



VIA: E-mail

August 24, 2017

Daron Haddock, Environmental Manager
Utah Coal Regulatory Program
STATE OF UTAH
Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

RE: Wellington Prep Plant (C/007/0012): Response to the Midterm Permit Review

Dear Mr. Haddock:

Attached please find Price River Terminal's response to DOGM's Midterm Review (dated June 16, 2017). The attachment includes:

- Cover letter
- C1 and C2 forms
- Deficiencies, Comments & Instructions for insertion to the MRP.
- Text, map and appendix for insertion to the MRP (~~redline~~/~~strike~~ version).

We welcome questions and comments from you or your staff anytime.

Sincerely,

A handwritten signature in blue ink, appearing to read "Patrick D. Collins".

Patrick D. Collins, Ph.D.
Resident Agent

Attachments

cc: T. Stanley (PRT)

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: Price River Terminal

Mine: Wellington Preparation Plant

Permit Number:

C/007/012

Title: Midterm Permit Review Response

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

Response to DOGM deficiencies in in Midterm Permit Review

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

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

Explain: _____

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

Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you. (These numbers include a copy for the Price Field Office)

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

PATRICK D. COLLINS Resident Ag. 8/24/17 Patrick D Collins
 Print Name Position Date Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 24 day of August, 2017

Notary Public: Marcie S. Clark, state of Utah.

My commission Expires: 6-21-2018

Commission Number: 677113

Address: 110 S. main

City: Springville State: UT Zip: 84663



MARCIE S CLARK
 NOTARY PUBLIC-STATE OF UTAH
 COMMISSION# 677113
 COMM. EXP. 06-21-2018

<p>For Office Use Only:</p>	<p>Assigned Tracking Number:</p>	<p>Received by Oil, Gas & Mining</p>
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Wellington Preparation Plant (C/007/0012) Midterm Permit Review Response

Deficiencies, Comments & MRP Insertion Instructions

(Redline/Strikeout Version)

August 25, 2017

Price River Terminal, LLC

3215 West 4th Street
Fort Worth, Texas 76107

The following are responses to deficiencies provided by the State of Utah, Division of Oil, Gas & Mining (DOGM) as a result of their Midterm Permit Review of Wellington Prep Plant's Mining & Reclamation Plan (MRP). Price River Terminal (PRT) comments along with instructions for insertion to the MRP are also included below.

DOGM Deficiencies:

R645-301-112, -112.300: The Permittee must clarify who or what entity owns the remaining 11.33% of Price River Terminal, LLC (i.e. the remaining ownership beyond the 55% owned by Sunoco Partners Marketing & Terminals L.P. and the 33.6671% owned by Global One Transport, Inc.).

R645-301-112: The Permittee must update the information provided in Section 1.20. The updates to include any changes in the officers and directors and ownership associated with the ownership structure of Price River Terminal, LLC. It's common for officers/directors to leave organizations or for ownership structures to change over time. In the event that there are no changes to either the officers and directors and ownership, the Permittee may indicate that in the cover letter to the Division in response to this mid-term review.

R645-301-112: The Permittee must identify/clarify who the Operator of the site is. On page 5 of Section 1.20, Watco Transloading, LLC is identified as the Operator of the site; however, the MRP notes that Watco Transloading, LLC only performs work related to the oil transloading process. The Operator who will be performing mining and reclamation activities must be clarified in the MRP. If the owner and operator are Price River Terminal, LLC, simply revise this section to reflect this.

Mt. Nebo Scientific, Inc.
P.O. Box 337, 330 East 400 South, Suite 6
Springville, Utah 84663



PRT Comments:

- The appropriate changes and updates to Chapter 1 have been provided and made insertable MRP.

MRP Insertion Instructions:

- Section 1.20, pages 1-5 (08/25/17) of this submittal replaces Section 1.20, pages 1-5 (05/20/14) in the current MRP.

DOGM Deficiency:

The Permittee must correct and amend the MRP legal description so it is accurate, clear and concise pursuant to R645-301-121.200. Upon correction of the legal description in the MRP, the permit issued by the Division must also be corrected accordingly.

PRT Comments:

- The legal description for the property has been revised.

MRP Insertion Instructions:

- Section 1.00, page 4 (08/25/17) of this submittal replaces Section 1.00, page 4 (11/06/13) in the current MRP.

DOGM Deficiency:

R645-301-116.100: The Permittee must revise section 116.100 of the MRP to reflect current coal mining and reclamation operations. At the time this section was approved by the Division, a plan for removal of on-site coal material had not yet materialized. Please revise this section with a brief discussion of the current on-going reclamation of the slurry material so the MRP is up to date.

PRT Comments:

- The current fines removal operations for reclamation have been updated and briefly described in Chapter 1.

MRP Insertion Instructions:

- Section 1.20, page 10 (08/25/17) of this submittal replaces Section 1.20, pages 10 (11/06/13) in the current MRP

DOGM Deficiency:

As noted in Section 3.41, page 54, standards for success will include criteria representative of unmined lands. However, Map F9-179 indicates the reference area identified for the greasewood reference site appears to have been disturbed and used for rock storage. The Permittee stated the map is erroneous and will be updated to include the correct location as well as provide geographic coordinates.

The Permittee has verbally committed to conduct a qualitative analysis of the reference sites during the 2017 growing season. A report with photographs will be submitted to the Division for review and inclusion to the MRP. Map F9-178, 179 must be updated to show where seed mix C shall be seeded.

The MRP loses information between pages 6 & 7 which must be reconciled and corrected.

PRT Comments:

- An arrow has been added to Map F9-178, 179 to clarify the location of the Sarcobatus/Suaeda (Greasewood) Reference Area. We apologize for this poor quality of this map. It is an old map we inherited that was drafted using conventional drafting techniques.

The geographic coordinates for the reference areas have been added to Map F9-178,179.

- A qualitative field study of the reference areas was conducted by P. Collins (Mt. Nebo Scientific) and J. Helfrich (DOGM) on August 9, 2017. Results of this study will be submitted in Wellington Prep Plant's 2017 Annual Report.

Map F9-178, 179 has been updated to include Seed Mix C.

- The lost information mentioned in the deficiency has been retrieved. The MRP has been corrected in this submittal.

MRP Insertion Instructions:

- Map F9-178, 179 (revised 8/11/17) of this submittal replaces Map F9-178, 179 (dated 10/7/94) of the current MRP.
- Section 3.11, page 7 (08/25/17) of this submittal replaces Section 3.11, page 7 (09/10/97) in the current MRP

DOGM Deficiency:

The Permittee must update the MRP to comply with the Upper Colorado River Endangered Fish Recovery Program to satisfy the 1996 BO for Colorado River Fishes. Section 3.33 page 3 indicates there is a water withdrawal rate but it the narrative does not explain what that rate is and how it may affect the protected fish. The most appropriate location for this information is located in Section 3.33, page 6, "Protection of Threatened and Endangered Species" or Section 3.34, page 69 "Special Wildlife Protection Requirements".

The Permittee must address protection and enhancement measures for the Yellow-billed Cuckoo since it is a summer resident of the permit area and is protected under the Threatened and Endangered Species Act. The most appropriate location in the MRP is "Protection of Avifauna", Section 3.33, page 4 or "Protection of Threatened and Endangered Species, page 6.

PRT Comments:

- Water withdrawal rates for the site have been calculated in order to comply with the 1996 BO for Colorado River Fishes and made insertable to the MRP.
- Protection of habitat for the Yellow-billed Cuckoo has been addressed in this submittal.

MRP Insertion Instructions:

- Section 3.33 , pages 6-8 (08/25/17) of this submittal replaces Section 3.33, pages 6 (09/10/97) in the current MRP.

DOGM Deficiency:

As a result of re-mining, the Permittee has uncovered suitable soil for reclamation purposes. In accordance with R645-301-234.230, R645-301-234.200 and R645-301-244.100, The Permittee must update the MRP with plans to stabilize, protect and enhance the re-exposed 11 acres for use as substitute topsoil/cover.

PRT Comments:

- A site visit was made to the slurry pond fines removal area by P. Burton (DOGM), P. Collins (Mt. Nebo Scientific) and B. Hansen (Savage Services) on July 19, 2017.
- The process and progress for the fines removal was explained by Mr. Hansen, supervisor of the operations.
- There has been no areas determined as "undesirable" as the DOGM Midterm analysis mentioned.
- As for plans to "*stabilize protect and enhance the re-exposed 11 acres*" that have been re-exposed as a result of the fines removal process, there continues to be a small amount of fines that remain (most of the resident soils have not yet been fully exposed). Furthermore, Mr. Hansen explained that the 11 acres continues to be used as a staging area for equipment and areas to dry out slurry fines material prior to trucking them from the site. In other words, the area remains to be vital for the ongoing fines removal process. Seeding or otherwise employing soil stabilization techniques would be premature at this time.

MRP Insertion Instructions:

- No changes were necessary to insert to the MRP for this deficiency.

DOGM Deficiency

R645-301-731.200: The Permittee must revise the MRP to provide a clear and concise presentation of the baseline and operational water monitoring conducted at the site. The revision must include clarifications/revisions to the text as well as tables (Table 7.24.2 and Table 7.24.5) to clearly present the water monitoring sites (identified by site name), the frequency of their monitoring, the water quantity, field and laboratory water quality parameters to be obtained at each and the frequency of their collection (i.e. quarterly, baseline collection frequency, flow only, etc.). See the analysis discussion for more detail.

PRT Comments

- The presentation of the hydrologic monitoring plan in the MRP has been modified to provide a clear and concise description of all aspects of the plan. Tables 7.24.2 and 7.24.5 have been removed from the MRP. These have been replaced by Tables 7.31.2-1, 7.31.2-2, 7.31.2-3, 7.31.2-4, 7.31.2-5 and 7.31.2-6 which have been added to the MRP. All water monitoring sites and the hydrologic monitoring protocols for each monitoring site are listed in Table 7.31.2-1. Descriptions of each of the hydrologic monitoring protocols included in the monitoring plan are presented in Table 7.31.2-2. Operational and reclamation phase water-quality monitoring parameters for groundwaters and surface waters are listed in Tables 7.31.2-3 and 7.31.2-4, respectively. Baseline water quality monitoring parameters for groundwaters and surface waters are listed in Tables 7.31.2-5 and 7.31.2-6, respectively.
- Table 7.31.2-2 also includes a description of the monitoring sites, protocols, and schedule for the once-every-5-year baseline monitoring activities at the site.
- The text of the monitoring plan in Chapter 7 of the MRP has been modified where appropriate to reference and reflect the updated water monitoring plan presentation.

MRP Insertion Instructions:

- Table 7.24.2 – Remove from MRP
- Table 7.24.5 – Remove from MRP
- Table 7.31.2.1 – New table, insert into Section 7.31.2 of Chapter 7 text
- Table 7.31.2.1 – New table, insert into Section 7.31.2 of Chapter 7 text
- Table 7.31.2.1 – New table, insert into Section 7.31.2 of Chapter 7 text
- Table 7.31.2.1 – New table, insert into Section 7.31.2 of Chapter 7 text
- Table 7.31.2.1 – New table, insert into Section 7.31.2 of Chapter 7 text
- Table 7.31.2.1 – New table, insert into Section 7.31.2 of Chapter 7 text
- Table 7.31.2.1 – New table, insert into Section 7.31.2 of Chapter 7 text
- Page 3 of Section 7.31 – Remove from MRP
- New Page 3 of Section 7.31 – Replaces old page 3
- Page 6b of Section 7.31 – Remove from MRP
- New Page 6b of Section 7.31 – replaces old page 6b
- Page 6c of Section 7.31 – Remove from MRP
- New Page 6c of Section 7.31 – replaces old page 6c

DOGM Deficiencies:

The Permittee must update the unit cost data used in the 2012 Midterm Permit Review reclamation cost estimate to 2017 unit costs using the 2017 R.S. Means Heavy Construction Cost Data manual. All computation sheets for demolition, earthwork and re-vegetation must be updated and submitted to the Division so the Division can determine the required bond amount needed through 2022.

In accordance with R645-301-830.410, Division Technical Directive 007, and Office of Surface Mining Handbook for Calculation of Reclamation Bond Amounts the Permittee may utilize third party contractors for cost references when a general cost references does not adequately describe the required reclamation task. In the event the Permittee utilizes local third party contractors cost estimates within the reclamation bond amount additional information must be submitted with the application including a minimum of three individual quotes for the work. References may include items such as a letter or email transcript but must include all relevant contact information from the contractor so that the Division may contact said contractor to verify unit cost is valid in the event the Division was the hiring personal. References must be submitted at the time the reclamation bond amount is submitted to the Division. The Permittee will submit detailed cost references for all contracted costs of reclamation.

In accordance with R645-301-830.410, Division Technical Directive 007, and Office of Surface Mining Handbook for Calculation of Reclamation Bond Amounts the Permittee must utilize Overhead and Profit costs when using standardized cost reference manuals such as R.S. Means Heavy Construction. The Division applies an indirect cost of 26.8% that covers Project overhead calculations in the indirect line items of the total sheet. The Permittee will utilize the O&P unit cost when utilizing R.S. Means Heavy Construction cost reference.

The Wellington Prep Plant Midterm review, in accordance with R645-303-211, was commenced on April 5, 2017 by the Division. In accordance with R645-301-830.410, Division Technical Directive 007, and Office of Surface Mining Handbook for Calculation of Reclamation Bond Amounts the Permittee must utilize the dollar year for which the midterm was commenced. The escalation to the next midterm must also be amended to calculate the new escalation to the next midterm review, five years.

The total reclamation cost for the Wellington Prep Plant (sum of the direct and indirect costs) must be escalated from 2017 to 2022 (5 years) using an escalation factor of 1.00.

This escalated cost is rounded up to the nearest \$ 1,000 to determine the amount of required bond which must be posted with the Division by the Permittee

PRT Comments:

- Beginning when they purchased the property, PRT has been working on reclamation at the Wellington Prep Plant including cleaning up the site, removing slurry waste material and salvaging (removing) unused structures.
- Consequently, some of this work should reduce the reclamation bond costs for the site.
- **Demolition Costs**
We have used RS Means Heavy Construction Costs (2017 version) for the Demolition cost estimates. We have made several notes, mostly in **purple text**, in the spreadsheet for clarifications and explanations for some of the cost changes.
- **Earthmoving Costs**
First we want to express our appreciation for the work that Beverly Wisner (DOGM) has done on the reclamation cost estimates. For the Earthmoving costs, we have included DOGM's estimates in this document. Bev has added some additional earthmoving activities that appeared to be missing from previous reclamation costs. That said, we have used DOGM's spreadsheets and cost estimates since 2002 when Wayne Western (DOGM) first calculated the reclamation costs, then again in 2008 and finally in 2012 when James Owen (DOGM) and Mt. Nebo calculated the bond -- again using DOGM's spreadsheets.

- **Revegetation Costs**

For Revegetation costs we have also used DOGM's cost estimates for this submittal.

- If appears more collaboration with DOGM is needed to resolve Wellington's bond estimate.
- Nonetheless, we have included the most recent revisions to the Reclamation Costs (Appendix J) with this submittal for DOGM's review and comments.

MRP Insertion Instructions:

- Appendix J , (08/25/17) of this submittal replaces
- Appendix J, (March 21, 2013) in the current MRP

1.20 LEGAL/FINANCIAL/OWNERSHIP

IDENTIFICATION OF INTERESTS - (R645-301-112)

112.100 Identification of Permittee, Operator, and Owner

112.300 Names and Addresses of Officers, Directors

OWNER & OPERATOR

Price River Terminal, LLC
3215 West 4th Street
Fort Worth, TX 76107
817-717-1000
Employer Identification Number: 46-3234994

Price River Terminal is the owner and operator of the Wellington Prep Plant that is responsible for the onsite mining and reclamation activities. As described below, Watco Transloading, LLC is the operator that performs the transloading operations.

As a limited liability company, Price River Terminal does not have any officers and is 55% owned by Sunoco Partners Marketing & Terminals L.P., ~~33.6671~~ 25.25% owned by Global One Transport, Inc. and 19.75% by other "Minority Owners" listed below. ~~There are no other entities with a greater than 10% ownership of Price River Terminal.~~ Listed below are company information, including the officers and their ownership percentage of Sunoco Partners Marketing & Terminals L.P., Global One Transport, Inc. and the other minority partners.

Sunoco Partners Marketing & Terminals L.P., a Texas limited partnership, is 0.010% owned by its General Partner, Sunoco Logistics Partners Operations GP LLC ("SLPOGP LLC"), a Delaware Limited Liability Company and 99.990% owned by its Limited Partner, Sunoco Logistics Partners Operations L.P. ("SPLO LP"), a Delaware Limited Partnership.

~~SLPOGP LLC is 100% owned by SPLO LP.~~

~~SPLO LP is 0.010% owned by its General Partner, Sunoco Logistics Partners GP LLC ("SLPGP LLC"), a Delaware Limited Liability Company and 99.990% owned by its Limited Partner, Sunoco Logistics Partners, L.P. ("SXL"), a publicly traded Delaware Master Limited Partnership.~~

~~SLPGP LLC is 100% owned by SXL.~~

~~SXL is 33.65% (2.00% general partnership interest and 31.65% limited partnership interest) owned by its General Partner, Sunoco Partners LLC ("Sunoco Partners"), a Pennsylvania Limited Liability Company. The other limited partnership units are owned by Public Investors.~~

SPLO LP is 0.010% owned by its General Partner, Sunoco Logistics Partners GP LLC ("SLPGP LLC"), a Delaware Limited Liability Company and 99.990% owned by its Limited Partners, Energy Transfer Partners, L.P. (formerly known as Sunoco Logistics Partners, L.P.) ("ETP"), a publicly traded Delaware Master Limited Partnership.

SLPGP LLC is 100% owned by ETP.

ETP is 0.33% owned by its General Partner, Energy Transfer Partners GP, L.P. (“ETP GP”), a Delaware Limited Partner. The other limited partnership units are owned by Public Investors.

ETP GP is 0.010% owned by its General Partner, Energy Transfer Partners, L.L.C., a Delaware Limited Liability Company and 99.990% owned by its Limited Partner Energy Transfer Equity, L.P. a publicly traded Delaware Master Limited Partnership.

Sunoco Partners Marketing & Terminals L.P. - 55.00% Ownership

~~1818 Market Street, Suite 1500~~

~~Philadelphia, PA 19103~~

~~215.977.6164~~

3807 West Chester Pike

New Town Square, PA 19072

Employer Identification Number: 23-3102655

Officers & Directors: None

Sunoco Logistics Partners Operations GP LLC

1818 Market Street, Suite 1500

Philadelphia, PA 19103

215.977.6164

3807 West Chester Pike

New Town Square, PA 19072

Employer Identification Number: 23-3102660

Name	Title	First Elected
David R. Chalson	Vice President	08/01/2012
Harry J. Alexander	Vice President	07/12/2013
Jonathan R. Farrow	Assistant Treasurer	07/12/2013
Kathleen Shea Ballay	Vice President and Secretary	08/01/2010
Kurt A. Lauterbach	Vice President	07/12/2013
Lynn Lickman	Assistant Secretary	05/15/2009
Michael D. Galtman	Controller	07/12/2013
Michael J. Hennigan	Chief Executive Officer and President	07/12/2013
Michael J. Hennigan	Sole Director	08/01/2010
Michael S. Prince	Vice President	07/12/2013
Michael W. Slough	Vice President	07/12/2013
Peter J. Gvazdauskas	Vice President and Treasurer	07/12/2013
Robert M. Ricciuti	Vice President	07/12/2013
Theresa Zabawa	Assistant Secretary	07/12/2013

Sunoco Logistics Partners Operations GP LLC

Officers & Directors

Name	Title	Role	First Elected
Long, Thomas E.	Director	Director	06/17/2017
Warren, Kelcy L.	Director	Director	06/17/2017
Warren, Kelcy L.	Chief Executive Officer	Officer	06/17/2017
Ramsey, Matthew S.	President & Chief Operating Officer	Officer	06/17/2017
Long, Thomas E.	Chief Financial Officer	Officer	06/17/2017
McCrea, Marshall S. III	Chief Commercial Officer	Officer	06/17/2017
Coffey, Ryan K.	Executive Vice President - Operations	Officer	06/17/2017
Curia, Christopher R.	Executive Vice President & Chief Human Resources Officer	Officer	06/17/2017
Street, Jennifer	Executive Vice President, Operations & Engineering Services	Officer	06/17/2017
Whitehurst, Bradford D.	Executive Vice President - Head of Tax	Officer	06/17/2017

Colella, Joseph	Senior Vice President - Production, Trading & Marketing; & Business Development	Officer	06/17/2017
Malott, James	Senior Vice President - Lease, Acquisition & Marketing	Officer	06/17/2017
Prince, Michael S.	Senior Vice President - Business Development	Officer	06/17/2017
Smith, Michael D.	Senior Vice President - Mergers & Acquisitions	Officer	06/17/2017
Alexander, Harry J.	Vice President - Business Development	Officer	06/17/2017
Bramhall, Dylan	Vice President - Financial Planning & Analysis	Officer	06/17/2017
Dolle, Justin K.	Vice President - Financial Reporting	Officer	06/17/2017
Krebs, Darryl	Vice President - Tax	Officer	06/17/2017
Rose, Robert R.	Vice President - Land & Right-of-Way	Officer	06/17/2017
Sturrock, A. Troy	Vice President & Controller	Officer	06/17/2017
Wright, James M.	General Counsel & Assistant Secretary	Officer	06/17/2017
Healy, William J.	Associate General Counsel & Secretary	Officer	06/17/2017
De Sloover, Tonja	Associate General Counsel - Head of Litigation	Officer	06/17/2017

Sunoco Logistics Partners Operations L.P.

~~1818 Market Street, Suite 1500~~

~~Philadelphia, PA 19103~~

~~215.977.6164~~

3807 West Chester Pike

New Town Square, PA 19072

Employer Identification Number: 23-3102657

Officers & Directors: None

Sunoco Logistics Partners GP LLC

~~1818 Market Street, Suite 1500~~

~~Philadelphia, PA 19103~~

~~215.977.6164~~

3807 West Chester Pike

New Town Square, PA 19072

Employer Identification Number: 23-310258

Name	Title	First Elected
David R. Chalson	Vice President	08/01/2012
Jonathan R. Farrow	Assistant Treasurer	07/12/2013
Kathleen Shea-Ballay	Vice President and Secretary	08/01/2010
Lynn Lickman	Assistant Secretary	05/15/2009
Martin Salinas, Jr.	Chief Financial Officer	10/05/2012
Michael D. Galtman	Controller	10/05/2012
Michael J. Hennigan	Chief Executive Officer and President	05/04/2012
Michael J. Hennigan	Sole Director	05/04/2012
Peter J. Gvazdauskas	Vice President and Treasurer	07/12/2013
Theresa Zabawa	Assistant Secretary	07/12/2013

Officers & Directors

Name	Title	Role	First Elected
Long, Thomas E.	Director	Director	06/17/2017
Warren, Kelcy L.	Director	Director	06/17/2017
Warren, Kelcy L.	Chief Executive Officer	Officer	06/17/2017
Ramsey, Matthew S.	President & Chief Operating Officer	Officer	06/17/2017
Long, Thomas E.	Chief Financial Officer	Officer	06/17/2017
McCrea, Marshall S. III	Chief Commercial Officer	Officer	06/17/2017
Coffey, Ryan K.	Executive Vice President - Operations	Officer	06/17/2017
Curia, Christopher R.	Executive Vice President & Chief Human Resources Officer	Officer	06/17/2017
Street, Jennifer	Executive Vice President, Operations & Engineering Services	Officer	06/17/2017
Whitehurst, Bradford D.	Executive Vice President - Head of Tax	Officer	06/17/2017
Colella, Joseph	Senior Vice President - Production, Trading & Marketing; & Business Development	Officer	06/17/2017
Malott, James	Senior Vice President - Lease, Acquisition & Marketing	Officer	06/17/2017
Prince, Michael S.	Senior Vice President - Business Development	Officer	06/17/2017
Smith, Michael D.	Senior Vice President - Mergers & Acquisitions	Officer	06/17/2017
Alexander, Harry J.	Vice President - Business Development	Officer	06/17/2017
Bramhall, Dylan	Vice President - Financial Planning & Analysis	Officer	06/17/2017
Dolle, Justin K.	Vice President - Financial Reporting	Officer	06/17/2017

Krebs, Darryl	Vice President - Tax	Officer	06/17/2017
Rose, Robert R.	Vice President - Land & Right-of-Way	Officer	06/17/2017
Sturrock, A. Troy	Vice President & Controller	Officer	06/17/2017
Wright, James M.	General Counsel & Assistant Secretary	Officer	06/17/2017
Healy, William J.	Associate General Counsel & Secretary	Officer	06/17/2017
De Sloover, Tonja	Associate General Counsel - Head of Litigation	Officer	06/17/2017

~~Sunoco Logistics Partners Operations L.P.~~

~~1818 Market Street, Suite 1500~~

~~Philadelphia, PA 19103~~

~~215.977.6164~~

~~Employer Identification Number: 23-3096839~~

Energy Transfer Partners, L.P.

8111 Westchester Drive, Suite 600

Dallas, TX 75225

214.981.0700

Employer Identification Number: 23-3096839

Officers & Directors: None

Energy Transfer Partners GP, L.P.

8111 Westchester Drive, Suite 600

Dallas, TX 75225

214.981.0700

Employer Identification Number: 59-3630327

Officers & Directors: None

Energy Transfer Partners, L.L.C.

8111 Westchester Drive, Suite 600

Dallas, TX 75225

214.981.0700

Employer Identification Number: 59-3630324

Officers & Directors:

Name	Title	First Elected
Basil Leon Bray	Audit Committee Chair	10/24/2012
Basil Leon Bray	Compensation Committee Member	10/24/2012
Basil Leon Bray	Conflicts Committee Member	10/24/2012
Basil Leon Bray	Director	10/05/2012
David R. Chalson	Senior Vice President—Operations	01/24/2013
Jamie Welch	Director	06/24/2013
Kathleen Shea Ballay	Senior Vice President, General Counsel & Secretary	01/24/2013
Lynn Lickman	Assistant Secretary	12/10/2012
Marshall S. McCrea III	Chairman	10/05/2012
Marshall S. McCrea III	Compensation Committee Member	01/24/2013
Kurt A. Lauterbach	Senior Vice President	01/24/2013
Marshall S. McCrea III	Director	10/05/2012
Martin Salinas Jr.	Chief Financial Officer	10/05/2012
Martin Salinas Jr.	Director	10/05/2012
Meghan Zaffarese	Vice President & Chief Human Resources Officer	01/24/2013
Michael D. Galtman	Controller and Chief Accounting Officer	01/24/2012
Michael J. Hennigan	Chief Executive Officer and President	03/01/2012
Michael J. Hennigan	Compensation Committee Member	10/24/2012
Michael J. Hennigan	Director	04/27/2010
Michael W. Slough	Senior Vice President	01/24/2013
Peter J. Gvazdauskas	Vice President, Finance & Treasurer	01/24/2013
Scott A. Angelle	Audit Committee Member	12/10/2012
Scott A. Angelle	Compensation Committee Chair	01/24/2013
Scott A. Angelle	Conflicts Committee Member	12/10/2012
Scott A. Angelle	Director	12/10/2012
Steven R. Anderson	Audit Committee Member	12/10/2012
Steven R. Anderson	Compensation Committee Chair	01/24/2013
Steven R. Anderson	Conflicts Committee Member	12/10/2012
Steven R. Anderson	Director	12/10/2012
Thomas P. Mason	Director	12/10/2012

Name	Title	Role	First Elected
Collins, Ted Jr.	Managers/Directors	Director	08/11/2004
Grimm, Michael K.	Managers/Directors	Director	12/29/2005

McCrea, Marshall S. III	Managers/Directors	Director	12/23/2009
Ramsey, Matthew S.	Managers/Directors	Director	11/09/2015
Skidmore, David K.	Managers/Directors	Director	03/08/2013
Warren, Kelcy L.	Chairman of the Board & Managing Director	Director	01/20/2004
Warren, Kelcy L.	Managers/Directors	Director	01/20/2004
Warren, Kelcy L.	Chief Executive Officer	Officer	01/19/2004
Ramsey, Matthew S.	President & Chief Operating Officer	Officer	11/09/2015
Long, Thomas E.	Chief Financial Officer	Officer	04/30/2015
McCrea, Marshall S. III	Chief Commercial Officer	Officer	04/28/2017
Coffey, Ryan K.	Executive Vice President - Operations	Officer	04/23/2014
Curia, Christopher R.	Executive Vice President & Chief Human Resources Officer	Officer	04/23/2014
Fletcher, Luke	Executive Vice President - Business Development, Natural Gas, Marketing and Optimization	Officer	04/29/2015
Hanse, Lee	Executive Vice President - Business Development, U.S.	Officer	04/29/2015
Mahmoud, Yousif (Joey)	Executive Vice President - Engineering & Construction	Officer	04/28/2017
Street, Jennifer	Executive Vice President, Operations & Engineering Services	Officer	04/19/2016
Whitehurst, Bradford D.	Executive Vice President - Head of Tax	Officer	04/29/2015
Beebe, Brian	Senior Vice President - Commercial Operations	Officer	04/24/2012
Bramhall, Dylan	Senior Vice President - Financial Planning and Analysis	Officer	04/28/2017
Hotte, Steve J.	Senior Vice President & Chief Information Officer	Officer	04/29/2015
Kerrigan, Robert M. III	Senior Vice President - Human Resources, and Administration	Officer	04/28/2017
Prince, Michael S.	Senior Vice President - Business Development	Officer	04/28/2017
Ryoo, Helen	Senior Vice President - Investor Relations & BD	Officer	04/28/2017
Smith, Michael D.	Senior Vice President - Merger and Acquisitions	Officer	04/29/2015
Sturrock, A. Troy	Senior Vice President & Controller	Officer	04/28/2017
Dolle, Justin K.	Vice President - Financial Reporting	Officer	10/05/2010

Krebs, Darryl	Vice President - Tax	Officer	09/18/2013
Ratliff, Brent	Vice President - Investor Relations	Officer	04/24/2012
Wright, James M.	General Counsel & Assistant Secretary	Officer	04/19/2016
Healy, William J.	Associate General Counsel & Secretary	Officer	12/18/2015
De Sloover, Tonja	Associate General Counsel - Head of Litigation	Officer	04/19/2016

Global One Transport, Inc. - ~~33.6671%~~ 25.2503% Ownership

3215 West 4th Street
Fort Worth, TX 76107
817-717-1000
Employer Identification Number: 20-1528722

Officers & Directors:

Name	Title	Ownership	Date Position Began
Darrell D. Dial	Chairman and Treasurer	25% 33.333%	May 25, 2005
Timothy P. Stanley	President and CEO	25% 0%	May 25, 2005
Jason D. Dial	Vice President and Secretary	25% 33.333%	May 25, 2005
Russell D. Dial	Vice President	25% 33.333%	May 25, 2005

PRT MINORITY OWNERS

Stanley Bope Holdings, LP - 12.4282% Ownership

3215 West 4th Street
Fort Worth, TX 76107
614-832-3578
Employer Identification Number: 45-4203006

Stanley Bope Holdings, LP Ownership as of January 1, 2017	
<u>Name</u>	<u>Ownership</u>
Timothy P. Stanley	67.0%
Jessica L. Senften	16.0%
Joshua W. Stanley	16.0%
Stanley Bope Inc	1.0%

Agape Linbeck Operating, LLC - 2.8450% Ownership

804 West Friar Tuck Lane

Houston, TX 77024

713-993-4069

Employer Identification Number: 27-3919458

Drawgridge Holdings, LLC - 2.8450% Ownership

3404 Chevy Chase

Houston, TX 77019

832-367-0934

Employer Identification Number: 46-2848059

Dial Family Partners, LP - 1.6315%

3215 West 4th Street

Fort Worth, TX 76107

817-717-1000

Employer Identification Number: 20-8898501

OPERATOR

Watco Transloading, LLC
315 W 3rd Street
Pittsburgh, KS 66762
(620) 231-2230
Employer Identification Number: 27-0732018

NOTE: Watco Transloading, LLC will only be performing work related to the oil transloading process and will not be involved in any mining or reclamation activities.

Officers & Directors:

Watco Transloading, LLC Officers			
Name	Title	Ownership	Date Position Began
Richard B. Webb	Chief Executive Officer	None	September 11, 2009
Terrance D. Towner	President	None	September 11, 2009
Gary L. Lundy	Executive Vice President, Secretary and Treasurer	None	September 11, 2009
Arthur E. McKechnie, III	Executive Vice President, Assistant Secretary and Chief Commercial Officer	None	March 15, 2013
Craig R. Richey	Executive Vice President, Assistant Secretary and General Counsel	None	September 11, 2009
Rick D. Baden	Executive Vice President, Assistant Secretary and Chief Operating Officer	None	September 11, 2009
Matt McKenzie	Executive Vice President, Assistant Treasurer and Chief Financial Officer	None	March 15, 2013
Dan Smith	Senior Vice President of Operations	None	March 15, 2013
Jim Haas	Vice President of Operations	None	March 15, 2013

Name	Title	Ownership	Date Position Began
Gary L. Lundy	Chairman of the Board	None	January 1, 2014
Richard B. Webb	Chief Executive Officer	None	September 11, 2009
Rick D. Baden	President Chief Financial Officer, Treasurer and Assistant Secretary	None	Since December 1, 2015 Since September 11, 2009
Dan C. Smith	Executive Vice-President, Chief Operating Officer	None	December 1, 2015
Craig R. Richey	Executive Vice President, General Counsel, Secretary, Assistant Treasurer	None	September 11, 2009
Arthur E, McKechnie, III	Executive Vice President, Chief of Global Strategy	None	March 15, 2013
Stefan Loeb	Executive Vice-President, Chief Marketing Officer, Assistant Secretary	None	December 1, 2015

The only entity with a greater than 10% ownership in Watco Transloading, LLC is Watco Holdings, Inc.

Watco Holdings, Inc.
315 W 3rd Street
Pittsburgh, KS 66762
(620) 231-2230

Employer Identification Number: 27-3775072

Property Description and Acreage

The property description and applicable acreage of the current permit area is presented below.

The permit area is located at 6000 Wash Plant Road, City of Wellington, and Carbon County, Utah. A total of 1573.5 acres are current in the permit area. A property description of the permit area is given below.

Township 15 South, Range 11 East, Salt Lake Base and Meridian:

- Section 8 ~~SE ¼ SE ¼,~~
 ~~NE ¼ SE ¼ (portions s. of Ridge Road),~~
 ~~NW ¼ SE ¼ (portions s. of Ridge Road),~~
 ~~SW ¼ SE ¼ (portions s. of Ridge Road).~~
 ~~E1/2 SE1/4 (portions s. of Ridge Road), W1/2 SE1/4~~
 ~~(portions s. of Ridge Road; excl. portion n. of railroad tracks)~~
- Section 9 S ½ (portions s. of Ridge Road),
 portions of S1/2 N1/2,
- Section 10 W½ SW ¼
- Section 15 W½ NW ¼
- Section 16 All
- Section 17 ~~E1/2 SE1/4 NE¼,~~ E ½ SE ¼

Wellington Preparation Plant Acreage

Undisturbed	1307.8
Total Disturbed/Bond (see Dwg. E9-3333)	392.0
Total Permit Acreage (see Dwg. E9-3341 and E9-3333)	1699.8
Area Removed from Permit Area (north of Ridge Road)	126.3
Total of the Present Permit Area	1573.5

R645-301-116 PERMIT TERM INFORMATION

The permit renewal date occurs on a 5-year basis.

116.100 Coal Mining and Reclamation Operations

~~PRT intends to begin the process of reclaiming the site within 18 months after closing on the property. Based on the preliminary analysis of the on-site coal material, provided to PRT by the Seller, we believe that there is an opportunity to remove a significant portion of this material from the site prior to performing the reclamation. This is obviously good for both the state and PRT. We intend to have the coal fines sampled and analyzed to determine what portion of the material is "saleable." We have been approached by several companies that are interested in purchasing some of this material once we have current quality data and we have also been approached by a local co-generation facility that is interested in removing the coal material for use in their facility. Based on the amount of material on site, we believe that it will take several years to remove all of the marketable material and complete the reclamation of the coal fines area.~~

Beginning in March 2015 Sunnyside Cogeneration signed a contract with Price River Terminal (PRT) to remove coal refuse fines from the slurry ponds at the Wellington site. Removal of the fines will enable them to be used at a cogeneration power plant as well as being instrumental for initiation of final reclamation for that area of the Wellington site. The contract provides for the removal of a minimum of 130,000 tons per year through 2022.

PERSONAL INJURY AND PROPERTY DAMAGE INSURANCE (R645-301-117)

117.100 Certificate of Insurance

A Certificate of Liability Insurance has been issued to Price River Terminal with DOGM named as additionally insured. The coverage amounts of \$6 million for both each occurrence and general aggregate exceed the minimum insurance coverage requirements. A copy of the insurance certificate is presented in **Appendix C**.

117.200 Newspaper Advertisement and Proof of Publication

A copy of the Affidavit of Publication in the Sun Advocate is presented in **Appendix D**.

117.210 Statement by Operator

A statement by the owner, PRT, agreeing to comply with appropriate requirements will be provided upon closing of the property sale.

~~down to this section from upstream areas. Channel catfish and speckled dace naturally maintain their populations in the Price River. A catfish population also may survive within the Company's clean water storage pond when sufficient water is present.~~

~~Soldier Creek, a portion of which lies in the mine plan area, is of no value to Utah's fishery management program. It may support a viable population of speckled dace, since it flows into Coal Creek. It is important to note that Soldier Creek has not been inventoried.~~

~~The/endangered Colorado squawfish has been reported by UDWR from the Farnham Diversion within the Permit Area. Downstream in the Price river below Woodside squawfish have established a stable population associated with the squawfish population in the Green River. The other endangered Colorado River system fish, the humpback chub and the bony tail chub, have~~

~~not been reported from the Price River. The impacts to fish habitats in the permit area due to the proposed recycling of the coal fines will be similar to those of previous coal washing operations at the Wellington site.~~

Amphibians — Species Occurrence and Use Areas

~~Seven species of amphibians, all of which are protected, are shown to inhabit the biogeographic area in which the mine plan and adjacent areas are located. It is probable that six of these species inhabit the project area (reference the Division of Wildlife Resources Publication No. 78 16). Only one species of amphibian inhabiting the project area has been~~

~~determined to be of high interest to the State of Utah.~~

Total mean woody plant species per acre was 3,963.9 (Table 11). Total above ground annual production for the Sarcobatus-Suaeda community was estimated at 728.99 pounds per acre. For these totals and production by lifeform, refer to Table 12.

The range condition was rated as "high fair (mid seral)" by the USDA Natural Resource Conservation Service (as per October 25, 1995 letter). A copy of this letter has been included in Appendix G.

Disturbed Community

There are about 356 acres on the permit area that were disturbed by roads, settling ponds, facilities, waste areas, etc. Most of these disturbed soils are dominated by "weedy" plant species [i.e. halogeton (Halogeton glomeratus), fivehook bassia (Bassia hyssopifolia) and summer cypress (Kochia scoparia)]. For a more complete species list of the disturbed community, refer to the asterisked species in Table 13.

Riparian Community

As mentioned in the INTRODUCTION, the Price River dissects the properties and supports a riparian plant community (see Maps A-C). The disturbance to this community was less than one acre and therefore was not sampled by quantitative methods.

Threatened and Endangered Species

No sensitive, threatened or endangered plant species were found on or near the Wellington Railroad Loadout Facility.

will develop coal haulage contracts that require involved with coal haulage to use extreme caution accidental collisions between motor vehicles and big reduced. Reduced speeds will be used when crossing areas during crucial periods between November 1 and May.

o Protection of Threatened and Endangered Species

The Company will promptly report to the appropriate regulatory authorities any state or federally listed threatened or endangered species within the permit area of which the Company becomes aware, as per R614-301-3 S6.100. The endangered Colorado squawfish (*Ptychocheilus lucius*) has been reported at the Farnham Diversion in July 1997 by the UDWR, which is within the permit area. Since the regulatory state agency reported the endangered fish it is assumed that the reporting requirement has been satisfied. Upon abandonment of the project and reclamation of the associated disturbances the area of the Wellington Plan will eventually be reinvaded by those wildlife species that were originally displaced. Detailed reclamation and revegetation plans are presented in Section 3.40 of this Chapter.

Lisa Reinhart, a DOGM biologist, accessed the U.S. Fish and Wildlife Service's, Information for Planning and Consultation (IPaC) website on May 30, 2017 to evaluate federally protected species within the permit area. As a result, she notes that there are six (6) protected species within the area. They were: Mexican Spotted Owl, Yellow-billed Cuckoo, Bonytail Chub, Colorado Pikeminnow, Humpback Chub, and Razorback Sucker. There were no critical habitats identified in the permit area.

Fish and wildlife are discussed throughout Chapter 3, Section 3.11, and the State of Utah, Division of Wildlife Resources Publication No. 78-16, Appendix A. This publication does evaluate the Yellow-billed Cuckoo and notes it could be a summer resident of the project area. This bird only nests in the riparian habitat. Such areas are of critical value to the maintenance of this species. Consequently, the riparian habitat along the Price River that dissects the Wellington Prep Plant will not be disturbed to ensure protection and enhancement of the Yellow-billed Cuckoo habitat.

The Mexican Spotted Owl has not been evaluated in the MRP but this species requires wooded canyons with narrow side canyons which are not present within the permit area. Water withdrawal rates for the site have been calculated in order to comply with the 1996 Biological Opinion (BO) for Colorado River Fishes mentioned above.

The Price River dissects the Wellington Prep Plant property. This river enters the Green River downstream that ultimately flows into the Colorado River. Fish habitat at the site has been discussed, but to account for the Upper Colorado River Endangered Fish Recovery Program and satisfy the 1996 BO for Colorado River fishes, water consumption has been calculated as a means to determine the potential impact of the site to the endangered fish in the upper Colorado River system. Consequently, the annual water withdrawal rate for the Wellington Prep site has been reassessed.

Aside from normal water use for onsite restroom facilities, the only water use at the site is on surface areas for dust suppression. Each dust suppression treatment uses 4,000 gallons of water. Number of treatments per day depends on the month of the year. The following table estimates the annual water consumption for dust suppression at the Wellington Prep Plant.

Water Consumption for Dust Suppression at the Wellington Prep Plant

Month	Treatments/Day	Days/Week	Treatments/Week	Gallons/Month	Acre Feet
January	0	0	0	0	0.000
February	0	0	0	0	0.000
March	1	1	1	4000	0.012
April	1	2	2	8000	0.025
May	1	4	4	16000	0.049
June	2	5	10	40000	0.123
July	2	5	10	40000	0.123
August	2	5	10	40000	0.123
September	1	4	4	16000	0.049
October	1	1	1	4000	0.012
November	0	0	0	0	0.000
December	0	0	0	0	0.000
TOTAL	11	27	42	168000	0.516

7.31.2. WATER MONITORING

The monitoring plan for groundwaters and surface waters is described in Tables 7.31.2-1, 7.31.2-2, 7.31.2-4, 7.31.2-5 and 7.31.2-6. Groundwater and surface water monitoring stations are shown on Map E9-3451. The locations of UPDES monitoring stations and the locations of historic monitoring sites are also shown on Map E9-3451.

Ground and surface water monitoring are described below. Field measurements collected for both surface and ground water stations are collected with the aid of meters, except for dissolved oxygen which is monitored by use of either a meter or a field test kit using chemicals. Recommended procedures and guidelines for water sampling is attached to this MRP as Appendix 7.31-1. Results of the water monitoring program will be submitted on a quarterly basis to the Division's electronic water quality database.

The water monitoring plan has been designed to verify that impacts to the hydrologic balance do not occur as a result of mining and reclamation activities at the Price River Terminal permit area. The monitoring plan may be used to detect potential impacts by comparing the results of baseline water monitoring activities with current water monitoring data. In such an evaluation, other important factors that should be considered include climatic variability and land use and management practices.

It has been noted that there have been some historic problems with data sampling which the operator desires to resolve. As a solution the Operator agrees that flows monitored as part of the surface water monitoring program will be measured and not listed as "greater or lesser than" (unless measurement is not practically possible or do to hazard to life), and that Copies of field data collection sheets will be submitted to the Division upon request.

7.31.21. GROUND WATER MONITORING

A ground water monitoring plan, based upon the PHC determination, as described in Appendix I and Section 7.28, and baseline hydrologic and geologic information has been developed. The monitoring of groundwaters at the Price River Terminal is carried out as specified in Tables 7.31.2-1, 7.31.2-2, 7.31.3-3, and 7.31.2-5. Prior to 1996, fourteen wells were monitored quarterly for the parameters of Operational Monitoring in Table 3 of the Division's Guidelines for Establishment of Surface and Ground Water Monitoring Programs for Coal Mining and Reclamation Operations. In May 1996, a proposal was submitted to the Division to request the elimination of quality monitoring from site GW-2, total elimination of site GW-5, and the addition of two new well sites, GW-15 and GW-16. Site locations are shown on Dwg. E9-3451.

Well GW-2 will continue to collect water level data.

In November 1997, wells GW-15A, GW-15B, GW-16 and GW-17 were installed and added to the monitoring plan. Their locations are shown on DWG. E9-3451A. GW-15a and GW-15b will monitor undisturbed water in the coal fines. Permeability tests will be conducted on each of these wells prior to February 1, 1998, and results will be reported to the Division.

Baseline parameters for groundwaters will be collected as specified in Tables 7.31.2-1, 7-31.2-2, and 7.31.2-5.

Table 7.31.2-1 Hydrologic monitoring protocols for Wellington Prep Plant water monitoring stations.

	<u>Water Level/Flow</u>	<u>Water Quality</u>
Wells – East side of Price River		
GW-1	1	A, C
GW-2	1	--
GW-3	1	A, C
GW-4	1	A, C
GW-6	1	A, C
GW-15a	1	A, C
GW-15b	1	A, C
GW-16	1	A, C
GW-17	1	A, C
Surface Water – East side of Price River		
SW-1	2	B, D
SW-2	2	--
SW-2a	--	B, D
SW-3	2	B, D
SW-4	2	B, D
SW-5	2	B, D
SW-6	2	B, D
SW-7	2	B, D
Wells – West side of Price River		
GW-7	1	A, C
GW-8	1	A, C
GW-9	1	A, C
GW-9b	1	A, C
GW-10	1	A, C
GW-13	1	A, C
GW-14	1	A, C
Surface Water – West side of Price River		
SW-8	2	B, D

Table 7.31.2-2 Hydrologic monitoring protocols.

Water Level/Flow

- 1 Monitoring well: quarterly water level measurement when site is reasonably accessible.
- 2 Surface water monitoring sites: Quarterly discharge measurement when site is reasonably accessible. Site will not be physically accessed when high flows, mud, or ice is present that presents a danger to health and safety. Under such conditions, an attempt will be made to perform a discharge measurement using a technique that does not jeopardize health and safety. When the stream is ice-covered, it is usually not possible to perform a discharge measurement.

Water Quality

- A Monitoring well: quarterly field and laboratory water-quality measurements as specified in Table 7.31.2-3 when site is reasonably accessible.
- B Surface water: quarterly field and laboratory water-quality measurements as specified in Table 7.31.2-4 when site is reasonably accessible.
- C Monitoring well: field and laboratory water-quality measurements for baseline parameters as specified in Table 7.31.2-5 only during the second or third quarter monitoring event every five (5) years when the site is reasonably accessible. Scheduled future baseline monitoring events are for 2019, 2024, 2029, etc. The baseline monitoring events are intended to occur in the year prior to permit renewal.
- D Surface water: field and laboratory water quality measurements for baseline parameters as specified in Table 7.31.2-6 only during the second or third quarter monitoring event every five (5) years when the site is reasonably accessible. Scheduled future baseline monitoring events are for 2019, 2024, 2029, etc. The baseline monitoring events are intended to occur in the year prior to permit renewal.

Table 7.31.2-3 Groundwater operational and reclamation phase water-quality monitoring parameters.

<u>FIELD MEASUREMENTS</u>	<u>REPORTED AS</u>
pH	pH units
Specific Conductance	µS/cm
Temperature	°C
 <u>LABORATORY MEASUREMENTS</u>	
Calcium (dissolved)	mg/L
Magnesium (dissolved)	mg/L
Sodium (dissolved)	mg/L
Potassium (dissolved)	mg/L
Bicarbonate	mg/L
Carbonate	mg/L
Sulfate	mg/L
Chloride	mg/L
Boron (total)	mg/L
Boron (dissolved)	mg/L
Iron (total)	mg/L
Iron (dissolved)	mg/L
Lead (dissolved)	mg/L
Manganese (total)	mg/L
Manganese (dissolved)	mg/L
Selenium (total)	mg/L
Selenium (dissolved)	mg/L
Total Dissolved Solids (TDS)	mg/L
Total Alkalinity	mg/L
Total Hardness	mg/L
Cation/Anion Balance	%

Table 7.31.2-4 Surface water operational and reclamation phase water-quality monitoring parameters.

<u>FIELD MEASUREMENTS</u>	<u>REPORTED AS</u>
pH	pH units
Specific Conductance	µS/cm
Temperature	°C
 <u>LABORATORY MEASUREMENTS</u>	
Calcium (dissolved)	mg/L
Magnesium (dissolved)	mg/L
Sodium (dissolved)	mg/L
Potassium (dissolved)	mg/L
Bicarbonate	mg/L
Carbonate	mg/L
Sulfate	mg/L
Chloride	mg/L
Boron (total)	mg/L
Boron (dissolved)	mg/L
Iron (total)	mg/L
Iron (dissolved)	mg/L
Manganese (total)	mg/L
Manganese (dissolved)	mg/L
Selenium (total)	mg/L
Selenium (dissolved)	mg/L
Total Dissolved Solids (TDS)	mg/L
Total Suspended Solids (TSS)	mg/L
Total Settleable Solids	mg/L
Total Alkalinity	mg/L
Total Hardness	mg/L
Cation/Anion Balance	%
Oil and Grease	mg/L

Table 7.31.2-5 Groundwater baseline water-quality monitoring parameters.

<u>FIELD MEASUREMENTS</u>	<u>REPORTED AS</u>
pH	pH units
Specific Conductance	µS/cm
Temperature	°C
 <u>LABORATORY MEASUREMENTS</u>	
Calcium (dissolved)	mg/L
Magnesium (dissolved)	mg/L
Sodium (dissolved)	mg/L
Potassium (dissolved)	mg/L
Bicarbonate	mg/L
Carbonate	mg/L
Sulfate	mg/L
Chloride	mg/L
Boron (total)	mg/L
Boron (dissolved)	mg/L
Iron (total)	mg/L
Iron (dissolved)	mg/L
Lead (dissolved)	mg/L
Manganese (total)	mg/L
Manganese (dissolved)	mg/L
Selenium (total)	mg/L
Selenium (dissolved)	mg/L
Total Dissolved Solids (TDS)	mg/L
Total Alkalinity	mg/L
Total Hardness	mg/L
Cation/Anion Balance	%
Ammonia	mg/L
Aluminum (dissolved)	mg/L
Arsenic (dissolved)	mg/L
Cadmium (dissolved)	mg/L
Copper (dissolved)	mg/L
Molybdenum (dissolved)	mg/L
Nitrate	mg/L
Nitrite	mg/L
Oil and Grease	mg/L
Phosphate (ortho)	mg/L
Zinc (dissolved)	mg/L

Table 7.31.2-6 Surface water baseline water-quality monitoring parameters.

<u>FIELD MEASUREMENTS</u>	<u>REPORTED AS</u>
pH	pH units
Specific Conductance	µS/cm
Temperature	°C
 <u>LABORATORY MEASUREMENTS</u>	
Calcium (dissolved)	mg/L
Magnesium (dissolved)	mg/L
Sodium (dissolved)	mg/L
Potassium (dissolved)	mg/L
Bicarbonate	mg/L
Carbonate	mg/L
Sulfate	mg/L
Chloride	mg/L
Boron (total)	mg/L
Boron (dissolved)	mg/L
Iron (total)	mg/L
Iron (dissolved)	mg/L
Manganese (total)	mg/L
Manganese (dissolved)	mg/L
Selenium (total)	mg/L
Selenium (dissolved)	mg/L
Total Dissolved Solids (TDS)	mg/L
Total Suspended Solids (TSS)	mg/L
Total Settleable Solids	mg/L
Total Alkalinity	mg/L
Total Hardness	mg/L
Cation/Anion Balance	%
Oil and Grease	mg/L
Ammonia (NH ₃)	mg/L
Aluminum (dissolved)	mg/L
Arsenic (dissolved)	mg/L
Cadmium (total)	mg/L
Copper (total)	mg/L
Lead (total)	mg/L
Molybdenum (total)	mg/L
Nitrate	mg/L
Nitrite	mg/L
Phosphate (ortho)	mg/L
Zinc (dissolved)	mg/L

- Bailing resulting in increasingly turbid samples should be allowed to sit overnight before collecting a sample. This time delay will allow the disturbed sediments not characteristic of wells to re-settle before a valid sample is taken.
- When required and when practical, samples requiring filtering should be filtered in the field. When field filtering is not practical or possible, the laboratory will perform the filtering required. However, samples which are allowed to sit before being filtered are not truly representative of site conditions.
- A pump could be obtained for use in the collection of well samples without bailing. A low discharge pump will typically result in less turbulence and reduce the amount of sediment put into solution. At some well locations this may also result in the ability to collect the sample at the time of pumping rather than waiting until the following day.

Quarterly ground water monitoring is conducted at 14 wells (GW-1 through GW-14). A list of parameters analyzed was given previously in Table 7.24-2. Baseline parameters will be collected the year prior to the five year permit renewal. (2014, 2019, 2014, etc).

No modifications to the ground water quality monitoring plan are proposed to be implemented at the time of reclamation. A review of both operational and reclamation mapping appears to indicate that little if any disturbance of current ground water monitoring locations will be required. Should recontouring operations demonstrate that the ground surface adjacent to current monitoring locations be either significantly cut or filled, then the wells will be cut or extended as required to maintain the monitoring station.

7.31.22. SURFACE WATER MONITORING

A surface water monitoring plan, based upon the PHC determination, as described in Appendix I and Section 7.28, and baseline hydrologic and geologic information has been developed. All eight (8) surface water monitoring sites are monitored quarterly for the parameters of Operational Monitoring in Tables 7.31.2-1, 7.31.2-2, 7.31.2-4 and 7.31.2-6. ~~1 of the Division's Guidelines for Establishment of Surface and Ground Water Monitoring Programs for Coal Mining and Reclamation Operations.~~ Monitoring at any UPDES point discharge location will comply with the Utah Division of Water Quality Utah Pollution Discharge Elimination System (UPDES) permits. ~~Utah Division of Environmental Health and National Pollution Discharge Elimination System (NPDES) permits.~~ Site locations are shown on Dwg. E9-3451.

Analytical results from each quarterly sample will be submitted to the Division. If the analysis of any UPDES surface water sample indicates noncompliance with permit conditions, the operator will promptly notify the Division and immediately take action as required to bring the effluent into compliance. Surface water monitoring will proceed through mining and continue during reclamation until bond release, or until it is demonstrated that disturbance to the prevailing hydrologic balance in the permit and adjacent areas has been minimized and material damage to the hydrologic balance outside the permit area has been prevented, and water quantity and quality are suitable to support the approved post-mining land use, in accordance with Division Guidelines for post-mining monitoring.

Baseline parameters ~~for surface waters~~ will be collected ~~as specified in Tables 7.31.2-1, 7-31.2-2, and 7.31.2-6- the year preceding five year permit renewal.~~

Equipment, structures and other devices used in conjunction with monitoring the quality and quantity of surface water on-site and off-site will be properly installed, maintained and operated and will be removed by the operator when no longer needed. Overall surface water sampling guidelines which may improve the quality of water samples being taken include:

- Surface water samples should generally be collected in a well-mixed portion of the stream above the weir by submerging the sample bottle with the opening pointed upstream. It is important not to disturb bottom sediments while taking these samples. The bottle however must be removed immediately upon filling so as not to dilute any fixing agent which may have been placed in the bottle by the chemical laboratory.
- Oil and grease samples should be collected by submerging only a portion of the bottle opening beneath the water surface. Since oil and grease rise to the surface, distorted samples can be collected by totally submerging the opening of the sample bottle.

Water flow measurements taken at the majority of all surface water stations include the implementation of the “float” method for estimating flow rates. This method approximates the channel width and depth, then records the time it takes a stick or other floating material to pass between two points a known distance apart. The total estimate is then reduced to approximately 70% of the calculated value to adjust for naturally occurring velocity gradients with channel depth. The only measuring device wherein the flow is recorded is at the concrete weir located at the river pump house. Flow recorded at this point is used for recording flow at station SW-2.

As required by the regulations surface water monitoring will be completed quarterly for all surface water stations. Historic monitoring has included monthly monitoring at Station SW-3 and semi-annual monitoring at stations SW-1, SW-2, SW-4, SW-5, SW-6, SW-7, and SW-8. In addition, attempts will be made to collect water quality samples during local precipitation events from the silt fence and straw bale area near surface water station SW-4 when practical and feasible. These samples will be taken when adequate flow exists to collect a representative sample without the introduction of additional sediments or contaminants throughout the sampling process. A list of surface water sampling parameters was given previously in Table 7.24-5. Baseline parameters for surface waters will be collected **as specified in Tables 7.31.2-1, 7-31.2-2, and 7.31.2-6, ~~the year preceding five year permit renewal.~~**

The reclamation plan which has been submitted for surface water runoff and conveyance includes the installation of two drainage diversion ditches or channels upstream of the Upper and Lower Refuse ponds as described within Section 7.60. The long term value of these two permanent channels is to 1) divert surface water runoff away from the refuse ponds thereby reducing the amount of materials which could possibly be leached from soils found within the ponds, and 2) to contain, control, and reduce the amount of potential erosion from vegetated pond surfaces.

A slight modification of the water quality monitoring plan is proposed to be implemented at the time of reclamation as follows. First, Surface water quality monitoring stations SW-5 and SW-6 will be eliminated due to recontouring activities. Second, water quality samples from the Clearwater Pond will be collected from the ponded water surface at the approximate location of SW-7 and not from the discharge structure itself. Third, a new water quality monitoring station will be added (SW-9) to the monitoring plan at the time of reclamation (if practical and feasible) in order to obtain water quality data from reclaimed refuse pond surfaces. This station will be installed using design technologies and methodologies reasonably and feasibly available at the time of reclamation.

APPENDIX J

Cost of Reclamation

August 25, 2017



WELLINGTON PREPARATION PLANT

C/007/012

Bond Amount

WELLINGTON PREP PLANT

Bonding Calculations

Direct Costs

Subtotal Demolition and Removal	\$59,379.00
Subtotal Backfilling and Grading	\$3,232,360.00
Subtotal Revegetation	\$417,420.00
Direct Costs in 2017 Dollars	\$3,709,159.00

Indirect Costs

Mob/Demob	\$370,916.00	10.0%
Contingency	\$185,458.00	5.0%
Engineering Redesign	\$92,729.00	2.5%
Main Office Expense	\$252,223.00	6.8%
Project Mainagement Fee	\$92,729.00	2.5%
Subtotal Indirect Costs	\$994,055.00	26.8%

Total Cost	\$4,703,214.00	2017 Dollars
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Demolition



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	
	Refuse Pipeline 01	Refuse Pipeline																			11662
	Pumphouse 02*	Pumphouse																			0
	Powerline East 03	Powerline																			7750
	Clear Water Dike 04	Clearwater Dike																			20153
	Wash Plant 05	Wash Plant																			4005
	* Column Flotation Cells 06	Column Flotation Cells																			0
	Conveyor Belts 07	Conveyor Belts																			0
	Office 08	Office																			0
	Diesel 09	Diesel																			1707
	* Pipelines 10	Pipelines																			474
	Slurry Feed Tank and Pump 11*	Slurry Feed Tank & Pump																			0
	Foundations12	Foundations																			13628
	Total																				59379

Total

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
	Refuse Pipeline 01																			
	Structure's Demolition Cost*	Steel Bld. Large	02 41 16.13 0020	0.38	/CF						64230					CF		64230	CF	0
	Structure's Vol. Demolished										833					CY	0.35	833	CY	0
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			0
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Pipe's Demolition																			
	Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.38	/CF	6800										LF		6800	LF	0
	Pipe's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			0
	Foundation's Demolition																			
	Demolition Cost**	Concrete demo/ load/ dump**	03 05 05.10 0060	167	/CY						62					CY		62	CY	10354
	Foundation's Vol. Demolished																			
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.21	/CY												1.3	81	CY	179
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	31 23 23 17 0320	3.74	/CY													81	CY	303
	Disposal Costs	On site disposal	02 41 16 17 4200	10.2	/CF													81	CY	826
	Subtotal																			11662
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			11662

* This pipe has been removed and salvaged

** Some foundations remain onsite

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
	Pumphouse 02*																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.35	/CF						0					CF		0	CF	0
	Structure's Vol. Demolished										0					CY	0.35	0	CY	
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			0
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			0
	Floor's Demolition																			
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	13.1	/CY						0					CY		0	CY	0
	Floor's Vol. Demolished																1.3	0	CY	
	Loading Cost	Front end loader 3 CY			/CY													0	CY	0
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip			/CY													0	CY	0
	Disposal Costs	On site disposal	02 41 16.17 4200	10.2	/CY													0	CY	0
	Subtotal																			0
	Foundation's Demolition																			
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	13.1	/CY						0					CY		0	CY	0
	Foundation's Vol. Demolished																1.3	0	CY	
	Loading Cost	Front end loader 3 CY			/CY													0	CY	0
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip			/CY													0	CY	0
	Disposal Costs	On site disposal	02 41 16.17 4200	10.2	/CY													0	CY	0
	Subtotal																			0
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			0
	Total																			0

* Pumphouse has been "salvaged" (stolen) and the site has been reclaimed.

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diamet	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Clear Water Dike 04																			
	Structure's Demolition Cost																			
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			
	Building 's Disposal Cost*	410 H. P. (D9)	01 54 33 20 4360	2368/day											0.2 DAY			0.2 DAY		474
	Dismantling Cost																			
	Building 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			474
	Fresh Water Line's Demolition Cost	Pipe removal 24 inch	02 41 13.38 0500	19.8/FT		200									FT			200 FT		3960
	Demolition Cost																			
	Fresh Water Line's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			3960
	Intake Tower																			
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	167 /CY							62				CY			62 CY		10354
	Intake Tower's Vol. Demolished																1.3	81 CY		179
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	2.21/CY														81 CY		303
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23 17 0320	3.74/CY														81 CY		923
	Disposal Costs	On site disposal	02 41 16.17 4200	11.4/CY														81 CY		11759
	Subtotal																			
	Spillway	Pipe removal 24 inch	02 41 13.38 0500	19.8/FT		200									FT			200 FT		3960
	Demolition Cost																			
	Spillway's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			3960
	Total																			20153

* Onsite dozer equipment cost = rental cost + operating cost or \$2368/day

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		
	Wash Plant 05																					
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.35	/CF	90	70	50								FT		315000	FT	0		
	Structure's Vol. Demolished										4083					CY	0.35	4083	CY			
	Rubble's Weight (exclude steel)																					
	Truck's Capacity																					
	Haulage																					
	Transportation Cost Non Steel Truck																					
	Transportation Cost Non Steel Drive																					
	Disposal Cost Non Steel																					
	Steel's Weight																					
	Truck's Capacity																					
	Haulage																					
	Transportation Cost Steel Truck																					
	Transportation Cost Steel Truck Drive																					
	Disposal Cost Steel																					
	Subtotal																		4083	CY	0	
	Equipment 's Disposal Cost																					
	Dismantling Cost																					
	Equipment 's Vol. Demolished																					
	Loading Costs																					
	Transport Costs																					
	Disposal Costs																					
	Subtotal																					
	Floor's Demolition																					
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	167	/CY	90	70	0.5								FT		117	CY	0**		
	Floor's Vol. Demolished																	1.3	152	CY		
	Loading Cost	Front end loader 3 CY			/CY																	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip			/CY																	
	Disposal Costs	On site disposal	02 41 16.17 4200	11.4	/CY															152	CY	
	Subtotal																				0	
	Foundation's Demolition																					
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	167	/CY						22					CY			22	CY	3674	
	Foundation's Vol. Demolished																	1.3	29	CY		
	Loading Cost	Front end loader 3 CY			/CY																	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip			/CY																	
	Disposal Costs	On site disposal	02 41 16.17 4200	11.4	/CY																29	CY
	Subtotal																				331	
	Concrete Demolition																				4005	
	Demolition Cost																					
	Concrete's Vol. Demolished																					
	Loading Cost																					
	Transportation Cost																					
	Disposal Costs																					
	Subtotal																					
	Total																				4005	

This is the old facilities area.

** This concrete structure has been re-engineered, reinforced and is now part of rail system, track and transloading operation and will not be reclaimed (photographs available upon request).

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	
	* Column Flotation Cells 06																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.35	/CF			42	8							4	FT		0	FT	0
	Structure's Vol. Demolished										109							0.35	109	CY	
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				109
	Subtotal																				0
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Floor's Demolition																				
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060		/CY	40	40	0.5													0
	Floor's Vol. Demolished																	1.3			0
	Loading Cost	Front end loader 3 CY			/CY																0
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip			/CY																
	Disposal Costs	On site disposal	02 41 16.17 4200		/CY																0
	Subtotal																				0
	Foundation's Demolition																				
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060		/CY						9										0
	Foundation's Vol. Demolished																	1.3			0
	Loading Cost	Front end loader 3 CY			/CY																
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip			/CY																
	Disposal Costs	On site disposal	02 41 16.17 4200		/CY																0
	Subtotal																				0
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				0

* Covol Site has been dismantled, salvaged and reclaimed.

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Conveyor Belts 07																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.35	/CF	800	5	5							1	FT		0	CF	0
	Structure's Vol. Demolished										259					CY	0.35	0	CY	
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			0
	Subtotal																			0
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Foundation's Demolition																			
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	167	/CY						37					CY		0	CY	0
	Foundation's Vol. Demolished																	1.3	0	CY
	Loading Cost	Front end loader 3 CY			/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip			/CY															
	Disposal Costs	On site disposal	02 41 16.17 4200	11.4	/CY															0
	Subtotal																			0
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			0

Covol Site has been dismantled, salvaged and reclaimed.

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	
	Office 08																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.35	/CF	800	5	5							1	FT		0	CF	0	
	Structure's Vol. Demolished										259					CY	0.35	0	CY		
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																			259	CY
																					0
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				0

All of the Covol Site has been dismantled, salvaged and reclaimed.

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diamet	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost		
	Diesel 09																					
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.35	/CF						1340				1	CF		1340	CF	0		
	Structure's Vol. Demolished										17					CY	0.35	17	CY			
	Rubble's Weight (exclude steel)																					
	Truck's Capacity																					
	Haulage																					
	Transportation Cost Non Steel Truck																					
	Transportation Cost Non Steel Drive																					
	Disposal Cost Non Steel																					
	Steel's Weight																					
	Truck's Capacity																					
	Haulage																					
	Transportation Cost Steel Truck																					
	Transportation Cost Steel Truck Drive																					
	Disposal Cost Steel																					
	Subtotal																			17	CY	0
	Equipment 's Disposal Cost																					
	Dismantling Cost																					
	Equipment 's Vol. Demolished																					
	Loading Costs																					
	Transport Costs																					
	Disposal Costs																					
	Subtotal																					
	Floor's Demolition																					
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	167	/CY	17	17	0.5								FT		5.4	CY	902		
	Floor's Vol. Demolished																1.3	7	CY			
	Loading Cost	Front end loader 3 CY			/CY																	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip			/CY																	
	Disposal Costs	On site disposal	02 41 16.17 4200	11.4	/CY															7	CY	80
	Subtotal																					982
	Floor's Demolition																					
	Demolition Cost																					
	Floor's Vol. Demolished																					
	Loading Cost																					
	Transportation Cost																					
	Disposal Costs																					
	Subtotal																					
	Foundation's Demolition																					
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	167	/CY						4					CY		4	CY	668		
	Foundation's Vol. Demolished																1.3	5	CY			
	Loading Cost	Front end loader 3 CY			/CY																	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip			/CY																	
	Disposal Costs	On site disposal	02 41 16.17 4200	11.4	/CY															5	CY	57
	Subtotal																					725
	Total																					1707

* We left this in but are not sure when this floor and foundation is located.
Total volume if present would be 5.4 CY not 145 CY.

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	
	* Pipelines 10																				
	Structure's Demolition Cost	Pipe removal 12 inch	02 41 13.23 2900	11.3	FT	5800										LF		5800	LF	0	
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																			0	
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Equipment Cost																				
	Demolition Cost	Backhoe 5/8 CY capacity	01 54 33 0400	268	nda											1 DAY		1 DAY		268	
	Concrete	1 YD	03 31 13 0020	124																	124
	Concrete	Concrete short load costs	03 31 13.35 1520	82																	82
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				474

* We assume this is the underground pipeline is the one from the Clearwater Pond to the Dryer Pond. We have reviewed early U.S. Steel and NEICO reclamation costs (1996 & 2000) of which had no costs for removal of the pipeline. Furthermore, it is not within the SMCRA bond area. As stated in previous submittals to DOGM, the current owner considers the ability to move water from the east to the west side has a valuable asset for current and future operations of the facility. Additionally transfer of this water is an approved water right throughout the State of Utah. Finally, in the extremely unlikely event the water pipeline were to be reclaimed through SMCRA, the reclamation would be to stop the water flow at its source near the pumphouse area by plugging the upstream end with cement grout.

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
	Slurry Feed Tank and Pump 11*																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.38	/CF						21200					CF		21200	CF	0
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			0
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Floor's Demolition																			
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	167	/CY						5					SY		5	SY	0
	Floor's Vol. Demolished																1.3	6	CY	
	Loading Cost	Front end loader 3 CY			/CY															
	Disposal Costs	On site disposal	02 41 16.17 4200	11.4	/CY														6	CY
	Subtotal																			0
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Foundation's Demolition																			
	Demolition Cost	Concrete demo/ load/ dump	03 05 05.10 0060	167	/CY						10.5					CY		10.5	CY	0
	Foundation's Vol. Demolished																1.3	14	CY	
	Loading Cost	Front end loader 3 CY			/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip			/CY															
	Disposal Costs	On site disposal	02 41 16.17 4200	11.4	/CY														14	CY
	Subtotal																			0
	Total																			0

* There is no Feed Tank and Pump. We assume this was a Covol structure. The Covol site has been demolished, salvaged and reclaimed.

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length ft	Width ft	Height ft	Diameter in	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
	Foundations12																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Foundation demo/ load/ dump	02 41 16.17 0440*	1.57 /SqFt		30	40	10	12		3800 SqFt				141 CY					5966	
	Demolition Cost	Foundation demo/ load/ dump	02 41 16.17 0440*	0.99 /SqFt		10	10	6	6		440 SqFt				8 CY					436	
	Demolition Cost	Foundation demo/ load/ dump	02 41 16.17 0440*	0.99 /SqFt		30	15	15	6		2370 SqFt				44 CY					2346	
	Transportation Cost																				
	Disposal Costs	On site disposal	02 41 16.17 4200	11.4 /CY		70	65	31			193 CY				193 CY					2200	
	Subtotal																				
	Railroad Track Removal	Tie and track removal	02 41 13.33 3500	13.4 L.F.		200														2680	
	Demolition Cost																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				13628

The CY in 2013 was calculated incorretly This has been revised here.

* Cost of 12" concrete \$1.43 plus 10% added for average reinforcing (Ref. 02 41 16.17 2600)

Earthwork



	in 2017 costs	
	Cost	
West Side		
Plant Sediment Pond 001	\$ 307	
Road Pond 002	\$ 3,891	
Heat Dryer Pond 003	\$ 341	
Site Grading West of Price River 204	\$ 48,323	not located in operator sheets
Cover Coarse Refuse Pile with Topsoil 205	\$ 45,072	not located in operator sheets
East Side		
Coarse Slurry Pond Pile to Upper Slurry 206	\$ 716,967	not located in operator sheets
Upper and Lower Refuse Basin 004	\$ 2,090,610	
Grade Upper Refuse Dike 005	\$ 5,189	
Grade Crest 006	\$ 19,525	
Grade Diversion Ditch West of River 007	\$ 2,594	
Pumphouse and Slurry Pipeline Area Topsoil 008	\$ 3,280	
Grade & Rip Topsoil Borrow Area 009	\$ 50,032	
Support 013	\$ 246,229	
Total	\$ 3,232,360	

Note: We need to check the LCY and CY to acres in MRP and locate the acres, area, hours work for those items in yellow. And why do we have 0 for totals of 2 pages? Unable to locate the yellow items. Also I have 2 sheets that didn't match from operator they have different work times so I wasn't sure where they belong. one of them had 0 cost the other had 4,294. cost. I didn't finish the RSMeans vs. Blue Book because RSMeans was higher and not all of the equipment was in the RSMeans book.

Wellington Prep Plant C/007/0012	Cost Reference		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's		Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production		Equip. + Labor Time/Dis.	Revised 2017 Est	
	Year	Page				Hourly Wage Rate	Hourly Costs						Rate	Units			
Road Pond 002																	
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35		3410	icy	298.8	icy/hr	11.4	HR	\$3,891.00
Subtotal																	\$ 3,891

Dozer 410 HP	2017	01 54 33 20	20500	125.2	0.1	81	346.85	1	346.85						11.4	HR	\$3,954.00
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Wellington Prep Plant C/007/0012	Cost Reference		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage	Hourly Earthwork Costs	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Production		Equip. + Labor Time/Dis.	Unit	Revised 2017 Est	
	Year	Page										Units	Rate				Units
Upper and Lower Refuse Basin 004																	
with 4 feet of Cover																	
Portion from Borrow Area E																	
657EP-P (2006) 550 HP 32-44 CY EROPS	2H 2017	\$9-84	33735	227.85	0.1	81	542.48	4	2169.92		610700	lcy	1826	lcy/hr	334.4	HR	\$725,621.00
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35						334.4	HR	\$114,147.00
Portion from Borrow Area D + G																	
657EP-P (2006) 550 HP 32-44 CY EROPS	2H 2017	\$9-84	33735	227.85	0.1	81	542.48	4	2169.92		229338	lcy	2400	lcy/hr	95.6	HR	\$207,444.00
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35						95.6	HR	\$32,633.00
Portion from Borrow Area H + I																	
988G EROPS 8.2 CY 475 HP (2005)	2H 2017	\$9-62	13070	92.25	0.1	81	264.16	2	528.33		168702	lcy	747	lcy/hr	225.8	HR	\$119,297.00
6X4 70,000lbs 12-18 CY 400 HP	2H 2017	\$20-11	4560	46.7	0.1	77.15	157.02	16	2512.32						225.8	HR	\$567,282.00
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35						225.8	HR	\$77,077.00
Portion from Clearwater & Lower Refuse Dikes																	
657EP-P (2006) 550 HP 32-44 CY EROPS	2H 2017	\$9-84	33735	227.85	0.1	81	542.48	4	2169.92		224068	lcy	2276	lcy/hr	98.4	HR	\$213,520.00
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35		180700				98.4	HR	\$33,589.00
Subtotal																	
																\$ 2,090,610	

Note: this sheet includes what use to be sheet cover upper Lower Refuse Basin with Topsoil 208 it was the Clearwater lower refuse dikes portion.

657EP-P (2006) 550 HP 32-44 CY EROPS	2H 2017	\$9-84	33735	227.85	0.1	81	542.48	4	2169.92		610700	lcy	1826	lcy/hr	334.4	HR	\$725,621.00
Dozer 410 HP	2017	01 54 33 20 4360	20500	125.2	0.1	81	346.85	1	346.85						334.4	HR	\$115,987.00
657EP-P (2006) 550 HP 32-44 CY EROPS	2H 2017	\$9-84	33735	227.85	0.1	81	542.48	4	2169.92		229338	lcy	2400	lcy/hr	95.6	HR	\$207,444.00
Dozer 410 HP	2017	01 54 33 20 4360	20500	125.2	0.1	81	346.85	1	346.85						95.6	HR	\$33,159.00
988G EROPS 8.2 CY 475 HP (2005)	2H 2017	\$9-62	13070	92.25	0.1	81	264.16	2	528.33		168702	lcy	747	lcy/hr	225.8	HR	\$119,297.00
6X4 70,000lbs 12-18 CY 400 HP	2H 2017	\$20-11	4560	46.7	0.1	77.15	157.02	16	2512.32						225.8	HR	\$567,282.00
Dozer 410 HP	2017	01 54 33 20 4360	20500	125.2	0.1	81	346.85	1	346.85						225.8	HR	\$78,319.00
657EP-P (2006) 550 HP 32-44 CY EROPS	2H 2017	\$9-84	33735	227.85	0.1	81	542.48	4	2169.92		224068	lcy	2276	lcy/hr	98.4	HR	\$213,520.00
Dozer 410 HP	2017	01 54 33 20 4360	20500	125.2	0.1	81	346.85	1	346.85		180700				98.4	HR	\$34,130.00

\$ 2,094,759

	Cost Reference		Equipment Cost	Hourly		Operat. Earthwork Costs		Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production		Equip. + Labor Time/Dis.	Revised 2017	
	Year	Page		Operating Costs	Equipment Overhead	Hourly Wage Rate	Hourly Cost						Rate	Units		Units	Cost
Grade Crest 006																	
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35		43904	lcy	766.92	lcy/hr	57.2	HR	\$19,525.00
Subtotal																	\$ 19,525

Dozer 410 HP	2017	01 54 33 20	20500	125.2	0.1	81	346.85	1	346.85							0.9	HR	\$312.00
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Wellington Prep Plant C/007/0012	Cost Reference		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's		Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production		Equip. + Labor Time/Dis. Units	Revised 2017	
	Year	Page				Hourly Wage Rate	Hourly Costs						Rate	Units			
Grade Diversion Ditch West of River 007																	
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35		5828	lcy	766.92	lcy/hr	7.6	HR	\$2,594.00
Subtotal																	\$ 2,594

Dozer 410 HP	2017	01 54 33 20	20500	125.2	0.1	81	346.85	1	346.85							0.9	HR	\$312.00
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Wellington Prep Plant C/007/0012	Cost Reference		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly		Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Revised 2017 Est	
	Year	Page				Hourly Wage Rate	Hourly Costs										
Pumphouse and Slurry Pipeline Area Topsoil 008																	
657EP-P (2006) 550 HP 32-44 CY EROPS	2H 2017	\$9-84	33735	227.85	0.1	81	542.48	2	1084.96								
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35		3000	lcy	1328	lcy/hr	2.3	HR	\$2,495.00
																	\$785.00
Subtotal																	\$ 3,280

Note: Hours has been removed from submittal - has this already been done "0" cost was provided? Was it included somewhere else?

Dozer 410 HP	2017	01 54 33 20	20500	125.2	0.1	81	346.85	1	346.85							0.9	HR	\$312.00
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Wellington Prep Plant C/007/0012	Cost Reference		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's		Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Revised 2017 Est
	Year	Page				Hourly Wage Rate	Hourly Costs									
Site Grading West of Price River 204																
D9R Semi-U EROPS 410 HP (2005) grading was done on the ground	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35						100 HR	\$34,135.00
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35						38 HR	\$12,971.00
Multi-Shank Ripper 360-519 P	2H 2017	\$9-99	3180	11.05	0.1		32.03	1	32.03						38 HR	\$1,217.00
Subtotal																\$ 48,323

Note: couldn't find this in operators sheets? What is it called? Or has work been done.

Bev:
I'm not sure how much grading is needed here.
It's pretty much done.
We can talk about it. Patrick

Dozer 410 HP	2017	01 54 33 20	20500	125.2	0.1	81	346.85	1	346.85						100 HR	\$34,685.00
Dozer 410 HP	2017	01 54 33 20	20500	125.2	0.1	81	346.85	1	346.85						38 HR	\$13,180.00
Multi-Shank Ripper 360-519 P	2H 2017	\$9-99	3180	11.05	0.1		32.03	1	32.03						38 HR	\$1,217.00

total \$ 49,082

Wellington Prep Plant C/007/0012	Cost Reference		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's		Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Revised 2017 Cost	
	Year	Page				Hourly Wage Rate	Hourly Costs										
Coarse Slurry Pond Pile to Upper Slurry 206																	
657EP-P (2006) 550 HP 32-44 CY EROPS	2H 2017	\$9-84	33735	227.85	0.1	81	542.48	4	2169.92		694800	lcy	2434	lcy/hr	285.5	HR	\$619,512.00
D9R Semi-U EROPS 410 HP (2005)	2H 2017	\$9-88	20950	117.65	0.1	81	341.35	1	341.35						285.5	HR	\$97,455.00
Subtotal																	\$ 716,967

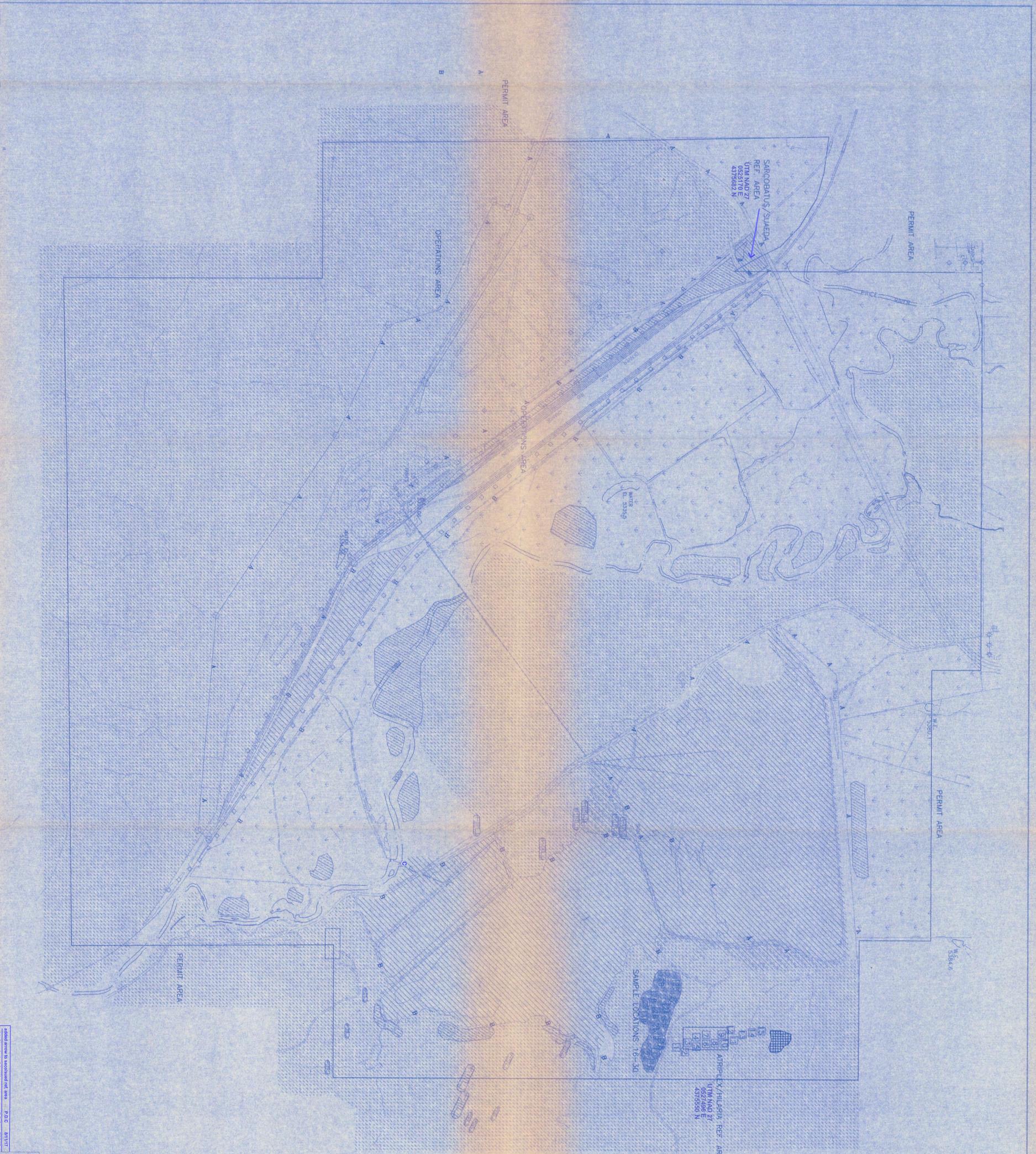
Note: Unable to Identify these LCY in operator provided sheets.

Dozer 410 HP	2017	01 54 33 20	20500	125.2	0.1	81	346.85	1	346.85						0.9	HR	\$312.00
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Revegetation



Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
Vegetation																			
Fertilizer	Fertilizer Hydro Spread/water soluble 1.5#	32 01 90.13 0180	5/MSF						421						AC		18339	MSF	\$ 91,694.00
Light Disk Harrow	Grader Rear Ripper, 180 HP ideal condition inst	31 23 16.32 2510	3.14	BCY					421						AC	1	2038	BCY	\$ 6,398.00
Seeding	Atriplex-Hilaria	Wellington1	430.88	\$/AC					421						AC		421	AC	\$ 181,400.00
Mulch	Hay bale	Reveg007	61.6	/ton					421						2 AC		842	ton	\$ 51,867.00
Mulch	Mulch Application	Wellington 003	6.12	/AC					421						AC		421	AC	\$ 2,577.00
Subtotal																			333936
Revegetation																			
100% Revegetation Rate																			\$ 83,484.00
Subtotal																			83484
Concrete Demolition																			
Demolition Cost																			
Concrete's Vol. Demolished																			
Loading Cost																			
Transportation Cost																			
Disposal Costs																			
Subtotal																			
Concrete Demolition																			
Demolition Cost																			
Concrete's Vol. Demolished																			
Loading Cost																			
Transportation Cost																			
Disposal Costs																			
Subtotal																			
Concrete Demolition																			
Demolition Cost																			
Concrete's Vol. Demolished																			
Loading Cost																			
Transportation Cost																			
Disposal Costs																			
Subtotal																			
Total																			\$ 417,420.00



-  DISTURBED AREA
-  RIPARIAN COMMUNITY
-  PASTURELANDS/GRAZING
-  ARTEMISIA/HILARIA COMMUNITY
-  SARCOPATUS/SUAEDA COMMUNITIES
-  ATRIPLEX/HILARIA COMMUNITY
-  ATRIPLEX CORRUGATA COMMUNITY
-  ORYZOPSIS HYMENOIDES COMMUNITY
-  22 VEGETATIVE SAMPLE LOCATIONS

-  A-A REVEGETATION SEED MIX A
-  B-B REVEGETATION SEED MIX B
-  REVEGETATION SEED MIX C



This map (drawing) was based on previous engineering or permit information and is accurate to the best of my knowledge.

VEGETATION STUDY MAP
 NEVADA ELECTRIC INVESTMENT COMPANY

MT. NEBO SCIENTIFIC
 REGISTERED PROFESSIONAL ENGINEERS

REVISIONS	BY	DATE	DRAWN	CHECKED
1. Initial drawing to accommodate the map	J.M.	9/24/93	JON WAGENO	
2. Revised drawing to accommodate the map	J.M.	7/6/94		
3. Revised drawing to accommodate the map	J.M.	7/29/94		
4. Revised drawing to accommodate the map	J.M.	4/29/95		

SCALE 1" = 500'

F9-178,179

