	1					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	12	60	2					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
42	<b>New Scale House 42</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF	20	20	8					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	20	30	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	3	8	1.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	0.66	80	0.66					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
43	<b>Proposed Bathhouse 43</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF	60	100	18					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	60	100	0.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	3	320	1.5					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Concrete Demolition (Scamp)	Concret Demo1	18.00	CY	1	80	0.66					
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
44	<b>Coal Silo 44</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF			60	12				
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
45	<b>Conveyors 45</b>												
	Structure's Demolition Cost	Steel bldg. Large	02 41 16.13 0020	0.28	CF	5	780	4					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage	12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.8	CY								
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	Nielson Construction	Nielson Con (2016 b	7.64	Ton								1
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
46	<b>Parking Lot 46</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Pavement Removal, Bituminous 3"	02 41 13.17 5010	4.33	SY					4800			
	Concrete's Vol. Demolished							0.25					
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost	Pavement Removal, Bituminous 3"	02 41 13.17 5010	4.33	SY					4400			
	Concrete's Vol. Demolished							0.25					
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
47	<b>RubberLiner 47</b>												
	Structure's Demolition Cost												
	Structure's Vol. Demolished	Mechanical equipment heavy	23 05 05.10 3600	795.00	Ton							32.5	
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage												
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel												
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	xxxxx												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
48	<b>Culvert Bedding Removal 48</b>												
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Stream Bed Sand												
	Demolition Cost	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY						1296		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Culvert Bed Sand												
	Demolition Cost	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY						3630		
	Concrete's Vol. Demolished												
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.69	CY								
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1025	10.8	CY								
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.07	CY								
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	xxxxx												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
	See Backfilling & Grading Plan												
49	<b>Off Site Dump Fee 49</b>												
	Structure's Demolition Cost												
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)												
	Truck's Capacity												
	Haulage												
	Transportation Cost Non Steel Truck												
	Transportation Cost Non Steel Drive												
	Disposal Cost Non Steel	City Sanitation	City Sanitation	3.09	CY						66096		
	Steel's Weight												
	Truck's Capacity												
	Haulage												
	Transportation Cost Steel Truck												
	Transportation Cost Steel Truck Drive												
	Disposal Cost Steel												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
	See Backfilling and Grading												
	<b>Drainage Control 50</b>												
	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												
	<b>Subtotal</b>												
	Filter Material	Silt Fence	31 25 14.16 1000	1.15	LF	3000							
	Rip-rap	Riprap Dumped 300 lb. average	31 37 13.10 0370	30.52	Ton							2100	
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-3 for surface facilities details.











Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density
31	<b>Burma Basin 52</b>												
	CMP 24	Demolition 18" CMP	02 41 13.23 2930	17.40	LF	20		1.5					
	Structure's Vol. Demolished												
	Rubble's Weight (exclude steel)	Excavate 3 CY excavator	31 23 16.13 0050	7.19	BCY	20	5	4.5			450		
	Truck's Capacity												
	Haulage	D7R Semi-U EROPS	(9-37)	233.64	\$/HR								
	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												
	<b>Subtotal</b>												
	Equipment 's Disposal Cost												
	Dismantling Cost												
	Equipment 's Vol. Demolished												
	Loading Costs												
	Transport Costs												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	Concrete Demolition												
	Demolition Cost												
	Concrete's Vol. Demolished												
	Loading Cost												
	Transportation Cost												
	Disposal Costs												
	<b>Subtotal</b>												
	<b>Total</b>												

Notes: See Plate 5-A3 for surface facilities details. MRP Details need for imported cover over pond sludge, 3.5 ft on site and 6 inches imported (6" over 20,000 ft<sup>2</sup>=380)





Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height
	<b>Security Fence and Gates 53</b>							
	Chainlink Fence	Chainlink 6' tall	02 41 13.60 1700	3.07	LF	500		
	Fence Posts	Fence posts in concrete	02 41 13.62 1000	17.07	EA			
	Barbed Wire	Barbed Wire	02 41 13.62 1200	0.27	LF	1000		
	Chainlink Gate	Chainlink gate 10'-12' wide	02 41 13.62 0200	85	EA			
	Metal Gate	Metal gate 4'-6' high 3'-4' Wide	02 41 13.66 0600	68.3	EA			
	Metal Gate	metal gate 8'x15'	02 41 13.62 0400	136.5	EA			
	Structure's Vol Demolished							
	Bubble'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							
	<b>Subtotal</b>							
	<b>Subtotal</b>							
	Concrete Demolition							
	Demolition Cost							
	Concrete's Vol. Demolished							
	Loading Cost							
	Transportation Cost							
	Disposal Cost							
	<b>Subtotal</b>							
	Concrete Demolition							
	Demolition Cost							
	Concrete's Vol. Demolished							
	Loading Cost							
	Transportation Cost							
	Disposal Cost							
	<b>Subtotal</b>							
	<b>Total</b>							





<i>Crandall Canyon Mine</i>	
	<i>Cost</i>
<b>Earthwork Costs</b>	
Backfilling and Grading	\$ 464,574
Topsoil Distribution	\$ 53,999
Support Equipment and Labor	\$ 81,528
Forest Service Road	\$ 9,313
Drill Pads, Access Roads	\$ 35,590
SITLA Road	\$ 28,768
<b>Total</b>	<b>\$ 673,772</b>

DEMO								
							Cost Reference	
Materials	Means Number	2016 Units					page	year
Floor Concrete 6" w/Reinforcement	02 41 16.17 0420	0.90	SF	D9R Semi-U EROPS			(9-37)	1st2016
Footings Concrete, 2' thick 3' wide	02 41 16.17 1140	16.48	LF	988G II			(9-28)	1st2016
Footings Concrete 1' thick 2' wide	02 41 16.17 1000	9.64	LF	770 Cat Off-Highway Truck			(20-11)	1st2016
Concrete Plain 8" thick w/reinforcing Heavy add 20% average 10%	02 41 16.17 2420	0.83	SF	CAT 385BL			(10-19)	1st2016
Concrete Plain 12" thick w/reinforcing Heavy add 20% average 10%	02 41 16.17 2500	1.15	SF	Dump Truck			(20-14)	1st2016
Concrete 7" to 24" thick, plain	02 41 13.17 5400	91.00	CY	416 Backhoe Loaders			(9-22)	1st2016
Concrete 7" to 24" thick, plain w/reinforcement	02 41 13.17 5500	124.50	CY	D7R Semi-U EROPS			(9-37)	1st2016
Front End Loader 3 CY	31 23 16.42 1300	1.69	CY	5,000 gal H2O truck Diesel			20-15	1st2016
12 CY (16 ton) Dump Truck 5 mi. rod. trip	31 23 23.20 1025	10.80	CY	Pickup Truck Crew 4x4 1 ton			20-16	1st2016
City Sanitation	City Sanitation	3.09	CY	966G Series II EROPS			(9-28)	1st2016
Steel bldg. Large	02 41 16.13 0020	0.28	CF	6X4 50,000lbs 10-12 CY			(20-14)	1st2016
Utility Pole RSMMeans		203.80	EA	Foreman Average Outside				RSMMeans 2016
Guard Rail	02 41 13.30 0800	12.17	LF	CLAB (Common Building Laborers)				RSMMeans 2016
Guide Post	02 41 13.30 0860	12.92		Truck Driver (Heavy) (Eqmm)				RSMMeans 2016
Chain link, posts & fabric remove only	02 41 13.60 1700	3.07	LF	Cat 420				Scamp Ex (9-23)
Mechanical equipment heavy	23 05 05.10 3600	795.00	Ton	Cat 350				Scamp Ex (9-21)
Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.44	CY	Dump Truck				Scamp Ex (20-14)
9000 gal to 12000 gal tank Dismantal and haul	02 65 10.30 1029	1050.00	EA	416 Backhoe Loaders				Scamp Ex (9-22)
9000 gal to 12000 gal tank Disposal of tank (from Permittee)		325.00	EA	Pick-up Truck 4x4 1 Ton				Scamp Ex (20-15)
Nielson Construction	Nielson Con (2016 bid)	7.64	Ton	D9R				Scamp Ex (9-37)
12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	31 23 23.20 1025	10.80	CY	988B				Scamp Ex (9-28)
On Site Disposal	02 41 16.17 4200	9.07	CY	770 Cat Off-Highway Truck				Scamp Ex (20-11)
Wire Removal	02 41 13.56 1900	5.39	LF	CAT 385BL				Scamp Ex (10-19)
Wire Removal	23 05 05.10 1900	19.60	LF					
Conduit	26 05 05.10 0160	5.50	LF					
Fixtures	22 05 05.10 1140	94.50	EA					
Masonry bld. Large	02 41 16.13 0080	0.31	CF					
Seal Portals	JennChem (bid 2016)	4320.00	EA				*NOTE: Equipment hourly operating costs from Equipment Watch Rental Blue Book V	
Mixture of Types; average	02 41 16.13 0100	0.31	CF					
Plug Well	Nielson Con (2016 bid)	170.00	EA					
Concrete Bld. Large	02 41 16.13 0050	0.40	CF					
Pavement Removal, Bituminous 3"	02 41 13.17 5010	4.33	SY					
Silt Fence	31 25 14.16 1000	1.15	LF					
Riprap Dumped 300 lb. average	31 37 13.10 0370	30.52	Ton					
Bare root seedinings 11" to 16" med. Soil		1.35	EA					
Hydro Spreader (equip. & labor) Revege 005	Reveq 005	20.40	MSF					
Seed Non Riparian Area	Crandall 15321	281.83	\$/Ac					
Hydro Spreader (equip. & labor) Revege 002	Reveq 002	20.40	MSF					
Hay 1" Material Only	Reveq 001	132.00	MSF					
Transplant Non Riparian	Crandall 15322	206.05	\$/Ac					
Transplant North slope	Crandall 15323	1915.00	\$/Ac					
Seed Riparian Area	Crandall 15324	289.88	\$/Ac					
Transplant Riparian	Crandall 15325	554.39	\$/Ac					
D9R Bulldozer Semi-U EROPS	Scamp Excavation	185.00						
Hourly Cost	01 54 33 4360							
988G II ((6-13) 1H2008) 2005	Scamp Excavation	120.00						
Hourly Cost	01 54 33 4870							
770 Cat Off-Highway Truck	Scamp Excavation	150.00						
Hourly Cost	01 54 33 5600							
Chain link remove 8'-10"	02 41 13.60 1700	3.07	LF					
Excavate 3 CY excavator	31 23 16.13 0050	7.19	CY					
Chainlink 6' tall	02 41 13.60 1700	3.05	LF					
Fence posts in concrete	02 41 13.62 1000	16.95	EA					
Barbed Wire	02 41 13.62 1200	0.27	LF					
Chainlink gate 10'-12' wide	02 41 13.62 0100	85.00	EA					
Metal gate 4'-6' high 3'-4' Wide	02 41 13.66 0600	67.70	EA					
metal gate 8'x15'	02 41 13.62 0300	135.50	EA					

Equipment					
Equipment cost monthly	Equipment operating*	equip overhead	oper. Hourly wage	hourly cost	Rate per hour w/ operator
24400	125.2	0.1	50.6	340.82	
35440	154.85	0.1	50.6	442.44	
16050	170	0.1	43.2	330.51	
34620	177.05	0.1	50.6	461.73	
3405	46.1	0.1	43.2	115.19	
3080	19.7	0.1	50.6	91.52	
15875	76.2	0.1	50.6	233.64	
5280	45.8	0.1	43.3	126.68	
234	16.1	0.1	43.3	62.47	
8250	57.8	0.1	55.4	170.54	
3670	49.8	0.1	43.3	121.02	
			51.90	51.9	
			37.90	37.9	
			43.20	43.2	
	23.15			163.15	140.00
	18.65			173.65	155.00
	46.1			131.10	85.00
	19.2			94.20	75.00
	16.1			56.10	40.00
	125.2			310.20	185.00
	154.85			274.85	120.00
	170			320.00	150.00
	177.05			279.05	102.00

/ol 1 first half 2016.

	Cost Reference		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
	Year	page															
<b>Crandell Canyon Mine</b>																	
<i>Backfilling and Grading</i>																	
<i>Ripping Fill Area</i>																	
D9R	Scamp	(9-37)		125.2			310.20	1	310.2	\$/HR	57387	CY	1473	CY/HR	39	HR	\$12,098.00
<b>Subtotal</b>																	<b>\$12,098.00</b>
<i>Backfill On Site</i>																	
<i>Loading</i>																	
988B	Scamp	(9-28)		154.85			274.85	1	274.85	\$/HR	70192	CY	498	CY/HR	140.9	HR	\$38,726.00
<i>Hauling</i>																	
770 Cat Off-Highway Truck	Scamp	(20-11)		170			320.00	2	640	\$/HR	70192	CY	498	CY/HR	140.9	HR	\$90,176.00
<i>Place with Excavator</i>																	
CAT 385BL	Scamp	(10-19)		177.05			279.05	1	279.05	\$/HR	12805	CY	181.3	CY/HR	70.6	HR	\$19,701.00
<i>Place with Dozer</i>																	
D9R	Scamp	(9-37)		125.2			310.20	1	310.2	\$/HR	57387	CY	215	CY/HR	266.9	HR	\$82,792.00
<b>Subtotal</b>																	<b>\$231,395.00</b>
<i>Backfill Off Site</i>																	
<i>Loading</i>																	
988B	Scamp	(9-28)		154.85			274.85	1	274.85	\$/HR	66096	CY	583	CY/HR	113.4	HR	\$31,168.00
<i>Hauling</i>																	
Dump Truck	(20-14	1st2016	3405	46.1	0.1	43.2	115.19	12	1382.28	\$/HR	66096	CY	583	CY/HR	113.4	HR	\$156,751.00
<b>Subtotal</b>																	<b>\$187,919.00</b>
<i>Miscellaneous Removal/Excavate Stream Channels</i>																	
416 Backhoe Loaders	Scamp	(9-22)		19.2			94.20	1	94.2	\$/HR	1560	CY	151.1	CY/HR	10.3	HR	\$970.00
<b>Subtotal</b>																	<b>\$970.00</b>
<i>Burma Pond</i>																	
416 Backhoe Loaders	Scamp	(9-22)		19.2			94.20	1	94.2	\$/HR	8406	CY	151.1	CY/HR	55.6	HR	\$5,238.00
<i>Burma Pond Deficient Materials</i>																	
Dump Truck	(20-14	1st2016	3405	46.1	0.1	43.2	115.19	6	691.14		2805	CY	72	CY/HR	39	HR	\$26,954.46
<b>Burma Basin Subtotal</b>																	<b>\$32,192.46</b>
<b>Total Backfilling and Grading</b>																	<b>\$464,574.46</b>

Note:

	Cost Reference		Equipment	Hourly	Equipment	Operator's	Hourly	Number	Total			Production	Equip. +			Cost	
	Year	page	Cost	Operating	Overhead	Hourly	Cost	of Men	Eq. & Lab.	Units	Quantity	Rate	Labor	Time/Dis.	Units	Cost	
				Costs		Wage Rate		or Eq.	Costs			Units	Time/Dis.				
<b>Crandall Canyon Mine</b>																	
<b>Topsoil Distribution</b>																	
<b>Load From Topsoil Stockpile</b>																	
<i>Load</i>																	
966G Series II EROPS	(9-28)	1st2016	8250	57.8	0.1	55.4	170.54	1	170.54	\$/HR	10737	CY	298.8	CY/HR	35.9	HR	\$6,122.00
<i>Haul</i>																	
6X4 50,000lbs 10-12 CY	(20-14)	1st2016	3670	49.8	0.1	43.3	121.02	5	605.1	\$/HR	10737	CY	298.8	CY/HR	35.9	HR	\$21,723.00
<b>Subtotal</b>																	<b>\$27,845.00</b>
<b>Place Topsoil</b>																	
<i>Place with Wheel Loader</i>																	
966G Series II EROPS	(9-28)	1st2016	8250	57.8	0.1	55.4	170.54	1	170.54	\$/HR	7354	CY	160.1	CY/HR	45.9	HR	\$7,828.00
<i>Grading</i>																	
D7R Semi-U EROPS	(9-37)	1st2016	15875	76.2	0.1	50.6	233.64	1	233.64	\$/HR	7354	CY	145	CY/HR	50.7	HR	\$11,846.00
<i>Excavator</i>																	
CAT 385BL	Scamj	(10-19)		177.05			279.05	1	279.05	\$/HR	3383	CY	181.3	CY/HR	18.7	HR	\$5,218.00
<b>Subtotal</b>																	<b>\$24,892.00</b>
<b>Burma Pond</b>																	
416 Backhoe Loaders	Scamj	(9-22)		19.2			94.20	1	94.2	\$/HR	2436	CY	181.3	CY/HR	13.4	HR	\$1,262.00
<b>Burma Basin</b>																	<b>\$1,262.00</b>
<b>Total</b>																	<b>\$53,999.00</b>

	Cost Reference		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	
	Year	page																
<b>Crandell Canyon Mine</b>																		
<b>Support Equipment and Labor</b>																		
5,000 gal H2O truck Diesel	20-15	1st2016	5280	45.8	0.1	43.3	126.68	1	126.68	\$/HR								
Pick-up Truck 4x4 1 Ton	Scam	(20-15)		16.1			56.1	1	56.1	\$/HR					347.4	HR	19489	
Foreman Average Outside	RSMel	2016				51.9	51.9	1	51.9	\$/HR					347.4	HR	18030	
<b>Subtotal</b>																	<b>81528</b>	
<b>Total</b>																	<b>81528</b>	

	Cost Reference		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	
	Year	page																
East mountain Reclamation Costs																		
Forest Service Rd																		
Forest Service Rd																		
Wood Mulch			4765															4765
Labor	RS Means					37.9	37.9	6	227.4	\$/HR	20	HR			20	HR		4548
<b>Subtotal</b>																		<b>9313</b>
<b>Total</b>																		<b>9313</b>

	Cost Reference		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	
	Year	page																
East mountain Reclamation Costs																		
Drill pads, Access Rd																		
Wood Mulch			23765															23765
Labor	RS Means					37.9	37.9	6	227.4	\$/HR	52	HR			52	HR		11825
Subtotal																		35590
<b>Total</b>																		<b>35590</b>

	Cost Reference		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
	Year	page															
<b>East mountain Reclamation Costs</b>																	
<b>SITLA Road</b>																	
Wood Mulch			23765														23765
Labor	RS Means					37.9	37.9	6	227.4	\$/HR	22	HR			22	HR	5003
<b>Subtotal</b>																	<b>28768</b>
<b>Total</b>																	<b>28768</b>



Material	Means Number	Unit Cost	Units
Hydro Spreader (equip. & labor)	32 92 19.14 0200	32.50	MSF
Hay 1" Material Only	32 91 13.16 0250	61.27	MSF
Transplant Non Riparian	Crandall 15322	107.00	\$/Ac
Transplant North Slope	Crandall 15323	2223.00	\$/Ac
Seed Riparian Area	Crandall 15324	246.33	\$/Ac
Transplant Riparian	Crandall 15325	649.00	\$/Ac
Silt Fence	31 25 14.16 1000	1.15	LF
Seed Non Riparian Area	Crandall 15321	235.83	\$/Ac
East Mountain Mix	MapleLeaf	74.48	\$/Ac
Bare root seedinings 11" to 16" me	32 93 43.10 0562	1.35	EA

## Bond Summary

**Direct Costs**

Demolition and Removal	\$886,479.59
Backfilling and Grading	\$673,772.46
Revegetation	\$83,695.00
<b>Subtotal Direct Costs 2016 Dollars</b>	<b>\$1,643,947.05</b>

**Indirect Costs**

Mob/Demob	\$164,395.00	10.0%
Contingency	\$82,197.00	5.0%
Engineering Redesign	\$41,099.00	2.5%
Main Office Expense	\$111,788.00	6.8%
Project Management Fee	\$41,099.00	2.5%
<b>Subtotal Indirect Costs</b>	<b>\$440,578.00</b>	<b>26.8%</b>

<b>Total Reclamation Cost 2016 Dollars</b>	<b>\$2,084,525.05</b>
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<i>Escalation factor</i>		0.007
<i>Number of years</i>		4
<i>Escalation</i>	\$58,982.00	

<b>Total Escalated Reclamation Cost 2020 Dollars</b>	<b>\$2,143,507.05</b>
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<b>Bond Amount (rounded to nearest \$1,000)</b>	<b>\$2,144,000.00</b>
Bond Posted 2011	\$2,082,910.00
Difference Between Cost Estimate and Bond	<b>-\$61,090.00</b>
Percent Difference	<b>-2.85%</b>