C/007/012 Incoming
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MT NEBO SCIENTIFIC, INC.
research & consulting

VIA: U.S. Priority Mail

November 15, 2012

April Abate, Team Lead
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 C/007/012: Midterm Review Responses

Dear Ms. Abate:

Attached please find three (3) copies of NEICO's responses to the Division's Midterm Review for the Wellington Preparation Plant. The documents have basically been divided into two sections

This first section, DEFICIENCIES & NEICO COMMENTS, cites each deficiency and provides comments about the methodologies or background information about each response. The section is *not* intended to be inserted in the MRP.

The next section, DEFICIENCIES & MRP INSERTION INSTRUCTIONS, again cites each deficiency and provides instructions for each response to be inserted in the MRP.

Your help in this process, along with your colleagues' assistance at the Division, has been much appreciated.

Sincerely,

Patrick D. Collins, Ph.D.
Resident Agent

Attachments

cc: T. Garcia (NEICO)

File in:
☐ Confidential
☒ Shelf
☐ Expandable
Date Folder 112012 C/0070012
Incoming

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NOV 20 2012
DIV. OF OIL, GAS & MINING

330 East 400 South, Ste. 6, P.O. Box 337, Springville, Utah 84663
(801) 489-6937, (fax) 489-6779

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: NEICO
Mine: Wellington Preparation Plant **Permit Number:** C/007/012
Title: Responses to State of Utah, Division of Oil, Gas & Mining Midterm Review: 2012

Description, Include reason for application and timing required to implement:
Response to Midterm Review by the Division. (Implement timing when appropriate through the Division)

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 Agent for NEICO	11/15/2012	
Print Name	Position	Date	Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 15 day of Nov, 2012
Notary Public: Marie A. Clark, state of Utah.
My commission Expires: 6/21/14
Commission Number: 583091
Address: 110 S. main
City: Springville State: UT Zip: 84663

MARIE A. CLARK
NOTARY PUBLIC - STATE OF UTAH
COMMISSION # 583091
COMM. EXP. 06-21-2014

For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining
		RECEIVED NOV 20 2012 DIV. OF OIL, GAS & MINING

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

Permittee: NEICO
Mine: Wellington Preparation Plant **Permit Number:** C/007/012
Title: Responses to State of Utah, Division of Oil, Gas & Mining Midterm Review: 2012

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

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☒ Add	☐ Replace	☐ Remove	Refer to the attached "DEFICIENCIES & MRP INSERTION INSTRUCTIONS"
☐ Add	☒ Replace	☐ Remove	
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Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.

Received by Oil, Gas & Mining

RECEIVED
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DIV. OF OIL, GAS & MINING

WELLINGTON PREPARATION PLANT

C/007/012

November 20, 2012

Responses to:

STATE OF UTAH
Division of Oil, Gas & Mining
Midterm Review: 2012
Task No. 4043

Permittee:

NEICO
6226 West Sahara Ave.
Las Vegas, Nevada 89146

Prepared by

MT. NEBO SCIENTIFIC, INC.
Research & Consulting
330 East 400 South, Suite 6
Springville, Utah 84663
(801) 489-6937

DEFICIENCIES
&
NEICO COMMENTS

Task No. 4043
Task Name: 2012 Midterm Permit Review

The members of the Division's review team include the following individuals:
April Abate (AA)
Priscilla Burton (PB)
Ingrid Campbell (IC)
Angela Nance (AN)
James Owen (JO)

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1. ***[R645-301-113.300]: Violation Notices****. The MRP lists the most recent update of the violations database in 2004. This information should be updated. (AA)*

NEICO Comments:

- There were several deficiencies in this section of Wellington's MRP pertaining to R645-301-100 in the regulations.
- When comparing the Division's copy of the MRP with *Mt. Nebo Scientific's* office copy, it was apparent that the Division's copy is *outdated* in this chapter.
- With this in mind, a redline/~~strikeout~~ version could not be prepared to address the Division's deficiencies because we would have been editing outdated information with the Division's copy or editing *Mt. Nebo's* copy – making changes that would make no sense to the Division reviewers.
- Finally, because several deficiencies were written in this section of the MRP, with the exception of the attachments at the end, the entire chapter was revised to address the deficiencies as well as add other updated information.
- All deficiencies have been addressed. Insertion instructions for the MRP have been provided with the C1-C2 Forms.

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2. ***R645-301-114.100]: Right of Entry****. The ROE information provided in the section deals solely with the COVOL lease and their ROE agreement with NEICO. The remainder of the section includes the lease agreement between NEICO and COVOL. There was no information in this section discussing the legal right of entry for the Permittee themselves. This section should reference a deed and/or any other lease agreements that are in place for the Permittee to demonstrate legal ROE in order to comply with this regulation. (AA & PB)*

NEICO Comments:

- This deficiency was addressed in the information described in **No. 1** above.
- Specifically, the information can be found in Section 1.20, p. 13, 11/20/12 in the attached information.

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3. ***[R645-301-116.100]: Permit Term Information.*** *The information regarding the permit term was last updated in 1994. If any information about the long-term operational plan for the site has changed, than that information should be updated in this section also. (AA)*

NEICO Comments:

- This deficiency was addressed in the information described in **No. 1** above.
- Specifically, the information can be found in Section 1.20, p. 15, 11/20/12 in the attached information.

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4. ***[R645-301-722.100]: Location and Extent of Ground Water.*** *This section discusses the nature and extent of groundwater within the permit area. The section references Table 722-1 with water level readings collected in 1990. This table however, provides data current up through 1998. The table should be updated to include more recent groundwater gauging levels while preserving the historic data for comparison. The reference in the narrative text should also then be updated. (AA)*

NEICO Comments:

- Table 7.22-1 has been updated to include recent water level data (2nd quarter 2012) for wells. Water levels were generally similar to previous values.

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5. ***[R645-301-722.400]: Location and Depth of Water Wells.*** *This regulation is missing from the plan. Please add a reference to the map showing the locations of all groundwater monitoring wells and any other water wells within and adjacent to the permit area. A reference to the well location map and Table 7.22-1 should be referenced here. (AA)*

NEICO Comments:

- A description for R645-301-722.400 has been added to the MRP. A reference to Table 7.22-1 was added.

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6. ***[R645-301-723]: Sampling and Analysis.*** *This section describes the water sampling plan for the site. This will likely be updated when the Probable Hydrologic Consequences (PHC) section of the plan gets updated. In addition, there is language in this section discussing COVOL's water monitoring responsibilities. This information should be updated. Furthermore, this section discusses the need to monitor groundwater for the presence of BTEXN and propylene glycol compounds. This action was based on the operational activities at the COVOL wash plant when additives were used in the coal washing process. Since these compounds were not detected in significant concentrations, continued monitoring no longer appears necessary. The language in this section should be updated to reflect the historic operations at the COVOL wash plan. (AA)*

NEICO Comments:

- References to Covol's monitoring responsibilities have been removed from 301-723.
- Monitoring parameters BTEX-N and propylene glycol have been removed from the water monitoring plan for surface waters and ground waters.
- The language regarding BTEX-N and propylene glycol has been removed from several sections of Chapter 7

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7. ***[R645-301-724]: Water Quality****. This section references water quality data up through May 1997. This section summarizes the tabulated data found in Table 7.24.3. This information should all be updated based on the outcome of the PHC evaluation. The Permittee may want to consider consolidating some of these data tables or removing them altogether from the plan since this data is all available electronically through the Division's electronic water quality database. (AA)*

NEICO Comments:

- Tables 7.24-3, 7.24-3a, 7.24-3b, and 7.24-3c have been removed from the MRP as this data is all available electronically through the Division's electronic water quality database.

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8. ***[R645-301-724.400]: Climatological Information****. This section requires climatological information of the permit area. Seasonal temperature ranges were provided; however, seasonal precipitation ranges and prevailing wind direction and velocity information were not. The information provided in the MRP lists only the average annual precipitation total. Please provide seasonal precipitation averages, prevailing wind direction and velocity information. (AA)*

NEICO Comments:

- Climatological information including seasonal precipitation ranges and regional prevailing wind direction and velocity was added to R645-301-724-400.

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9. ***[R645-301-724.600]: Survey of Renewable Resource Lands.*** *This section discusses COVOL operations in the present tense and should be updated. (AA)*

NEICO Comments:

- Information discussing COVOL's operations in the present tense were updated in R645-301-724.600

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10. ***[R645-301-727]: Alternative Water Resource Information.*** *This section discusses a water right held by the Permittee for water from the Price River. The section also discusses a lease agreement with COVOL. This section should now be updated to reflect historic water usage when COVOL operated their facility. Paragraph 3 also lists the State Department of Health as the regulatory authority over the Price River. This should be changed to the Utah Department of Environmental Quality. (AA)*

NEICO Comments:

- R645-301-727 has been updated to reflect current conditions and preserve the historic water usage.
- The reference to the State Department of Health was corrected.

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11. ***[R645-301-728]: Probable Hydrologic Consequences (PHC).*** *Based on ongoing discussions with the Permittee and their hydrologic consultant, it was agreed that a revised PHC should be prepared for the site as part of the 2012 midterm permit review. (AA)*

NEICO Comments:

- The statement of probable hydrologic consequences (PHC) has been updated.
- It should be noted that, because of uncertainties in the future ownership and operational status of the facility, some language regarding previous operational conditions and potential future operations was not removed from the MRP.

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12. ***[R645-301-731.122 and -.222]: Water Monitoring.*** *These sections should be updated based on the outcome of the revised PHC. (AA)*

NEICO Comments:

- Sections R645-301-731.122 and .222 (water monitoring plans) were updated.

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13. ***[R645-301-731.800]: Water Rights and Water Replacement.*** *Information on the operational status of COVOL and its use of 5 cfs of water requires updating. (AA)*

NEICO Comments:

- Section 731-800 was modified to reflect the potential historic use of 5 cfs at the Covol operation.

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14. [R645-301-733.220]: Permanent and Temporary Impoundments.

The MRP currently states that no permanent impoundments are proposed. Based on the midterm field visit, a discussion initiated with regard to the Dryer Pond indicating that it could be a candidate for a permanent impoundment given the continuous source of water being fed to it via a culvert. Alluvial water is contained in the impoundment creating a wetland feature of high esthetic value. The Division feels that the quality of the water in the impoundment meets the criteria set forth in 733.220 thru 733.226. The permanent wetland impoundment would have to be added to the reclamation plan and an application for a land-use change, should it be transferred to industrial use. (AA)

NEICO Comments:

- Thank you for your comments. We will take them into consideration and submit an amendment for a permit change when this decision is made by the Permittee.
- No change to the MRP on this subject has been prepared with this submittal.

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15. ***[R645-301-121.100 & -521.165]:*** *Label the topsoil stockpiles and include them in the legend on Facilities Map E9-3341. (PB)*

NEICO Comments:

- The topsoil stockpiles have been added to the Facilities Map E9-3341

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16. ***[R645-301-121.100 & -112.600]****: Update Surface ownership map Plate E9-3341 A and Section 112.600 of the MRP. (PB)*

NEICO Comments:

- A new Surface Ownership Map E9-3341 A has been created for the MRP
- Section 112.600 has also been updated (see Section 1.20, pp. 8-10, 11/20/12).

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17. [R645-301-820.113]: *Currently the Reclamation Agreement (dated 2000) references MRP Chap 1 Ex. A for the bonded area, which is the map included with the COVOL lease, is this reference still accurate? If not, please update the reference to the map illustrating the 392 bonded acres in the 2000 Reclamation Agreement. (Previous reclamation agreements have referred to Dwg. E9-3341 for the bonded/disturbed area. However Map E9-3341 shows a permit boundary that is significantly larger than 392 acres, but does not have a bonded/disturbed area boundary on the map or in the legend. (PB)*

NEICO Comments:

- Rather than changing a legal document that we did not prepare (Reclamation Agreement), we have addressed this deficiency in another area of the MRP.
- This deficiency was addressed in the information described in **No. 1** above.
- Specifically, the information can be found in Section 1.00, p. 7, 11/20/12.

18. ***[R645-301-233.100]****: The 2008 bond describes soil salvage from Areas E, D, H, & I. This will not result in the best available soil in the permit area being utilized. Rather Areas B & C are the most preferable, followed by shallow soils in Area D and G. Compare borrow areas shown on Plates E9-3341 and E9-3511 and make adjustments to Plate E9-3341 to show Borrow Area B and reinstate Borrow Area B on p 4, Sec. 2.41 and make adjustments to the reclamation plan and bond, accordingly. (Area I is not designated or discussed as a borrow area in the MRP.) (PB)*

NEICO Comments:

- Although Borrow Area B would provide a logical and perhaps more cost effective place to retrieve soils for revegetation, this area is also the most logical site to be used if the west side of the property were to used more as industrial site rather than returning it to grazing and wildlife habitat. The industrial option has made the Wellington site more appealing to those parties that have been interested in developing and operated new activities at the site. NEICO has been marketing the area with that in mind. In recent discussions with NEICO representatives, they determined it prudent to maintain the industrial-use option for the future. Representatives from the Division would be welcomed to discuss this matter further with representatives from NEICO.

  Accordingly, NEICO conducted several soil surveys to ensure there is adequate amounts of onsite borrow material for reclamation purposes – without using Borrow Area B, thus leaving open the possibility for this area to be marketed and used for an industrial site.

  The soil surveys reported in the MRP provide data to show the other borrow areas would be acceptable for topsoil and substitute topsoil for revegetation. Moreover, the subsequent bond calculations reflect this standpoint. That said, if the industrial option is not exercised, and complete site reclamation were to proceed, Borrow Area B remains a viable option. Consequently, the soils dataset along with its delineation on a map have been retained in the MRP as an optional area for use at the time of final reclamation.

MRP Insertion Instructions:

- No changes to the borrow areas have been made in the MRP at this time.

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19. ***[R645-301-541.400]****: Site operations have changed since 1998, when Section 2.41 (reclamation plan) was written. Please re-evaluate whether the best-case scenario described in Section 2.41 (removal of coarse refuse by re-mining) is still feasible and whether the potential for using Borrow Area B soils (Dwg E9- 3511) is now possible, and make adjustments accordingly to the Reclamation plan described in Chapters 2 and 5 of the MRP. (PB)*

NEICO Comments:

- Changes have been made to update Chapter 2 of the MRP.
- A redline/~~strikeout~~ version has been included for Division review.
- Specifically, the information can be found in Section 2.41, pp.1- 7, 11/20/12.

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20. ***[R645-301-121.200 & -121.300]****: The Table of Contents lists Tables 2-1 through 2-8, please provide page numbers for these tables in the Table of Contents. (PB)*

NEICO Comments:

- Changes have been made to add the pages to the Table of Contents in the MRP.
- A redline/~~strikeout~~ version has been included for Division review.
- Specifically, the information can be found in Table of Contents, p.vi, of this submittal.

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21. [R645-301-121.200 &-243]: In addition to straw or hay mulch, the application of another form of organic matter was a variable in the 1991 test plot (Appendix A and Sec. 2.33, p. 2). The results of the 1994 test plot evaluation are reported in Section 3.41, but it is not clear what organic amendment was included as a variable. Please clarify. (PB)

NEICO Comments:

- Changes have been made to add the pages to the current MRP.
- A redline/~~strikeout~~ version has been included for Division review.
- Specifically, the information can be found in Section 3.41, p.19, 11/20/12.

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22. ***[R645-301-121.200 & -244.200]****: Section 3.41 p. 4a varies from the remainder of Section 3.41 and Section 2.41 with regard to the approach to seeding, surface roughening and mulch incorporation. Is ripping followed by green hay incorporation with drill seeding specific to a location within the permit area? If so, please specify on page 4a the area to receive the treatments described on page 4a. (PB)*

NEICO Comments:

- This site is another surface facilities site that was created by COVOL in 1997, long after the original surface facilities site constructed by U.S. Steel Corporation in 1957.
- Changes to clarify this have been made to add the pages to the current MRP.
- A redline/~~strikeout~~ version has been included for Division review.
- Specifically, the information can be found in Section 3.41, p. 4a, 11/20/12.

23. *No deficiencies were issued by Ingrid Campbell; however, the Division would like to remind the Permittee that they have committed to remove Class C noxious weed, tamarisk, in riparian areas and replanting with willow and cottonwood cuttings to enhance wildlife habitat (Mining and Reclamation Plan Volume I-A, Section 3.42).*

NEICO Comments:

- Section 3.42 (page 2) does address tamarisk, but it does not refer to the entire reach of the Price River where this species is the dominant woody plant. The MRP states the following:

  The only critical wildlife habitat in the permit area is the riparian area along the Price River. There has been very little disturbance created by the operations at Wellington along the Price River, ***but there is one small area that has been disturbed and will receive a concentrated effort for wildlife enhancement at the time of final reclamation*** (emphasis added). *This area is located near the pump house along the Price River and adjacent to the Farnum county road.*

  The area is less than one acre (emphasis added), *but with a concentrated effort at the time of final reclamation, valuable wildlife habitat could be created. The first step in this effort would be to remove all tamarisk plants in the area, especially along the Price River.*

- Also as described in Section 5.40 (page 8) with reference specifically to reclamation in the pumphouse area, the MRP states the following:

  The riparian vegetation near the Price River where the reclamation activities will occur is dominated two by non-native plant species: tamarisk (Tamarisk chinensis) and common reed (Phragmitis communis). Little or no work is expected to be necessary in the riparian vegetation immediately adjacent to the Price River, but some tamarisk plants in the area may need to be removed.

- Tamarisk is classified as a Class C noxious weed in the state of Utah which means the goal is "containment" of this species. It is declared as a noxious weed, not native to the state of Utah that is widely spread but poses a threat to the agricultural industry and agricultural products with a focus on stopping expansion.

- Even though it recognized as a worthwhile goal, due to the magnitude and complexity of such a project it is not the intention of NEICO's to attempt and eradicate this plant from their property entirely.

24. ***[R645-301-112.330]****: The information in the current MRP presented below does not match the information found in the OSM/AVS database. The Operator should submit either updated pages for the MRP to reflect the correct information, or the Operator should provide a Secretary's Certificate or End Dates so that the AVS can update its records. (AN)*

NEICO

1. The following individuals have a different Begin Date in the MRP as compared to the date listed in the AVS database.

a. Michael W. Yackira, President & Treasurer (AVS 6/01/04 vs. MRP Aug 2004)

b. Paul J. Kaleta, Secretary (AVS 2/01/06 vs. MRP Apr 2006)

c. Walter M. Higgins, Director (AVS 6/01/04 vs. MRP Aug 2004)

This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct the AVS.

Nevada Power Company

1. The AVS shows Walter M. Higgins, Chairman and CEO, with a Begin Date of 10/01/04. The MRP shows a Begin Date of Aug 2000. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

2. The AVS shows Krestine M. Corbin, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of July 1999. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the ,4 VS.

3. The AVS shows T.J. Day, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of July 1999. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

4. The AVS shows James R. Donnelley, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of July 1999. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

S. The AVS shows Walter M. Higgins, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of August 2000. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS .

6. The AVS shows Philip G. Satre, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of January 2005. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

7. The following individuals are in the AVS database as an Officer or Director, but they are not listed in the MRP:

a. David Barney, Vice President, 10/01/93

b. *Charles Lenzie, COB and CEO, 10/01/93*
c. *Richard Hinkley, Director, 5/01/91*
d. *Richard Hinkley, Vice President, 10/01/93*
e. *Cynthia Gilliam, Vice President, 10/01/93*
f. *Steven Rigazio, Vice President, 10101/93.*
g, *Gloria Weddle, Vice President, 10/01/93*
h. *Fred Gibson, Jr., Director, 2/01/78*
i. *John Goolsby, Director, 1/01/91 C. Ryan, Director, 9/01/78*
k. *Frank Scott, Director, 5/l/72*
l. *Arthur Smith, Director, 1/01/59*
m. *J. Tiberti, Director, 11/01/63*
n. *Walter Higgins, President, 10/01/04*
o. *Earnest East, General Counselor/Secretary/SV'P, 10/01/04*

These discrepancies should be addressed by either correcting the MRP or submitting End Dates or a Secretary's Certificate to update the AVS database.

Sierra Pacific Resources

I The AVS shows Walter M. Higgins, President, with a Begin Date of 10/01/04. The MRP shows a Begin Date of Aug 2000. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certiiicate to correct this information in the AVS.

2. The AVS shows Walter M. Higgins, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of August 2000. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

3 The AVS shows Philip G. Satre, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of January 2005. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

4. The following individuals are in the AVS database as an Officer or Director, but they are not listed in the MRP:

a. *David Barneby, Vice President, 7/29/99*
b. *William Peterson, Sr. Vice President, 7/29/99*
c. *Steven Rigazio, President, 5131100*
d. *Gloria Weddle, Vice President, 7/29/99*
e. *Fred Gibson, Jr., Member, 7/29/99*
f. *Mark Ruelle, CFO/SVP/Treasure, 7/29/99*
g. *Matt Davis, Vice President, 7/29/99*
h. *Steven Oldham, Vice President, 6/20/00*
i. *Douglas Ponn, Vice President, 7/29/99*
i. *Mary Jane Reed, Vice President, 7/29/99*
k. *Mary Simmons, Controller, 7/29/99*
l. *Edward Bliss, Member, 7/29/99*
m. *James Murphy, Member, 7/29/99*
n. *Earnest East, General Counselor/Secretery/SVP, 10/01/04*

These discrepancies should be addressed by either correcting the MRP or submitting End Dates or a Secretary's Certificate to update the AVS database.

NEICO Comments:

- This deficiency was addressed in the information described in **No. 1** above.
- Specifically, the information can be found in Section 1.20, pp. 1-5, 11/20/12.

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25. ***[R645-301-830.140]****: The reclamation cost estimate which is approved and incorporated into the current Wellington Prep Plant mining and reclamation plan has not been updated to current unit costs. Current unit costs are used to calculate the direct costs of reclamation including demolition, backfilling and grading, and revegetation. Also, there has been on-site demolition that is not reflected in the MRP. Updates should be provided using the 2012 data from R.S. Means Heavy Construction Cost data manual and the Caterpillar Handbook or other appropriate resources. Also, bond summary sheets are not updated to current escalation factor estimates. The Permittee must provide updated information in terms of detailed estimated cost, with supporting calculations for the estimates, submitted by the permit applicant. This includes updated unit costs (to be used to update bond calculation spreadsheets) and updated escalation factors (used the Division's approved 1.2% and 5 year escalation). (JO)*

NEICO Comments:

- The bond calculations have been revisited and adjusted.
- Specifically, the information can be found in Appendix J dated 11/20/12.
- As a template, used the Division's spreadsheet executed in 2007-08.
- However, we did NOT have access to some of the internal links in that spreadsheet, so we had to make certain assumptions regarding them.
- Consequently, we could not find certain equipment that was cited in the Division's spreadsheet in the RS Means data book. We tried to find comparable equipment, but in some cases we just left the Division's work in the spreadsheet so we could incorporate the Division's suggestions later when necessary.
- Finally, the decrease in the reclamation costs can be mostly attributed to the following: a) some of the **reclamation work** has been **accomplished**, b) we found potentially significant changes in the Earthwork section for the reclamation of two very small ponds: the **Heat Dryer Pond** and the **Road Pond**, and c) the **Escalation Factor** worked in our favor.
- We have red-lined the changes in the attached bond spreadsheet (Appendix J).

DEFICIENCIES
&
MRP INSERTION INSTRUCTIONS

Task No. 4043
Task Name: 2012 Midterm Permit Review

The members of the Division's review team include the following individuals:
April Abate (AA)
Priscilla Burton (PB)
Ingrid Campbell (IC)
Angela Nance (AN)
James Owen (JO)

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1. DOGM Deficiency:
[R645-301-113.300]: Violation Notices*. The MRP lists the most recent update of the violations database in 2004. This information should be updated. (AA)*

MRP Insertion Instructions:

- Sec. 1.00 p. 1-7, 11/20/12, of this submittal replaces
- Sec. 1.00 p. 1-7, (various dates), of the Division's copy of the MRP

- Sec. 1.20 p. 1-16, 11/20/12, of this submittal replaces
- Sec. 1.20 p. 1-17, (various dates), of the Division's copy of the MRP

CHAPTER 1

R645-301-100

LEGAL, FINANCIAL, OWNERSHIP & COMPLIANCE

INTRODUCTION AND EXECUTIVE SUMMARY

1.00 Introduction and Brief History

The Wellington Preparation Plant is located in Carbon County, Utah in portions of Sections 8, 9, 10, 15, 16 and 17, Township 15S, Range 11 E, SLBM. The Plant was originally established in 1958 by United States Steel Corporation as a coal cleaning, preparation and loading facility. The Plant was in continuous operation until 1985 and was subsequently sold to Kaiser Coal Corporation in 1986. After the latter declared bankruptcy, the Plant was purchased through the court by Genwal Coal Company, a wholly owned subsidiary of Nevada Electric Investment Company (NEICO), in August 1989. The operator for Genwal was Castle Valley Resources (CVR).

Pursuant to a Joint Ownership & Operation Agreement dated as of July 1, 1991, and executed as of July 11, 1991, Intermountain Power Agency (IPA) and NEICO jointly owned certain coal and loadout properties including portions of the Wellington Preparation Plant's permit area. By a Coal Sales and Loading Services Agreement dated July 1, 1991 and executed July 11, 1991, CVR agreed with IPA and NEICO to operate and maintain loadout properties including the Wellington Preparation Plant.

Genwal later became the operator of the Joint Ownership land co-owned by NEICO and IPA. In other words, NEICO and IPA owned a portion of the area called "Joint Ownership Area" (approximately 120.2 acres). The operator at that time was Genwal. NEICO, however, was sole owner and operator of the remainder of the property (approximately 1579.6 acres).

Pursuant to a Special Warranty Deed (dated January 11, 1995) IPA deeded to NEICO their interest in the Joint Ownership Area. A "Termination Agreement" between IPA and NEICO was signed simultaneously to sale NEICO's interest in the Crandall Canyon Project to Andalex Resources, Inc. (Genwal). Therefore NEICO has been sole owner and operator of the entire Wellington Preparation Plant property (ACT/007/012) since January 1995.

Nevada Power Company merged with Sierra Pacific Resources (Reno) in July 1999. By 2012, Nevada Power Company became an operating affiliate of NV Energy, Inc, (NEICO is an affiliate of Nevada Power Company). For more detailed ownership information, refer the following LEGAL/FINANCIAL/OWNERSHIP following section (Section 1.20).

Elevation at the Wellington Plant is approximately 5,300 - 5,500 feet above sea level, with mean annual precipitation of six to eight inches. The site lies primarily on gently rolling slopes of Mancos Shale and valleys of alluvial deposits and is characterized by salt desert shrub vegetation communities. The Denver and Rio Grande Western Railroad passes through the site and the Price River also dissects the property. Historic land use of the area has been dominated by grazing of domestic livestock, wildlife habitat and limited crop production. About 400 acres within the property boundaries have been disturbed by coal cleaning and preparation operations since 1958.

History of Operations at Wellington

From 1958 until 1985, the operation history of the property was that of receiving coal by rail, preparation of coal (coal cleaning), and shipping a blended product by rail. When Genwal Coal Company purchased the area that operation was terminated. The railroad load-out facility at Wellington then consisted of a much simplified flow of product. Coal was crushed at the mine site, transported by truck to the Wellington facility, temporarily stored on the ground, screened, and then loaded into waiting railcars.

The actual loading operation was part of a new system installed by Genwal Coal Company in September and October of 1989 and made operational during November of 1989. The new loading system used only one conveyor belt system of the old Kaiser/U.S. Steel preparation plant.

The Wellington Loadout Facility was later used only to store and load coal. Following that, all transportation of coal from the mine and screening was discontinued.

In 1997 the Permittee, NEICO, designated Earthco as the Operator of the Wellington Preparation Plant. Earthco began reclamation of the site and by initiating a post-mining land use change to industrial. During this operation, all buildings and most structures west of the Price River were demolished and salvaged. The area was also graded in preparation for development of an industrial site. Later, additional clean-up and grading work was done in the same area under the direction of NEICO. A major company in the area had secured an option to purchasing this portion of the permit area if the post-mining land use was changed to industrial. Due to an unanticipated change in the operational plans of the potential buyer, the option to buy was not exercised.

On the east side of the Price River, a modular coal fines wash plant, truck loadout, slurry tank, NW tailings impoundment and retention berm, power lines and above ground water and tailings pipelines was constructed to recycle the coal refuse from the slurry ponds area. The area to implement this process was leased by company called Covol Technologies. This use is entirely consistent with all previous activities that have occurred and been permitted in the past. Site grading, diversions and sediment control measures have been directed to control any runoff that may occur into the Lower Refuse Pond or into Alternative Sediment Control Areas (ASCA's) 4 & 5. The majority of the facilities is located on the previously disturbed Coarse Slurry Pile. A substation is located near the wash plant. The river pumphouse will not be refurbished to pump water. However, a pump was be installed in a supply well near the river pumphouse.

The type of equipment installed to process the coal fines includes conveyors, screens, hoppers, flotation columns, centrifuges, pumps, tanks, and cyclones. Construction was done in a phased manner to allow for some production of washed fines to begin while the final additions to the plant were made. The final reclamation design at the plant site on the Coarse Slurry Pile was consistent with the current reclamation plan.

Regrading activities were included in the modification to the bond calculations even though very minimal earthmoving will be required. Dismantling and disposal of the surface facilities were the focus of the revised bond calculations.

Covol's modular coal fines wash plant was idle for much of 1999. Another company, TechMat, LLC, has signed a lease to resume these activities.

Following cessation of the TechMat operations, the wash plant was dismantled, salvaged and the site was reclaimed in 2004.

The current owner, NEICO, is evaluating the remainder of the permit area for the future. As mentioned above, the Wellington site had been proposed as an industrial area or could be used in its current condition. The area is zoned "heavy industrial" and future plans may be conducted to develop it as such. General and very specific plans have been outlined previously to the State of Utah, Division of Oil, Gas & Mining (DOGM). Plans are currently being made for development of this property. If these plans continue, amendments to the present permit will be prepared and submitted to DOGM related to the above proposed changes.

Property Description and Acreage

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

PROPERTY DESCRIPTION

The permit area is located at 6000 Wash Plant Road, City of Wellington, 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	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	S1/2, portions of S1/2 N1/2,
Section 10	W1/2 SW1/4
Section 15	W1/2 NW1/4
Section 16	All
Section 17	E1/2 SE1/4, NE1/4

Wellington Preparation Plant Acreage	
Undisturbed	1307.8
Total Disturbed/Bond (see Dwg. E9-3333)	392.0
Total Permit Acreage (see Dwgs. 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

1.20 LEGAL/FINANCIAL/OWNERSHIP

IDENTIFICATION OF INTERESTS - (R645-301-112)

112.100 Identification of Permittee, Operator, and Owner

1. Permittee: The permittee, Nevada Electric Investment Company (NEICO), is a corporation duly organized, validly existing and in good standing under the laws of the State of Nevada.

2. Operator: The operator, Nevada Electric Investment Company (NEICO), is a corporation duly organized, validly existing and in good standing under the laws of the State of Nevada.

3. Owner: The owner, Nevada Power Company, is the sole owner of NEICO and is a corporation duly organized, validly existing and in good standing under the laws of the State of Nevada.

4. Affiliates: Nevada Power Company is an operating affiliate of NV Energy, Inc,; NEICO is an affiliate of Nevada Power Company.

Names, Addresses & Telephone Numbers:

1. Permittee
NEVADA ELECTRIC INVESTMENT COMPANY
6226 West Sahara
P.O. Box 230
Las Vegas, Nevada 89102
ph. (702) 367-5692
Employer Identification Number: 88-6002040

2. Operator
NEVADA ELECTRIC INVESTMENT COMPANY
6226 West Sahara
P.O. Box 230
Las Vegas, Nevada 89102
ph. (702) 367-5692
Employer Identification Number: 88-6002040

3. Owner
NEVADA POWER COMPANY
6226 West Sahara Ave.
P.O. Box 230
Las Vegas, Nevada 89151
ph. (702) 367-5692
Employer Identification Number: 88-6002040

112.210 Name, Address & Telephone Number of Resident Agent:

Patrick D. Collins, Ph.D.
MT. NEBO SCIENTIFIC, INC.
330 East 400 South, Suite 6
P.O. Box 337
Springville, Utah 84663
(801) 489-6937

112.230 Abandoned Mine Land Reclamation Fee

The operator listed below will be responsible for the Abandoned Mine Reclamation Fee if "mining" occurs on the property and if this fee is still assessed for the type of mining that is proposed for future activities.

NEVADA ELECTRIC INVESTMENT COMPANY
6226 West Sahara
P.O. Box 230
Las Vegas, Nevada 89102
ph. (702) 367-5692
Employer Identification Number: 88-6002040

112.300 Names and Addresses of Officers, Directors

1. Permittee & Operator:

NEICO Officers & Directors (Present)			
Name	**Employee ID Number**	**Title**	**Begin Date**
Robert E. Stewart	RS22966	President	Dec 2010
Tony F. Sanchez	TS22372	Vice Pres.	Dec 2008
Paul J. Keleta	PK21675	Secretary	Apr 2006
Jonathan S. Halkyard	JH26665	Treasurer	Jul 2012

2. Owners:

Nevada Power Company Officers & Directors (Present)			
Name	**Employee ID Number**	**Title**	**Begin Date**
Michael W. Yackira	MY20883	President and Chief Executive Officer	Oct. 2004
Jonathan S. Halkyard	JH26665	Executive Vice President & Chief Officer	July 2012
Paul J. Kaleta	PK21675	Executive VP, Shared Services, General Counsel and Corporate Security	Apr 2006
Dilek L. Samil	DS24821	Executive Vice President & Chief Operating Officer	Jun 2010
Alice A. Cobb	AC26138	Senior Vice President, Human Resources & Information Technology	Jan 2012
Roberto R. Denis	RD20988	Senior Vice President, Energy Delivery	Oct. 2004
Tony F. Sanchez III	TS22372	Senior Vice President, Government and Community Strategy	Oct 2007
Robert E. Stewart	RS22966	Senior Vice President, Customer Relationship	Aug 2009
E. Kevin Bethel	KB22760	Vice President, Chief Accounting Officer and Controller	Apr 2008
Bruce A. Bullock	BB3945	Vice President, Customer Relationship	May 2011
Kevin C. Geraghty	KG23301	Vice President, Energy Supply	Jul 2012
Frank P. Gonzales	FG3167	Vice President, Corporate Services	May 2011
Kevin J. Judice	KJ26480	Vice President and Chief Information Officer	May 2012
Gary L. Lavey	GL23648	Vice President, Internal Audit and Chief Risk Officer	May 2010
Mary O. Simmons	MS4463	Vice President, External Affairs	Jun 2008
Mario Villar	MV21359	Vice President, Transmission	Feb 2010

NV Energy, Inc Officers & Directors (Present)			
Name	**Employee ID Number**	**Title**	**Begin Date**
Officers			
Michael W. Yackira	MY20883	President and Chief Executive Officer	Oct 2004
Jonathan S. Halkyard	JH26665	Executive Vice President & Chief Officer	Jul 2012
Paul J. Kaleta	PK21675	Executive VP, Shared Services, General Counsel and Corporate Security	Apr 2006
Dilek L. Samil	DS24821	Executive Vice President & Chief Operating Officer	Jun 2010
Alice A. Cobb	AC26138	Senior Vice President, Human Resources & Information Technology	Jan 2012
Roberto R. Denis	RD20988	Senior Vice President, Energy Delivery	Oct 2004
Tony F. Sanchez III	TS22372	Senior Vice President, Government and Community Strategy	Oct 2007
Robert E. Stewart	RS22966	Senior Vice President, Customer Relationship	Aug 2009
E. Kevin Bethel	KB22760	Vice President, Chief Accounting Officer and Controller	
Board of Directors			
Phillip G. Satre	N/A	Chairman of the Board	Jan. 2005
Joseph B. Anderson, Jr	N/A	Director	Feb. 2005
Glenn C. Christenson	N/A	Director	May 2007
Susan F. Clark	N/A	Director	Nov 2008
Stephen E. Frank	N/A	Director	Feb 2009
Brian J. Kennedy	N/A	Director	Feb 2007
Maureen T. Mullarkey	N/A	Director	June 2008
John F. O'Reilly	N/A	Director	July 1999
Donald D. Snyder	N/A	Director	Nov. 2005
Michael W. Yackira	MY20883	Director	Feb 2007

NAME(S) UNDER WHICH PERMITTEE AND OPERATOR PREVIOUSLY OPERATED MINING ACTIVITIES - (R645-301-320)

1. Permittee and Operator:
   NEICO owned 50% of the Crandall Canyon Mine (ACT/015/032) several years ago.

112.400 Pending, Current and Previous Coal Permits:

1. Permittee's Previous Coal Permits

   Genwal Coal Company, which was in the past owned by NEICO, held a coal mining permit for the Crandall Canyon Mine. It is now dormant and does not conduct business operations. Pertinent information about the mine is a follows:

   Name and Address:
   Crandall Canyon Mine
   Genwal Coal Company
   P.O. Box 1420
   Huntington, Utah 84528
   ph. (435) 687-9813

2. Owner's Previous Coal Permits

   Nevada Power Company and NV Energy has had no other coal permits in the past 5 years.

112.500 Legal or Equitable Owners of Record

The legal or equitable owner of the areas to be affected by the surface operator and facilities of the permit applicant are:

Legal Title:
NEVADA ELECTRIC INVESTMENT COMPANY
6226 West Sahara Avenue
Las Vegas, Nevada 89102

112.510 The Holders of Record of Any Leasehold Interest in Areas to be Affected by Surface Operation of Facilities

MCI
136 East South Temple
University Club Bldg., Suite 2000
Salt Lake City, UT 84111

D&RGW - Southern Pacific Railroad
250 South Broadway
Green River, UT

112.520 Owner of Coal Estate for the Mined Areas

Not applicable. All preparation plant operations occur on the surface.

112.600 Owners of Record of Surface Areas Within and Contiguous to the Permit Area:

Property Owners
Inside Permit Boundary

Name & Address	Parcel Number	Acres
Nevada Electric Investment Co. 6226 W Sahara Ave. P.O. Box 230 Las Vegas, NV 89151-0001	02-2174	80.00
Nevada Electric Investment Co. P.O. Box 10100 Reno, NV 89520-0000	02-1931-C	413.95
Nevada Electric Investment Co. 6226 W Sahara Ave. P.O. Box 230 Las Vegas, NV 89151-0001	02-1664-3	80.00
Nevada Electric Investment Co. 6226 W Sahara Ave. P.O. Box 230 Las Vegas, NV 89151-0001	02-1664-4	523.86
Nevada Electric Investment Co. 6226 W Sahara Ave. P.O. Box 230 Las Vegas, NV 89151-0001	02-1664-5	203.80
Nevada Electric Investment Co. 2835 S Jones Blvd Suite 5 Crandall Canyon Project Las Vegas, NV 89151-0001	02-1664-6	120.04
Denver & Rio Grande Western Railroad Union Pacific Railroad Co. One market Plaza SP Bldg Property Tax Dept. Room 200 San Francisco, CA 94105-0000	2A-1690	6.07
Wellington City P.O. Box 559 Wellington, UT 84524-0000	2-1944	0.88

Property Owners Adjacent to Permit Boundary

Lee Ann C. P.O. Box 146 Mayfield, UT 84643-0000	2-1951-4	5.0
Roger Brown 401 Catherine St. Steelton, PA 17113	2-1951	10.24
Dee L. Hugely 845 N Castle Heights Dr. Price, UT 84501	2-1947	29.47
Delbert K & Brenda Thayne 7488 E Highway 6 Price, UT 84501	2-2172	117.17
United States of America Bureau of Land Management No Address listed	2A-1656-10F Section 10, T15S, R11E, SLB&M	None listed
United States of America Bureau of Land Management No Address listed	2A-1656-15F Section 15, T15S, R11E, SLB&M	None listed
United States of America Bureau of Land Management No Address listed	2A-1656-22F Section 22, T15S, R11E, SLB&M	None listed
United States of America Bureau of Land Management No Address listed	2A-1656-21F Section 21, T15S, R11E, SLB&M	None listed
United States of America Bureau of Land Management No Address listed	2A-1656-10F Section 10, T15S, R11E, SLB&M	None listed
Utah State Institutional Trust Lands No Address listed	2A-1656-20S Section 20, T15S, R11E, SLB&M	None listed
Birch Creek Limited Partnership Arrowwood Management Corp. 3225 McLeod DR. Suite 100 Las Vegas, NV 89121	2A-9-A	640.00
United States of America Bureau of Land Management No Address listed	2A-1656-8F Section 8, T15S, R11E, SLB&M	None listed

Emery Industrial Resources Inc. 148 S. 100 E. Spanish Fork, UT 84660	2-1930-2B	5.00
Sharon Hansen ETAL P.O. Box 264 Riverton, UT 84065	2-1930-1B	11.00
Dale L. & Barbra H. Terry 1290 E 300 N Price, UT 84501	2-1930-5	94.83
Wellington Mountaineers P.O. Box 921 Wellington, UT 84542	2-1946-1	5.10
Carbon County Carbon County Clerk 120 East Main St. Price, UT 84501	None Listed County Road #480 Ridge Road	None Listed

112.610 The Holders of Record of Any Leasehold Interest in the Coal to be Mine

None

112.700 Mine Structures that require MSHA Numbers

Plant Refuse Pile - 1211-UT-09-00099-01
Clear Water Pond - 1211-UT-09-00099-02
Lower Refuse Pond - 1211-UT-09-00099-03
Upper Refuse Pond - 1211-UT-09-00099-04
Pond Refuse Pile - 1211-UT-09-00099-05

112.800

There are no outstanding interests in lands, options or pending bids on interests held or made by the applicant for lands which are contiguous to the areas to be covered by the permit.

VIOLATION INFORMATION (R645-301-113)

113.100 Compliance Information

Neither the permittee, operator, or any of their subsidiaries, affiliates or persons controlled by or under common control with the permittee have had a federal or state mining permit suspended or revoked in the last five years.

The permittee has not forfeited a performance bond or similar security deposited in lieu of bond in the past five.

113.200 Explanations of Suspensions, Revocations and Forfeitures

Not applicable

113.300 Violation Notices

No violation notices have been issued to the permittee in connection with any underground or surface coal mining activities for the past five-year period.

RIGHT OF ENTRY INFORMATION (R645-301-114)

114.100 Right of Entry and Operations Information

In 1989, when the property was purchased, the permittee obtained the legal right to enter and begin onsite activities. A brief summary for this documentation follows.

Pursuant to a Joint Ownership & Operation Agreement dated as of July 1, 1991, and executed as of July 11, 1991, Intermountain Power Agency (IPA) and NEICO jointly owned certain coal and loadout properties including portions of the Wellington Preparation Plant's permit area. By a Coal Sales and Loading Services Agreement dated July 1, 1991 and executed July 11, 1991, CVR agreed with IPA and NEICO to operate and maintain loadout properties including the Wellington Preparation Plant.

Genwal later became the operator of the Joint Ownership land co-owned by NEICO and IPA. In other words, NEICO and IPA owned a portion of the area called "Joint Ownership Area" (approximately 120.2 acres). The operator at that time was Genwal. NEICO was sole owner and operator of the remainder of the property (approximately 1579.6 acres).

Pursuant to a Special Warranty Deed (dated January 11, 1995) IPA deeded to NEICO their interest in the Joint Ownership Area. A "Termination Agreement" between IPA and NEICO was signed simultaneously to sale NEICO's interest in the Crandall Canyon Project to Andalex Resources, Inc. (Genwal). Therefore NEICO has been sole owner and operator of the entire Wellington Preparation Plant property (ACT/007/012) since January 1995.

NEICO as the new permit holder continues to honor the agreements entered into by CVR and Genwal that allow access.

Much of the above-mentioned documentation has been retained in the MRP at the end of Chapter 1.

114.200 Not applicable.

R645-301-115 STATUS OF UNSUITABILITY CLAIMS

115.100 Unsuitability Claims

The permit area in not within an area designated as unsuitable or under study as an area designated as unsuitable under R645-103-300, R645-103-400, or 30 CFR 769.

115.200

Not applicable

115.300 Distances From Dwellings and Public Road

The plans include operations that have been done previously within 100 ft of a county road. Current operations in the area are minimal. A letter from the county acknowledging the proximity to this road has been included in the Appendix following Chapter 1.

The operator does not propose to mine or perform any other operations within 300 feet of an occupied building.

R645-301-116 PERMIT TERM INFORMATION

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

The Wellington site began operations as a coal loadout in 1989 upon permit transfer. The site operated as such for a number of years. Since that time, approval for studies of fines removal was attained and these operations were conducted by different operators who leased the property from the current permittee, NEICO. It is anticipated that removal of these fines may once again occur in the future. Other activities such as demolition, dismantling, salvage, revegetation and other reclamation activities have also occurred at the Wellington site.

NEICO has been actively considering other options for future operations at the site; feasibility studies are currently being conducted. When appropriate, more specific information about such plans can be obtained directly from the NEICO.

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

117.100 Certificate of Insurance

A copy of or NEICO's Certificate of Insurance with PRICE INSURANCE AGENCY in the amount required under the Utah Coal Program is available in Wellington's Inspection Book and is provided to the Division's inspectors when requested.

117.200 Newspaper Advertisement and Proof of Publication

Notices of publication have been submitted to the local newspaper following Division endorsements when appropriate in the permit process.

117.210 Statement by Operator

A statement by the owner, NEICO agreeing to comply with appropriate requirements is enclosed in the Appendix following Chapter 1.

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2. ***R645-301-114.100]: Right of Entry***. *The ROE information provided in the section deals solely with the COVOL lease and their ROE agreement with NEICO. The remainder of the section includes the lease agreement between NEICO and COVOL. There was no information in this section discussing the legal right of entry for the Permittee themselves. This section should reference a deed and/or any other lease agreements that are in place for the Permittee to demonstrate legal ROE in order to comply with this regulation. (AA & PB)*

MRP Insertion Instructions:

- This deficiency was addressed in the information described in **No. 1** above, so no additional insertions are needed.

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3. ***[R645-301-116.100]: Permit Term Information***. *The information regarding the permit term was last updated in 1994. If any information about the long-term operational plan for the site has changed, than that information should be updated in this section also. (AA)*

MRP Insertion Instructions:

- This deficiency was addressed in the information described in **No. 1** above, so no additional insertions are needed.

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4. ***[R645-301-722.100]: Location and Extent of Ground Water****. This section discusses the nature and extent of groundwater within the permit area. The section references Table 722-1 with water level readings collected in 1990. This table however, provides data current up through 1998. The table should be updated to include more recent groundwater gauging levels while preserving the historic data for comparison. The reference in the narrative text should also then be updated. (AA)*

MRP Insertion Instructions:

- Sec. 7.22, p. 1, 11/20/12 of this submittal replaces
- Sec. 7.22, p. 1, 7/15/90 of the Division's copy of the MRP

- Sec. 7.22, Table 7.22-1, 11/20/12 of this submittal replaces
- Sec. 7.22, Table 7.22-1, of the Division's copy of the MRP

7.22 CROSS SECTIONS AND MAPS (R614-301-722)

Hydrological structure cross-sections are referenced throughout Appendix II, and cross-sections and maps are in Appendix III-A.

7.21.1 GROUND WATER LOCATION AND EXTENT

As indicated in Section 6.0, the geology of the load out facility area consists of the Blue Gate Shale member of the Mancos Shale formation overlain by slopewash and floodplain alluvial deposits. Ground water is found in each of these deposits. Ground water has been identified, within the load-out facility area, in 13 of the 14 monitoring wells on the site. Table 722.1 presents the water level readings collected in May 1990, 1999, and June 2012. Dwg. G9-3509 shows the location of the monitoring wells and the potentiometric surface map for the facility area. The drawing indicates that the ground water flow is from the hills to the north and south of the site toward the Price River. Water levels measured during June 2012 were generally similar to previous values.

Underlying the load-out facility, the ground water gradient is very gentle at 0.005 foot per foot. Under the abandoned tailings pond, the gradient is also quite gentle, ranging from 0.006 to 0.01 foot per foot. However, at the contact between the tailings and the river alluvium, the gradient steepens to 0.05 foot per foot. Monitoring well GW-5, the dry well, is located in this region where the water table drops toward the river. Originally completed in the ground water seepage mound from the operational tailings ponds, the bottom of the well is presently located an estimated 7 feet above the ground water surface.

Table 7.22-1

Wellington Preparation Plant Well and Water Level Data

Well ID	Static Water Level 1990, 1998 (ft-btc*)	Static Water Level June 2012 (ft-btc*)	Total Depth (ft-bgl**)	Stick-up (ft)	Screened Interval (ft-btc)
GW-1	14.31	14.30	22.20	2.30	-
GW-2	24.62	25.43	31.50	1.45	12.0-31.5
GW-3	18.30	Dry	22.00	2.30	9.0-22.0
GW-4	9.07	8.30	31.90	2.28	-
GW-5*	-	-	22.50	-	-
GW-6	8.68	6.81	34.00	2.30	17.0-34.0
GW-7	10.48	11.08	37.85	2.80	-
GW-8	26.83	27.69	58.35	1.92	43.0-58.0
GW-9	15.14	14.88	36.10	6.05	-
GW-10	13.55	12.67	46.46	1.66	-
GW-12	9.17	8.03	42.20	2.32	-
GW-13	24.20	25.52	26.30	1.80	-
GW-14	13.68	10.48	45.12	2.15	26.0-45.0
GW-15A	6.42	11.34	14.20	3.0	9.2-14.2
GW-15B	5.74	10.62	26.10	3.0	21.1-26.1
GW-16	41.59	45.52	69.25	3.0	59.25-69.25
GW-17	20.90	23.47	24.30	3.0	14.30-24.30

*ft – below top of casing
** ft – below ground level

New Surface Water Sampling Location

SW-2a monitors water quality only (use SW-2 for flow rate)

5. ***[R645-301-722.400]: Location and Depth of Water Wells****. This regulation is missing from the plan. Please add a reference to the map showing the locations of all groundwater monitoring wells and any other water wells within and adjacent to the permit area. A reference to the well location map and Table 7.22-1 should be referenced here. (AA)*

Insert 7.22 page 4 (replaces old 7.22 page 4)

MRP Insertion Instructions:

- Sec. 7.22, p. 4, 11/20/12 of this submittal replaces
- Sec. 7.22, p. 4, 09/10/97 of the Division's copy of the MRP

has not been in operation since 1984, these structures have been dry excluding small amounts of water due to run-off of surrounding watershed areas. They will again impound water once the Covol Wash Plant becomes operational.

The Clearwater Basin was constructed with a lining of clay and clay loam to form an impervious liner. The upper two basins were not similarly lined. This refuse area is separated from the load out area by the Price River. The flow in the river greatly varies with the seasons and precipitation and snow melt. The Price River flows at the Woodside Station # 09314500 south of the property are referenced in Table 7.22-9 through 7.22-13. Flow pattern of the surface drainages are shown on Drawing F9-1777.

7.22.3 Elevations and Locations of Monitoring Stations

The location of the water monitoring sites is shown on Drawing E9-3451. Elevations of the ground water monitoring wells, along with the Ground Water surface is located on Drawing G9-3509.

7.22.4 Location and Depth of Water Wells

The locations of water wells are shown on Drawing E9-3451. Completion information for water wells, including total well depths, screened intervals, and depths to water are provided in Table 7.22-1.

7.22.5 Contour Maps of Permit Area

Dwg F9-177 shows the contours of the property including disturbed and undisturbed areas. The detailed topography associated with the Covol Wash Plant site and the Refuse Basin is shown on Drawings 712a and Tl-9596.

6. ***[R645-301-723]: Sampling and Analysis.*** *This section describes the water sampling plan for the site. This will likely be updated when the Probable Hydrologic Consequences (PHC) section of the plan gets updated. In addition, there is language in this section discussing COVOL's water monitoring responsibilities. This information should be updated. Furthermore, this section discusses the need to monitor groundwater for the presence of BTEXN and propylene glycol compounds. This action was based on the operational activities at the COVOL wash plant when additives were used in the coal washing process. Since these compounds were not detected in significant concentrations, continued monitoring no longer appears necessary. The language in this section should be updated to reflect the historic operations at the COVOL wash plan. (AA)*

MRP Insertion Instructions:

- Sec. 7.23, p. 1, 11/20/12 of this submittal replaces
- Sec. 7.23, p. 1, 7/22/98 of the Division's copy of the MRP

7.23 Sampling and Analysis (R645-301-723)

The owner/operator of the facility will carry out the hydrological sampling protocol listed in the permit under Sections 7.24.1 and 7.24.2 and in accordance with the appropriate regulations. Beginning with the fourth quarter of 1997, Covol will be responsible for collecting surface water and ground water samples for all sites east of, and including, the Price River. This includes surface water sites SW-1 through SW-7 and groundwater sites GW-1 through GW-5, GW-6, and the recently installed monitoring wells GW-15a and b, GW-16 and GW-17. Dry well GW-5 will be officially eliminated from the monitoring program as of the fourth quarter of 1997; it has been abandoned, sealed and reclaimed by Covol.

All of the ground and surface water sites are sampled on a quarterly basis using the parameters shown on Table 7.24-2 and 7.24-5. In addition, beginning with the third quarter of 1998, four of the sites (GW-4, GW-6, SW-4 and SW-5) will be monitored for the presence of BTEX-N and propylene glycol. The BTEX-N analysis consists of measurements of benzene, toluene, ethyl benzene, xylene, and naphthalene concentrations. Section 7.31 provides the rational for this addition to the monitoring plan.

The owner/operator will verify that the analysis of the samples is being done in accordance with the methodology in "Standard Methods for the Examination of Water and Wastewater" or 40 CFR parts 136 and 4344.

7. ***[R645-301-724]: Water Quality****. This section references water quality data up through May 1997. This section summarizes the tabulated data found in Table 7.24.3. This information should all be updated based on the outcome of the PHC evaluation. The Permittee may want to consider consolidating some of these data tables or removing them altogether from the plan since this data is all available electronically through the Division's electronic water quality database. (AA)*

MRP Insertion Instructions:

Please remove/delete the following tables:

- The following tables in Sec. 7.24 of the Division copy of the MRP should be removed:
  - Table 7.24-3
  - Table 7.24-3a
  - Table 7.24-3b
  - Table 7.24-3c

- Sec. 7.24, pp. 1-3, 11/20/12 of this submittal replaces
- Sec. 7.24, p. 1, 12/05/97 and pp. 2-3 09/10/97 of the Division's copy of the MRP

- Sec. 7.24, Table 7.24-2, 11/20/12 of this submittal replaces
- Sec. 7.24, Table 7.24-2 of the Division's copy of the MRP

- Sec. 7.24, Table 7.24-5, 11/20/12 of this submittal replaces
- Sec. 7.24, Table 7.24-5 of the Division's copy of the MRP

7.24 BASELINE INFORMATION

7.24.1 GROUNDWATER INFORMATION

WATER RIGHTS

A search of all the ground water rights located within a three mile radius of the permit boundary was conducted. These ground water rights are summarized in Table 7.24-1 with Dwg. G9-3507 showing the location of each water right.

WATER QUALITY

Ground water quality data have been collected in the area of the load-out facility since 1985. This data collection activity has been conducted by several different owners and sampling firms. Since no information is available about the methods used to sample the ground water a anion/cation balance test was applied to all of the ground water samples. Milliequivalent values of the anions and cations in each sample were summed and the percent difference calculated. If the percent difference between the cation sum and the anion sum exceeded 10 percent, the data for that sample were assumed to be in error. The ground water sampling protocol, which has been used since December, 1989, consists of collecting the water samples in accordance with the procedures stated in the Guidelines for Establishment of Surface and Ground Water Monitoring Programs for Coal Mining and Reclamation Operations, the Division, 1986. A copy of the Water Quality Parameters can be referenced in Table 7.24-2. Cation

The groundwater quality data, collected from 1985 through mid-1991 have been entered into the Divisions electronic water quality database ~~compiled and summarized in Table7.24-3~~. To update information as part of the Covol Wash Plant amendment, data collected at sites east of the Price River (GW-1, GW-2, GW-3, GW-4, and GW-6) from mid-1991 through May 1997 has been submitted to the Division's electronic water quality database. ~~are summarized in Table 7.24-3a.~~ (No water quality data has been reported at GW-5 in recent years, as the well has evidently been dry.) Further, samples from these five wells were sampled by Covol in August, 1997 for all baseline parameters, and these data have been entered into the Division's electronic water quality database. ~~are reported in Table 7.24-3b. Following the same format as Tables 7.24-3 and Table 7.24-3a, Table 7.24-3c has been created to provide monitoring information obtained by Covol since August 1997. These summaries contain a listing of all water quality data for each sample site. Sample results assumed to be in error because of the anion/cation imbalance have been separated in the table from the sample data assumed to be good. Basic statistical evaluations, consisting of maximum, minimum, mean, standard deviation, and number of analyses, of each parameter was conducted for the data assumed to be good. The erroneous sample data contain the work "Error" in the Comment column of the table and are listed below the data statistical summaries discussed.~~

Comparison of ground water quality data with the Utah ground water quality standards indicate pH values outside the acceptable range for two wells, GW-1 and GW-7. For the GW-1 sample of 12/87, the pH value was 6.33. The GW-7 sample of 8/86 had a pH value of 9.65. The updated data set also showed at least one pH value outside the acceptable range on three different dates and at four out of the five wells. The inconsistent nature of these exceedences suggests sampling and/or analytical error rather than natural occurrences. All other samples meet the ground water standards.

An evaluation of the major cations and anions was conducted to classify the ground water. The ground water in the load-out area classifies as a strong sodium-sulfate type water. This type of water classification is expected due to the high concentrations of soluble salts, including gypsum ($CaSO_4 \cdot 2H_2O$), and mirabilite ($Na_2SO_4 \cdot 10H_2O$), and thenardite ($NaSO_4$), present in the Mancos Shale (Waddell, et. Al., 1981). To assist in understanding the seasonal variations of ground water quality, graphs for selected parameters were developed for each well using the pre-1991 data. These graphs are presented as Figures 7.24-1

through 7.24-6. The graphs present the concentrations of Iron, Manganese, pH, TDS, TSS, and Water Level for each of the ground and surface water sampling sites for the original data set through mid-1991. The discussions below relate to that data set. The pH graphs indicate little seasonal variation. Although graphs for ground water TDS do not show seasonal variation, some show an increase in TDS with time. Wells GW-3, GW-8, GW-9 and GW-11 show the greatest variation with time.

There also appears to be an abnormal variation in TDS values with reference to both time and location. GW-2 and GW-3 had similar TDS concentrations during 1985 and 1986. However, in 1987 GW-3 experienced a dramatic ten fold rise in TDS values while the TDS values for GW-2 have remained relatively low over time. Both GW-2 and GW-3 are located in the Upper Refuse Basin and within 1,500 feet of each other. The reason for this abrupt change in the TDS levels of GW-3 is not apparent.

TDS values determined for the samples taken from GW-6 were all within the 2,500 to 6,800 ppm range except for a TDS value for the 11/85 sample which was 32.6 ppm. This is another order-of-magnitude difference for which there is no apparent explanation. It is probable that the methods of sampling changed or that a recording error was made, however without detailed field or lab notes the exact cause is unlikely to be determined.

TDS values obtained from samples taken from GW-13 are also unusually high compared to the valued obtained from other samples. The location of GW-13 does not suggest that these values should be higher and may indicate that these data may be questionable.

The graphs for Total Iron and Total Manganese indicate considerably variability. One of the companies which has been sampling the wells suggests that the reason for the variability may be due to the use of the total analyses that are conducted. With the high concentration of TDS recorded in many of the samples, the iron and manganese in the sediment as well as the dissolved constituent is reported. There is little evidence to support this conclusion because TSS levels were not analyzed, not recorded, or were too low to register, for many of the high iron and/or manganese samples. The manganese concentration reported for samples from Well GW-10 range from 0.01 to 0.08 ppm except for one sample taken 10/88 which shows a concentration of 1.38 ppm. This is an approximate 25 times increase for the one sample. After 10/88 the measured concentrations of manganese returned to the normal levels of 0.01 to 0.05 ppm. It would appear that the 10/88 sample was anomalous. Well GW-9 also exhibits the same type of extreme variability.

Monitoring wells GW-10 and GW-11 are very close together yet they exhibit an unusually large variation in sample results. The 9/90 sample for GW-10 showed a manganese level of 0.04 ppm while the 9/90 sample for GW-11 showed a value of 0.69 ppm or 17 times higher than for the GW-10 sample. GW-10 and GW-11 are just over 250 feet apart. There are other examples of wide ranges of manganese sample analyses over time and location.

The same kinds of anomalies can be found in the sample data for iron analyses. For example, typical iron concentrations for GW-14 samples range from 0.01 to 6.57 ppm. However, the sample for 5/87 indicated a value of 140 ppm, an increase of 40 times over the typical values. GW-1 shows typical values of 0.01 to 9.18 ppm iron, however the 3/88 sample indicates and iron concentration of over 96 ppm, a 20 times increase over typical values. Sampling data as recent as 3/91 also shows an iron value of 28 ppm which is 5 times the typical values.

The data presented herein contain other anomalous results with no apparent reason for their variation. Throughout the ground water analysis it has been puzzling to find such extreme variation in ground water conditions. As a whole, such variation is not typical and not reasonable for the local ground water characteristics. The reason for the anomalies discussed above is unknown and at present can only be explained by sampling, reporting or analytical error. This is especially true since the loadout facility was idle between the year 1984 and 1989.

Given the data problems described above, the more recent data set analyzed as part of the Covol amendment was tabulated and analyzed separately. However, it is still difficult to make definitive statements regarding trends or variations in the data. In general, the more recent data ~~reported in the more recent Table 7.24-3a~~ showed values that were within the range of the previous data. Since 1991, the TDS concentrations at GW-1 and GW-3 appear to have increased over time, while TDS at GW-2, GW-4 and GW-6 have apparently at least minimally decreased during the same time period, most notably at GW-2. GW-2 and GW-3 still report widely disparate TDS values even though they are located quite close to each other.

7.24.2. SURFACE WATER INFORMATION

WATER RIGHTS

A search of all the surface water rights located within a three mile radius of the permit boundary was conducted. These water rights are summarized in Table 7.24-4, with an accompanying map which shows the location of each water right.

WATER QUALITY

Surface water quality data have been collected in the area of the load-out facility since 1985. This data collection activity has been conducted by several different owners and sampling firms. Since no information is available about the methods used to sample the surface water a anion/cation balance test was applied to all of the surface water samples. Milliequivalent values of the anions and cations in each sample were summed and the percent difference calculated. If the percent difference between the cation sum and the anion sum exceeded 10 percent the data for that sample were assumed to be in error. The surface water sampling protocol, used since December, 1989, consists of collecting the water samples in accordance with the procedures stated in the Guidelines for Establishment of Surface and Ground Water Monitoring Programs for Coal Mining and Reclamation Operations, the Division, 1986. A copy of the Water Quality Parameters can be referenced in Table 7.24-5.

The surface water quality data, collected from 1985 through mid-1991, have been entered into the Division's electronic water quality database ~~compiled and summarized in Table 7.24-6~~ and plotted on Figures 7.24-1 through 7.24-6. Data for surface water sites SW-1, SW-2 and SW-4 from mid-1991 to mid-1997 have been entered into the Division's electronic water quality database. ~~are summarized in Table7.24-6a.~~ Data from this latter period for SW-3, SW-5, SW-6 and SW-7 are not included because no flow was recorded at those sights in recent years. ~~These summaries contain a listing of all water quality data for each sample site. Sample results assumed to be in error because of the anion/cation imbalance have been separated in the table from the sample data assumed to be good.~~ Basic statistical evaluations, consisting of maximum, minimum, mean, standard deviation, and number of analyses, of each parameter was conducted for the data assumed to be good. ~~The erroneous sample data contain the word "Error" in the Comment of the table and are listed below the data statistical summaries discussed.~~

TABLE 7.24.2
GROUND WATER QUALITY PARAMETER LIST

PARAMETERS	BASELINE	OPERATIONAL*
FIELD PARAMETERS		
Flow or Water Level (gpm/ft)		
Specific Conductivity (µS/cm)		
Temperature (°C)		
pH		
LABORATORY PARAMETERS		
Ammonia (NH_3)		
Alkalinity (Carbonate)		
Alkalinity (Bicarbonate)		
Alkalinity (Total)		
Aluminum Dissolved		
Arsenic Dissolved		
Boron Total		
Boron Dissolved		
Cadmium Dissolved		
Calcium		
Chloride		
Copper Dissolved		
Total Hardness		
Iron Dissolved		
Iron Total		
Lead Dissolved		
Magnesium		
Manganese Dissolved		
Manganese Total		
Molybdenum Dissolved		
Nitrate		
Nitrite		
Oil & Grease		
Phosphate (Orth.)		
Potassium		
Selenium Total		
Selenium Dissolved		
Sodium		
Sulfate		
Zinc Dissolved		
pH		(removed parameter)
Specific Conductance		(removed parameter)
Total Dissolved Solids (T.D.S.)		
Cation/Anion Balance		

TABLE 7.24.5
SURFACE WATER QUALITY PARAMETER LIST

PARAMETERS	BASELINE	OPERATIONAL*
FIELD PARAMETERS		
Flow or Water Level (gpm/ft)		
Specific Conductivity (µS/cm)		
Temperature (°C)		
pH		
LABORATORY PARAMETERS		
Ammonia (NH_3)		
Alkalinity (Carbonate)		
Alkalinity (Bicarbonate)		
Alkalinity (Total)		
Aluminum Dissolved		
Arsenic Dissolved		
Boron Total		
Boron Dissolved		
Cadmium Total		
Calcium		
Chloride		
Copper Total		
Total Hardness		
Iron Dissolved		
Iron Total		
Lead Total		
Magnesium		
Manganese Dissolved		
Manganese Total		
Molybdenum Total		
Nitrate		
Nitrite		
Oil & Grease		
Phosphate (Orth.)		
Potassium		
Selenium Total		
Selenium Dissolved		
Sodium		
Sulfate		
Zinc Dissolved		
pH		(removed parameter)
Specific Conductance		(removed parameter)
Total Dissolved Solids (T.D.S.)		
Total Settleable Solids		
Total Suspended Solids		
Cation/Anion Balance		

*OPERATIONAL AND POST MINING

8. ***[R645-301-724.400]: Climatological Information****. This section requires climatological information of the permit area. Seasonal temperature ranges were provided; however, seasonal precipitation ranges and prevailing wind direction and velocity information were not. The information provided in the MRP lists only the average annual precipitation total. Please provide seasonal precipitation averages, prevailing wind direction and velocity information. (AA)*

MRP Insertion Instructions:

- Sec. 7.24, p. 5, 11/20/12 of this submittal replaces
- Sec. 7.24, p. 5, 09/10/97 of the Division's copy of the MRP

In order to improve the nature of the water quality data it is proposed that the sampling and analysis process be refined. Refinement will include training to the designated sampler and a review of the water quality laboratory completing the analyses. Through this process, the older more questionable data will be replaced by recent and future, more uniform, and accurate sampling data.

7.24.3 GEOLOGIC INFORMATION.

Geologic information is present in Section 600. This information was used to develop the probable hydrologic consequences.

7.24.4 CLIMATOLOGICAL INFORMATION.

Average annual temperature for this area is 49.4 °F with a range of -21° to 107 °F. The average temperature during the warm months is 63.9 °F and during the cold months is 34.9 °F. Average annual precipitation is 9.59 inches. Seasonal precipitation ranges at the facility are summarized below (1980-2005 data from the Wellington 3E weather station 429368 located 0.7 miles north of the facility).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Precip. (in.)	0.62	0.57	0.76	0.74	0.76	0.51	0.78	1.09	1.29	1.02	0.49	0.49
Snowfall (in.)	6.4	4.2	1.8	0.5	0	0	0	0	0	0.3	2.6	4.7

The prevailing winds at the nearby Price weather station are from the north (18% of the time), northwest (13% of the time), northeast (11% of the time) and from the south (8% of the time), with wind speeds typically ranging from 0 to 19 mph, rarely exceeding 26 mph (see station data 1999-2012).

7.24.5 SUPPLEMENTAL INFORMATION.

7.24.6 SURVEY OF RENEWABLE RESOURCE LANDS.

Information obtained from the ground water monitoring wells within the permit area suggests that there is an aquifer perched at the interface of the surface alluvium with the underlying Blue Gate Shale. The shape of the piezometric surface as shown on Map E9-3451 indicates that the primary source of recharge is north of the permit area.

Mining of native, in-situ material ~~does~~ did not occur within the permit boundary so there is no subsidence. The mining that ~~will occur~~ occurred under Covol's operations simply ~~involves~~ involved removing waste coal refuse placed by previous operators, so there ~~will be~~ was no potential for subsidence as a result of that operation. There are~~a~~ no excavations at the operation which penetrate to the aquifer, except for the monitoring wells. It was concluded that because of these limitations the operation within the permit area ~~will~~ would not disrupt the aquifer except as described in Section 7.28. The primary recharge area for the aquifer is off the permit area to the north.

7.24.7 MEET REQUIREMENTS OF 302-320

Information regarding Alluvial Valley Floors as presented within Section 2.0 and other sections of this MRP has been summarized herein.

The Wellington Coal Loadout Facility appears to be located on alluvial deposits and there is evidence of historic flood irrigation to fields between he DRG&W Railroad and the Price River. Subirrigation in this area is however not highly beneficial because of poor ground water quality.

Section 2.20- entitled "Environmental Description" indicates that the general map unit of soils encompassing the Wellington Plant Site is the Ravola-Billings-Hunting unit. The soils distribution is shown on Figure G9-3510. This map unit is described as:

9. ***[R645-301-724.600]: Survey of Renewable Resource Lands.*** *This section discusses COVOL operations in the present tense and should be updated. (AA)*

MRP Insertion Instructions:

- Sec. 7.27, p. 1, 11/20/12 of this submittal replaces
- Sec. 7.27, p. 1, 12/05/97 of the Division's copy of the MRP

7.27 Alternative Water Source Information (R645-301-727)

The owner/operator owns approximately 10 cubic feet per second of water rights in the Price River for industrial and irrigation uses at the Wellington Facility. While the cleaning plant is not in operation the water usage for the facility is limited to small quantities. Previously, in conjunction with the Covol Wash Plant operations, ~~However,~~ the owner/operator ~~has~~ committed in a lease agreement to provide Covol with up to 5 cubic feet per second of water from those water rights for operations at the Covol Wash Plant. ~~Under current planning,.~~ As discussed further in Section 7.28 of this Chapter, Covol under its maximum water needs in Phase 1, ~~expecteds~~ to use about 4.6 cfs of water pumped from the Price River collection well and/or the river diversion to the river pumphouse. During the bulk of operations in Phase II, water usage was planned to ~~will~~ be much less than during Phase I, averaging around 2 cfs on an annual basis, with pumping rates closer to about 3 cfs during summer months. The balance of the water rights ~~are~~ were available for other activities if necessary at the plant.

The ownership and use of water under these water rights is covered by the State of Utah water laws and administered by the Division of Water Rights, State Engineers Office. The use of the Price River water is monitored year-round by a water commissioner employed by the Price River Water Users and appointed by the State Engineer. In the event that the owner/operator's actions result in diminution or interruption to the water rights of a legitimate water use~~rd~~, the owner/operator will make available water from the owner/operator owned or controlled water rights during the diminution or interruptions.

The quality of the Price River water is administered by the ~~State Department of Health~~ Utah Department of Environmental Quality. In the event that the quality of water becomes unsuitable for use by a legitimate water user due to actions by the owner/operator, the owner/operator will make available water from owned water right during the period

10. ***[R645-301-727]: Alternative Water Resource Information.*** *This section discusses a water right held by the Permittee for water from the Price River. The section also discusses a lease agreement with COVOL. This section should now be updated to reflect historic water usage when COVOL operated their facility. Paragraph 3 also lists the State Department of Health as the regulatory authority over the Price River. This should be changed to the Utah Department of Environmental Quality. (AA)*

MRP Insertion Instructions:

- No insertion needed, addressed above

11. ***[R645-301-728]: Probable Hydrologic Consequences (PHC).*** *Based on ongoing discussions with the Permittee and their hydrologic consultant, it was agreed that a revised PHC should be prepared for the site as part of the 2012 midterm permit review. (AA)*

MRP Insertion Instructions:

- Sec. 7.28, p. 2, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 2, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 8, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 8, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 8a, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 8a, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 15, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 15, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 20, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 20, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 21, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 21, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 21a, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 21a, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 22, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 22, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 25, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 25, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 28, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 28, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 29, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 29, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 30, 11/20/12 of this submittal replaces
- Sec. 7.28, p. 30, 10/20/97 of the Division's copy of the MRP

- Sec. 7.28, p. 30a, 11/20/12 of this submittal is added to the Division's copy of the MRP

7.28.2 BASELINE INFORMATION

The Wellington Coal Loadout facility is located approximately one to two miles east-southeast of wellington, Utah adjacent to the Price River. The permit area is located in parts of Sections 8 through 10 and 15 through 17 of Township 5 South, Range 11 East (as indicated on Drawing G9-3507). The site has previously been operated as a coal preparation and wash facility by both U.S. Steel Corporation and Kaiser Coal Corporation. Originally constructed in 1958, the preparation plan was operated more or less continuously until approximately 1984. Castle Valley Resources acquired the property on August 2, 1989.

Present site facilities consist of a wash plant, loadout, a coarse refuse pile, a temporary pond coarse slurry pile and fine refuse basins, as indicated on Drawing E9-3341. ~~Castle Valley Resource plans to operate the loadout portions of the facility and to reclaim the fine refuse basins. The loadout is expected to receive and ship 500,000 tons of coal from the Genwal Mine annually. Covol intends to construct and operate a modular coal fines wash plant, power lines and water and tailings pipelines in the coal refuse ponds area (Drawing 712a and T1-9597) in order to reclaim fine coal from the existing fine refuse ponds.~~

GEOLOGY

Surficial geology in the facility area has been presented on map C9-1213R. All of the valley bottom areas occupied by the loadout facility and the fine refuse pile is mapped as alluvium associated with various depositional environments (i.e., river alluvium, or slope wash). The hills that rise adjacent to the Price River have been mapped as Blue Gate Shale, a member of the Mancos Shale. Beneath the Blue Gate Shale, is another member of the Mancos Shale, the Ferron Sandstone.

Ferron Sandstone. The Ferron Sandstone is a regionally extensive member of the Mancos Shale. In the area of the loadout, the Ferron Sandstone appears to be located at a depth of approximately 400 to 450 feet below the surface. Based on the water rights data, few wells, if any, are completed in the formation in the area adjacent to the loadout.

Blue Gate Shale. The Blue Gate Shale has been observed at all locations drilled through the alluvium in the area of the loadout. In addition, the Blue Gate shale is exposed in all the hills that rise above the loadout and fine refuse basins. Therefore, it is concluded that the Blue Gate Shale is continuous beneath the alluvial deposits and over the Ferron Sandstone in the loadout area. As is typical of the marine shales of the Mancos Shale, the Blue Gate Shale, in the area of the Wellington loadout, is gypsiferous. The presence of salts in the area is indicated by salt deposits found at or just below the crest of hills or high points in the Blue Gats Shale or shale-derived soils. These salts are soluble by rainfall and can be conveyed to either surface water or the ground water system.

alluvial quality typical of the higher permeability zones found at other locations. For these reasons it was decided to cease the collection of water quality data from this station.

It has been determined that well GW-3 may monitor upstream and downstream refuse pile water quality depending upon water level conditions. Cross section analysis shows that the Siaperas Ditch acts as a local ground water drain and may reverse local water gradients from the south to the north when water within the well rises to about the 20.6 foot level. When the water level is below this point, flow will generally continue to the south with some potential impacts on water quality.

With the above-described changes to the monitoring plan, all potential ground water impacts from the CWP will be adequately described; no additional new wells are planned or needed to cover the CWP operations. ~~However, additional parameters (BTEX-N and propylene glycol) will be measured at GW-4 and GW-6 beginning with the third quarter of 1998. These constituents area contained with the frothing and flotation agents used at the CWP. They are not expected to be present in samples obtained at GW-4 and GW-6, but their inclusion in the parameter list for those sites will provide the means to determine the potential for adverse impacts to the hydrologic balance.~~

~~In addition, to provide supplemental information, water samples may occasionally be taken from the water supply well located in the Price River alluvium in order to document the surface-groundwater relationship of Covol's water source with the Price River; results from any such sampling will be submitted to UDOGM along with the required monitoring reports.~~

SURFACE WATER

The WCLF and the CWP are located within the central portions of the State of Utah within the Price River drainage. The Price River drainage is located mainly in Carbon and Emery counties and comprises and approximate drainage area of 1,900 square miles. The Price River drains the north end of the Wasatch Plateau and the western portion of the Book Cliffs. As the water flows to the south it is diverted in an east-southeast direction around a locally present geologic dome (the San Rafael Swell).

Regional drainage basin topography ranges in altitude from 10,443 feet within the headwaters of the Price river at Monument Peak to about 4,200 feet at the confluence of the Price and Green rivers. Precipitation over the entire drainage basin varies greatly due to changes in elevation. According to Utah Division of Water Resources (1975), normal annual precipitation can be in excess of 30 inches at higher elevations and less than 8 inches at lower elevations. Most of the annual precipitation which falls within high basin elevations occurs between the months of October and April as snowfall.

Surface water resources within the area of the loadout and the CWP include the Price River which flows diagonally, northwest to southeast through the permit area (see Drawing F9-177) and several ephemeral drainages which are tributary to the Price River. Price River flows recorded by the USGS at the loadout facility are presented in Table 7.28-3.

Surface water sampling stations established by the applicant for the monitoring of the surface water system include stations identified as SW-1 through SW-8 on map E9-3451. Stations SW-1 and SW-2 are located on the Price River upstream and downstream of the facility respectively. Stations SW-3 and SW-6 are both located in undisturbed areas east of the Upper Refuse Basins. SW-4 is located on the lower Siaperas Ditch before its confluence with the Price River, and SW-5 and SW-7 are located at the outlets of the Upper Coarse and Fine Refuse Basins respectively. SW-8 is located west of the Price River in the area of the main operations facilities.

Of the stations monitored, data records indicate that station SW-3 has not experienced flow during the life of the station. SW-3 is located on an undisturbed ephemeral drainage up-stream of the tailings ponds.

Sampling records for stations SW-4 through SW-7 indicate that between late 1985 and early 1988 flow at these sites transitioned from perennial to ephemeral. This transition was due to 1) the cessation of operations at the preparation plant, 2) the associated cessation of discharge to the tailings ponds, and 3) a natural decrease in precipitation and associated runoff. As the source of the water in the tailings ponds diminished through either evaporation of seepage, the flows recorded at the surrounding stations declined. Under the recent runoff configuration, surface stations SW-3, SW-4, SW-6, and SW-8 were expected to receive runoff only following a precipitation event and stations SW-5 and SW-7 will note runoff only following a major precipitation event. Stations SW-5, SW-6 and SW-7 are likely to again experience more frequent flows as water used in the dredging process and water contained in the redeposited tails is decanted from the Northwest Pond to the Upper Refuse Pond, then to the Lower Pond and finally to the Clearwater Pond. Flow variations for Stations SW-1, SW-2 and SW-4 are shown in Figure 7.24-6. No flows are available for the other stations monitored.

~~In addition to the parameters listed in Table 7.24-5 for the basic surface water monitoring, BTEX-N and propylene glycol will be measured at SW-4 and SW-5 beginning with the third quarter of 1998. These constituents are contained with the frothing and floatation agents used at CWP. Their inclusion in the parameter list for these two surface water sites will provide the means to determine the potential for adverse impacts to the hydrologic balance.~~

Uses and Rights

The Price River is a perennial stream used as a supply for domestic, irrigation, and stock watering purposes. Because of rapidly decreasing water quality within the lower reaches of the river system, domestic or municipal uses of the Price River are generally confined to upper stream reaches. Irrigation and stock watering uses occur throughout its length. A listing of water rights was provided earlier within the hydrologic section of this permit application.

~~Operation of the CWP will require up to 5 cfs of water obtained from the river water collection well near the Price River and/or the river diversion to the river pumphouse. Water rights associated with this water belong to Genwal and are being provided to Covol as part of their lease agreement with EarthCo.~~

Seasonal Fluctuations

Streamflows in the Price River fluctuate seasonally in response to the seasonal variations in precipitation and temperature. Waddell, et al. (1981) reports that 50 to 70 percent of the streamflow from the Book Cliffs and Wasatch Plateau occurs during the period between May through July as a result of snowmelt and spring runoff, with most of the flow originating from the Wasatch Plateau drainages. The USGS (1990) maintained a stream gaging station on the Price River below Miller Creek near Wellington, Utah for the period between 1972 and 1986. The station was discontinued in 1986. Stream flow data for the available period of record has been reproduced in Table 7.28-3. ~~For ease of impact analysis associated with Covol's **project,**~~ from this table has been further analyzed in Tables 7.28-3b and 7.28-3c.

Two stations on the Price River are monitored as part of this MRP, one up- and one downstream of the permit area (monitoring stations SW-1 and SW-2); the streamflow data has been obtained since 1986 is reproduced in Table 7.28-3d.

shown in Table 7.28-4. The location of gasoline based products including diesel and gasoline are shown on Map 712d. The shop building shown on the drawing is also used to house all other oil, grease, antifreeze etc and is used as the site for all truck maintenance. Trucks too large to fit into the shop are cleaned and have their oil changed in back of the shop in the general shaded area as shown on map 712d. Fuel oil and lubricants ~~will also be~~ were stored in the Covol modular coal fines was plant located on Figure 5.12-1. No. 2 Diesel ~~is~~ was added to the coal at the CWP to provide floatation of the coal particles, and ~~is~~ was also used to fuel some of the heavy equipment used on-site. Additional information related to the location of the other surface facilities may be found in Section 5.0.

The impact from spillage during maintenance activities and during filling of tanks will be mitigated by the implementation of the SPCC plan. The gasoline and diesel fuel storage tanks currently constructed without containment structures will be modified as follows. The tanks will be moved and any contaminated soil currently found beneath the tanks will be removed and properly disposed of, after which rectangular concrete bases will then be constructed with volumes adequate to contain the maximum storage potential for the facilities. Designs for the containment of Diesel and Gasoline fuels are included as part of Appendix 7.28-1. It is important to note that the designs can and should be modified to fit both existing and future tanks as required to obtain total containment with an adequate freeboard. It is not the horizontal dimensions but the total volume. Based on the tank volumes provided by the operator of 2,000 gallons diesel and 500 gallons gasoline, the containment facilities must contain a 2,000 gallon spill. The tanks will then be placed in the concrete containment bases thereby preventing the contamination of local soils or ground water during filling. These containment pads will be placed at the same sites as the tanks currently occupy. New hydrocarbon storage tanks associated with the Covol wash plant will be placed within similarly constructed concrete containment pads.

Monitoring well GW-9B, GW-10, GW-11, and GW-12 would be used to evaluate the presence of hydrocarbon product contamination in the event that future spills occur at the loadout facility by sampling for Volatile Organic Carbons. Further, quarterly monitoring of BTEX-N at GW-4, GW-6, SW-4, and SW-5 would be used to determine whether or not the No. 2 diesel is adversely impacting surface or ground waters.

Table 7.28-4

Potential Sources of Hydrocarbon Contamination

Contamination Source	Comment
Dust Suppressant	• This material consists of soap and water, is used on coal piles, and is located in 55 gal. drums housed in storage building. • During summer periods, water is sprayed on roads as a dust suppressant. • During winter periods salt is applied to the road between the property gate and the coal piles.
Maintenance Operations • On site	• Performed at fueling station
Oil • Storage • Deposition	• For Covol's operations, oil will also be stored at the plant site in a 10,000 gallon above ground tank. • Very minor amounts of diesel, which is bound to the refuse, ins returned to the Northwest Pond and the Upper Refuse Basin.
Underground storage tanks	• None located on site.
Waste Disposal • Liquid • Solid	• Septic tank system with drain fields. Drain field lies Northwest of main Office. • Contracted to "City Sanitation".

Other Reagents

The CWP ~~uses~~ used two agents in processing coal in addition to the No. 2 diesel discussed above. CM-630 Floatation Frother (which consists of tripropylene glycol *n*-propyl ether and propylene glycol *n*-propyl ether) and sodium silicate solution ~~are~~ were stored at the CWP and added to the coal at the floatation cells. The former agent was ~~is~~ used for frothing, and the latter is a de-slimmer. The presence of propylene glycol ~~will be~~ was analyzed quarterly at monitoring sites GW-4, GW-6, SW-4 and SW-5 through the 3rd quarter of 2012. Results from those analyses were ~~would be~~ used to determine whether or not these reagents area adversely ~~impacting~~ impacted surfaces or ground waters.

Water Reduction or Diminution

The impacts to the hydrologic balance are discussed within the following section.

7.28.3.1 Impacts to the Hydrologic Balance

As presently envisioned, the operations of the Wellington Loadout facilities will not be water intensive; therefore, it is not believed that significant impacts will occur from ~~EarthCo's~~ the facilities operations to the surrounding water levels. Some minor impact however may result ~~form~~ from a reduction in runoff as surface water flows are contained.

within surface impoundments which are required by the regulatory agency to control water quality. These effects however are believed to be of minor significance since runoff only occurs in response to local rainfall, and since rainfall within the general area is small. The majority of water found within the area is from limited aquifer resources and flows within the Price River. As with other areas of the region and State, current declines in water level and or river flow are believed to be the result of climatic variations and not lodout opoerations. However, in the unlikely event that a significant diminution in water level in the surrounding wells or in the stream flow were to be caused by the ~~EarthCo~~ Wellington Loadout operation, ~~Earthco~~ the owner/operator will replace the water with on-site water which they have access to. ~~through agreements with the underlying water right owners, NEICO, Genwal, and IPA.~~ It must be remembered that this possibility is highly unlikely since no changes in ~~EarthCo's~~ the facilities operation are planned which could possibly impact the local water resources.

~~Covol's operations will be more water intensive. Water in amounts up to 5 cfs will be supplied to Covol by EarthCo, from water they control under agreements with owners of water rights #91-215, #91-216, #91-371. Section 7.24 provided a tabular water rights summary that included information on these rights. These three water rights combined have a total flow of approximately 20 cfs, with a yearly total withdrawl limit of about half that (7,297 acre-feet per year). Year-round, industrial use of this water is allowed under these appropriations. In the watewr balances associated with Covol's three year mine plan, they propose to use water at the yearly rates shown below in Table 7.28-4a. The water use projections have included averaged estimates of precipitation, runoff, and in-situ moisture as additional water inputs, and evaporation and seepage as additional water losses. The details, including assumptions, for the spreadsheet water balance calculations are included in Appendix WB. The calculated plant water usage includes approximately 500 gallons per day for road watering as needed.~~

~~Table 7.28-4a~~
~~Summary of Projected Water Use by Covol~~
~~(in gpm and afy, annual averages)~~

~~OPERATIONAL CASE~~	~~Water Used by Covol~~	
~~Phase I (initial startup)~~	~~2045 gpm~~	~~3299 afy~~
~~Phase II – Year 1~~	~~710 gpm~~	~~1145 afy~~
~~Phase II – Year 2~~	~~787 gpm~~	~~1269 afy~~
~~Phase II – Year 3~~	~~852 gpm~~	~~1374 afy~~
~~Design Case (assuming 0 precip and summer evaporation rates)~~	~~1282 gpm~~	~~2067 afy~~

~~Although Covol's operations will result in an increased use of water over that occurring in recent years, these general levels of water from these sources and at similar rates have been previously used at the site for similar operations. Additionally, the proposed uses, sources and quantities of water area allowable and appropriate beneficial uses for the water rights to be used. Therefore, diminution of water occur that could affect other water rights should not occur.~~

The existing ground water monitoring network was ~~will continue to be~~ used to monitor fluctuations in the ground water surface and predict potential impacts due to loadout operations and mining and operations associated with the CWP. The surface water sampling sites SW-1 and SW-2 were ~~will be~~ used to evaluate the impacts of both operations on the surface water resources of the Price River which passes through the area.

7.28.3.3 Impacts by Mining or Reclamation

Sediment Yield from Disturbed Areas

The impacts which could result from additional sediment contamination are decreased surface water quality in the Price River. The quality decrease would occur as increased TSS, TDS, and salt concentrations for downstream flows. Such impacts could reduce the usability of the flow for downstream irrigation and stockwatering.

These impacts are controlled at the Wellington loadout~~, including the area under lease by Covol,~~ through the use of adequately designed runoff control structures. As previously installed, the runoff control structures for the Wellington loadout capture and treat all runoff from disturbed lands before it is released to the Price River. A review of the runoff control plan and structures for the entire permit area was recently completed by Hansen, Allen & Luce, Inc. and is included within the permit in Sections 7.32, 7.33, 7.34, 7.42, and 7.43, and as shown on Drawing F9-177. The basic plan includes the diversion of all undisturbed areas away from disturbed areas and the collection and retention of all other areas into sediment ponds or alternate sediment control structures (ASCA's). Similarly, at the Covol coal fines wash plant, sediment and runoff ~~will~~ was designed to be controlled by site grading, drainage ditches, and culverts. The main plant site pad will be graded at 2 percent, with all runoff directed to the Lower Refuse Basin sediment pond. Upgradient runoff will be directed around the pad with structures as described in Section 7.42. In addition, interim revegetation and erosion control matting will be place on the steep fill slopes associated with the column pad and the east side of the main pad area. The sediment ponds have been designed to contain runoff until effluent limitations are met, and runoff treated by ASCA's is limited to small areas which contain limited activity.

Water Quality Impacts

Overall impacts to water quality as a result of mining were identified in the discussion related to the spacial water quality time plots discussed in Section 7.28.2. According to information contained in the previous section, the acid base potential for materials found within the refuse ponds is low, and consequently little water quality impact is expected to occur as a result of acidity either during operations or during reclamation. Similarly, analyses of a washed tails sample (Appendix WT) from Covol's bench scale testing showed low acid base potential, and represents the expected acid base potential of replaced tails after Covol's processing. The reported results from EP toxicity tests on the in-place coal fines refuse deposited by U.S. Steel indicated that the material does not generate toxic leachate. Covol's initial bench scale test samples (Appendix WT and Appendix TW) indicate that the washed tails would not generate toxic leachate either. The leachate of the Covol tails was analyzed through standard soil past extract procedures, which is a 24-hour leach with water. Further, chemicals added to the tailings as a result of Covol's processing will be surfactants/flocculents which are used at low, environmentally benign, concentrations (See Appendix MS for the Material Safety Data Sheets for the reagents to be used).

~~The flotation agents to be used in the plant will include propylene glycol of various molecular weights, No. 2 diesel, and sodium silicate. Calculations have been made of the concentrations of those reagents in the resulting wash planta tailings and show that they will vary from less than 10 ppm for the glycol and diesel to approximately 110 pm for the sodium silicate (See Appendix MS for these calculations). MSDAs for these reagents indicate that none of these reagents are listed in EPA designations for hazardous substances (40 CFR 302.4). In addition, the waste stream containing these agents will not be hazardous waste under EPA regulations (40 CFR261.2). Both the glycol product and the diesel are biodegradable and there concentrations in the waste area are expected to naturally reduce over time. Based on the non-toxic nature of the plant floatation agents, no special spill control plans, other that the existing SPCC plan, will be necessary. Information obtained from the supplemental quarterly monitoring of BTEX-N and propylene glycol that will be implemented in the third quarter of 1998 as sites GW-4, GW-6, SW-4, and SW-5 will be used to verify the concentrations of those substances.~~

- Operations ceased adding material and water to the slurry ponds in the early 1980's. The only water currently entering the ponds is through rainfall or natural runoff, neither of which contain high mineral contents which could potentially occur in slurry water. ~~Beginning with initial startup of the CWP operations, water pumped from the nearby river water collection well and/or the river diversion to the river pumphouse, and plant tails from the wash plant will enter the slurry ponds. Water will be pumped to the ponds at an average rate of between 710 and 1,282 gpm, and tails will be slurried to the ponds at an average rate 41.9 stph and 4070.7 gpm.~~ Water quality information for a sample of washed tails water obtained from a bench scale test, and results from a soil paste extraction analysis of the solid component of the waste from the bench scale test has been added to Appendix WT and Appendix TW, respectively. As shown, the washed tails water has a total dissolved solids content of 1,500 mg/l, reflecting the same general level of mineral content as the Price River source water.

- Decreased inflows experienced since operations ceased have translated to a decreased leaching potential of slurry materials. ~~Once the CWP operations begin removing the existing slurry, and providing increased inflows of water and reworked tails, leaching potential will change. During operations, there will be and increased in water applied to the pond, with a consequent increase in leaching potential. However, the net effect of the operations will be to reduce the volume and surface area of slurry materials in the ponds, reducing the material that can be leached. The leaching potential of the existing in place tales is expected to be the same as under former U.S. Steel's operations.~~

- ~~Supplemental monitoring for the presence of BTEX-N and propylene glycol (additives used in processing at the CWP) will allow for determination of quality impacts to water resources.~~

Reclamation. Water quality impacts as they relate to reclamation activities will be minimal because runoff and sediment control will be designed and maintained to prevent surficial loading to the Price River. Should sediment control fail, water quality impacts include the potential for increased sediment loading to the Price River during the initial phases of reclamation disturbance, and by toxics including boron and selenium. As can be seen by the data presented in Table 7.28-7, boron exceeds the acceptable limit of 5 mg/l in at least one depth sample at all six SP Stations. As stated earlier within this chapter, as well as within Chapter 2, high boron concentrations can be of concern due to the potential limiting impact upon plant life. A discussion regarding successful plant growth on test plots wherein SP soils were used can be found within Chapter 2. The remaining question regarding the control of boron then relates to the potential for boron to leave the site via ground water migration and thereby impact neighboring vegetation systems. An evaluation of data found in Table 7.28-7 shows that all SP stations experience a decreasing concentration of boron with depth. This anomaly was explained in a personal communication in 1994 between Hansen, Allen & Luce, Inc. and Mt. Nebo Scientific as a natural occurrence resulting from evapotranspiration. The end result is that the most concentrated amounts of boron will be found within the upper most soil layers thereby limiting the potential for leaching into the ground water system

Upon reclamation, it is proposed to create a roughened surface which will mostly contain and control rainfall runoff. Rainfall captured by this roughened surface will be mostly absorbed into the soil matrix and become available for the support of vegetative growth. During summer months, little rainfall contribution to the local ground water table is believed possible due to the typically high evapotranspiration rates documented in the "Hydrologic Atlas of Utah" prepared by the Utah Department of Natural Resources and Utah State University. (Although the summer months of July, August and September provide, on average, the highest rainfall amounts, much of this rainfall would be expected to evaporate and/or run off surficially.) The greatest potential for rainfall contribution to the ground water table would characteristically be in the winter between the months of November and March when evapotranspiration rates are at a minimum. Even during the winter months however recharge and leaching potentials will be hampered because of freezing conditions which will slow overall infiltration. Under either scenario, boron concentrations are expected to be similar in nature to those currently measured at monitoring stations in that concentrations decrease with depth. The end result is that little to no transport via either surface or ground water is expected to occur, and vegetation will continue to grow as documented in test plot studies.

- A large quantity of runoff water that currently enters the basins will be diverted through a permanent diversion ditch. This reduction of water will limit the amount of leaching possible to the amount of rainfall which falls directly on the respective basins.

- The land surface will be roughened to encourage and promote infiltration of rainfall. This localized capturing of the water is believed to be critical to the establishment of successful vegetation. As vegetation grows, additional water will be used within the upper soil layers to support the vegetation thereby reducing the total amount of leaching possible.

- A review of precipitation and evaporation records discussed earlier indicates that the annual amount of evapotranspiration significantly exceeds the amount of rainfall to the region.

Flooding or Streamflow Alteration

No streamflow alteration has occurred to the Price river which traverses through the middle of the permit area, nor has any hydrologic modification been made which would impact the flooding potential of the Price river. To the contrary, it is believed that the flooding potential within the disturbed areas of the permit has been reduced with the installation of surface impoundment structures as discussed previously. Because of a change in operation since 1984, many of the runoff control ponds have capacities far in excess of local requirements. Even with operation of the CWP, required capacities were ~~will be~~ maintained. Although this retention of water produced from precipitation at these areas will reduce the total amount of runoff which would normally enter the Price river in the absence of the loadout facility, the overall impact should be negligible because of the small amounts of rainfall runoff which would normally occur throughout the year in comparison of annual Price river flow volumes.

Pumping of up to 5 cfs of water from the river water collection well near the Price River and/or the rivers diversion to the river pumphouse ~~is~~ would likely to have a similar level of impact on river flows as during U.S. Steel's former operations.

Ground-Water and Surface-Water Availability

Probable hydrologic impacts upon surface and ground water availability will be related to use of up to 5 cfs of water from the Price River. This water has previously been appropriated for use at the site, and its use will continue to be overseen by the State Engineer's office to insure that it will not negatively affect other water right holders. According to information provided earlier it also appears that the local ground water basin was being benefitted by previous operations through the dilution of the highly saline local waters. Since the operations have ceased which caused this dilution, the ground water appears to have returned, or is returning to background or natural levels. ~~As operation of the CWP continues, it may be expected that infiltration of the water portion of applied tails and makeup water to the local ground water basin will again occur, and provide a similar dilution effect.~~ Additional information related to water quality conditions or trends can be found in Sections 7.24 and 7.28.2.

Since 1) water quality variations resulting from the facility are believed negligible, 2) neither surface or ground water is used for domestic purposes, and 3) ground water levels appear unimpacted by surface operations, little or no impact upon local domestic, agricultural, or industrial systems is anticipated.

Adequacy of Existing Monitoring Plan

It is believed by the applicant that the current water quality monitoring plan is adequate to define and document current, and monitor future impacts to the surrounding surface and ground water systems with modifications noted below.

~~The supplemental monitoring of BTEX-N and propylene glycol at GW-4, GW-6, SW-4 and SW-5, that will be initiated in the third quarter of 1998, will provide additional measures whereby impacts from CWP operation can be assessed.~~ As part of the monitoring plan, samples of ground water and surface water have been collected at sites GW-4, GW-6, SW-4, and SW-5 for analysis of BTEX-N and propylene glycol. The BTEX-N monitoring at these sites began in the third quarter of 1998 and has continued through the third quarter of 2012. These parameters were analyzed to monitor for the potential presence of these substances in ground waters and surface waters at the site resulting from the use of additives in Covol's wash plant operations. At the time the BTEX-N and propylene glycol monitoring was first recommended, it was considered unlikely that these constituents would be detected in the monitoring wells. These compounds were never detected in significant concentrations and these compounds have not been used at the facility since Covol's operations ceased in 1999. Accordingly, the monitoring of BTEX-N and propylene glycol at these monitoring stations is no longer included in the monitoring plan.

Some unexplained variation in water quality results have been noted and some potential errors in sampling, reporting and/or analyzing have been documented historically. Plans to improve the water quality monitoring program include additional on site education of persons responsible for collecting the appropriate samples, the collection of boron and selenium samples at each ground water site, a review of the track record and capabilities of the analytical laboratory, the installation of two new wells to replace existing wells GW-2 and GW-5 and, the "same day" collection of water samples.

The collection of "same day" water samples is especially critical at surface stations SW-1, SW-2, SW-4 since the time of travel between stations is measured in minutes rather than days, weeks or months as it is in ground water situations. It is believed however by the Operator that the interaction between surface and ground water sources is sufficiently slow that collection of "same day" ground water samples ~~at GW-3, GW-6, GW-15 and GW-16~~ is not warranted. However, at the request of DOGM, and to increase efficiency, the Operator will attempt to collect samples at stations SW-1, SW-2a, and SW-4~~, GW-3, GW-6, GW-15, GW-16, and GW-17~~ on the same day. ~~Should the laboratory be incapable of providing required accuracy, alternatives will be analyzed. Appropriate action will be taken to improve the accuracy and validity of data collected.~~

Monitoring at site GW-12 is being removed from the monitoring plan. The reasons for the removal are discussed below. GW-12 is located west of the Price River near the historic location of the surface facilities. Currently there are no operational activities at the historic surface facilities area. Well GW-12 is situated between two nearby monitoring wells (GW-7 and GW-14) which are also located west of the Price River and east of the railroad tracks. Because of their close proximity, these two wells can adequately monitor for potential impacts to groundwater systems in the area. Additionally, the region at and immediately surrounding the well location is frequently flooded with surface water runoff from adjacent irrigated farm lands. The ponding of irrigation water at the well location has influenced both water levels and groundwater chemical compositions at the well. These factors limit the usefulness of water level and chemical information collected at the well.

Laboratory pH and Laboratory specific conductance measurements are being removed from the list of laboratory analytical parameters in the monitoring plan for both groundwaters and surface waters. Field pH and field specific conductance measurements are currently included in the monitoring plan for ground waters and surface waters. The field measurements are performed using industry standard field instruments which are regularly calibrated using traceable NIST standard reference material. The results of the field measurements are believed to be reliable and accurate. Accordingly, there is no need to perform redundant pH and specific conductance measurements at the laboratory.

Discharge measurements at SW-2 are being temporarily suspended from the surface water monitoring plan. Currently, no diversions of water from the Price River or discharges of water to the Price River at the facility area are occurring. The likely magnitude of potential contributions (or losses) of flow to the Price River resulting from current activities at the facility is small, and is likely less than the typical error in the flow measurement technique used at SW-2 (current velocity meter and wading rod). The typical measurement error using the alternate "float" method is much greater. Historically there was infrastructure at SW-2 which included an access bridge and cement weir to facilitate accurate discharge measurements at the site. However, at the request of the Division, the access bridge was removed and the stream channel geometry at the cement weir has changed substantially due to erosion of the stream banks at the weir location. As a result of the erosion, poor conditions for stream discharge measurement are now present at the site. Complicating the collection of accurate flow data, water now flows diagonally over substantial portions of the weir rather than in a laminar condition parallel to the channel direction as occurred previously. Additionally, in recent years considerable thicknesses of sticky mud have been deposited along the stream banks and on the channel bottom which makes wading of the stream unsafe. When active operations that could potentially influence flow rates in the Price River resume at the facility, discharge measurements at SW-2 will resume as part of the surface water monitoring plan. It may be necessary to locate an alternate, more suitable location to monitor the river at that time. It should be noted that monitoring of water quality in the Price River, both above and below the facility area, will continue as currently detailed in the surface water monitoring plan.

12. ***[R645-301-731.122 and -.222]: Water Monitoring.*** *These sections should be updated based on the outcome of the revised PHC. (AA)*

MRP Insertion Instructions:

- Sec. 7.31, p. 3, 11/20/12 of this submittal replaces
- Sec. 7.31, p. 3, 07/22/98 of the Division's copy of the MRP

- Sec. 7.31, p.3a, 11/20/12 of this submittal should be added to the Division's copy of the MRP

- Sec. 7.31, p.6d, 11/20/12 of this submittal should be added to the Division's copy of the MRP

- NOTE Table 7.24-2 and Table 7.24-5 have been updated and inserted above.

7.31.2. WATER MONITORING

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. ~~analyzed and submitted on an annual basis by plotting a comparison of Ca, Mg, SO4, Cl, Fe, Mn and conductivity or TDS concentrations with time. Boron and Selenium will be added as new data becomes available since these parameters are now being added to the monitoring list. If deemed necessary or of value, the operator may also include a comparison of climatic factors such as precipitation in order to help document the cause of noted changes.~~

~~In addition to the overall monitoring plan, supplemental monitoring will be implemented within the third quarter of 1998 sampling. This supplemental monitoring will be done at two ground water sites (GW-4 and GW-6) and two surface water sites (SW-4 and SW-5). The purpose will be to document the fate of additives that are used within the CWP and that are discharged in low concentrations with the tailing slurry. The parameters monitored at these four sites will be BTEX-N and propylene glycol. The BETX-N analysis consists of measurements of benzene, toluene, ethyl benzene, xylene, and naphthalene concentrations. These constituents are found within the No. 2 diesel oil that is used to provide flotation in the flotation cells. Propylene glycol is the frothing agent used. Remnants of these additives that are bound with the tailing refuse are discharged back to the refuse ponds at environmentally benign concentrations. There is no designed mechanism for surface release of these agents to Siaperas ditch, however monitoring for their presence at SW-4 may provide an indication of seepage, if any, through the dike and into the Siaperas ditch. SW-5 is within the process circuit; monitoring that site for these reagents will indicate what levels remain in the tailing water after the heavier tailings material have settled out. GW-4 and GW-6 are down-gradient wells; resence of these constituents in these wells is not expected, but analytical data will provide a record.~~

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 "great or lesser than" (unless measurement is not practically possible or due to a 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 Apendix I and Section 7.28, and baseline hydrologic and geologic information has been developed. 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.

For reasons discussed in Section 645-301-728, monitoring well GW-12 is being removed from the groundwater monitoring plan.

For reasons discussed in Section 645-301-728, laboratory pH and laboratory specific conductance are being removed from the groundwater monitoring plan.

For reasons discussed in Section 645-301-728, BTEX-N and propylene glycol are being removed as laboratory parameter for monitoring wells MW-4 and MW-6.

For reasons discussed in Section R645-301-728, laboratory pH and laboratory specific conductance are being removed from the surface water monitoring plan.

For reasons discussed in Section R645-301-728, BTEX-N and propylene glycol are being removed as laboratory parameters for surface water sites SW-4 and SW-5.

For reasons discussed in Section R645-301-728, discharge monitoring at SW-2 is being temporarily suspended.

13. ***[R645-301-731.800]: Water Rights and Water Replacement.*** *Information on the operational status of COVOL and its use of 5 cfs of water requires updating. (AA)*

MRP Insertion Instructions:

- Sec. 7.31, p. 8, 11/20/12 of this submittal replaces
- Sec. 7.31, p. 8, 09/10/97 of the Division's copy of the MRP

Heat Dryer Pond	Dwg. E9-3453, A9-1464, & 712D
Plant Sediment Pond	Dwg. 4067-6-21
Slurry Pipeline Sediment Pond	Dwg. D5-0163 & 712C
Lower Refuse Dike & Clearwater Pond	Dwg. E9-3460
Upper and North Refuse Dikes	Dwg. E9-3427
Clearwater Pond	Dwg. 712B
Refuse Basin	Dwg. 712A

7.31.800 WATER RIGHTS AND REPLACEMENT

No surface coal mining and reclamation activities will occur within the permit area, however mining of previously deposited coal waste ~~will~~ could occur on the east side of the Price River ~~as part of CWP operations~~. ~~These CWP operations will use water in amounts up to 5 cfs obtained via existing water rights.~~ Further, because the "mining" is actually the removal of recently placed materials, there will be no potential for subsidence or other interruption of ground water.

14. ***[R645-301-733.220]: Permanent and Temporary Impoundments.*** *The MRP currently states that no permanent impoundments are proposed. Based on the midterm field visit, a discussion initiated with regard to the Dryer Pond indicating that it could be a candidate for a permanent impoundment given the continuous source of water being fed to it via a culvert. Alluvial water is contained in the impoundment creating a wetland feature of high esthetic value. The Division feels that the quality of the water in the impoundment meets the criteria set forth in 733.220 thru 733.226. The permanent wetland impoundment would have to be added to the reclamation plan and an application for a land-use change, should it be transferred to industrial use. (AA)*

MRP Insertion Instructions:

- Refer to the "Deficiencies and NEICO Comments" pages.
- No change to the MRP on this subject has been prepared for this submittal.

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15. ***[R645-301-121.100 & -521.165]:*** *Label the topsoil stockpiles and include them in the legend on Facilities Map E9-3341. (PB)*

MRP Insertion Instructions:

- Map E9-3341 of this submittal (dated 10/31/12) replaces Map E9-3341 (dated 10/17/06) of the current MRP.

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16. ***[R645-301-121.100 & -112.600]****: Update Surface ownership map Plate E9-3341 A and Section 112.600 of the MRP. (PB)*

MRP Insertion Instructions:

- Map E9-3341 A of this submittal (dated 11/10/12) replaces Map E9-3341 A (dated 4/9/92) of the current MRP.

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17. [R645-301-820.113]: *Currently the Reclamation Agreement (dated 2000) references MRP Chap 1 Ex. A for the bonded area, which is the map included with the COVOL lease, is this reference still accurate? If not, please update the reference to the map illustrating the 392 bonded acres in the 2000 Reclamation Agreement. (Previous reclamation agreements have referred to Dwg. E9-3341 for the bonded/disturbed area. However Map E9-3341 shows a permit boundary that is significantly larger than 392 acres, but does not have a bonded/disturbed area boundary on the map or in the legend. (PB)*

MRP Insertion Instructions:

- This deficiency was addressed in the information described in **No. 1** above, so no additional insertions are needed.
- For more information, refer to the "Deficiencies and NEICO Comments" pages.

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18. *[R645-301-233.100]*: *The 2008 bond describes soil salvage from Areas E, D, H, & I. This will not result in the best available soil in the permit area being utilized. Rather Areas B & C are the most preferable, followed by shallow soils in Area D and G. Compare borrow areas shown on Plates E9-3341 and E9-3511 and make adjustments to Plate E9-3341 to show Borrow Area B and reinstate Borrow Area B on p 4, Sec. 2.41 and make adjustments to the reclamation plan and bond, accordingly. (Area I is not designated or discussed as a borrow area in the MRP.) (PB)*

MRP Insertion Instructions:

- No changes to the borrow areas have been made in the MRP at this time.
- For justifications on the subject, refer to the "Deficiencies and NEICO Comments" pages.

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19. ***[R645-301-541.400]****: Site operations have changed since 1998, when Section 2.41 (reclamation plan) was written. Please re-evaluate whether the best-case scenario described in Section 2.41 (removal of coarse refuse by re-mining) is still feasible and whether the potential for using Borrow Area B soils (Dwg E9- 3511) is now possible, and make adjustments accordingly to the Reclamation plan described in Chapters 2 and 5 of the MRP. (PB)*

MRP Insertion Instructions:

Sec. 2.41 p. 1-7, 11/20-12, of this submittal replaces
Sec. 2.41 p. 1-7, (various dates) of the Division's copy of the MRP.

2.41 General Requirements (R645-301-241)

The topsoil borrow plan has been determined by two different methods. A worst-case scenario ~~is~~ has been included to represent the existing conditions in the permit area as of this date and will be used as the basis of bonding calculations. A best-case scenario is also included to account for the ~~approved operation of Covol's wash plant and refuse pond mining plant~~ very real possibility that the fines will eventually be re-mined and removed from the site. This scenario serves as the basis for the release of a part of the permit which formerly contained one of the previous potential topsoil borrow areas. Together, these methods will provide for whichever is the final reclamation plan for the permit area.

This facility was constructed prior to SMRCA and has less than 4,000 cy of topsoil stockpiled for reclamation (see Dwg E9-3341). To meet the worst-case scenario, ~~covering both the upper and lower refuse ponds 1,034,400~~1,031,300 cy of soil material is needed. This involves disturbing additional lands within the permit area. Soil investigations reports are included for potential Topsoil Areas H, E, D and G for this scenario. The best-case scenario preserves this undisturbed land, except for a limited area in Area H, by utilizing soil material salvaged during regrading of the Clearwater and Lower Refuse Dikes and requires only 539,300 cy.

All of the undisturbed potential topsoil borrow areas have been sampled extensively. The Clearwater and Lower Refuse Dikes have substantial as-built information in the Hydrology Appendix, 77.216-2(6) - Construction History Attachment; on Drawing E9-1764, (1764A, 1764B), Drawing E9-3460A, and in the Geotechnical Investigation by Rollins, Brown and Gunnell, 1983. Sampling in the identified borrow areas indicates that the soil materials are of adequate quality and quantity for the successful revegetation of ~~all~~ the entire disturbance in the permit site.

Section 2.22 provides a detailed history of soil sampling in the borrow areas. The results of the field studies and laboratory analyses are also included in this section.

Topsoil and Substitute Requirements

The reclamation plan in Sec. 3.41 describes the borrowed topsoil and substitutes required. Appendix J calculates the volumes, depths and acreage required to achieve the plan for this worst-case scenario. Thus, the total amount of topsoil borrow required is ~~1,034,400~~1,031,300 cy ~~cubic yards~~. The best-case scenario, which is intended to minimize total disturbance by maximizing the use of material in the dikes, requires 539,300 cy. To summarize the requirements necessary for borrow soils and substitutes for both scenarios, the reclamation plan requires the following:

Main Plant Area

The 44.6 acre area around the main plant area has been heavily used and compacted. This area will receive no additional soil from the topsoil borrow areas since it was disturbed prior to 1977. The small piles of coal wastes will be removed and deposited on the coarse refuse pile.

River Pumphouse
The river pumphouse area will require 6 inches of borrowed topsoil to cover it. The required volume of borrow topsoil was estimated to be 3,000 cy. The material would be imported from the adjacent Topsoil Borrow Area G in the worst-case-scenario (see Dwg.G9-351 1). In the best-case scenario, the material would be supplied by the Lower Refuse Dike.

Coarse Refuse Pile
This site would be covered with four feet of coarse-grained Stormitt soil material from Topsoil Borrow Area H for both scenarios. Approximately 43,300 cy of material would be required for a four foot cover. Some grading of the perimeter would be done to consolidate the coarse refuse and reduce the existing area to be covered by 7%.

Upper and Lower Refuse Slurry Ponds
For the worst-case scenario, the upper (81.2 acres) and lower (71.5 acres) refuse slurry ponds would be covered with four feet of soil materials (985,000 cy). The first two feet would be fine-grained subsoil and substrate from Topsoil Borrow Area E (492,500 cy), followed by two feet of coarse-grained topsoil from Topsoil Borrow Areas D, G and H as well as both of the dikes. A capillary break would be established at the boundary between the lower two feet of fine-grained materials and the upper two feet of coarse-grained topsoil materials. The capillary break would help prevent migration of salts and metals from the lower two feet of cover upwards into the topsoil material.

For the best-case scenario, ~~Covol~~an operator will have successfully removed all of the coal fines in both the upper and lower refuse ponds. Washed tailings will have been redeposited into the upper pond. The washed tailings have been analyzed in a bench scale test and are reported to be non-toxic (see See. 7.28, pg. 25, 12/05/97). The lower pond will be returned to natural topography. Drawing 9704-T4 illustrates a cross section of the reclamation slope drawn through both ponds. The reference line for this section is shown on Drawing G9-3511. Thus this scenario requires that only the upper pond be covered with four feet of cover. Further, some consolidation of this pond will reduce the area to be covered to 76.4 acres.

Reclamation will begin with the redistribution of the coarse slurry pile to the upper refuse pond. The four foot cover will begin with one foot of impacted soils that are removed from the lower basin after mining. Some testing has been done on samples obtained by drilling in May 1997 which indicate that this soil could well meet the criteria required in Table 2 of the Guidelines. The next one foot will come from the impacted soils immediately under the coarse slurry pile. The final two feet will be available from the regrading of the lower refuse dike and the ~~e~~Clearwater ~~d~~Dike. This material is described elsewhere and it is known to have originally been taken from the immediate area which has since been well characterized. This material is the best available material without disturbing additional lands. However, actual characterization will be performed in the near future by drilling.

Coarse Slurry Pile
For both scenarios, the material in the ~~c~~Coarse ~~s~~Slurry ~~p~~Pile and any natural soil material that was impacted would be relocated onto the ~~u~~Upper ~~s~~Slurry ~~p~~Pond prior to the final cover material being placed on it. Therefore, no topsoil borrow is necessary for this area.

Clearwater Dike
For both scenarios, the dike would be removed and the suitable soil materials (151,000 cy) used in the topsoil redistribution plan for the reclaimed areas (see Drawing E9-1764B). The unsuitable materials (outer layer of dike and pond bottom sediments) would be removed to the upper slurry pond and covered. This material is the best available material without disturbing additional lands. However, actual characterization will be performed in the near future by drilling. The dike materials identified as topsoil borrow would also be tested onsite during excavation. Each material would be tested for texture, pH, SAR prior to distribution. The cleared site would then be reclaimed by using existing native soil materials daylighted with the removal of dikes and pond sediments.

Lower Refuse Dike
In the worst-case scenario, this dike is regraded to a 5:1 slope which makes 29,700 cy topsoil material available. Two feet of the top and downstream so that this suitable topsoil material could be redistributed as the topsoil cover on the slurry ponds (Drawings E9-1764A and E9-3460A). The suitable materials would originate from the upper portion of the dike that would not have been exposed to contaminants from the slurry pond water either through direct contact or through capillary action. Calculations are attached illustrating the amount of topsoil material to be salvaged. Any unsuitable materials excavated during the borrow operation would be removed to the slurry pond and covered as waste.

In the best-case scenario, this dike is regraded entirely to natural topography which creates ~~110,400~~107,400 cy of topsoil material. This would be distributed on the upper pond as part of the final two feet of cover. Any unsuitable materials excavated during the borrow operation would be removed to the upper slurry pond and covered as waste.

This material is the best available material without disturbing additional lands. However, actual characterization will be performed in the future. The dike materials identified as suitable soil borrow materials would be tested on-site during excavation. Each soil material type would be tested for texture, pH, EC, and SAR prior to distribution. The cleared portion of the dike would be reclaimed by using existing suitable native soil materials daylighted with the removal of the borrow.

Proposed Topsoil Borrow Areas

Numerous studies have been conducted to identify and characterize topsoil borrow areas and are included in Section 2.22 of the MRP. Currently, eight separate borrow areas have been identified, mapped and soils investigations completed. See Map G9-3511 for locations and boundaries of borrow areas. Below is a description of all the Topsoil Borrow Areas with the volumes of material available and management restrictions:

Topsoil Borrow Area A
The soils in this area have been recently identified as "critical farmland" by the NRCS, and thus, are no longer available for borrow.

Topsoil Borrow Area B

The land within Area B and most of adjoining Area C is involved in a proposed land sale to develop an industrial area, and thus, is not available for borrow in the future

Topsoil Borrow Area C

Most of the land within Area C is involved in the aforementioned land sale and would not be available for borrow. Approximately 13 acres of the eastern portion of Area C is not involved in the land sale and was incorporated into the new Area H.

Topsoil Borrow Area D

The soil investigation of six soil pits plus Neico-7 soil pit indicates that 175,429 cubic yards of good topsoil material is available. Most of the borrow would come from Gerst, Juva Variant, and Stormitt soils in the northern portion of the Area. The proposed average topsoil borrow depth is 3.5 feet. This will allow for positive drainage from Area D. See Soil Borrow Investigation - Area D (attached). In the best-case scenario, no disturbance of this area would be necessary.

Topsoil Borrow Area E

The soils investigation (see Section 2.22, 7th Sample Period) indicates that the surface soils and the deep substrate in A is suitable topsoil material as defined in Table 2. The subsoils and the shallower substrates are not suitable as topsoil but would be suitable as fill, and as fine-grained material would provide a two foot capillary break in the four-foot cover over the slurry ponds. In the best-case scenario, no disturbance of this area would be necessary.

For the worst-case scenario, the surface soils would be removed between a depth of four to nineteen inches and stored on-site. The subsoils and shallow substrates would be borrowed as fill to a depth of about 6.5 feet (492,550 cy). In addition, the slickspots, as unsuitable material (about 87,000 cy), would be removed and distributed on the slurry ponds as waste and would not be counted as part of the fill. Since the slickspots phenomena is concentrated in the surface and subsoils, the actual amount that may need to be excavated may be less. Field testing during excavation would determine the actual amount and depth of material that needs, to be treated as soil waste. The remaining substrate would be suitable material only to facilitate revegetation.

The substrates are very deep, at least 122 inches; thus, the redistribution of the surface soils over the deep substrates (about 44 inches) plus the addition of an average of 12 inches of surface soils would provide a 58 inch deep seedbed of loams and silt loams for revegetation.

Once excavation is complete and the borrow and waste materials removed, the remaining substrate would be ripped to lessen compaction prior to redistribution of the stored surface soil materials. The surface soil materials would be re-distributed evenly over the substrates and an irregular surface left to provide micro-niches for plant growth.

The groundwater table fluctuates between 84 to 180 inches so the depth over the high groundwater level would be at least 6 inches. The only material in contact with the groundwater would be deemed suitable material and be low in salts and metals. The natural occurrence of high salts in the soil profiles indicates that salty groundwater is depositing salts in the subsoils and upper substrates during high water tables. See Soil Borrow Investigation - Area E (attached).

Topsoil Borrow Area F

The very shallow soils over the Mancos Shale are unsuitable for borrow.

Topsoil Borrow Area G

The estimated volume of Gerst soil materials in this 119 acre area is 12,570 cy based on 17 inches of available topsoil after leaving 18 inches in-situ for revegetation. For the worst-case scenario, the topsoil borrow would be redistributed as the upper two feet of the cover on the slurry ponds (~~9,770~~9,550 cy). An estimated 3,000 cy would be distributed to the pumphouse site. The only suitable soils for borrow area the Stormitt soils on crests of the hills and ridges (Soil Report G - Section 2.22). See Soil Borrow Investigation - Area G (attached).

In the best-case scenario, no disturbance of this area would be necessary.

Topsoil Borrow Area H

Area H is composed of 13 acres of the old Area C and lands adjoining the Area C on the south and southeast. A recent soils investigation established that 179,332 cy of Stormitt series topsoil material was available on the tops of the knolls and ridges (Section 2.22, 8th Sample Period). This coarse-grained topsoil material is suitable for redistribution in the reclaimed areas. Approximately 43,~~0~~300 cy of soil material would be used to cover the Ceoarse R~~r~~efuse P~~p~~ile on the west side of the river for both scenarios. This quantity of material (and more) is available in the vicinity of test pits C-1, EA-3, EA-4, EA-5. For th worst-case scenario, the remainder (136,032 cy) would be placed on the Slurry Pond(s). See Soil Borrow Investigation - Area H (attached).

Clearwater and Lower Refuse Dikes

Through analyses of as-built drawings of the dikes, it was established that Gerst soil material is available in each dike. Since this facility was constructed prior to SMRCA and only very minimal topsoil is stockpiled, it is prudent to use as much of these dikes as possible. It minimizes disturbance to undisturbed lands that otherwise would have to be a source of topsoil borrow.

The C~~c~~learwater D~~d~~ike contains about 166,100 cy of material. The suitable material for redistribution is calculated to be about 91% of this or 151,000 cy (see Dwg. E9-1764B). Regrading this dike to natural topography will be required in both scenarios.

The Lower Refuse Dike contains a minimum of 29,700 cu. This is the amount that will be used in the worst-case scenario. In the best-case scenario, this dike would be regraded to its natural topography and creates 110,400 cy of available topsoil material (see Dwg. E9-1764A).

Actual characterization of both dikes per Table 2 of the DOGM Guidelines will be performed in the near future by drilling. The dike materials identified as suitable soil borrow material would also be tested on-site during excavation. Each soil material type would be tested for texture, pH, EC, and SAR prior to distribution. The cleared portion of the dike would be reclaimed by using existing suitable native soil material daylighted with the removal of the borrow.

Table 2.41-1 is a summary of the reclamation sites and sources of topsoil for the worst-case.

Table 2.41-1: Summary of Reclamation Sites and Topsoil Distribution - Worst Case

Reclamation Site	Topsoil & Cover Required cy	Sources of Borrow & cover by Topsoil Borrow Area cy
River Pumphouse	3,000	Area "G"
Coarse Refuse Pile	43,300	Area "H"
Slurry Ponds	985,000	Area "D" - 175,400 Area "G" - 9,550 Area "E" - 492,500 Area "H" - 136,050 CW Dike - 151,000 LR Dike - 29,700
Coarse Slurry Pile	0 redistributed to slurry pond	0
Totals	1,031,300	1,040,500

Table 2.41-1 is a summary of the reclamation sites and sources of topsoil for the best-case.

Table 2.41-2: Summary of Reclamation Sites and Topsoil Distribution - Worst Case

Reclamation Site	Topsoil & Cover Required cy	Sources of Borrow & cover by Topsoil Borrow Area cy
River Pumphouse	3,000	Lower Refuse Dike 3,000
Coarse Refuse Pile	43,300	Area "H" 43,300
Slurry Ponds	493,000	CW Dike - 151,000 LR Dike - 107,400 Impacted soils: LR basin & Coarse Slurry Pile -246,500
Coarse Slurry Pile	0 redistributed to slurry pond	0
Totals	539,300	551,200

Soil Monitoring for Reclamation

The soil profile analyses have been completed for the designated topsoil borrow areas. The specific pedon information will be used to identify horizons that may be unsuitable for substitute topsoil material. As the identified potentially unsuitable horizons are uncovered during the borrow operation, on-site testing will be conducted to determine the material that was unsuitable and may not be available as borrow. The on-site testing includes texture, pH, EC, and SAR. The on-site results will be used to determine whether the material should remain in the pit or be diluted with suitable material for borrow. The unsuitable material remaining in the borrow pit would be buried and covered with 18 inches of suitable material for revegetation.

20. ***[R645-301-121.200 & -121.300]****: The Table of Contents lists Tables 2-1 through 2-8, please provide page numbers for these tables in the Table of Contents. (PB)*

MRP Insertion Instructions:

Table of Contents, p. vi, of this submittal replaces
Table of Contents, p. vi, of the Division's copy of the MRP.

LIST OF TABLES

21. ***[R645-301-121.200 &-243]****: In addition to straw or hay mulch, the application of another form of organic matter was a variable in the 1991 test plot (Appendix A and Sec. 2.33, p. 2). The results of the 1994 test plot evaluation are reported in Section 3.41, but it is not clear what organic amendment was included as a variable. Please clarify. (PB)*

MRP Insertion Instructions:

Sec. 3.41 p. 19, 11/20/12, of this submittal replaces
Sec. 3.41 p. 19, 11/10/94 of the Division's copy of the MRP.

The treatment that exceeded the reference area standard was an irrigated plot with 6" of topsoil and no slurry cover or organic amendment added. To test this trend and the theory that this may only be an anomaly in this plot, one can compare statistically these same treatments individually with all other treatments (Appendix 3.41-A). For example, when irrigation was compared, the trend favors irrigation of over unirrigated plots. Moreover, six (6") inches of topsoil was significantly better than twelve (12") inches in several subplots. The addition of organic amendments* showed no definite trend when each treatment was compared on an individual basis. Furthermore, the addition of slurry cover seemed to have a negative effect on the plots. More plots did significantly better *without* the addition of coarse slurry material. This again may be explained by a soil/water relationship as suggested in the CS plot above. These results suggest that the "N" plot in Figure 3-2 may indeed be a reliable set of treatments for reclamation techniques to be used on the slurry pond waste areas.

* In a Midterm Review by DOGM (dated May 30, 2012), a request was made to clarify what organic amendment was incorporated in the revegetation test plots. These plots were constructed in 1984. The initial plans were to utilize sewage sludge that was retrieved from the sewage treatment plant located near the Wellington Prep Plant property. It is believed that this was accomplished, but a review of the files and documents at the offices of *Mt. Nebo Scientific, Inc.* could not positively confirm this conclusion.

22. ***[R645-301-121.200 & -244.200]****: Section 3.41 p. 4a varies from the remainder of Section 3.41 and Section 2.41 with regard to the approach to seeding, surface roughening and mulch incorporation. Is ripping followed by green hay incorporation with drill seeding specific to a location within the permit area? If so, please specify on page 4a the area to receive the treatments described on page 4a. (PB)*

MRP Insertion Instructions:

Sec. 3.41 p. 4a, 11/20/12, of this submittal replaces
Sec. 3.41 p. 4a, 09/10/97 of the Division's copy of the MRP.

3.41 REVEGETATION REQUIREMENTS (R645-301-341)

Description of Disturbed Areas

Approximately 392 (only 0.36 acres of flotation cell site + tank site) acres have been identified as disturbed at the Wellington site. This area is where COVOL, TECHMAT and General Resources operated a fines wash plant. This site has been reclaimed. For more information about the reclamation refer to Section 5.15).

Revegetation Methods for Each Disturbed Area

Additional Surface Facilities Area (Modular Wash Plant Area)

Following removal of the flotation cells and the slurry tank revegetation techniques will be implemented.

Soil Ripping
The access road to the flotation cells will be ripped to a minimum depth of one foot with rippers spaced a maximum of two feet apart. The cell and tank sites will have the construction materials removed but the sites will not be ripped due to the possibility of bringing rnancos shale material to the surface.

Topsoiling
One foot of topsoil from the stockpiles will be applied to the flotation cells and tank sites but not to the access road, which has native soils in place.

Gouging
Gouging will be implemented in the topsoil material at the cell and tank sites but not in the access road because the ripping of the roadbed will leave the surface roughened.

The steep slopes below the cell site will be ripped on the contour to provide furrows to increase moisture retention in the seedbed to facilitate seed germination and seedling growth. The rippers will be spaced four feet apart and ripped to a depth of 18 inches.

Fertilization
All of the area to be seeded will be fertilized with 80 lbs/acre of N and 80-160lbs./acre of P. The exact amounts will be determined by final topsoil sampling and analyses.

Mulching
The area to be seeded will be mulched at the rate of two tons per acre of green alfalfa hay. The hay will be chopped and blown on to be incorporated into the seedbed by the subsequent action of the seed drill.

Seeding
The topsoiled an ripped areas will be drilled to place the seed at a 1/4-1/2" depth in the prepared seedbed. Seed mixture A for Atriplex-Hilaria plant community will be used for this area.

23. *No deficiencies were issued by Ingrid Campbell; however, the Division would like to remind the Permittee that they have committed to remove Class C noxious weed, tamarisk, in riparian areas and replanting with willow and cottonwood cuttings to enhance wildlife habitat (Mining and Reclamation Plan Volume I-A, Section 3.42).*

MRP Insertion Instructions:

- Refer to the "Deficiencies and NEICO Comments" pages.
- No change to the MRP on this subject has been prepared for this submittal.

24. ***[R645-301-112.330]****: The information in the current MRP presented below does not match the information found in the OSM/AVS database. The Operator should submit either updated pages for the MRP to reflect the correct information, or the Operator should provide a Secretary's Certificate or End Dates so that the AVS can update its records. (AN)*

NEICO

1. The following individuals have a different Begin Date in the MRP as compared to the date listed in the AVS database.

a. Michael W. Yackira, President & Treasurer (AVS 6/01/04 vs. MRP Aug 2004)

b. Paul J. Kaleta, Secretary (AVS 2/01/06 vs. MRP Apr 2006)

c. Walter M. Higgins, Director (AVS 6/01/04 vs. MRP Aug 2004)

This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct the AVS.

Nevada Power Company

1. The AVS shows Walter M. Higgins, Chairman and CEO, with a Begin Date of 10/01/04. The MRP shows a Begin Date of Aug 2000. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

2. The AVS shows Krestine M. Corbin, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of July 1999. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the ,4 VS.

3. The AVS shows T.J. Day, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of July 1999. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

4. The AVS shows James R. Donnelley, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of July 1999. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

S. The AVS shows Walter M. Higgins, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of August 2000. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS .

6. The AVS shows Philip G. Satre, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of January 2005. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

7. The following individuals are in the AVS database as an Officer or Director, but they are not listed in the MRP:

a. David Barney, Vice President, 10/01/93

b. *Charles Lenzie, COB and CEO, 10/01/93*
c. *Richard Hinkley, Director, 5/01/91*
d. *Richard Hinkley, Vice President, 10/01/93*
e. *Cynthia Gilliam, Vice President, 10/01/93*
f. *Steven Rigazio, Vice President, 10101/93.*
g, *Gloria Weddle, Vice President, 10/01/93*
h. *Fred Gibson, Jr., Director, 2/01/78*
i. *John Goolsby, Director, 1/01/91 C. Ryan, Director, 9/01/78*
k. *Frank Scott, Director, 5/l/72*
1. *Arthur Smith, Director, 1/01/59*
m. *J. Tiberti, Director, 11/01/63*
n. *Walter Higgins, President, 10/01/04*
o. *Earnest East, General Counselor/Secretary/SV'P, 10/01/04*

These discrepancies should be addressed by either correcting the MRP or submitting End Dates or a Secretary's Certificate to update the AVS database.

Sierra Pacific Resources

I The AVS shows Walter M. Higgins, President, with a Begin Date of 10/01/04. The MRP shows a Begin Date of Aug 2000. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certijicate to correct this information in the AVS.

2. The AVS shows Walter M. Higgins, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of August 2000. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

3 The AVS shows Philip G. Satre, Director, with a Begin Date of 2/20/05. The MRP shows a Begin Date of January 2005. This discrepancy should be addressed by either correcting the MRP or providing a Secretary's Certificate to correct this information in the AVS.

4. The following individuals are in the AVS database as an Officer or Director, but they are not listed in the MRP:

a. *David Barneby, Vice President, 7/29/99*
b. *William Peterson, Sr. Vice President, 7/29/99*
c. *Steven Rigazio, President, 5131100*
d. *Gloria Weddle, Vice President, 7/29/99*
e. *Fred Gibson, Jr., Member, 7/29/99*
f. *Mark Ruelle, CFO/SVP/Treasure, 7/29/99*
g. *Matt Davis, Vice President, 7/29/99*
h. *Steven Oldham, Vice President, 6/20/00*
i. *Douglas Ponn, Vice President, 7/29/99*
i. *Mary Jane Reed, Vice President, 7/29/99*
k. *Mary Simmons, Controller, 7/29/99*
l. *Edward Bliss, Member, 7/29/99*
m. *James Murphy, Member, 7/29/99*
n. *Earnest East, General Counselor/Secretery/SVP, 10/01/04*

These discrepancies should be addressed by either correcting the MRP or submitting End Dates or a Secretary's Certificate to update the AVS database.

MRP Insertion Instructions:

- This deficiency was addressed in the information described in **No. 1** above, so no additional insertions are needed.

25. ***[R645-301-830.140]****: The reclamation cost estimate which is approved and incorporated into the current Wellington Prep Plant mining and reclamation plan has not been updated to current unit costs. Current unit costs are used to calculate the direct costs of reclamation including demolition, backfilling and grading, and revegetation. Also, there has been on-site demolition that is not reflected in the MRP. Updates should be provided using the 2012 data from R.S. Means Heavy Construction Cost data manual and the Caterpillar Handbook or other appropriate resources. Also, bond summary sheets are not updated to current escalation factor estimates. The Permittee must provide updated information in terms of detailed estimated cost, with supporting calculations for the estimates, submitted by the permit applicant. This includes updated unit costs (to be used to update bond calculation spreadsheets) and updated escalation factors (used the Division's approved 1.2% and 5 year escalation). (JO)*

MRP Insertion Instructions:

Cost of Reclamation, Appendix J, November 20, 2012, of this submittal replaces Cost of Reclamation, Appendix J, February 27, 2012 of the Division's MRP

APPENDIX J

COST OF RECLAMATION
November 20, 2012

SUMMARY OF BOND CALCULATIONS [1]
FOR THE
WELLINGTON PREPARATION PLANT (C/007/012)

(1) For detailed cost analysis and other information including demolition, earthmoving, volumes, equipment and revegetation, refer to the attached spreadsheets.

DIRECT COSTS	
Demolition and Removal	$219,108.00
Backfilling and Grading	$2,071,798
Revegetation	$762,892.00
Subtotal Direct Costs	**$3,053,798.00**
INDIRECT COSTS	
Mobilization/De-mobilization (10.0%)	$305,380.00
Contingency (5.0%)	$152,690.00
Engineering Redesign (2.5%)	$76,345.00
Main Office Expense (6.8%)	$207,658.00
Project Management Fee (2.5%)	$76,345.00
Subtotal Indirect Costs (26.8%)	**$818,418.00**
TOTAL COSTS	**$3,872,216.00**
Escalation factor (0.012)	
Number of years (5.0)	
Escalation	$237,976.00
Reclamation Cost Escalated	$4,110,192.00
Dollar Year: 2013	
BOND AMOUNT (rounded to nearest $1,000)	**$4,110,000.00**

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															
	Refuse Pipeline 01	Refuse Pipeline			Pumphouse															26310
	Pumphouse 02	Pumphouse			PowerlineEast															0
	Powerline East 03	Powerline			Clearwater Dike															2500
	Clear Water Dike 04	Clearwater Dike			Washplant															6419
	Wash Plant 05	Wash Plant			ColumnFloatations															112600
	Column Flotation Cells 06	Column Floatation Cells			Conveyor Belts															0
	Conveyor Belts 07	Conveyor Belts			Office															0
	Office 08	Office			Diesel															0
	Diesel 09	Diesel			Pipelines															2987
	Pipelines 10	Slurry Feed Tank & Pump			Slurry Feed															60610
	Slurry Feed Tank and Pump 11				Slurry Feed Tank/Pump															7682
	Total																			**219108**

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	0.35	/CF						64230					CF		64230	CF	22481
	Structure's Vol. Demolished										833					CY	0.35	833	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																			22481
	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	0.35	/CF	6800										LF		6800	LF	2380
	Pipe's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			2380
	Foundation's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						62					CY		62	CY	422
	Foundation's Vol. Demolished																1.3	81	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY													81	CY	116
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY													81	CY	283
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													81	CY	628
	Subtotal																			1449
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			26310

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																			
	Floor's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						0					CY		0	CY	0
	Floor's Vol. Demolished																1.3	0	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY													0	CY	0
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY													0	CY	0
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													0	CY	0
	Subtotal																			0
	Foundation's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						0					CY		0	CY	0
	Foundation's Vol. Demolished																1.3	0	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY													0	CY	0
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY													0	CY	0
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													0	CY	0
	Subtotal																			0
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			0

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Powerline East 03																			
	Structure's Demolition Cost	Powerpole	Hiawatha	100	EA										25	EA		25	EA	2500
	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																			**2500**
	Conductort 's Disposal Cost	Electrical Demolition	16055 300 1870	15.35	CLF	3.5										MI		0	CLF	0
	Dismantling Cost																			
	Conductor 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	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																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			2500

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
	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	2250	/day										0.2	DAY		0.2	DAY	450
	Dismantling Cost																			
	Building 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			**450**
	Fresh Water Line's Demolition Cost	Pipe removal 24 inch	02220 240 2960	11.3	/FT	200										FT		200	FT	2260
	Demolition Cost																			
	Fresh Water Line's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			**2260**
	Intake Tower																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						62					CY		62	CY	422
	Intake Tower's Vol. Demolished																1.3	81	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY													81	CY	116
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY													81	CY	283
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													81	CY	628
	Subtotal																			**1449**
	Spillway	Pipe removal 24 inch	02220 240 2960	11.3	/FT	200										FT		200	FT	2260
	Demolition Cost																			
	Spillway's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			**2260**
	Total																			**6419**

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	110250
	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																	4083	CY	
	Subtotal																			110250
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Floor's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY	90	70	0.5								FT		117	CY	797
	Floor's Vol. Demolished																1.3	152	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY															
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													152	CY	1178
	Subtotal																			1975
	Foundation's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						22					CY		22	CY	150
	Foundation's Vol. Demolished																1.3	29	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY															
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													29	CY	225
	Subtotal																			375
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			112600

This is the old facilities area.

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					CY	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	CY	
	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 demolition	ConcreteDemo1	6.81	/CY	40	40	0.5								FT		0	CY	0
	Floor's Vol. Demolished																1.3	0	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY															
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													0	CY	0
	Subtotal																			0
	Foundation's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						9					CY		0	CY	0
	Foundation's Vol. Demolished																1.3	0	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY															
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													0	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	CY	
	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 demolition	ConcreteDemo1	6.81	/CY						37					CY		0	CY	0
	Foundation's Vol. Demolished																1.3	0	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY															
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													0	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																	259	CY	
	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																			
	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
	Diesel 09																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0020	0.35	/CF						1340				1	CF		1340	CF	469
	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																	17	CY	
	Subtotal																			**469**
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Floor's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY	17	17	0.5								FT		145	CY	987
	Floor's Vol. Demolished																1.3	189	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY															
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													189	CY	1465
	Subtotal																			**2452**
	Floor's Demolition																			
	Demolition Cost																			
	Floor's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Foundation's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						4					CY		4	CY	27
	Foundation's Vol. Demolished																1.3	5	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY															
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													5	CY	39
	Subtotal																			**66**
	Total																			2987

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 13.33 2900	10.45	/FT	5800										LF		5800	LF	60610
	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																			60610
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			60610

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	0.35	/CF						21200					CF		21200	CF	7420
	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																			7420
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Floor's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						5					SY		5	SY	34
	Floor's Vol. Demolished																1.3	6	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY															
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													6	CY	47
	Subtotal																			81
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Foundation's Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						10.5					CY		10.5	CY	72
	Foundation's Vol. Demolished																1.3	14	CY	
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	02315 490 0320	3.49	/CY															
	Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													14	CY	109
	Subtotal																			181
	Total																			7682

EARTHWORK

330 East 400 South, P.O. Box 337, Springville, Utah 84663

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Plant Sediment Pond 001															269
Road Pond 002															597
Heat Dryer Pond 003															597
Upper and Lower Refuse Basin 004															1807728
Grade Upper Refuse Dike 005															4539
Grade Crest 006															17112
Grade Diverson Ditch 007															2270
Cover River Pump House 008															0
Grade Topsoil Borrow Area 009															20905
Rip Topsoil Borrow Area 010															22940
Grade Coal Fines Plant 011															4294
Coal Fine Plant Site 012															0
Support 013															190547
Total															**2071798**

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Plant Sediment Pond 001															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						0.9	HR	269
Subtotal															269

Line B7= Monthly rate for 410 HP dozer (D9)
Line C7 = Monthly rate and 240 hours/month
Line E7 = Medium Equipment operator
Line F7 = Based on monthly rental rate divided by 200 operating hours per month.

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Road Pond 002															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						2	HR	597
657EP-P (9-47) (2nd2006)	36765	190.65	0.1	57.85	497.35	2	994.7						0	HR	0
Subtotal															597

Line B7= Monthly rate for 410 HP dozer (D9)
Line C7 = Monthly rate and 240 hours/month
Line E7 = Medium Equipment operator
Line P8 = No need for scrapers
Line F7 = Based on monthly rental rate divided by 200 operating hours per month.
Line P25 = We were unsure why previous costs were so high (this is only a small pond; perhaps DOGM's internal speadsheet will clarify)

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Heat Dryer Pond 003															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						2	HR	597
657EP-P (9-47) (2nd2006)	36765	190.65	0.1	57.85	497.35	4	1989.4						0	HR	0
Subtotal															597

Line B7= Monthly rate for 410 HP dozer (D9)
Line C7 = Monthly rate and 240 hours/month
Line E7 = Medium Equipment operator
Line P8 = No need for scrapers
Line F7 = Based on monthly rental rate divided by 200 operating hours per month.
Line P25 = We were unsure why previous costs were so high (this is only a small pond, approx 0.2 ac; perhaps DOGM's internal speadsheet will clarify)

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Equip Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Upper and Lower Refuse Basin 004															
Cover Upper and Lower Refuse Basin with															
4 feet of Cover															
Portion from Borrow Area E															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						334.4	HR	99867
657EP-P (9-47) (2nd2006)	36765	190.65	0.1	57.85	497.35	4	1989.4						334.4	HR	665255
Portion from Borrow Area D+G															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						95.6	HR	28550
657EP-P (9-47) (2nd2006)	36765	190.65	0.1	57.85	497.35	2	994.7						95.6	HR	95093
Portion from Borrow Area H+I															
Off hwy rear dump 35 T 01 54 33 20 5600	12200	82.6	0.1	66.03	50.83	10	2077.20						241	HR	500605
Front end Loader 988G 475 hp 01 54 33 20 4810	16200	115.7	0.1	66.03	67.5	2	521.60						241	HR	125706
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	47.5	84.17	1	280.12						241	HR	67508
Portion from Clearwater &															
Lower Refuse Dikes															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						98.4	HR	29387
657EP-P (9-47) (2nd2006)	36765	190.65	0.1	57.85	497.35	4	1989.4						98.4	HR	195757
Subtotal															1807728

Blue Lines = Costs unchanged (We could not find a cost for this in RSMeans).

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Grade Upper Refuse Dike 005															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						15.2	HR	4539
Subtotal															4539

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Grade Crest 006 Lower Refuse Pond															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						57.3	HR	17112
Subtotal															17112

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Grade Diverson Ditch 007 West of Price River															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						7.6	HR	2270
Subtotal															2270

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Cover River Pump House 008 and Slurry Pipeline Areas with Topsoil															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	1	298.65						0	HR	0
657EP-P (9-47) (2nd2006)	36765	190.65	0.1	57.85	497.35	2	994.7						0	HR	0
Subtotal															0

Line P25 = This work has been accomplished

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Grade Topsoil Borrow Area 009															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	2	597.29						35	HR	20905
Subtotal															20905

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Rip Topsoil Borrow Area 010															
Dozer 410 HP 01 54 33 20 4360	20200	134.95	0.1	66.03	84.17	2	597.29						35	HR	20905
Multi-Shank Ripper 360-519 P (9-56) (2nd2006)	3040	9.15	0.1		29.07	2	58.14						35	HR	2035
Subtotal															22940

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Grade Coal Fines Plant 011															
D7R Series II (9-50) (2nd2006)	11575	52.85	0.1	57.85	188.33	1	188.33		7400	LCY	324	LCY/HR	22.8	HR	4294
Subtotal															**4294**

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Coal Fine Plant Site 012															
D7R Series II (9-50) (2nd2006)	11575	52.85	0.1	57.85	188.33	1	188.33						0	HR	0
657EP-P (9-47) (2nd2006)	36765	190.65	0.1	57.85	497.35	1	497.35						0	HR	0
Subtotal															0

Line P25 = The Covol Fine Plant Site has been reclaimed

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Support 013															
Truck 4X4, 3/4 ton 01 54 33 40 7200	660	15.2	0.1	0	21.1	1	37.82						1006	HR	38047
Foreman outside					57.97	1	57.97						1006	HR	58318
Tractor/Truck 6X4 450 hp to pull H2O 01 54 33 40 7600	3475	63.65	0.1	66.03	144.79	1	14.48						1006	HR	14567
5,000 gal H2O water tank trailer 01 54 33 40 6900	1325	6.9	0.1	0	5.52	1	79.14						1006	HR	79615
Subtotal															190547

REVEGETATION

330 East 400 South, P.O. Box 337, Springville, Utah 84663

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
	Vegetation																			
	Fertilizer	Fetilizer Hydro Spread	32 01 90 13 0180	4.06	/MSF					421						AC		18339	MSF	74456
	Light Disk Harrow	75 HP Dozerw/scarifiers	M029107103100	4.02	MSF					421						AC		18339	MSF	73723
	Seeding	Atriplex-Hilaria	Wellington1	430.88	$/AC					421						AC		421	AC	181400
	Mulch	Hay bale	Reveg007	61.6	/ton					421					2	AC		842	ton	51867
	Subtotal																			381446
	Revegetation																			
	100% Revegetation Rate																			381446
	Subtotal																			381446
	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																			762892