

0002

C/007/045 Incoming

Q

#3256



March 30, 2009

Mr. Daron Haddock, Environmental Manager
Coal Regulatory Program
Utah Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84116

**RE: Wellington Dry-Coal Cleaning Facility Application
COVOL Engineered Fuels, LC
Permit No. C/007/0045, Task #3075**

Dear Mr. Haddock:

Covol Engineered Fuels, LC (Covol) is submitting the enclosed application for Covol's pending mine permit C/007/0045. This submittal addresses the deficiencies listed in the Utah Division of Oil, Gas, and Mining (UDOGM) letter dated February 17, 2009.

In the enclosed application, the red markings represent the additions and deletions that were made to the October 2008 revision. The blue markings represent the additions and deletions that address the deficiencies listed in the February 17, 2009 UDOGM letter.

If you have any questions regarding the application or enclosed information, please call me at (801) 984-3770.

Sincerely,

A handwritten signature in blue ink that reads "Gina Rau".

Gina Rau
Environmental Manager

10653 S. River Front Parkway
Suite 300
South Jordan, UT 84095
P: 801.984.9400
F: 801.984.9410

File in:
C/007/0045 2009 Incoming
Refer to:
 Confidential
 Shelf
 Expandable
Date: 3/30/09 For additional information

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MAR 30 2009

DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: COVOL Engineered Fuels, LC

Mine: Wellington Dry-Coal Cleaning Facility

Permit Number: C/007/0045

Title: Response to DOGM comments dated February 17, 2009 (Task ID #3075)

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

Revision of permit application to address DOGM comments

Instructions: If you answer yes to any of the first eight (gray) 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?

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

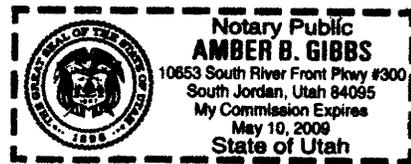
I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

R. Keith Thompson
Print Name

[Signature], VP, 30 Mar 09
Sign Name, Position, Date

Subscribed and sworn to before me this 30 day of March, 20 09

[Signature]
Notary Public
My commission Expires: May 10, 20 09
Attest: State of Utah) ss:
County of Salt Lake



For Office Use Only:

Assigned Tracking Number:

Received by Oil, Gas & Mining

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DIV. OF OIL, GAS & MINING

Response to Deficiency List
Task ID #3075
Wellington Dry-Coal Cleaning Facility

Remove all references to undisturbed acres within the permit area.

All references but one in Chapter 2, Section 2.2.2 have been removed. The reference in Chapter 2 was placed there at the request of DOGM in the October 2008 response to comments.

Remove all references to reclamation/revegetation if that is not part of the postmining land use.

References to reclamation/revegetation are in response to the requirements of the R645 regulations.

Show Earnest Partners' relation to Headwaters Incorporated (10% ownership) in Figure 1-1

Earnest Partners is a shareholder and has no operational controlling interest in Headwaters or its affiliates. Since Figure 1-1 shows operational control, this information could not be shown on this figure. Relevant information is presented instead in Section 1.1.2.

Provide officers and directorship information for Earnest Partners

This information is presented in Section 1.1.2.

Verify that COVOL Fuels No. 2 is related to Kentucky permit 889-8005 (OSM's information shows it as 889-004).

The permit number is correct as indicated. The OSM database has been updated to correctly show COVOL Fuels No. 2 as the permittee for Kentucky Permit No. 889-8005.

Provide identification numbers and MSHA numbers (with date of issuance) for all sites controlled by Covol Engineered Fuels, LC and affiliates: Covol Fuels No 2 LLC, Covol Fuels No 3 LLC, Covol Fuels No 4 LLC, Covol Fuels No 5 LLC, within the last five years.

This information is provided in Table 1-1.

Correct Figure 2-1 (two lines seem to have the same elevation).

Figure 2-1 is correct as shown. The Wellington site is situated on a ridge. The indicated topographic lines are on either side of the ridge line.

Provide a listing of violations received by the Applicant and affiliated companies at all permitted coal mining and reclamation sites in the last three years, or state if there were none.

This information is provided in Section 1.1.3.

Make sure that the surface ownership information listed in Section 1.1.2.6 is consistent with the plat map in Appendix 1-3 (T. 15 S, R. 10 E. Section 14), and that the map is current.

The surface information contained in Section 1.1.2.6 is correct. The warranty deed in Appendix 1-3 is from 2005 and is not current. The warranty deed was included in the permit application at the request of the DOGM in the October 2008 response to comments.

Seed open topsoil piles as soon as possible with the mix listed in Table 3.1.

The topsoil stockpiles will be spread out and re-contoured to promote germination and will be seeded prior to April 17, 2009. The mix in Table 3-1 will be utilized except as noted in Section 2.3.1.4.

Provide development plats as approved by county zoning, any reclamation obligations for development plan, amount of bond to county (if any) for reclamation, and confirmation that the land as improved will have value as an industrial site based on current and projected land use for the area. Land not part of structures, asphalt, and drives, may be seeded and re-vegetated, or other methods used to control erosion. Areas to be left for industrial use must be cleaned of all coal, coal wastes, trash and toxic materials or reclaimed as required by the Act.

Since the site was not subdivided, neither Carbon County nor Wellington City required the submittal of development plats, reclamation obligations, or reclamation bonds. COVOL did obtain a conditional use permit from Wellington City, a copy of which is contained in Appendix 1-4. The Wellington City ordinance describing zoning for the site has been provided as Appendix 1-4. A commitment to remove coal, coal waste, trash, and toxic materials is provided in Section 5.4.1.

Provide surface and groundwater baseline data in tabular form and a map of all sampling locations

This information has been provided in a new Table 7-1 and discussed in Section 7.2.2.1. Figure 7-2 has been added to show the location of the monitoring well. Plate 5-1 is referenced in Section 7.2.2.3 as showing the location of the sedimentation ponds which are monitored under the UPDES permit.

Provide a discussion as to how the information/data obtained from the Savage Coal Terminal and “nearby wells” is representative of the ground water resources located at the site. The discussion should address groundwater flow direction within the permit and adjacent area.

Section 7.2.2.1 has been modified.

Provide the data and/or observations that were utilized in determining the nature and characteristics of Miller Creek. The application characterizes Miller Creek as a “perennial stream”.

Section 7.2.4.2 has been modified.

Provide the data and/or observations that were utilized in determining the nature/characteristics of the tributary to Miller Creek located approximately 400 feet west of the southwest sediment pond (See Figure

7-2). This may be done by discussing/presenting information on the size of the watershed, stream morphology, presence/lack of riparian vegetation etc.

Section 7.2.4.2 has been modified.

Modify page 7-13 of the application to state that COVOL will sample all coal and coal waste on-site after an inactive period of 30 days. The sampling should be conducted according to Tables 7 and 8 of the Division's Guidelines For The Analysis of Topsoil Overburden.

Section 7.3.1.3 has been modified.

Provide a map showing the location of the newly installed groundwater monitoring well, the planned sampling parameters, and the planned monitoring frequency. (As outlined in Attachment A of the Sept. 15, 2008 agreement entered into by the Permittee and the Division the Permittee will work in consultation with the Division to establish the aforementioned criteria.)

Figure 7-2 has been added to show the monitoring well location. Section 7.2.3 has been modified to indicate the frequency of sampling and the parameters for which samples will be analyzed.

Provide a reasonable justification for not conducting surface water monitoring within the permit and adjacent area.

Section 7.2.2.3 has been modified to indicate that all surface water from the site flows through the sedimentation ponds, which are monitored in accordance with the UPDES permit.

Include a description of the plant communities found adjacent to the project area and provide a map delineating the vegetative communities including the riparian area found adjacent to the project site.

Section 3.2.1.1 included a description of vegetation in areas adjacent to the permit area. The title of the section has been changed to reflect that fact. A map of vegetative communities is provided in the updated biology report provided in Appendix 3-1.

Include a map delineating the habitats for high value wildlife species and conduct an approved wildlife survey of the permit site and adjacent area for burrowing owls and big game species. (An approved survey protocol can be found at the US Fish and Wildlife Department.)

A map of wildlife habitat in the area is provided in the revised report contained in Appendix 3-1. This appendix also provides additional information regarding the lack of big game species in the permit and adjacent areas. Section 3.2.2 has been modified to discuss the lack of big game species and the evidence upon which that conclusion is based. The revised report contained in Appendix 3-1 also further discusses observations in the area with respect to burrowing owls.

Include a summary of Threatened and Endangered Species found in the study areas in the "Findings and Recommendations" section of the biological survey in Appendix 3-1

A summary of this information is now included in the "Findings and Recommendations" section of the revised report contained in Appendix 3-1.

Modify Appendix 3-1 to include the habitat requirements and locations of *all* threatened or endangered species found in Carbon County. (Southwestern Willow flycatcher, the Uinta Basin hookless Cactus, or the Clay phacelia.)

The habitat requirements of threatened and endangered species found in Carbon County are discussed in Table B-1 of the revised report contained in Appendix 3-1.

Include the following maps for the permit site (and the adjacent areas where applicable):

- Cultural resources: area covered by the literature search, and any cultural resources found.

The area of the literature search and the location of the cultural resource found in that search are provided in the revised report contained in Appendix 4-1.

- Monitoring and sampling locations

These locations are shown on Figure 7-2 and Plate 5-1.

- Vegetation reference area

As indicated in Section 3.4.1.2, no vegetation reference area has been established. Revegetation success will be determined using a temporary reference area chosen at the time of reclamation.

- Public parks and cultural or historic resources located within the permit and adjacent areas.

The closest public park is located 2.2 miles northeast of the permit area. This park is not considered to be in the adjacent area. Cultural or historic sites in the vicinity of the permit area are noted on the map provided in the revised report in Appendix 4-1.

- Facilities to be left at reclamation

These facilities are noted on Plate 5-2.

- Reclamation surface and subsurface manmade features

These features are shown on Plate 5-2.

- Surface ownership

This information is noted on Figure 5-2A.

Include a statement of acknowledgement that the water consumption from Miller Creek is pending approval by the U.S. Department of Fish and Wildlife even though it is below the 100 acre-ft limit.

Section 3.2.2.2 has been modified to include this acknowledgement.

Omit the contradiction: "No wetland or riparian habitat exists in the permit or adjacent areas.. the closest riparian habitat is located along Miller Creek approximately .4 miles south of the permit area."

Section 3.5.8.4 has been modified.

Provide site specific information that describes the type of industrial use the property will be used for at the completion of mining activities

Section 5.4.1 has been modified to indicate that future land use will be consistent with zoning ordinances.

Provide a copy of the Wellington city Agreement for reclamation of the site

No such agreement exists.

Commit to provide the following information at the end of mining:

- The entity responsible for the post mining land use,
- A written request from the entity identifying their needs for the property, and a right of entry agreement between Covol and the industrial site user if other than Covol; or a clear and concise methodology for the reclamation of that portion of the disturbed area

A commitment to provide the entity responsible for the post-mining land use and a written request from the entity identifying their needs for the property is given in Section 5.4.1. A right-of-entry agreement will not be required because any reclamation activities will be specified in the purchase agreement for the property and will be completed prior to the property being transferred.

Describe how the coal and coal mine waste that could possibly be left (if operations were ceased due to unforeseen circumstances and the Division were to require bond forfeiture) would have to be handled/disposed of in reclamation (refuse pile, hauled to another permitted facility, etc), and include costs for that scenario in the bond. For example, if COVOL's plan is to remove all coal and coal waste material from the site, the bond must cover the cost of hauling to an appropriate refuse facility. If a refuse pile is more practical in this scenario, the application must include plans for constructing the refuse pile, and the bond must include those associated costs instead. COVOL and the Division need to agree on the amount of refuse considered as a "worst case scenario" based on COVOL's operating plans.

As noted in several sections of Chapter 5 and discussed during the meeting on January 14, 2009, no coal mine waste exists or is generated at the site. Hence, no coal refuse will exist at the site prior to reclamation. Given its economic value, all coal will be removed from the site by COVOL or the owner of the coal prior to the permanent cessation of operations. Section 5.4.1 has been modified as necessary.

Demonstrate that the fill areas and their associated bin/reclaim tunnels will support the approved post-mining land use and complement the drainage pattern of the surrounding terrain.

Section 5.4.2.2 has been modified to indicate that the need for these structures will be evaluated when the new owner is identified.

Describe how unauthorized access by animals or humans to subsurface bins and reclaim tunnels will be prevented during periods when no industrial activity is occurring.

Section 5.1.5.3 has been modified to indicate that fences will be maintained and gates locked.

If the sedimentation ponds are to be left in place as part of the post-mining industrial use, show that they meet the permanent impoundment requirements of the R645-Coal Mining Rules (R645-301-733.220 thru R645-301-733.226), include the plan to access the ponds for inspection and maintenance postreclamation.

The following sections have been modified to note that the impoundments meet the above requirements: 5.2.6.2, 5.4.2.2, 5.4.2.5, 5.5.2.2, 5.5.3.1, and 7.3.3.2.

CHAPTER 1
LEGAL, FINANCIAL, COMPLIANCE, AND RELATED INFORMATION

1.10 Minimum Requirements

1.1.1 Introduction

This chapter of the COVOL Dry-Coal Cleaning Facility permit application provides information regarding the ownership and control of the permit area. The compliance status of the operator at other locations is also provided herein. The facility covered by this permit application has been in operation since January 2006.

The COVOL Dry-Coal Cleaning Facility (MSHA ID 42-02398 issued 2/10/2005) is used for coal cleaning and is not a coal mine. As a result, some sections of Utah's coal mine permitting rules do not strictly apply to this site. Given that fact, the applicant and the Utah Division of Oil, Gas and Mining held discussions over a period of several months prior to the submittal of this permit application in order to establish the submittal requirements. Correspondence associated with these discussions is provided in Appendix 1-1.

An environmental compliance assessment was conducted of the COVOL operations in 2006. A copy of the opinion report resulting from that assessment is provided in Appendix 1-2. That report includes copies of environmental permits, plans, policies, and procedures that were in place at the time of the assessment.

This document has been arranged in the format of the R645-301 regulations. For example, Section 1.10 corresponds to R645-301-110, Section 1.1.1 corresponds to R645-301-111, Section 1.1.2.2 corresponds to R645-301-112.200, etc.

File in:

Confidential

Shelf

Expandable

Refer to Record No. 0002 Date 03302009

In C 10070045 2007 Subcoming

For additional information

1.1.2 Identification of Interests

COVOL Engineered Fuels, LLC (hereafter referred to as "COVOL") is a subsidiary of Headwaters Energy Services Corporation, 10653 South River Front Parkway, Suite 300, South Jordan, Utah. Headwaters Energy Services Corporation is a subsidiary of Headwaters Incorporated. The relationship between these three companies is shown in Figure 1-1. COVOL is the owner/operator of the dry coal cleaning facility located in Carbon County, Utah. The facility is located within Section 14, Township 15 South, Range 10 East, SLBM, approximately 2 miles west of Wellington, Utah. The following entity owns 10% or more of the stock of Headwaters Incorporated but does not control Headwaters Incorporated or its subsidiaries:

Earnest Partners

1180 Peachtree Street

Suite 2300

Atlanta, GA 30309

Phone: 800-322-0068

Chief Executive Officer and Manager: Paul Viera (with Earnest Partners since 03/15/1999)

Chief Operating Officer: John Whitmore (with Earnest Partners since 06/16/2005)

Chief Compliance Officer: James Wilson, Jr. (with Earnest Partners since 09/01/2002)

1.1.2.1 Business Entity

COVOL is a limited liability company. Headwaters Energy Services Corporation and Headwaters Incorporated are corporations.

1.1.2.2 Applicant and Operator

APPLICANT: COVOL Engineered Fuels, LC
10653 South River Front Parkway, Suite 300
South Jordan, Utah 84095
(801) 984-3777

Payment of abandoned mine land reclamation fees, if any, will be the responsibility of the President and Manager of COVOL Engineered Fuels. Inquiries regarding the payment of this fee should be directed to this individual at the mailing address and phone number indicated above. The person currently occupying this position is indicated in Section 1.1.2.3.

OPERATOR: COVOL Engineered Fuels, LC
1865 West Ridge Road
Wellington, Utah 84654
(435) 613-1631

1.1.2.3 Officers and Directors

The directors and officers of Headwaters Incorporated (FEIN 87-0547337) are:

Board of Directors (all own <5%):

<u>Name</u>	<u>Date position was assumed</u>
Kirk A. Benson	<u>01/01/1999</u> 09/06/2000
James A. Hickeroff	<u>08/01/1997</u> 09/06/2000
R. Sam Christensen	01/01/2003
William S. Dickenson	01/01/2003
E.J. Jake Garn	01/01/2002
Malyn K. Malquist	01/01/2003
Raymond J. Weller	<u>07/01/1991</u> 09/06/2000
Blake O. Fisher, Jr.	11/01/2004

Officers (all own <5%):

<u>Name</u>	<u>Title</u>	<u>Date position was assumed</u>
Kirk A. Benson	Chairman of the Board and Chief Executive Officer	
<u>01/01/1999</u> 09/06/2000		
Steven G. Stewart	Chief Financial Officer and Treasurer	09/04/2007
Harlan M. Hatfield	Vice President and Secretary	
<u>07/01/1998</u> 09/06/2000		

The director and officers of Headwaters Energy Services Corporation (FEIN 80-0380929) are:

Director (owns <5%): Steven G. Stewart (Position assumed 09/04/2007)

Officers (all own <5%):

<u>Name</u>	<u>Title</u>	<u>Date position was assumed</u>
Steven G. Stewart	Chief Financial Officer and Chairman of the Board	09/04/2007
Kenneth R. Frailey	President	08/18/2004
Harlan M. Hatfield	Vice President and Assistant Secretary	04/09/2003
Curtis J. Brown	Secretary	08/18/2004
Jason T. Day	Assistant Secretary	05/12/2004

The officers (all own <5%) of COVOL (FEIN 90-0221443) are:

<u>Name</u>	<u>Title</u>	<u>Date position was assumed</u>
Kenneth R. Frailey	President and Manager	08/24/2004
Steven G. Stewart	Corporate Financial Officer <u>and Manager</u>	09/04/2007
Evan J. O'Neil	Vice President	06/01/2006
Keith Thompson	Vice President	08/09/2004
Harlan M. Hatfield	<u>Vice President and Manager</u>	06/01/2006 08/09/2004
Curtis J. Brown	Officer	08/09/2004
Jason T. Day	Officer	08/09/2004

The addresses and phone numbers for the officers and directors of Headwaters Incorporated, Headwaters Energy Services Corporation, and COVOL are the same as the applicant.

Written correspondence to Headwaters Incorporated or COVOL regarding the operations should be addressed to:

Gina Rau
Environmental Manager
Headwaters Incorporated
10653 South River Front Parkway, Suite 300
South Jordan, Utah 84095
(801) 984-3770

1.1.2.4 Coal Mining and Reclamation Operation Permit Applications

The following list represents all permits issued to COVOL, along with applicable identification numbers of applications or permits:

<u>Permit</u>	<u>Issuing Authority</u>	<u>Status</u>
UPDES Permit (No. UTR000685)	Utah Dept. Environmental Quality, Division of Water Quality	Approved
Approval Order (DAQE# AN2952001-03)	Utah Dept. Environmental Quality, Division of Air Quality	Approved
Certificate of Insurance and Business Authorization	Utah Industrial Development Commission	Approved

The COVOL operations permit number is to be determined by the Utah Division of Oil, Gas, and Mining (“DOGM”), which is the issuing authority for the facility. The ~~following~~ permits and operations ~~are~~ held by ~~the indicated~~ subsidiary companies of Headwaters Energy Services Corporation are indicated in Table 1-1.:

Neither Wellington City nor Carbon County required COVOL to file development plans prior to construction of the facility. Neither of these local governmental bodies placed reclamation obligations on COVOL or required that COVOL file a reclamation bond. Wellington City issued a Conditional Use Permit to COVOL to grant a variance for the height of their loadout silo. A copy of the Conditional Use Permit is provided in Appendix 1-4.

COVOL Fuels No.2, LLC (Kentucky)

<u>Permit</u>	<u>Issuing Authority</u>	<u>Status</u>
Air Permit	Kentucky Division of Air Quality	Issued
KPDES Permit	Kentucky Division of Water	Pending
Mine Permit No. 889-8004	Kentucky Division of Mine Permit	Operator Revision—Pending

COVOL Fuels No.3, LLC (Kentucky)

<u>Permit</u>	<u>Issuing Authority</u>	<u>Status</u>
---------------	--------------------------	---------------

~~Mine Permit No.~~ ~~Kentucky Division of Mine Permit~~ ~~Operator Revision—Pending~~

1.1.2.5 Legal or Equitable Owner of the Surface and Mineral Properties to be Mined

COVOL Engineered Fuels, LC is the legal and equitable owner of the entire 30-acre surface parcel included within the permit area. There will be no mining at this facility. Thus, the mineral properties will not be affected by the operation. A property ownership map of the permit and adjacent areas is presented as Figure 5-2. No area within the lands to be affected by the facility is under a real estate contract.

1.1.2.6 Owners of Record of Property Contiguous to Proposed Permit Area

The following owners of surface lands are contiguous to the permit boundary:

High Country Forest Products
8243 Old Federal Road
Montgomery, Alabama 36117

~~Wellington Price~~ City
~~150 West 185 East~~ Main Street
Price, Utah 84501

~~Carbon County School District~~
~~75 East 400 North~~
~~Price, Utah 845001~~

State of Utah
203 State Capitol Building
Salt Lake City, Utah 84114

Circle K Ranch
P.O. Box 700
Price, Utah 84501

~~Sacco Brothers Land
1655 West 2100 North
Helper, Utah 84526~~

Denver and Rio Grande Western Railroad
1700 Farnham Street
10th Floor South
Omaha, Nebraska 68102

The locations of these lands relative to the permit area are shown on Figure 5-2A.

1.1.2.7 MSHA Numbers

The MSHA number for the operation is: 42-02398

1.1.2.8 Interest in Contiguous Lands

The applicant neither owns nor controls, directly or indirectly, a legal equitable interest in any lands contiguous to the permit area.

1.1.3 Violation Information

Neither the company nor any major stockholder of the company having any interest, either legal or equitable, in the COVOL facility have had a State or Federal mining permit suspended or revoked or a security deposited in lieu of bond revoked. The following Notices of Non-compliance have been issued within the last 3 years to a permittee other than COVOL but where COVOL Fuels No. 3, LLC is an operator:

Notice of Non-compliance #23-0689

Issuing agency: Kentucky Division of Mine Reclamation and Enforcement

Permit No. 807-8052

Permittee: Chas Coal, LLC

Operator: COVOL Fuels No. 3, LLC

Date of non-compliance: 7/28/2008

Description: Permittee has failed to follow their approved permit by drilling several unapproved slurry injection holes in Little Camp Branch. Also, the company has drilled water withdrawal holes in Little Camp Branch. These holes have been proposed under Major Revision #9, but the revision has not yet been issued.

Corrective action: Major Revision # 9 was approved and work could proceed as permitted.

Status: Abated

Abatement date: 12/1/2008

Notice of Non-compliance #23-1241

Issuing agency: Kentucky Division of Mine Reclamation and Enforcement

Permit No. 807-8052

Permittee: Chas Coal, LLC

Operator: COVOL Fuels No. 3, LLC

Date of non-compliance: 2/26/2009

Description: The company has placed coarse refuse in an unapproved location on the Little Camp Branch slurry impoundment.

Corrective action: Being contested.

Status: This Notice is being contested because coarse refuse can be placed on a temporary basis anywhere within the permit area. Coarse refuse will be moved to an approved permanent storage location once weather permits. Mud and steep slopes currently prevent access to the permanent storage locations.

1.1.4 Right-of-Entry Information

~~Since~~ The facility is located on lands that are entirely owned by the operator (see Appendix 1-3). Hence, no other right of entry is required.

1.1.5 Status of Unsuitability Claims

Since there is no mining at this facility, the issue of unsuitability claims is not applicable.

1.1.6 Permit Term

The following information is presented to identify permit term requirements and stipulations. The Applicant began operating the facility in January 2006 using an air-jig method to process coal-bearing materials. Termination of operations will be determined by economic conditions. The timing of this termination is, therefore, unknown. It is anticipated that the Applicant will operate at the site for a period in excess of 5 years.

The anticipated total acreage to be affected during operations is 30 acres. ~~The disturbed area to be reclaimed is 30 acres. The permit and adjacent areas have been zoned by Wellington City for "light industrial purposes" (Zone M-1). Permitted uses under this zoning include a variety of industrial and manufacturing operations, as indicated in Appendix 1-4. Since the land occupied by the facility has been zoned for general industrial use and will be used for that purpose following the cessation of COVOL's operations, complete site reclamation will not be required (See chapters 4 and 5).~~

1.1.7 Insurance and Proof of Publication

Certificates of Insurance issued to COVOL are provided in Appendix 8-1. ~~COVOL will submit to DOGM a~~ A copy of a the newspaper advertisement is provided in Appendix 1-45 indicating that, in accordance with R645-300-121.100 once the application ~~is~~ has been determined by DOGM to be administratively complete.

1.1.8 Filing Fee

The permit filing fee ~~will be~~ was paid upon submittal of the application.

1.20 Permit Application Format and Contents

The permit application contains clear, concise, current information, in the format of the DOGM regulations.

1.30 Reporting of Technical Data

All technical data submitted in the permit application is accompanied by the names of persons or organizations that collected and analyzed the data. The technical data also contains the dates of collection and analysis of the data, and descriptions of the method used to collect and analyze data, as indicated in subsequent sections of this application. A pProfessionals qualified in the subject, planned or directed the technical analyses. These professionals included the following:

- Richard B. White, P.E. – President/Civil and Environmental Engineer, EarthFax Engineering, Inc. (engineering, hydrology, bonding, alluvial valley floors)
- Ari Menitove – Geological Engineer, EarthFax Engineering, Inc. (geology, soils)
- Chris Jensen – Consultant, Canyon Environmental, LLC (cultural resources, biology)
- Gina Rau – Environmental Manager, Headwaters Incorporated (legal, financial, compliance, land use, air quality)

1.40 Maps and Plans

The maps submitted in this permit application correspond to the format required by the regulations. The entire permit area was developed prior to the initial submittal of this permit application on January 15, 2008.

1.50 Completeness

The Applicant believes the information in this application to be complete and correct.

TABLE 1-1

Related-Entity Permits

<u>Entity and State</u>	<u>Permit</u>	<u>Issuing Authority</u>	<u>Status</u>
<u>COVOL Engineered Fuels, LC (Alabama)</u> <u>FEIN 90-0221443</u>	<u>Operator on Mine Permits P3247 (MSHA ID 01-03364 issued 5/24/2007), P3256 (MSHA ID 01-03365 issued 5/24/2007), P3257 (MSHA ID 01-03278 issued 5/1/2006), and P3260 (MSHA ID 01-03362 issued 4/20/2007)</u>	<u>Alabama Surface Mining Commission</u>	<u>Issued</u>
<u>COVOL Engineered Fuels No. 2, LLC (Indiana)</u> <u>FEIN 37-1554450</u>	<u>Operator/Permittee on Mine Permit P-00004 (MSHA ID 12-02397 issued 3/23/2007)</u>	<u>Indiana Dept of Natural Resources</u>	<u>Issued</u>
<u>COVOL Fuels No. 2, LLC (Kentucky)</u> <u>FEIN 37-1554450</u>	<u>Permittee on Mine Permit 889-8005 (MSHA ID 15-19205 issued 3/21/2008)</u>	<u>Kentucky Division of Mine Permits</u>	<u>Issued</u>
<u>COVOL Fuels No. 2, LLC (Kentucky)</u> <u>FEIN 37-1554450</u>	<u>KPDES Permit No. 0107158 (MSHA ID 15-19205 issued 3/21/2008)</u>	<u>Kentucky Division of Water</u>	<u>Issued</u>
<u>COVOL Fuels No. 2, LLC (Kentucky)</u> <u>FEIN 37-1554450</u>	<u>Air Permits S-07-145 (MSHA ID 15-19205 issued 3/21/2008) and S-08-039 (MSHA ID 15-19071 issued 12/6/2007)</u>	<u>Kentucky Division of Air Quality</u>	<u>Issued</u>
<u>COVOL Fuels No. 2, LLC (Kentucky)</u> <u>FEIN 37-155-4450</u>	<u>UIC Permit KYV0047 (MSHA ID 15-19205 issued 3/21/2008)</u>	<u>USEPA Region 4</u>	<u>Issued</u>
<u>COVOL Fuels No. 3, LLC (Kentucky)</u> <u>FEIN 37-1554451</u>	<u>Operator on Mine Permits 807-8051 and 807-8052 (MSHA ID 15-12682 issued 12/7/2007)</u>	<u>Kentucky Division of Mine Permits</u>	<u>Issued</u>
<u>COVOL Fuels No. 3, LLC (Kentucky)</u> <u>FEIN 37-155441</u>	<u>Operator on Mine Permit 807-9003 (MSHA ID 15-12682 issued 12/7/2007)</u>	<u>Kentucky Division of Mine Permits</u>	<u>Pending/Issued</u>
<u>COVOL Fuels No. 4, LLC (West Virginia)</u> <u>FEIN 37-1554452</u>	<u>Operator on Mine Permit No. 0402292 (MSHA ID 46-09146 issued 2/18/2008)</u>	<u>WV Dept of Env. Protection</u>	<u>Issued</u>
<u>COVOL Fuels No. 4, LLC (West Virginia)</u> <u>FEIN 37-1554452</u>	<u>Air Permit G10-C104 (MSHA ID 09146 issued 2/18/2008)</u>	<u>WV Department of Environmental Protection</u>	<u>Issued</u>
<u>COVOL Fuels No. 5, LLC (Alabama)</u> <u>FEIN 37-1554453</u>	<u>Operator on Mine Permit P3199 (MSHA ID 01-00563 issued 7/1/2008)</u>	<u>Alabama Surface Mining Commission</u>	<u>Issued</u>

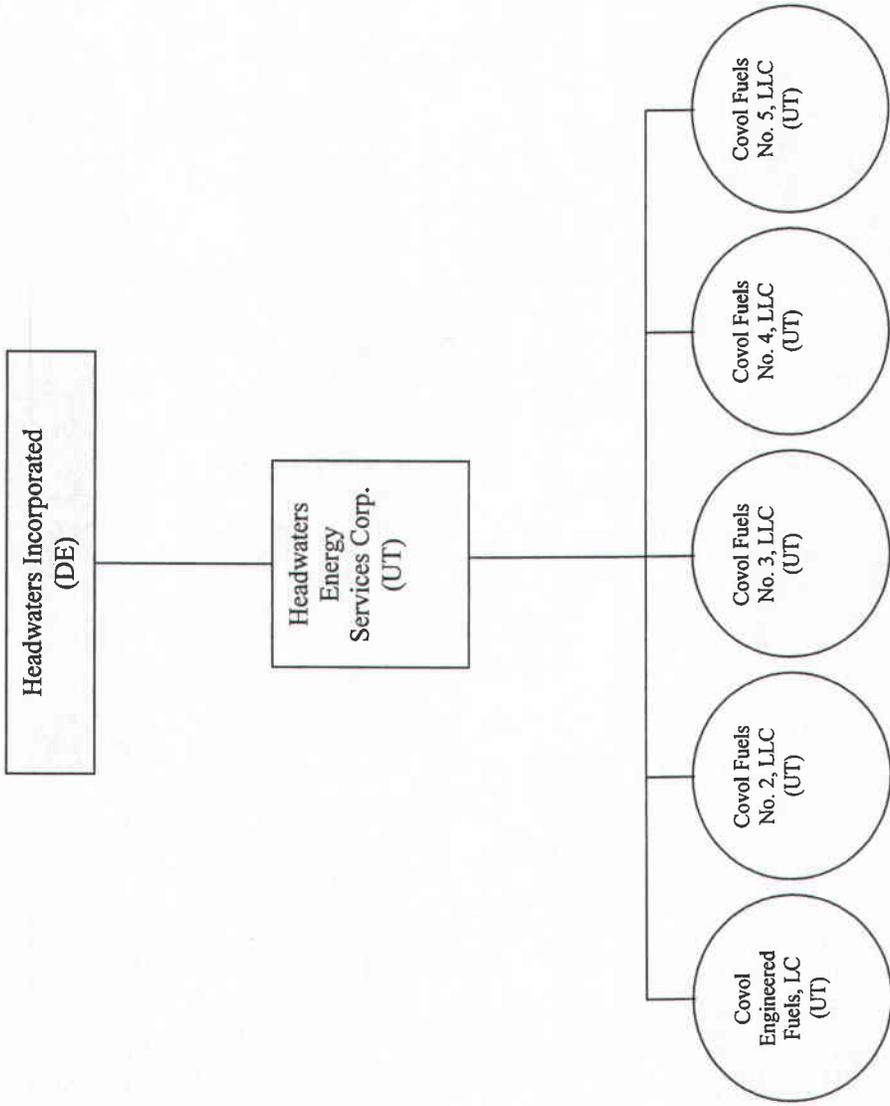


FIGURE 1-1. HEADWATERS/COVOL CORPORATE STRUCTURE



COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
~~January October 2008~~ March 2009

APPENDIX 1-1

Correspondence Regarding the
Permit Application Submittal

COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
~~January~~ ~~October 2008~~ ~~March 2009~~

APPENDIX 1-2

Environmental Compliance Assessment

COVOL Engineered Fuels, LC
Dry-Coal Cleaning Facility

Permit Application
January October 2008 March 2009

APPENDIX 1-3

Property Warranty Deeds

COVOL Engineered Fuels, LC
Dry-Coal Cleaning Facility

Permit Application
January ~~October 2008~~ March 2009

APPENDIX 1-4

Zoning and Conditional Use Permit Information

Chapter 10

COMMERCIAL AND MANUFACTURING ZONES

The M-1 Zone
provides for light
industrial uses.

Updated August 27, 2008

Wellington City

Land Use Code, Title 12

Section 10-3 MANUFACTURING ZONE M-1.

Subsections

- 10-3-1 Purpose
- 10-3-2 Permitted Use
- 10-3-3 Area Regulations
- 10-3-4 Side Yard Regulations
- 10-3-5 Front Yard Regulations
- 10-3-6 Rear Yard Regulations
- 10-3-7 Height Regulations
- 10-3-8 Coverage Regulations
- 10-3-9 Parking

Section 10-3-1 PURPOSE.

To provide in Wellington for light industrial uses.

Section 10-3-2 PERMITTED USES.

1. Ice manufacturing.
2. Food products manufacturing.
3. Textile manufacturing.
4. Furniture products manufacturing
5. Jewelry manufacturing.
6. Staging for trucking.
7. Retail sales establishment intended to service Wellington residents.
8. Restaurants and fast food establishments.
9. Professional offices.
10. Service business.
11. Warehousing.
12. Services.
13. Professional offices.
14. Industry and Manufacturing.

Chapter 10

COMMERCIAL AND MANUFACTURING ZONES

Wellington City

Land Use Code, Title 12

Section 10-3-3 AREA REGULATIONS.

Area requirements will be dependent on compliance with parking and setback regulations.

Section 10-3-4 SIDE YARD REGULATIONS.

None, except that wherever a building is located upon a lot adjacent to residential zone or agricultural boundary, there shall be provided a side yard of not less than ten (10) feet on the side of the building adjacent to the zone boundary line, and on corner lots, the side yard, which faces on a street, shall be not less than twenty (20) feet.

Section 10-3-5 FRONT YARD REGULATIONS.

The minimum depth of the front yard for all advertising signs, buildings, structures, walls, or fences more than two (2) feet in height shall be twenty (20) feet.

Section 10-3-6 REAR YARD REGULATIONS.

None, except that on corner lots which rear upon the side yard of another lot in a residential or agricultural zone, the minimum rear yard shall be ten (10) feet.

Section 10-3-7 HEIGHT REGULATIONS.

No building or structure shall be erected to a height greater than two and one-half (2 ½) stories, or thirty-five (35) feet.

Section 10-3-8 COVERAGE REGULATIONS.

No building or structure or group of buildings with their accessory buildings shall cover more than sixty (60) percent on the area of the lot.

Section 10-3-9 PARKING REGULATIONS.

For a new building or structure or the enlargement or increase in capacity or floor area of an existing main building or structure there should be at least one (1) permanently maintained parking space of not less than one hundred eighty (180) square feet for every two (2) employees at peak shift on that parcel of land.

WELLINGTON CITY CONDITIONAL USE APPLICATION

Date: 7/13/05

The following information must be provided for all conditional use permits.

Property Owner Name(s): Corval Engineered Fuels, LC

Property Address: 1865 W. Ridge Road

Property Zone: M-1 Lot Size: _____

Property Owner's Mailing Address: 10653 S. RiverFront Pkwy Ste 30

Property Owners Telephone #: 613-1036

Description of Proposed Conditional Use(use separate page if necessary): Wellington City ordinance states there shall be no structure over 35ft. The silo (loadout) will be 75ft. proposed conditional use is to allow silo @ 75ft. due to the fact of the zoning, which is M-1

Please attach the following:

Detailed Site plans w/Plat map drawn to scale

Signature of Neighbors (if required)

I, the undersigned, state that all information provided is true and accurate to my best knowledge.

Property Owner's Signature: _____ Date: _____

Lessee's Signature (If Applicable): _____ Date: _____

Approving Signatures

Planning and Zoning Ellie A. Johnson Date: 7-13-05

City Council Karl R. Hansberry Date: 7-18-05

COVOL Engineered Fuels, LC
Dry-Coal Cleaning Facility

Permit Application
~~January~~ ~~October 2008~~ March 2009

APPENDIX 1-45

**Affidavit of Publication of
Administrative Completeness**

0002

COPY

C/007/045 Incoming

Q

#3256



March 30, 2009

Mr. Daron Haddock, Environmental Manager
Coal Regulatory Program
Utah Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84116

**RE: Wellington Dry-Coal Cleaning Facility Application
COVOL Engineered Fuels, LC
Permit No. C/007/0045, Task #3075**

Dear Mr. Haddock:

Covol Engineered Fuels, LC (Covol) is submitting the enclosed application for Covol's pending mine permit C/007/0045. This submittal addresses the deficiencies listed in the Utah Division of Oil, Gas, and Mining (UDOGM) letter dated February 17, 2009.

In the enclosed application, the red markings represent the additions and deletions that were made to the October 2008 revision. The blue markings represent the additions and deletions that address the deficiencies listed in the February 17, 2009 UDOGM letter.

If you have any questions regarding the application or enclosed information, please call me at (801) 984-3770.

Sincerely,

Gina Rau
Environmental Manager

10653 S. River Front Parkway
Suite 300
South Jordan, UT 84095
P: 801.984.9400
F: 801.984.9410

File in:
C/007/0045 2009 Incoming
Refer to:
 Confidential
 Shelf
 Expandable
Date *033009* For additional information

RECEIVED

MAR 30 2009

DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

COPY

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: COVOL Engineered Fuels, LC

Mine: Wellington Dry-Coal Cleaning Facility

Permit Number: C/007/0045

Title: Response to DOGM comments dated February 17, 2009 (Task ID #3075)

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

Revision of permit application to address DOGM comments

Instructions: If you answer yes to any of the first eight (gray) 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?

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

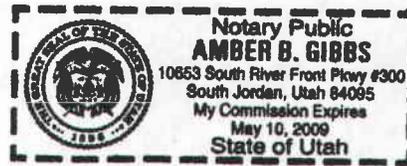
I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

R. Keith Thompson
Print Name

R. Keith Thompson, VP, 30 Mar 09
Sign Name, Position, Date

Subscribed and sworn to before me this 30 day of March, 20 09

Amber B. Gibbs
Notary Public
My commission Expires: May 10, 20 09
Attest: State of Utah) ss:
County of Salt Lake



For Office Use Only:

Assigned Tracking Number:

Received by Oil, Gas & Mining

RECEIVED

MAR 30 2009

DIV. OF OIL, GAS & MINING

**Response to Deficiency List
Task ID #3075
Wellington Dry-Coal Cleaning Facility**

Remove all references to undisturbed acres within the permit area.

All references but one in Chapter 2, Section 2.2.2 have been removed. The reference in Chapter 2 was placed there at the request of DOGM in the October 2008 response to comments.

Remove all references to reclamation/revegetation if that is not part of the postmining land use.

References to reclamation/revegetation are in response to the requirements of the R645 regulations.

Show Earnest Partners' relation to Headwaters Incorporated (10% ownership) in Figure 1-1

Earnest Partners is a shareholder and has no operational controlling interest in Headwaters or its affiliates. Since Figure 1-1 shows operational control, this information could not be shown on this figure. Relevant information is presented instead in Section 1.1.2.

Provide officers and directorship information for Earnest Partners

This information is presented in Section 1.1.2.

Verify that COVOL Fuels No. 2 is related to Kentucky permit 889-8005 (OSM's information shows it as 889-004).

The permit number is correct as indicated. The OSM database has been updated to correctly show COVOL Fuels No. 2 as the permittee for Kentucky Permit No. 889-8005.

Provide identification numbers and MSHA numbers (with date of issuance) for all sites controlled by Covol Engineered Fuels, LC and affiliates: Covol Fuels No 2 LLC, Covol Fuels No 3 LLC, Covol Fuels No 4 LLC, Covol Fuels No 5 LLC, within the last five years.

This information is provided in Table 1-1.

Correct Figure 2-1 (two lines seem to have the same elevation).

Figure 2-1 is correct as shown. The Wellington site is situated on a ridge. The indicated topographic lines are on either side of the ridge line.

Provide a listing of violations received by the Applicant and affiliated companies at all permitted coal mining and reclamation sites in the last three years, or state if there were none.

This information is provided in Section 1.1.3.

Make sure that the surface ownership information listed in Section 1.1.2.6 is consistent with the plat map in Appendix 1-3 (T. 15 S, R. 10 E. Section 14), and that the map is current.

The surface information contained in Section 1.1.2.6 is correct. The warranty deed in Appendix 1-3 is from 2005 and is not current. The warranty deed was included in the permit application at the request of the DOGM in the October 2008 response to comments.

Seed open topsoil piles as soon as possible with the mix listed in Table 3.1.

The topsoil stockpiles will be spread out and re-contoured to promote germination and will be seeded prior to April 17, 2009. The mix in Table 3-1 will be utilized except as noted in Section 2.3.1.4.

Provide development plats as approved by county zoning, any reclamation obligations for development plan, amount of bond to county (if any) for reclamation, and confirmation that the land as improved will have value as an industrial site based on current and projected land use for the area. Land not part of structures, asphalt, and drives, may be seeded and re-vegetated, or other methods used to control erosion. Areas to be left for industrial use must be cleaned of all coal, coal wastes, trash and toxic materials or reclaimed as required by the Act.

Since the site was not subdivided, neither Carbon County nor Wellington City required the submittal of development plats, reclamation obligations, or reclamation bonds. COVOL did obtain a conditional use permit from Wellington City, a copy of which is contained in Appendix 1-4. The Wellington City ordinance describing zoning for the site has been provided as Appendix 1-4. A commitment to remove coal, coal waste, trash, and toxic materials is provided in Section 5.4.1.

Provide surface and groundwater baseline data in tabular form and a map of all sampling locations

This information has been provided in a new Table 7-1 and discussed in Section 7.2.2.1. Figure 7-2 has been added to show the location of the monitoring well. Plate 5-1 is referenced in Section 7.2.2.3 as showing the location of the sedimentation ponds which are monitored under the UPDES permit.

Provide a discussion as to how the information/data obtained from the Savage Coal Terminal and “nearby wells” is representative of the ground water resources located at the site. The discussion should address groundwater flow direction within the permit and adjacent area.

Section 7.2.2.1 has been modified.

Provide the data and/or observations that were utilized in determining the nature and characteristics of Miller Creek. The application characterizes Miller Creek as a “perennial stream”.

Section 7.2.4.2 has been modified.

Provide the data and/or observations that were utilized in determining the nature/characteristics of the tributary to Miller Creek located approximately 400 feet west of the southwest sediment pond (See Figure

7-2). This may be done by discussing/presenting information on the size of the watershed, stream morphology, presence/lack of riparian vegetation etc.

Section 7.2.4.2 has been modified.

Modify page 7-13 of the application to state that COVOL will sample all coal and coal waste on-site after an inactive period of 30 days. The sampling should be conducted according to Tables 7 and 8 of the Division's Guidelines For The Analysis of Topsoil Overburden.

Section 7.3.1.3 has been modified.

Provide a map showing the location of the newly installed groundwater monitoring well, the planned sampling parameters, and the planned monitoring frequency. (As outlined in Attachment A of the Sept. 15, 2008 agreement entered into by the Permittee and the Division the Permittee will work in consultation with the Division to establish the aforementioned criteria.)

Figure 7-2 has been added to show the monitoring well location. Section 7.2.3 has been modified to indicate the frequency of sampling and the parameters for which samples will be analyzed.

Provide a reasonable justification for not conducting surface water monitoring within the permit and adjacent area.

Section 7.2.2.3 has been modified to indicate that all surface water from the site flows through the sedimentation ponds, which are monitored in accordance with the UPDES permit.

Include a description of the plant communities found adjacent to the project area and provide a map delineating the vegetative communities including the riparian area found adjacent to the project site.

Section 3.2.1.1 included a description of vegetation in areas adjacent to the permit area. The title of the section has been changed to reflect that fact. A map of vegetative communities is provided in the updated biology report provided in Appendix 3-1.

Include a map delineating the habitats for high value wildlife species and conduct an approved wildlife survey of the permit site and adjacent area for burrowing owls and big game species. (An approved survey protocol can be found at the US Fish and Wildlife Department.)

A map of wildlife habitat in the area is provided in the revised report contained in Appendix 3-1. This appendix also provides additional information regarding the lack of big game species in the permit and adjacent areas. Section 3.2.2 has been modified to discuss the lack of big game species and the evidence upon which that conclusion is based. The revised report contained in Appendix 3-1 also further discusses observations in the area with respect to burrowing owls.

Include a summary of Threatened and Endangered Species found in the study areas in the "Findings and Recommendations" section of the biological survey in Appendix 3-1

A summary of this information is now included in the "Findings and Recommendations" section of the revised report contained in Appendix 3-1.

Modify Appendix 3-1 to include the habitat requirements and locations of *all* threatened or endangered species found in Carbon County. (Southwestern Willow flycatcher, the Uinta Basin hookless Cactus, or the Clay phacelia.)

The habitat requirements of threatened and endangered species found in Carbon County are discussed in Table B-1 of the revised report contained in Appendix 3-1.

Include the following maps for the permit site (and the adjacent areas where applicable):

- Cultural resources: area covered by the literature search, and any cultural resources found.

The area of the literature search and the location of the cultural resource found in that search are provided in the revised report contained in Appendix 4-1.

- Monitoring and sampling locations

These locations are shown on Figure 7-2 and Plate 5-1.

- Vegetation reference area

As indicated in Section 3.4.1.2, no vegetation reference area has been established. Revegetation success will be determined using a temporary reference area chosen at the time of reclamation.

- Public parks and cultural or historic resources located within the permit and adjacent areas.

The closest public park is located 2.2 miles northeast of the permit area. This park is not considered to be in the adjacent area. Cultural or historic sites in the vicinity of the permit area are noted on the map provided in the revised report in Appendix 4-1.

- Facilities to be left at reclamation

These facilities are noted on Plate 5-2.

- Reclamation surface and subsurface manmade features

These features are shown on Plate 5-2.

- Surface ownership

This information is noted on Figure 5-2A.

Include a statement of acknowledgement that the water consumption from Miller Creek is pending approval by the U.S. Department of Fish and Wildlife even though it is below the 100 acre-ft limit.

Section 3.2.2.2 has been modified to include this acknowledgement.

Omit the contradiction: "No wetland or riparian habitat exists in the permit or adjacent areas.. the closest riparian habitat is located along Miller Creek approximately .4 miles south of the permit area."

Section 3.5.8.4 has been modified.

Provide site specific information that describes the type of industrial use the property will be used for at the completion of mining activities

Section 5.4.1 has been modified to indicate that future land use will be consistent with zoning ordinances.

Provide a copy of the Wellington city Agreement for reclamation of the site

No such agreement exists.

Commit to provide the following information at the end of mining:

- The entity responsible for the post mining land use,
- A written request from the entity identifying their needs for the property, and a right of entry agreement between Covol and the industrial site user if other than Covol; or a clear and concise methodology for the reclamation of that portion of the disturbed area

A commitment to provide the entity responsible for the post-mining land use and a written request from the entity identifying their needs for the property is given in Section 5.4.1. A right-of-entry agreement will not be required because any reclamation activities will be specified in the purchase agreement for the property and will be completed prior to the property being transferred.

Describe how the coal and coal mine waste that could possibly be left (if operations were ceased due to unforeseen circumstances and the Division were to require bond forfeiture) would have to be handled/disposed of in reclamation (refuse pile, hauled to another permitted facility, etc), and include costs for that scenario in the bond. For example, if COVOL's plan is to remove all coal and coal waste material from the site, the bond must cover the cost of hauling to an appropriate refuse facility. If a refuse pile is more practical in this scenario, the application must include plans for constructing the refuse pile, and the bond must include those associated costs instead. COVOL and the Division need to agree on the amount of refuse considered as a "worst case scenario" based on COVOL's operating plans.

As noted in several sections of Chapter 5 and discussed during the meeting on January 14, 2009, no coal mine waste exists or is generated at the site. Hence, no coal refuse will exist at the site prior to reclamation. Given its economic value, all coal will be removed from the site by COVOL or the owner of the coal prior to the permanent cessation of operations. Section 5.4.1 has been modified as necessary.

Demonstrate that the fill areas and their associated bin/reclaim tunnels will support the approved post-mining land use and complement the drainage pattern of the surrounding terrain.

Section 5.4.2.2 has been modified to indicate that the need for these structures will be evaluated when the new owner is identified.

Describe how unauthorized access by animals or humans to subsurface bins and reclaim tunnels will be prevented during periods when no industrial activity is occurring.

Section 5.1.5.3 has been modified to indicate that fences will be maintained and gates locked.

If the sedimentation ponds are to be left in place as part of the post-mining industrial use, show that they meet the permanent impoundment requirements of the R645-Coal Mining Rules (R645-301-733.220 thru R645-301-733.226), include the plan to access the ponds for inspection and maintenance postreclamation.

The following sections have been modified to note that the impoundments meet the above requirements: 5.2.6.2, 5.4.2.2, 5.4.2.5, 5.5.2.2, 5.5.3.1, and 7.3.3.2.

CHAPTER 2 SOILS

2.10 Introduction

This chapter contains pertinent information relating to identification, management, and reclamation activities associated with the soil resources present in the disturbed area of the COVOL Dry-Coal Cleaning Facility.

2.20 Environmental Description

The COVOL Dry-Coal Cleaning Facility lies in central Utah in the lowlands south of the Book Cliffs and north of the San Rafael Swell. Topography is dominated by broad plains and pediment surfaces dissected by small drainages. The dominant surficial geologic formation at the site is the Mancos Shale, of which the Blue Gate member is present at the surface in this location. The Blue Gate member is dominated by shales with some siltstones and minor sandstone bedding. The drainages are often filled with alluvial and slope wash deposits (Weiss et al, 1990). Surface elevations at the site range from about 5,530 to about 5,500 feet above sea level. Due to thin soils and shortage of irrigation water, most areas near the facility are not used to grow crops.

Photographs taken of the area prior to facility construction are provided in Appendix 2-1.

Soils in the area have formed from residual shale particles that mixed as they migrated down slope. Soils are usually shallow to very shallow, and consist predominantly of silty clay loams. The inherent erosion hazard from water is moderate (Jensen and Borchert, 1988).

2.2.1 Prime Farmland Investigation

No prime farmland soils are located within the COVOL Dry-Coal Cleaning Facility disturbed area (Jensen and Borchert, 1988). In surrounding undisturbed areas, native vegetation is very sparse. Furthermore, the disturbed area has been zoned for general industrial use by Carbon County, which allows for coal-cleaning activities at this site.

2.2.2 Soil Survey

In accordance with the agreement between DOGM and COVOL, soils data for the COVOL Dry-Coal Cleaning Facility disturbed area have been taken from previously published information (Jensen and Borchert, 1988). Soil survey data are presented in Appendix 2-12, and are herein summarized in Sections 2.2.2.1 and 2.2.2.2. Survey data include the following information: taxonomic classification, typical pedon, ranges of mineral and particle size characteristics, competing series, and geographic setting (Appendix 2-12). Prior to any future disturbance of currently-undisturbed areas of the site, soil samples will be collected from the area to be affected. These samples will be analyzed according to DOGM guidelines then in affect.

2.2.2.1 Soils Map

Figure 2-1 delineates the soil types present in the disturbed and adjacent areas.

2.2.2.2 Soil Identification

According to the Soil Survey of Carbon Area, Utah (Jensen and Borchert, 1988), the COVOL Dry-Coal Cleaning Facility disturbed area is located largely on soils classified as the Persayo-Chipeta Complex with some soils classified as the Killpack Clay Loam on its eastern edge. The Persayo-Chipeta Complex (Map Unit 80) consists of light brownish-grey, shallow, well-drained soils that formed in shale. Permeability is slow to moderately slow and the soil is slightly to moderately alkaline. The potential for water erosion is moderate to high, and the potential for blowing soil is moderate. Large-scale agricultural use or revegetation of the Persayo-Chipeta Complex is not considered practical due to its fine texture and the low amount of precipitation that it receives (Jensen and Borchert, 1988). Additional information for the Persayo and Chipeta soils is included in Appendix 2-12.

The Killpack Clay Loam (Map Unit 59) consists of grayish-brown, moderately deep, well-drained soils that have formed as residuum from shale. Permeability is slow and the soil is mildly alkaline. The potentials for water erosion and blowing soil are moderate. Like the Persayo-Chipeta Complex, revegetation of the Killpack Clay Loam is not considered practical due to its fine texture

and the low amount of precipitation that it receives (Jensen and Borchert, 1988). Additional information for the Killpack Clay Loam is included in Appendix 2-12.

2.2.2.3 Soil Description

In accordance with the agreement between COVOL and DOGM, no site-specific soil survey was performed. Thus, no further descriptions of soils are included.

2.2.2.4 Soil Productivity

Under favorable conditions, Jensen and Borchert (1988) indicate that Killpack soils can produce 700 lb/acre (dry weight) of rangeland vegetation. They report that production rates of 500 and 300 lb/acre can be expected under normal and unfavorable conditions. The Persayo-Chipeta Complex has a rangeland vegetation productivity of 300 to 400 lb/acre under favorable conditions, dropping to 100 to 150 lb/acre under unfavorable conditions.

2.2.3 Prime Farmland Soil Characterization

The published soil survey indicates that soil within the disturbed area does not qualify as prime farmland (Jensen and Borchert, 1988).

2.2.4 Substitute Topsoil

The Applicant segregated topsoil from the site prior to disturbance and, therefore, does not propose to use substitute topsoil during reclamation. Since the use of substitute topsoil is not anticipated, no field trials or other tests of suitability are anticipated.

2.30 Operation Plan

2.3.1 General Requirements

2.3.1.1 Removing and Storing Soil Methods

The COVOL Dry-Coal Cleaning Facility has been operating periodically since January 2006. At the time the facilities were constructed, topsoil was segregated and stored in ~~a~~ stockpiles located within the main yard of the facility. Due to the thin nature (less than 6 inches thick) and relatively poor quality of the soil, it was not segregated by soil horizon. All of the segregated soil will be treated as topsoil in compliance with R614-201-234.300.

2.3.1.2 Suitability of Topsoil Substitutes/Supplements

No topsoil substitutes or supplements are planned to be used at the facility.

2.3.1.3 Testing of Topsoil Handling and Reclamation Procedures

The facility is located in an area zoned for general industrial purposes, and is expected to be used for other industrial activities after the dry-coal cleaning operation is shut down. Hence, total site reclamation is not anticipated.

For those areas of the site where reclamation will occur, COVOL will exercise care to guard against erosion during and after application of topsoil and will employ the necessary measures to ensure the stability of topsoil on graded slopes. Erosion control measures will include surface roughening and erosion mat placement on slope areas thought to be unstable. The Applicant will fill, regrade, or otherwise stabilize any rills or gullies deeper than 9 inches which form in areas which have been regraded and topsoiled. The areas adjacent to any rills or gullies which have been filled, regraded or otherwise stabilized will be reseeded or stabilized appropriately.

2.3.1.4 Construction, Modification, Use, and Maintenance of Topsoil Stockpiles

The two topsoil storage piles at the facility were constructed in August 2005 and consists of approximately 500 cubic yards of soil that was removed from the ground surface during site grading prior to constructing the facility. Since the topsoil averaged less than six inches thick, it was not segregated before it was stockpiled. The stockpiled materials were placed on a stable surface in the southeast portion of the permit area. The stockpiles will be protected from wind and water erosion by being revegetated prior to April 17, 2009 with ~~a quick growing vegetative cover (proposed seed mix minus the shrubs and trees)~~ the seed mix contained in Table 3-1 (minus *Eriogonum inflatum*,

Oenothera caespitosa, and Stipa hymenoides due to a lack of availability at the time) and by installing silt fencing below the stockpiles to help trap sediment coming off the stockpiles. Revegetation of the topsoil stockpiles will occur during the fall of 2008 or the spring of 2009. A marker will be placed on the piles to indicate that ~~it~~ they contains topsoil. This topsoil will not be moved or disturbed until required for redistribution during final reclamation.

2.3.2 Topsoil and Subsoil Removal

2.3.2.1 Topsoil Removal and Segregation

It is not anticipated that additional soil disturbances will occur at the site. However, if such disturbances do occur, all topsoil thicker than 6 inches will be removed prior to disturbance as a separate layer from the subsoil, segregated, and stockpiled separately. Topsoil less than 6 inches thick will be removed according to Section 2.3.2.3.

2.3.2.2 Poor Topsoil

Topsoil that is of an insufficient quantity or of poor quality (for sustaining vegetation) will be removed as a separate layer and segregated. Such operations will be done with approval of DOGM and in compliance with R614-301-233.100.

2.3.2.3 Thin Topsoil

Topsoil to be removed that is less than 6 inches thick will be removed with the immediately underlying unconsolidated materials. This material mixture will be treated as topsoil.

2.3.2.4 Minor Disturbances Not Requiring Topsoil Removal

Small Structures. Topsoil will not be removed prior to construction resulting in only minor disturbances. Such construction activities include work on small structures such as power poles, signs, fence lines, and other small structures.

Vegetation. COVOL will not remove topsoil for minor disturbances where such activity will not destroy vegetation or cause erosion.

2.3.2.5 Subsoil Segregation

Due to the poor quality of the subsoil, the B and C soil horizons will not be individually segregated and stockpiled.

2.3.2.6 Timing

Soil removal will take place after all vegetation has been removed that could interfere with soil salvage. Surface disturbance activities will take place after the soil has been removed.

2.3.2.7 Topsoil and Subsoil Removal Under Adverse Conditions

In areas of surface disturbance where sufficient topsoil is present, topsoil and subsoil will be removed separately and segregated, except where natural conditions render such operations hazardous.

Conventional Machines. In localities where steep grades, adverse terrains, severe rockiness, limited depth of soils, or other adverse conditions exist that render soil removal and segregation activities using conventional machines hazardous, soils will not be salvaged and stockpiled.

Substitute Topsoil. Importing of substitute topsoil will not be required.

2.3.3 Topsoil Substitutes and Supplements

2.3.3.1 Overburden Materials Supplementing and/or Replacing Topsoil

No overburden materials will be used in site reclamation.

2.3.3.2 Suitability of Topsoil Substitutes and Supplements

No topsoil substitutes or supplements are planned for use at the facility.

2.3.3.3 Physical and Chemical Analyses

No topsoil substitutes or supplements are planned for use at the facility. Hence, no physical or chemical analyses of substitute material are anticipated.

2.3.3.4 Testing of Substitute Topsoil

Since it will not be used at the site, no testing of substitute topsoil is anticipated.

2.3.4 Topsoil Storage

2.3.4.1 Topsoil Stockpiling

Topsoil that was removed from the area during site grading is stored in an on-site stockpile (Section 2.3.1.4). Any topsoil removed from the site in the future will be stockpiled for later use in reclamation operations when it is impractical to promptly redistribute the topsoil on regraded areas.

2.3.4.2 Stockpiled Topsoil

Stable Stockpile Site. The topsoil removed from the site is stored in a small stockpile (approximately 5,500 square feet), located in a stable area in the southern portion of the permit area.

Protection from Contaminants and Compaction. Stockpiled topsoil will be located in areas away from traffic that might introduce contaminants and unnecessary compaction.

Wind and Water Erosion Protection. The topsoil stockpile will be protected from wind and water erosion by prompt establishment and maintenance of a vegetative cover. Silt fencing will be installed below the stockpile to help trap sediment runoff from the stockpile.

Topsoil Redistribution. No stockpiled topsoil will be moved until redistributed during reclamation operations unless approved by DOGM.

2.3.4.3 Topsoil Stockpile Relocation

Stockpiled topsoil in jeopardy of being detrimentally affected in terms of its quantity and quality by facility operations may be temporarily redistributed.

Host Site. Topsoil relocation may occur provided that such action does not permanently adversely affect topsoil of the host site.

Topsoil Suitability. Topsoil relocation may occur provided the topsoil is retained in a condition more suitable for redistribution than if stockpiled.

2.40 Reclamation Plan

2.4.1 General Requirements

Topsoil redistribution, amendments, and stabilization are discussed below.

2.4.2 Soil Redistribution

2.4.2.1 Soil Redistribution Practices

Under the industrial post-operation land-use scenario, ~~it is not anticipated that the site will undergo significant the extent of the future~~ redistribution of soil resources following facility shutdown ~~is not currently known.~~ However, for the sake of developing a reclamation cost estimate, ~~it is assumed in this permit application that the 9.7-acre area south of the facility loop road will be reclaimed, with the runoff- and sediment-control structures being retained for use by the future landowner. Soil salvaged to date will remain in a protected stockpile for use by the future site owner/operator.~~ For limited areas of the site that may be reclaimed, the topsoil will be redistributed following removal of all structures not part of the post-operation land use and regrading of the site. ~~Due to the high clay content and sodicity of the soils, no reclamation grading or redistribution of~~

~~topsoil will occur when the soil is too wet to adequately handle.~~ As described in 2.4.2.3, roads, storm water impoundments, and their appurtenant drainage channels will be left in place to support the post-operation land use.

2.4.2.2 Regrading

Since the facility is ~~located in an industrial area and the site is~~ essentially level, extensive site regrading will not be performed following its closure. The topographic configuration of the plant area will be left essentially unchanged for the subsequent landowner.

2.4.2.3 Topsoil Redistribution on Impoundments and Roads

On-site storm water impoundments and roads will be left in place to support the post-operation land use.

2.4.3 Soil Nutrients and Amendments

No soil nutrients or amendments will be applied.

2.4.4 Soil Stabilization

2.4.4.1 Protection and Stabilization of Surface Areas

The site has no unstable grades. Since there will be no substantial regrading of the site upon closure, no protection or stabilization of surface areas will be required.

2.4.4.2 Mulch Application

In support of the post-operation land use, no substantial regrading or redistribution of topsoil is anticipated upon site closure. If topsoil is redistributed over an area, revegetation of this soil will be promoted via surface roughening and (potentially) the application of erosion mats, rather than through the application of mulch.

2.4.4.3 Rills and Gullies

Low slope angles and drainage diversions retained on the site will minimize the potential for rills and gullies to form following closure.

2.50 Performance Standards

2.5.1 Topsoil, Subsoil, and Topsoil Supplements Management

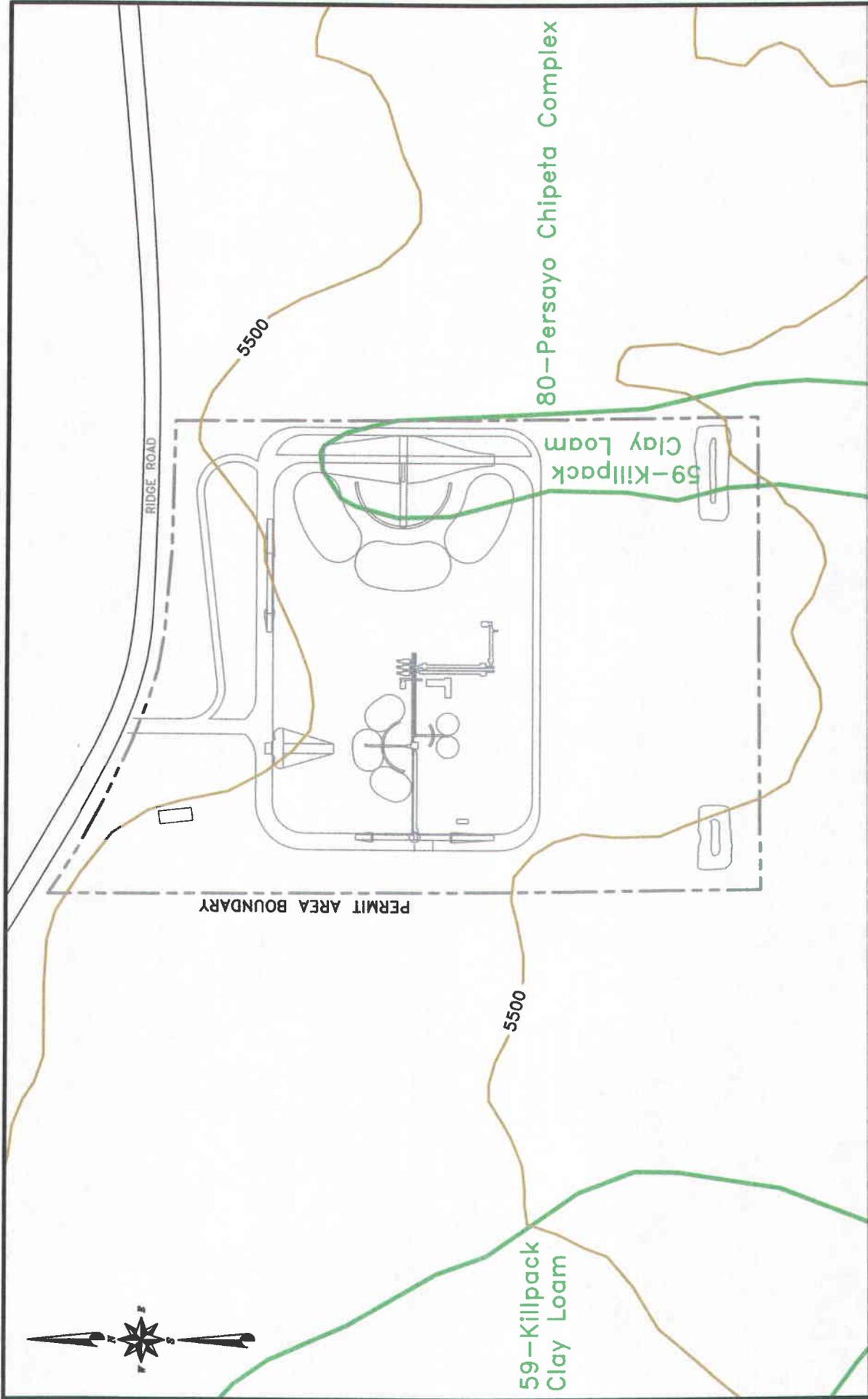
All topsoil, subsoil, and topsoil supplements shall be managed as outlined in Sections 2.30 and 2.40.

2.5.2 Stockpiled Topsoil and Subsoil

All stockpiled topsoil and subsoil will be managed according to plans outlined in Sections 2.30 and 2.40.

REFERENCES

- Jensen, Earl H. and James W. Borchert, 1988. Soil Survey of Carbon Area, Utah. U.S. Department of Agriculture Soil Conservation Service. 294 pp.
- Weiss, Malcolm P., Irving J. Witkind, and William B. Cashion, 1990. Geologic Map of the Price 30' X 60' Quadrangle, Carbon, Duchesne, Uintah, Utah, and Wasatch Counties, Utah. U.S. Geological Survey Miscellaneous Investigations Series Map I-1981. 1:100,000 scale.



BASE MAP: 7.5' USGS QUADRANGLE
 PRICE, UTAH 1972
 SOILS: USDA NRCS, WEB SOIL SURVEY



FIGURE 2-1. SOILS MAP

COVOL Engineered Fuels, LC
Dry-Coal Cleaning Facility

Permit Application
~~January~~ ~~October 2008~~ March 2009

APPENDIX 2-1

Pre-Disturbance Photographs

COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
~~January~~ ~~October 2008~~ March 2009

APPENDIX 2-~~12~~

Published Soil Survey Information

CHAPTER 3 BIOLOGY

3.10 Introduction

This chapter provides a general description of the biological resources found in the vicinity of the COVOL Dry-Coal Cleaning Facility, and describes measures taken to protect biological resources adjacent to the permit area. ~~As indicated in Appendix 3-1, information concerning biological resources in the area was obtained from a literature search, a field survey by a competent biologist, and consultation with the Utah Division of Wildlife Resources (“DWR”) and the U.S. Fish and Wildlife Service (“USFWS”). Much of the information on biological resources presented in this chapter was taken from the mining and reclamation plan (“M&RP”) associated with the Savage Coal Terminal, which is located 0.3 miles north of the COVOL facility (Savage Services Corporation, 1983). Since the Savage Coal Terminal occupies a very similar landscape, and is located directly across Ridge Road from the COVOL facility, biological conditions are similar at both sites.~~

Unlike many coal mining operations which are located in previously undisturbed areas, the COVOL Dry-Coal Cleaning facility occupies property that is zoned for general industrial purposes ~~and a portion of the site was previously disturbed~~ prior to the submittal of this application. ~~Given the poor suitability of site soils for agricultural and rangeland purposes (see Section 2.2.2.2 of this application), Reclamation of the site will be reclaimed make it available~~ for future industrial use rather than restoring the site to its undisturbed condition ~~(see also Section 4.1.2.1 of this application). This is in accordance with R645-301-413.120.~~ Also, unlike many coal mining operations, the area impacted by the facility is almost exclusively limited to the ~~disturbed permit~~ area boundary. No subsidence, groundwater, or surface water impacts are expected to extend off site. This is due to ~~the lack of underground mining and subsidence at this facility as well as~~ environmental controls that include runoff, sediment, and fugitive dust management, fencing off the permit area, and proper waste disposal. Thus, while biological resources inside the permit

boundary may have been affected by current uses of the property, efforts have been taken to protect biological resources in the undisturbed areas adjacent to the permit boundary.

3.1.1 Vegetative, Fish and Wildlife Resources

General vegetative, fish and wildlife resource conditions in the vicinity of the COVOL Dry-Coal Cleaning Facility are discussed in [Appendix 3-1 and](#) Section 3.20.

3.1.2 Potential Impact to Vegetative, Fish and Wildlife Resources

Potential impacts to vegetative, fish and wildlife resources and the associated mitigation plans are presented in [Appendix 3-1 and](#) Sections 3.30 and 3.40 of this application.

3.1.3 Description of Reclamation Plan

The plan to reclaim vegetative, fish and wildlife resources to a condition suitable for the post-operations land use is presented in Section 3.40.

3.20 Environmental Description

3.2.1 Vegetation Information

3.2.1.1 Plant Communities Within the Proposed Permit and Adjacent Areas

~~According to the M&RP for the nearby Savage Coal Terminal, the area is dominated by a saltbush vegetative community (Savage Services Corporation, 1983). The most common species found in undisturbed areas adjacent to the site are shadscale (*Atriplex confertifolia*), greasewood (*Sarcobatus vermiculatus*), matbush (*Atriplex corrugata*), and galleta (*Hilaria jamesii*). As indicated in Appendix 3-1, the site general area is characterized as a desert badland. Vegetation within and/or adjacent to the facility consists of the following:~~

Forbs/Herbaceous Plants:

- Big sage (*Artemisia tridentata*)
- Big rabbitbrush (*Chrysothamnus nauseosus*)
- Greasewood (*Sarcobatus vermiculatus*)
- Winterfat (*Krascheninnikovia lanata*)
- Halogeton (*Halogeton glomeratus*)
- Broom snakeweed (*Gutierrezia sarothrae*)
- Curlycup gumweed (*Grindelia squarrosa*)
- Skunkbush (*Rhus trilobata*)
- Desert trumpet (*Eriogonum inflatum*)
- Showy milkweed (*Asclepias speciosa*)
- Russian thistle (*Salsola iberica*)
- Inkweed (*Suaeda torreyana*)
- Shadscale (*Atriplex confertifolia*)
- Plains prickly pear cactus (*Opuntia polyacantha*)
- Rocky Mountain bee plant (*Cleome serrulata*)
- Common sunflower (*Helianthus annulus L.*)
- Diffuse knapweed (*Centaurea diffusa*)

Grasses:

- Foxtail barley (*Hordeum murinum*)
- Cheatgrass (*Bromus tectorum*)
- Indian ricegrass (*Orizopsis hymenoides*)

Vegetation within the site boundary is primarily isolated to the edges of the fenced area. Approximately 70% of the vegetative species within and adjacent to the site consists of cheatgrass, rabbitbrush, greasewood, Russian thistle, big sage, and halogeton. Based on observations in adjacent undisturbed areas, the facility area was likely dominated by rabbitbrush, greasewood, sage, and native prior to any disturbance in the region. However, cheatgrass, halogeton, and Russian thistle have commonly invaded many areas since the region was settled, and likely existed in the permit area prior to development (Chris Jensen, personal communication, 13 Oct 2008).

Miller Creek is a perennial stream that exists about 0.4 mile south of the COVOL site. A riparian corridor exists along this stream for a width of 25 to 50 feet. Vegetation within this corridor consists predominantly of Russian olive (*Elaeagnus angustifolia*) and Tamarisk (*Tamarix spp.*), with a few Fremont cottonwood (*Populus fremontii*) and Willow (*Salix sp.*) trees. Both Russian olive and Tamarisk are classified as noxious species.

3.2.1.2 Land Productivity Prior to Mining

Cover density in adjacent undisturbed areas is averages approximately 55 to 65% (Chris Jensen, personal communication, 13 Oct 2008). Based on the general uniformity of vegetation in undisturbed areas outside the boundary fence, it is assumed that cover densities within the site area prior to disturbance were similar to those that now exist outside of the boundary fence in adjacent areas. The total vegetative coverage, as measured in undisturbed areas near the Savage Coal Terminal, is 18.8% (Savage Services Corporation, 1983). It is expected that previously undisturbed areas at the COVOL facility would have had a similar vegetative coverage.

3.2.2 Fish and Wildlife Information

According to the Savage Coal Terminal M&RP, undisturbed lands in the areas generally support “limited wildlife habitat,” which is mainly due to the lack of precipitation, unproductive soils, and sparse vegetation. Disturbed areas support even less wildlife. No habitats of unusually high value have been were identified in the area of the Savage Coal Terminal located about one-half mile north-northwest of the COVOL permit area (Savage Services Corporation, 1983).

Undisturbed areas near the COVOL facility provide habitat for lizards, lagomorphs, burrowing rodents, and predators of these animals (Savage Services Corporation, 1983). Despite its proximity to the Price River, the poor vegetative cover precludes the area from serving as a stopover area for migrating birds. Wildlife species observed in the vicinity of the nearby Savage Coal Terminal include white-tailed prairie dog (*Cynomys leucurus*), black-tailed jackrabbit (*Lepus*

~~californicus), white-tailed jackrabbit (*Lepus townsendi*), and desert cottontail (*Sylvilagus auduboni*). Signs from other species that were not directly observed included badger (*Taxidea taxus*) and coyote (*Canis latrans*). No raptors were observed (Savage Services Corporation, 1983). During a site inspection conducted in September 2008, cottontail rabbit (*Sylvilagus audubonii*) and some ant mounds were the only signs of wildlife observed within the COVOL permit area (see Appendix 3-1). No evidence (e.g., scat, tracks, grazed vegetation) of big game species known to inhabit the region (e.g. mule deer, elk, antelope, big horn sheep) was identified in the permit or adjacent areas. Forage for these large herbivores is generally sparse within the area. No burrows indicating the presence of burrowing animals were found within or adjacent to the site. However, prairie dogs and their burrows were observed approximately one-half mile east of the site near Ridge Road and appropriate habitat for prairie dogs and burrowing owls is located south and east of the permit area as noted in Appendix 3-1. Given the lack of perennial surface water, there is no fish habitat within the permit area.~~

3.2.2.1 Level of Detail

The scope and level of detail within this document are sufficient to design the protection and enhancement plan for wildlife and fish in the area.

3.2.2.2 Site-specific Resource Information

~~In accordance with the agreement with DOGM, no site-specific biological field surveys have been conducted to support this document. However, a request was submitted to the Utah Division of Wildlife Resources (DWR) to search its databases for threatened, endangered, or sensitive species within the disturbed area. In a letter dated May 12, 2007 (a copy of which is contained in Appendix 3-1), the DWR reported that it had no records of such species located at the COVOL Dry-Coal-Cleaning Facility. This letter also states that three species listed on the Utah Sensitive Species list (burrowing owl, bluehead sucker, and white-tailed prairie dog) do occur within the general vicinity of the COVOL facility. Due to the environmental controls~~

emplaced at the site, it is anticipated that impacts, if any, will be minimal to any of these species which may exist outside the permitted area boundary. A site-specific evaluation of wildlife within the permit and adjacent areas was conducted on September 25, 2008. The results of this evaluation are provided in Appendix 3-1. Information obtained from DWR and USFWS as part of that evaluation indicates that critical habitat areas have been designated in Carbon County (as a whole) for the following Federally-protected species (see Appendix 3-1):

- Mexican spotted owl (*Strix occidentalis lucida*) – Threatened
- Humpback chub (*Gila cypha*) – Endangered
- Bonytail chub (*Gila elegans*) – Endangered
- Razorback sucker (*Xyrauchen texanus*) – Endangered
- Colorado pikeminnow (*Ptychochelilus lucius*) – Endangered

Critical habitat areas for the Mexican spotted owl are located in the Book Cliffs about 25 miles east of the permit area. Given this significant distance, activities at the COVOL site will not adversely impact this species or its critical habitat. Critical habitat areas for the Humpback chub, Bonytail chub, Razorback sucker, and Colorado pikeminnow are found in the Green River more than 30 miles east of the permit area. Runoff- and sediment-control measures that have been implemented within the COVOL permit area preclude adverse impacts to these species or their critical habitats.

Under the USFWS Windy Gap Process, projects within the Upper Colorado River Basin may be assessed a one-time conservation fee, depending on annual water usage, to study and protect endangered fish species. The conservation fee is generally assessed only if the annual water consumption exceeds 100 acre-feet. COVOL owns 6 shares of water for use in the permit area, equating to 6 acre-feet of water per year. Actual water usage from October 31, 2006 through November 31, 2007 was 4.1 acre-feet. COVOL acknowledges that the assessment of the conservation fee must be decided by the U.S. Fish and Wildlife Service, with this assessment potentially being independent of the 100 acre-foot value.

Appendix 3-1 indicates that the following endangered, threatened, or sensitive species may be present in the general vicinity of the permit area:

- Black-footed ferret (*Mustela nigrapes*) – Endangered/extirpated
- Burrowing owl (*Athene cunicularia*) – State sensitive
- White-tailed prairie dog (*Cynomys leucurus*) – State sensitive
- Bluehead sucker (*Catostomus discobolus*) – State sensitive

Black-footed ferrets feed on prairie dogs as their primary food source. As such, their potential presence cannot be ruled out when prairie dog towns exist. The fact that no prairie-dog burrows have been observed within and adjacent to the permit area makes it improbable that ferrets exist in this area. The closest prairie-dog town is located approximately one-half mile east of the permit area. The lack of potential black-footed ferret habitat in the permit and adjacent areas, together with prohibitions on personnel and equipment access outside of the chain-link boundary fence, indicate that site activities will have no adverse impacts on this species or its habitat.

Burrowing owls utilize existing mammal burrows or sometimes excavate their own burrows in soil for nesting. The fact that no burrows have been observed within and adjacent to the permit area makes it improbable that burrowing owls currently exist in the permit and adjacent areas. However, the area does contain potentially suitable conditions for nesting of burrowing owls. Plans to minimize potential impacts to this species are presented in Section 3.3.3 of this application.

White-tailed prairie dogs live in underground burrows. No such burrows have been observed within and adjacent to the permit area. Given the developed nature of the COVOL site, the existence of the boundary fence, access restrictions outside of that fence, and the lack of identified burrows in the permit and adjacent areas, it is doubtful that site activities would adversely impact prairie dogs or their habitats.

The Bluehead sucker is a bottom-dwelling fish species that occurs in the upper Colorado River basin. This species may occur in Miller Creek, approximately 0.4 mile south of the permit

area. Runoff-and sediment-control measures implemented in the permit area will eliminate the potential for sediment to reach Miller Creek from the COVOL site, thereby minimizing potential impacts to this species.

Migratory raptors may forage in the area and could nest in the riparian corridor along Miller Creek. Given the distance from the permit area, activities at the COVOL site will not directly impact potential nesting sites for these raptors. However, the raptors may prey on species that occur within or adjacent to the permit area. These prey species include cottontail rabbit (*Sylvilagus audubonii*), jackrabbit (*Lepus spp.*), and white-tailed prairie dog (*Cynomys leucurus*). Plans to minimize potential impacts to migratory raptors in the area are discussed in Section 3.3.3 of this application.

3.2.2.3 Fish and Wildlife Service Review

If requested, the applicant authorizes the release of information pertaining to Section 3.2.2 and 3.3.3 to the U.S. Fish and Wildlife Service Regional and Field office for their review.

3.2.3 Maps and Aerial Photographs

No maps or aerial photographs will be used to address the biological resources of the permit area.

3.30 Operation Plan

3.3.1 Measures Taken to Disturb the Smallest Practicable Area

No disturbance ~~is anticipated~~will occur beyond the fenced area that constitutes the disturbed and permit area boundary. All areas within the fence may be used for active operations. Thus, interim revegetation of the site is not feasible. The area within the fence is the smallest practicable area of disturbance for this operation.

3.3.2 Description of Anticipated Impacts of Subsidence

There will be nNo subsidence associated with the COVOL Dry-Coal Cleaning Facility will occur since the facility does not conduct underground mining operations.

3.3.3 Plan to Minimize Disturbances and Adverse Impacts

A limited number of potential biological concerns were identified in Appendix 3-1 that may require attention to minimize the adverse impacts of facility operations in the permit area. These potential concerns and plans to minimize adverse impacts are as follows:

- The Bluehead sucker, a State-sensitive species, may be present in Miller Creek. Runoff- and sediment-control facilities at the site have been installed and will be maintained to minimize disturbances to Miller Creek, thereby minimizing potential impacts to this species. No diversions from or discharges of water to Miller Creek currently occur or are planned. However, if future site activities require the diversion of water from or the direct discharge of water to Miller Creek, COVOL will first consult with DWR and implement appropriate methods to ensure that potential impacts to this species are minimized.
- Burrowing owls, a State-sensitive species, do not currently occur on or adjacent to the site (as indicated by a lack of burrows). However, due to the presence of suitable breeding habitat at the site, this species could inhabit the site in the future. Therefore, if future land-disturbing activities are planned at the site during the Burrowing owl breeding season (February through August), COVOL will conduct a pre-construction survey of the area to determine whether or not Burrowing owls are present in the area to be disturbed. If they are found in the area of proposed disturbance, discussions will be held with DWR to determine the most prudent plan of action. This may include avoiding construction in the subject area until after the breeding season is over, until all of the chicks had fledged the burrow, or until the adults have vacated the site.
- Migratory raptors may forage at the COVOL site or nest in the riparian corridor along Miller Creek. If future land-disturbing activities are planned at the site during the raptor nesting season (February through September), COVOL will conduct a pre-construction survey to determine whether or not raptors are nesting in the area to be disturbed. If they are found in the area of proposed disturbance, construction in the subject area will be postponed until after the nesting season is over.

- Various prey species of interest to raptors may be present in the permit area. Raptors may perch on facility equipment in search of such prey. Employees will be alerted during periodic staff meetings of the presence of raptors and told to avoid contact with or harassment of the raptors.

~~Species existing in the area of the nearby Savage Coal Terminal are limited to small mammals and songbirds, which appear to tolerate coal processing operations (Savage Services Corporation, 1983). No big-game wildlife species are known to frequent the permit or adjacent areas. However, to protect larger species if they do occur the area,~~ the fence around the COVOL facility will be maintained during operations. No disturbance will occur outside of that fenced area. Furthermore, runoff control measures will be maintained to preclude off-site surface-water impacts. Other protective measures within the disturbed area boundary include adhering to clean industrial hygiene procedures, properly disposing of all waste (papers, cans, bottles, etc.), and instructing employees not to hunt or harass wildlife. Thus, measures have been implemented to minimize adverse impacts to fish and wildlife and related environmental resources.

3.40 Reclamation Plan

As indicated in Section 2.2.2.2 of this application, the soil at the COVOL facility is poorly suited for agricultural use. Furthermore, native vegetation in the area is poorly suited for rangeland use of the site (see Section 3.2.1). Hence, in accordance with R645-301-413.120, rather than restoring the land to its pre-disturbance land use it will be restored to a higher or better post-operations industrial land use consistent with the current zoning of the site and adjacent areas. The extent of site restoration following operations is discussed more fully in Section 5.40 of this permit application.

~~As a zoned industrial site, Under~~ the post-operation industrial land use ~~will be industrial. Hence, substantial-complete~~ post-operation revegetation of the site is not anticipated. However, a proposed seed mix, application rate, and other plans have been developed in the event that for those

areas of the site that will require revegetation to support the post-operation land use (see Section 3.4.1). Aspects of the reclamation plan related to fish and wildlife are discussed in Section 3.4.2.

3.4.1 Revegetation

Due to the future industrial use of the site following coal-cleaning operations, the extent of future revegetation it is not currently known anticipated that substantial revegetation will occur. However, for the sake of developing a reclamation cost estimate, it is assumed in this permit application that the area south of the facility loop road will be revegetated during reclamation. This area, in which the runoff- and sediment-control structures will be retained for use by the future landowner, covers 9.7 acres of the permit area. The precise areas to be revegetated will be determined in consultation with the future site owner. Areas requiring revegetation will be treated as outlined below.

3.4.1.1 Schedule and Timetable

Any revegetation of the site will begin after the plant growth medium has been replaced. To the extent feasible, seeding will occur in the late fall, just prior to the onset of snow fall. If this schedule is not feasible, grasses and forbs will be planted eding in the late spring (May or early June), while shrubs and seedlings will be planted in the late summer through early fall (late August through early October).

3.4.1.2 Descriptions

Species and Amounts of Seed. All revegetated areas will be planted with the seed mix specified in Table 3-1.

Method Used for Planting and Seeding. Revegetation will be performed using broadcast methods.

Mulching Techniques. ~~No m~~Mulch consisting of grass hay or alfalfa hay will be applied at a rate of at least 2 tons per acre to areas being revegetated following preparation of the soil and prior to seeding. Mulch materials will only be obtained from fields that are certified by the County Extension Agent as noxious weed free. Mulch will be spread over the surface of the area to be revegetated using mechanical spreading, mechanical blowers, or hand spreading. Mulch will then be incorporated into the soil by plowing or chiseling to a depth of at least 12 inches.

Irrigation, Pest, and Disease Control. No persistent pesticides will be used in the permit area unless previously approved by DOGM.

Measures Proposed for Revegetation Success. Revegetation success will be monitored visually in accordance with Appendix A of DOGM's "Vegetation Information Guidelines." As indicated in Section 1.40 of this application, the entire permit area is disturbed. This condition, together with the fact that all land outside of the permit area is owned by individuals other than COVOL, precludes the establishment of a permanent revegetation reference area. Hence, prior to revegetation of the site, COVOL will confer with DOGM to select a temporary reference area on adjacent property that is representative of the permit area. COVOL will then seek landowner permission to monitor that location in accordance with the Vegetation Information Guidelines. Assuming that this permission can be obtained, Tthe temporary reference and revegetated areas will be inspected for plant growth and erosion at a schedule and using methods that comply with the Vegetation Information Guidelines. The operator will apply additional seed mix as deemed necessary.

3.4.1.3 Greenhouse Studies, Field Trials or Other Equivalent Studies

If DOGM requires additional testing for the purpose of demonstrating that reclamation as required by the State Program can be accomplished according to information given in this document, the applicant will comply.

3.4.2 Fish and Wildlife

3.4.2.1 Enhancement Measures

Wildlife habitat will be enhanced during reclamation through the use of runoff controls to prevent excessive erosion and through the use of a seed mix that includes plants that are indigenous to the area.

3.4.2.2 Plants Used for Wildlife Habitat

The post-operation land use will be industrial. Hence, the reclamation plan has not been specifically developed to support a fish and wildlife post-operation land use.

3.4.2.3 Cropland

Cropland is not a post-operation land use.

3.4.2.4 Residential, Public Service and Industrial Land Use

Although the post-operation land use is industrial, the site is not of sufficient size to permit the effective use of greenbelts and other substantial wildlife enhancements in reclamation.

3.50 Performance Standards

3.5.1 General Requirements

The Applicant commits to conduct all operations in accordance with Sections R645-301-330 through R645-301-340 of the regulations.

3.5.2 Contemporaneous Reclamation

Given the limited extent of areas within the permit boundary that are not in active use, contemporaneous reclamation is not considered practical at the facility.

3.5.3 Revegetation: General Requirements

As noted above, in order to support the post-operation industrial land use, it is assumed that only limited areas south of the site loop road will be reclaimed following the COVOL operations. This revegetation plan complies with the requirement that a vegetative cover will be established on all reclaimed areas. The vegetative cover will be in accordance with the approved permit and reclamation plan.

3.5.3.1 Vegetative Cover

For areas that will be revegetated, the seed mix is intended to provide vegetative cover that will be diverse, effective, and permanent. The seed mix was selected with to be compatible with the climate, potential seedbed quality, and drought tolerance.

Native Species. The vegetative mixture will be comprised of species native to the area. The seeds will be purchased from suppliers who will certify their purity, germination, hard seed, and percentages of maximum weed seed contents.

Extent of Cover. The vegetative cover will be at least equal in extent to the natural vegetation as measured in an adjacent reference area at the time of revegetation (see Section 3.4.1.2).

Stabilizing. The area to be revegetated will be mulched during reclamation. This mulching, together with the vegetative cover mixture, will ~~was selected to~~ provide erosional stability at least equivalent to that of adjacent undisturbed areas.

3.5.3.2 Reestablished Plant Species

Compatible. The ~~reestablished~~ plant species proposed for revegetation have been selected to be compatible with the intended post-operation land use.

Seasonal Characteristics. Because the reclamation seed mix is dominated by native species, the revegetation plant species will have the same growing season as the native vegetation.

Self-generation. The revegetation seed mix consists of species capable of self-generation and plant succession.

Compatibility. The seed mix proposed for revegetation contains plants native to the area and compatible with the plants and animals species of the permit area.

Federal and Utah Laws or Regulations. The seed mixture purchased to revegetate the mine area will contain neither poisonous nor noxious plant species. No species will be introduced in the area without being approved by DOGM.

3.5.3.3 Vegetative Exception

The applicant does not require vegetative exception at this time.

3.5.3.4 Cropland

The permit area contains no land designated as cropland for post-operation land use.

3.5.4 Revegetation: Timing

Areas intended for revegetation will be reclaimed during the first normal period for favorable planting conditions after replacements of the plant-growth medium, as discussed in Section 3.4.1.1.

3.5.5 Revegetation: Mulching and Other Soil Stabilizing Practices

~~Due to the limited extent of revegetation, no mulching or other soil stabilizing practices are anticipated.~~ Areas to be revegetated will be mulch as described in Section 3.4.1.2. If excessive erosion occurs following revegetation and prior to bond release, ~~however, the soil those affected areas~~ will be ~~stabilized-repaired~~ using a method approved by DOGM.

3.5.6 Revegetation: Standards for Success

The standards for revegetation success are detailed in Section 3.4.1.2.

3.5.6.1 Success of Revegetation

The success of revegetation will be judged on the effectiveness of the vegetation for post-operation land use and the standards outlined in Section 3.5.3. Success will be determined ~~visually~~

~~by both the operator and a DOGM representative~~ in accordance with Appendix A of DOGM's Vegetation Information Guidelines (see Section 3.4.1.2).

3.5.6.2 Standards for Success

Standards of success will be applied in accordance with the approved post-operation industrial land use.

Grazing Land or Pasture Land. No areas within the permit area are designated as grazing or pasture lands.

Cropland. No area within the permit area is designated as cropland.

Fish and Wildlife Habitat. No area within the permit area is designated as fish and wildlife habitat.

Industrial, Commercial or Residential. The entire permit area is designated as industrial. Revegetation of the site ~~as described in Section 3.40~~ will adequately control erosion.

Previously Disturbed Areas. There is no previously disturbed area within the permit boundary.

3.5.6.3 Siltation Structure Maintenance

Siltation structures will be maintained until removal is authorized by DOGM and the disturbed areas have been stabilized and revegetated. For additional details on siltation structures, see Section 5.4.2.

3.5.6.4 Removal of Siltation Structures

To more adequately support the post-operation industrial land use, the siltation structures will remain on site following closure of the COVOL facility.

3.5.7 Revegetation: Extended Responsibility Period

COVOL will be responsible for revegetation success during the extended responsibility period or until the property is sold to another company for industrial purposes, whichever is sooner. The period of extended responsibility will begin after the last year of augmented seeding, fertilization, irrigation, or other revegetation work, excluding husbandry as approved by DOGM. Vegetation parameters will equal or exceed the approved success standard during the last two years of the responsibility period. The success standards are outlined in Sections 3.5.6.1 and 3.5.6.2 of this application.

COVOL will comply with DOGM-approved husbandry practices, consisting of normal conservation practices within the region of the operation. These practices may include disease, pest, and vermin control; pruning; reseeding; and transplanting.

3.5.8 Protection of Fish, Wildlife, and Related Environmental Values

This plan is designed to minimize disturbances and adverse impacts on fish, wildlife and their related environments. COVOL will periodically educate their employees about wildlife needs and their importance. This will be done during periodic staff meetings by making the employees aware of species of concern (see Section 3.2.2.2) and their prey base. The mitigation requirements of Section 3.3.3 will also be discussed with existing employees during periodic staff meetings and with new employees during initial orientation. Given the lack of permanent surface water in the permit and adjacent areas, there are no fisheries within the permit area.

3.5.8.1 Existence of Endangered or Threatened Species

There are no known endangered or threatened species within the permit area. Therefore, facility operations will not result in the destruction or adverse modification of critical habitats. If State- or Federally-listed endangered or threatened species are discovered in the permit area in the future, the presence of these species will be reported to DOGM upon their discovery. Operations thereafter, including site reclamation, will proceed in accordance with appropriate DOGM stipulations.

3.5.8.2 Bald and Golden Eagles

No suitable bald or golden eagle habitat exists in the permit and adjacent areas. If such habitat is discovered in the future, COVOL will promptly report such habitat to DOGM and will proceed with operations thereafter in accordance with appropriate DOGM stipulations. If these species are observed in the area, COVOL will make employees aware of the species and their prey base during periodic staff meetings in accordance with Section 3.3.3 of this plan.

3.5.8.3 Taking of Endangered or Threatened Species

The applicant understands that there is no permission implied by these regulations for taking of endangered or threatened species, their nests, or eggs.

3.5.8.4 Replacement of Wetland and Riparian Vegetation

No wetland or riparian habitat exists in the permit ~~or adjacent~~ areas, nor has any such habitat been disturbed by this operation. The closest riparian habitat is located along Miller Creek approximately 0.4 mile south of the permit area (see Appendix 3-1).

3.5.8.5 Manmade Wildlife Protection Measures

Electric Power Lines. Power lines to and within the permit area are buried which eliminates electrocution hazards to raptors.

Potential Barriers. The permit area is limited in aerial extent and is located in an area zoned for industrial use. A chain link fence has been constructed to keep wildlife from entering the facility and being exposed to the industrial hazards located within. Given the limited area of the facility, wildlife can easily migrate around the outside of the fence if needed.

Pond Protection. The perimeter facility fence excludes large wildlife from encountering the sedimentation ponds. No site ponds contain hazardous concentrations of toxic-forming materials.

REFERENCES

Savage Services Corporation, 1983. Formerly Beaver Creek Coal Company. *Underground Mining Permit Application and Mining and Reclamation Plan for the C.V. Spur Coal Processing and Loadout Facility, Carbon County, Utah.* Submitted to the Utah Division of Oil, Gas, and Mining.

TABLE 3-1

Revegetation Seed Mixture

Scientific Name	Common Name	Application Rate (pls lb/acre)
Shrubs		
Atriplex gardneri var. cuneata	Castle Valley saltbush	2.0
Atriplex corrugata	Mat saltbush	3.0
Atriplex confertifolia	Shadscale	4.0
Chrysothamnus nauseosis	Rubber rabbitbrush	0.3
Ceratoides lanata	Winterfat	4.0
Sarcobatus vermiculatus	Greasewood	0.5
Forbs		
Eriogonum inflatum	Desert trumpet	1.0
Helianthus annuus	Annual sunflower	4.0
Oenothera caespitosa	Evening primrose	0.3
Sphaeraicea coccinea	Globemallow	0.5
Grasses		
Bouteloua gracilis	Blue grama	0.5
Elymus lanceolatus	Thickspike wheatgrass	2.0
Elymus cinereus	Great Basin wildrye	2.0
Elymus smithii	Western wheatgrass	1.0
Hilaria jamesii	Galleta	2.0
Sporobolus airoides	Alkalai sacaton	0.2
Stipa comata	Needle and thread	3.0
Stipa hymenoides	Indian ricegrass	2.0
Distichlis spicata	Saltgrass	0.5
TOTAL		32.80

APPENDIX 3-1

Letter from Utah Division of Wildlife Resources Biological Survey of the
Permit and Adjacent Areas

**BIOLOGICAL EVALUATION
FOR THE COVOL ENGINEERED
FUELS DRY-COAL CLEANING FACILITY
SECTION 14, TOWNSHIP 15 SOUTH, RANGE 10 EAST
CARBON COUNTY, UTAH**

Canyon Environmental Report No. 08-007

**October 9, 2008
(revised March 25, 2009)**

Prepared for

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INTRODUCTION

On September 25, 2008, a biological evaluation was conducted by Canyon Environmental, on behalf of Earthfax Engineering for the COVOL Dry-Coal Cleaning Facility. The proposed project is located approximately 3 miles south-southwest of Wellington in Carbon County, Utah. The legal description is a portion of Section 14, Township 15 South, Range 10 East (Appendix A). The surveyed project area comprises approximately 30 acres of land.

The site is comprised of an existing coal cleaning facility located on the south side of Ridge Road in a generally flat area. The site is enclosed within a six-foot tall chain link fence. Very little vegetation is contained within the actual site itself and the existing vegetation is isolated to the peripheral edges along the fence line. The surrounding area is comprised of flat mesas and dry drainages.

Canyon Environmental obtained a species list from the United States Fish and Wildlife Service (USFWS) as well as information from the Utah Division of Wildlife Resources (DWR) that identified federally protected plants and animals, as well as Utah state plant and animal Species of Concern that are known from and could occur at, the Project Site (Appendix B).

The subject property was inspected within the context of evaluating the potential impacts to these identified high value species and determining whether "take" of these species would occur. In addition, habitat at the site was characterized and observed, as well as flora and fauna identified. The site inspection was performed on September 25, 2008.

PROJECT AREA

The proposed project is located on a dry, flat mesa in the badlands area of central Utah. Miller Creek flows to the south of the site at a distance of about 0.25 miles. A small dry drainage that flows into Miller Creek is situated about 1,000 feet southwest of the project area. The majority of the site within the enclosed fence is devoid of any vegetation. The coal cleaning facility is comprised of a series of mills, piping, and truck drive-through areas. The vegetation on the site is isolated to the edges of the fenced area. Two water collection ponds are located on the southwest and southeast corners of the site, respectively. Topography across the site generally flat with slight slope to the south toward the nearby drainage and creek. The average elevation across the site is roughly 5,520 feet above mean sea level (amsl.).

Habitat and Wildlife

Habitat at the site is characterized as desert badlands, which is vegetated with drought tolerant shrubs and grasses in areas within the fenced site and away from the Miller Creek corridor. Within the enclosed project area, plant cover is generally very sparse and soil conditions are such that much of the land is barren. The surrounding area immediately about the fenced compound is comprised primarily of sagebrush, rabbitbrush, Russian thistle, and cheatgrass. Soil conditions appear to be very poor and vegetation immediately about the fenced enclosure is sparse. The Miller Creek riparian corridor averages about 25-50 feet in width to the south of the site (Approximately 0.25 miles in distance) and is primarily comprised of Russian olive

(*Elaeagnus angustifolia*) and Tamarisk (*Tamarix spp.*) shrubs and trees with a few Fremont cottonwood (*Populus fremontii*) and Willow (*Salix sp.*) trees. The vegetation along the corridor is not consistent and lacks any kind of canopy. A map identifying these vegetative communities is included in Appendix A. The following vegetation was noted at the site and in the surrounding site vicinity:

Shrubs and Trees

- Russian olive (*Elaeagnus angustifolia*)
- Tamarisk (*Tamarix spp.*)
- Fremont cottonwood (*Populus fremontii*)
- Willow (*Salix sp.*)

Forbs / Herbaceous Plants

- Big sage (*Artemisia tridentata*),
- Big rabbitbrush (*Chrysothamnus nauseosus*)
- Greasewood (*Sarcobatus vermiculatus*)
- Winterfat (*Krascheninnikovia lanata*)
- Halogeton (*Halogeton glomeratus*)
- Broom snakeweed (*Gutierrezia sarothrae*)
- Curlycup gumweed (*Grindelia squarrosa*)
- Skunkbush (*Rhus trilobata*)
- Desert trumpet (*Eriogonum inflatum*)
- Showy milkweed (*Asclepias speciosa*)
- Russian thistle (*Salsola iberica*)
- Inkweed (*Suaeda torreyana*)
- Shadscale (*Atriplex confertifolia*)
- Plains prickly pear cactus (*Opuntia polyacantha*)
- Rocky mountain bee plant (*Cleome serrulata*)
- Common sunflower (*Helianthus annuus L.*)
- Diffuse knapweed (*Centaurea diffusa*)

Grasses

- Foxtail barley (*Hordeum murinum*)
- Cheatgrass (*Bromus tectorum*)
- Indian ricegrass (*Orizopsis hymenoides*)

Noxious Weeds

- Russian olive (*Elaeagnus angustifolia*)
- Tamarisk (*Tamarix spp.*)

Wildlife and signs of animal life at the subject property included cottontail rabbit (*Sylvilagus audubonii*), and some ant mounds. No burrows were observed within the project area, or within the immediate vicinity about the site. However, prairie dog burrows and prairie dogs were identified along the highway within 0.5 miles to the east of the site.

No evidence (scat, tracks, grazed vegetation) of big game species known to inhabit the region (mule deer, elk, antelope, bighorn sheep) was identified within the survey area. Forage for these large herbivores is generally sparse within the project area and surrounding environs and soil quality is very poor.

DESIGNATED CRITIAL HABITAT

During a review of land status, evaluation of threatened or endangered species occurrences, and review of historical information, we noted that critical habitat areas have been designated in Carbon County, Utah for the following federally protected species:

Humpback chub (<i>Gila cypha</i>)	Endangered
Bonytail chub (<i>Gila elegans</i>)	Endangered
Razorback sucker (<i>Xyrauchen texanus</i>)	Endangered
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	Endangered
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	Threatened

Critical habitat areas for the Humpback chub, Bonytail chub, Razorback sucker, and Colorado pikeminnow are found within the Green River, in a reach of the river situated roughly 30 miles to the east of the site, at its closest point with respect to the site. Critical habitat areas for Mexican spotted owl are found near the Book Cliffs, situated roughly 25 miles east of the site. As such, due to the significant distance of the site with respect to these critical habitat areas, it is apparent that the proposed action would not result in destruction or adverse modification of a critical habitat area established for any of these species.

ENDANGERED, THREATENED, AND CANDIDATE SPECIES THAT MAY OCCUR ON THE PROJECT SITE AND WITHIN THE GENERAL PROJECT AREA

Canyon Environmental consulted with the USFWS and Utah Division of Wildlife Resources (DWR) by obtaining information and lists of threatened, endangered, and candidate species that may occur in, or may be affected by, projects in Carbon County and at the project site. These species are designated as 'high value' species and are afforded specific protections by Federal statute. The species are listed below and an analysis of these species, including their general habitat requirements, with respect to habitat present at the subject property and within Carbon County, is found below and in Appendix B (Table B-1). Species lists were obtained from the appropriate agencies are found in Appendix C.

Table 1. Federal Threatened and Endangered Species and Utah State Sensitive Species in Carbon County and the Site Vicinity

Common Name	Scientific Name	Status
Uinta Basin hookless cactus	Scierocactus glaucus	Threatened
Clay phacelia	Phacelia argillacea	Endangered
Humpback chub	Gila cypha	Endangered
Bonytail	Gila elegans	Endangered
Colorado pikeminnow	Ptychocheilus lucius	Endangered
Razorback sucker	Xyrauchen texanus	Endangered
Southwestern willow flycatcher	Empidonax traillii extimus	Endangered
Black-footed ferret	Mustela nigrapes	Endangered / Extirpated
White-tailed prairie dog	Cynomys leucurus	State Sensitive
Burrowing owl	Athene cunicularia	State Sensitive
Bluehead sucker	Catostomus discobolus	State Sensitive

Species Outside of Their Know Range or Lacking Suitable Habitat

The following federally protected species and State of Utah sensitive species are categorized as lacking suitable habitat, being outside of their known range, or undocumented in the site vicinity:

Clay phacelia	(Phacelia argillacea)	Endangered
Humpback chub	(Gila cypha)	Endangered
Bonytail	(Gila elegans)	Endangered
Colorado pikeminnow	(Ptychocheilus lucius)	Endangered
Razorback sucker	(Xyrauchen texanus)	Endangered
Southwestern willow flycatcher	(Empidonax traillii extimus)	Endangered
Uinta Basin hookless cactus	(Scierocactus glaucus)	Threatened

Summary of Species with Occupied Habitat within the Area

Based upon a site inspection, habitat characterization, and review of database information including a site-specific species list provided by the DWR regarding known species occurrences near the site, the following species could potentially occupy the site (species profiles obtained from the DWR):

Black-footed Ferret

"The black-footed ferret, *Mustela nigripes*, is sometimes called "the rarest mammal in North America." In fact, the black-footed ferret was believed to be extinct for quite some time until a wild population of the species was found near Meeteetsee, Wyoming in the early 1980s. When that population was threatened by canine distemper in the mid-1980s, the last surviving eighteen individuals were taken into captivity and used to start a captive breeding program. Descendants of those individuals have been released at several sites in the western United

States, including the Coyote Basin area of Uintah County, Utah in late 1999. Although the black-footed ferret is a federally listed endangered species, the re-introduced populations have been classified as "nonessential-experimental" by the U.S. Fish and Wildlife Service. In addition to Utah's re-introduced black-footed ferret population, unconfirmed sightings of naturally occurring ferrets persist throughout eastern Utah."

"Black-footed ferrets live in underground prairie dog burrows and eat prairie dogs as their primary food source. The black-footed ferret is, therefore, closely associated with prairie dog towns. For this reason, the major threat to the species is the decimation of prairie dog colonies through plague, poisoning, and habitat loss. The black-footed ferret breeds from March to April, and young are born in about six weeks; average litter size is three. The black-footed ferret is nocturnal."

Due to the presence of a chain link fence surrounding the site, and limitations imposed on personnel at the site that would restrict access to areas outside the fenced site boundaries, it is unlikely that ferrets would be impacted by activities on the project area. Furthermore, no apparent burrows were observed within the site boundaries or in the immediate vicinity about the site.

Burrowing Owl

"The burrowing owl, *Athene cunicularia*, breeds in southwestern Canada, the western United States, northern Mexico, Florida, and parts of the West Indies. It winters from the southwestern United States to Honduras, northern populations being migratory. In Utah, it is uncommon during summer in proper habitat throughout the state. Its habitats are open grassland and prairies, but it also utilizes other open situations, such as golf courses, cemeteries, and airports. It eats mainly terrestrial invertebrates, but also consumes a variety of small vertebrates, including small mammals, birds, frogs, toads, lizards, and snakes."

"The nest is in a mammal burrow, usually that of a prairie dog, ground squirrel, badger, or armadillo; if a mammal burrow is not available the owls will sometimes excavate their own nest burrow. Three to eleven (usually five to nine) eggs are incubated by the female parent, who is fed by the male, for 27 to 30 days. The young are tended by both parents and fledge after about 40 to 45 days."

Burrowing owls are known to inhabit portions of Carbon County. Presently Burrowing owls do not appear to be utilizing the site or surrounding area; therefore, any activities at the site are unlikely to result in adverse impacts to Burrowing owls. However, due to the presence of suitable breeding habitat in the site vicinity, Burrowing owls could move in and inhabit surrounding areas in the future; therefore, in the future if land-disturbing activities occur during the breeding season (February – August), a preconstruction survey should be completed in order to determine whether or not Burrowing owls are present. In the event that Burrowing owls are found at the site, construction activities should be postponed until the non-nesting season, when all of the chicks have fledged the burrow, or until the adults have vacated the site.

No Burrowing owls or burrows potentially used by Burrowing owls were noted during the site inspection, which occurred on September 25, 2008. The actual site is contained within a chain

link fence and operations occurring on-site are restricted to the enclosed area. No burrows were observed during a survey of the area surrounding the site. Soils on the site and in the general area are typically hard and rocky, with little to no ground cover. It is unlikely that activities conducted on the site would adversely affect any Burrowing owls.

White-tailed Prairie Dog

"The white-tailed prairie-dog, *Cynomys leucurus*, is one of three prairie-dog species found in Utah, occurring in the northeastern part of the state. The species is also found in parts of Colorado, Wyoming, and Montana."

"Similar to other prairie-dogs, white-tailed prairie-dogs form colonies and spend much of their time in underground burrows, often hibernating during the winter. The species breeds in the spring, and young can be seen above ground in early June. The white-tailed prairie-dog's diet is composed of grasses and bulbs. In turn, the white-tailed prairie-dog is the main food source of the Utah population of the endangered black-footed ferret."

No animal burrows were identified within the fenced, site boundary, nor were any burrows observed in the immediate surrounding area about the site. However, burrows were observed along Ridge Road at distances of about 0.5 miles east of the site. The identification of burrows along the nearby road indicates that prairie dogs could be present in the surrounding area. However, due to the developed nature of the site, fencing, and access restrictions, and lack of identified burrows within the site, it is not expected that site activities would adversely impact any prairie dog colonies that may be present in the surrounding area.

Bluehead Sucker

"The bluehead sucker, *Catostomus discobolus*, is native to parts of Utah, Idaho, Arizona, New Mexico, and Wyoming. Specifically, the species occurs in the upper Colorado River system, the Snake River system, and the Lake Bonneville basin. In Utah, bluehead suckers have been reduced in numbers and distribution due to flow alteration, habitat loss/alteration, and the introduction of nonnative fishes. Consequently, the bluehead sucker is included on the *Utah Sensitive Species List*."

"The bluehead sucker is a benthic (bottom dwelling) species with a mouth modified to scrape algae (the primary food of the bluehead sucker) from the surface of rocks. Members of the species spawn in streams during the spring and summer. Fast flowing water in high gradient reaches of mountain rivers has been identified as important habitat for bluehead sucker."

The Bluehead sucker is potentially present in Miller Creek, which is located about 0.25 miles to the south. As such, activities at the site involving diverting or removing water, or discharging substances including water or other effluent into Miller Creek could result in adverse impacts to the Bluehead sucker; therefore, any such activities that occur at the site should involve consultation with the Utah Division of Wildlife Resources as it is a state sensitive species.

MIGRATORY BIRDS

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA; 16 U.S.C., §703, Supp. I, 1989). The MBTA prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. There are a number of migratory birds that likely forage at the Project Site and potentially nest in the riparian corridor to the south; therefore, in order to avoid impacts to migratory birds protected under the MBTA including the removal of trees at the site during the nesting season (February – September), a preconstruction survey should be completed in order to determine whether or not nesting birds are present. In the event that migratory birds are found nesting at the site in trees that would be removed, construction activities should be postponed until the non-nesting season or until all of the chicks have fledged the nest.

It also noted that various prey species for numerous raptors are also present in the area. Some of these prey species include cottontail rabbit (*Sylvilagus audubonii*), jack-rabbit (*Lepus* species), and white-tailed prairie dog (*Cynomys leucurus*). As such, care should be taken to avoid contact with any raptors that may migrate and/or hunt through the general area.

METHODS

The site was surveyed by Mr. Chris Jensen, Project Biologist at Canyon Environmental, on September 25, 2008. The site was surveyed on foot by walking 10-15 foot transects across the enclosed project area and the surrounding site vicinity. The survey was conducted in accordance with U.S. Fish and Wildlife protocols for identifying habitat and species that may potentially inhabit the general area. The area was traversed in order to identify any burrows or signs and/or indications of prairie dogs, burrowing owls, or other species of significance. Vegetation was identified and habitat characterized within the fenced area, and in the area immediately about the site for a distance of approximately 800 feet around the subject property. The riparian area to the south was also surveyed to identify any species that may occur along Miller Creek and nearby drainages.

FINDINGS AND RECOMMENDATIONS

Canyon Environmental performed a site inspection, reviewed database information, and obtained lists of special status species from the appropriate agencies in order to ascertain the potential for presence of special status or high value species on a roughly 30-acre area of land in unincorporated Carbon County, Utah. Having performed these tasks we offer the following conclusions and recommendations:

- No listed species or suitable habitat for any listed or special status species was identified within the immediate project area. The project area is encompassed by a chain link fence and site activities are restricted to the enclosed facility within the existing fence.
- No listed species or special status species were identified within the area immediately surrounding the enclosed project area.
- The following special status species possesses suitable habitat within Miller Creek that is located about 0.25 miles south of the site, and are, therefore, potentially present within Miller Creek, to the south of the site:

- Bluehead sucker (*Catostomus discobolus*) State Sensitive

Activities at the site involving diverting or removing water or discharging substances including water or other effluent into Miller Creek could result in adverse impacts to this species; therefore, any such activities that occur at the site should involve consultation with Utah Division of Wildlife Resources since it is a state sensitive, and not a federally protected species.

- No Burrowing owls or burrows potentially used by Burrowing owls were noted during the site inspection, which occurred on September 25, 2008. The actual site is contained within a chain link fence and operations occurring on-site are restricted to the enclosed area. No burrows were observed during a survey of the area surrounding the site. Soils on the site and in the general area are typically hard and rocky, with little to no ground cover. Based upon soil conditions, the lack of identified burrows, and proposed site activities being contained within the fenced enclosure, it is unlikely that activities conducted on the site would adversely affect any Burrowing owls.
- Migratory birds are protected under the Migratory Bird Treaty Act (MBTA; 16 U.S.C., §703, Supp. I, 1989). The MBTA prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, bird nests, and eggs. There are a number of migratory birds that likely forage at the Project Site and potentially nest in the riparian corridor to the south; therefore, in order to avoid impacts to migratory birds protected under the MBTA, including the removal of trees at the site during the nesting season (February – September), a preconstruction survey should be completed in order to determine whether or not nesting birds are present. In the event that migratory birds are found nesting at the site in trees that would be removed, construction activities should be postponed until the non-nesting season or until all of the chicks have fledged the nest.
- Various prey species for numerous raptors are also present in the general surrounding area. Some of these prey species include cottontail rabbit (*Sylvilagus audubonii*), jack-rabbit (*Lepus californicus*), and white-tailed prairie dog (*Cynomys leucurus*). Raptors may perch on facility equipment and machinery at times throughout the year. As such,

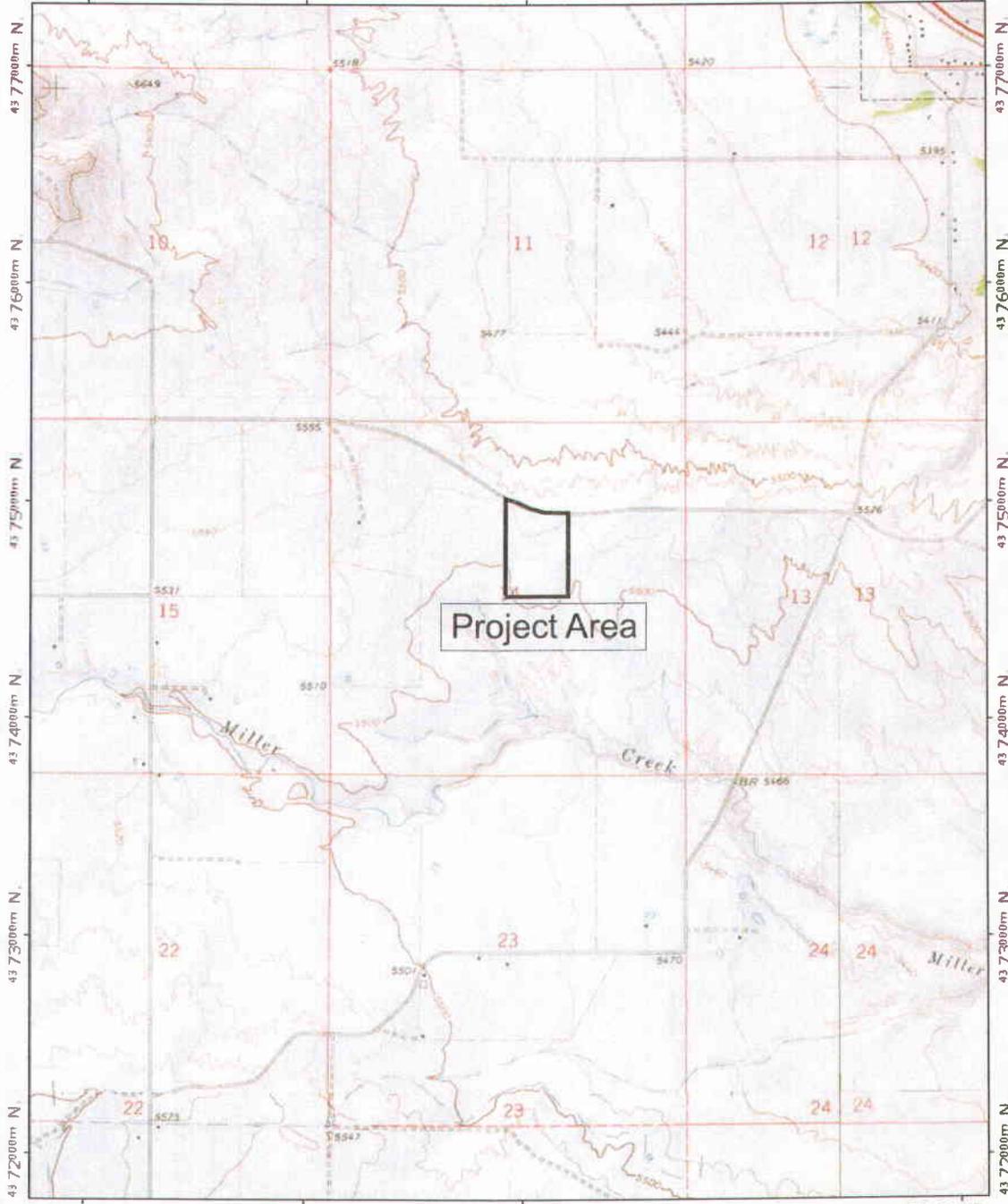
care should be taken to avoid contact with any raptors that may migrate through and/or hunt in the general area.

APPENDIX A
(Project Area Map and Habitat Maps)



TOPO! map printed on 09/05/08 from "Oil field cultural projects.tpo" and "Untitled.tpg"

518000m E. 519000m E. 520000m E. WGS84 Zone 12S 522000m E.



518000m E. 519000m E. 520000m E. WGS84 Zone 12S 522000m E.
0 1000 FEET 0 500 1000 METERS
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TOPOGRAPHIC MAP

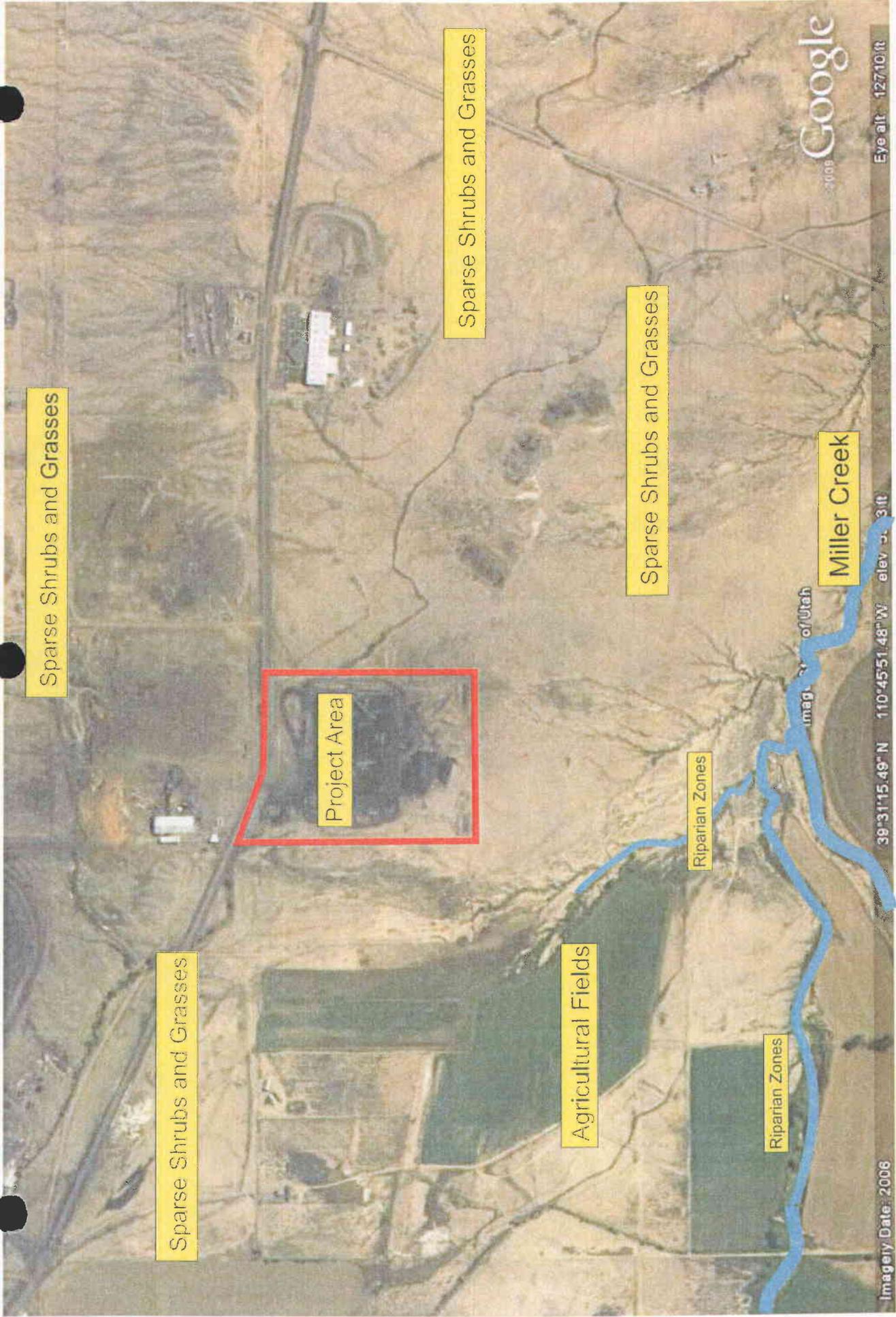
Wellington Dry-Coal Cleaning Facility
Section 14, Township 15 South, Range 10 East

USGS TOPOGRAPHIC MAP:
Price, Utah 7.5 Min Quadrangle



Figure 1

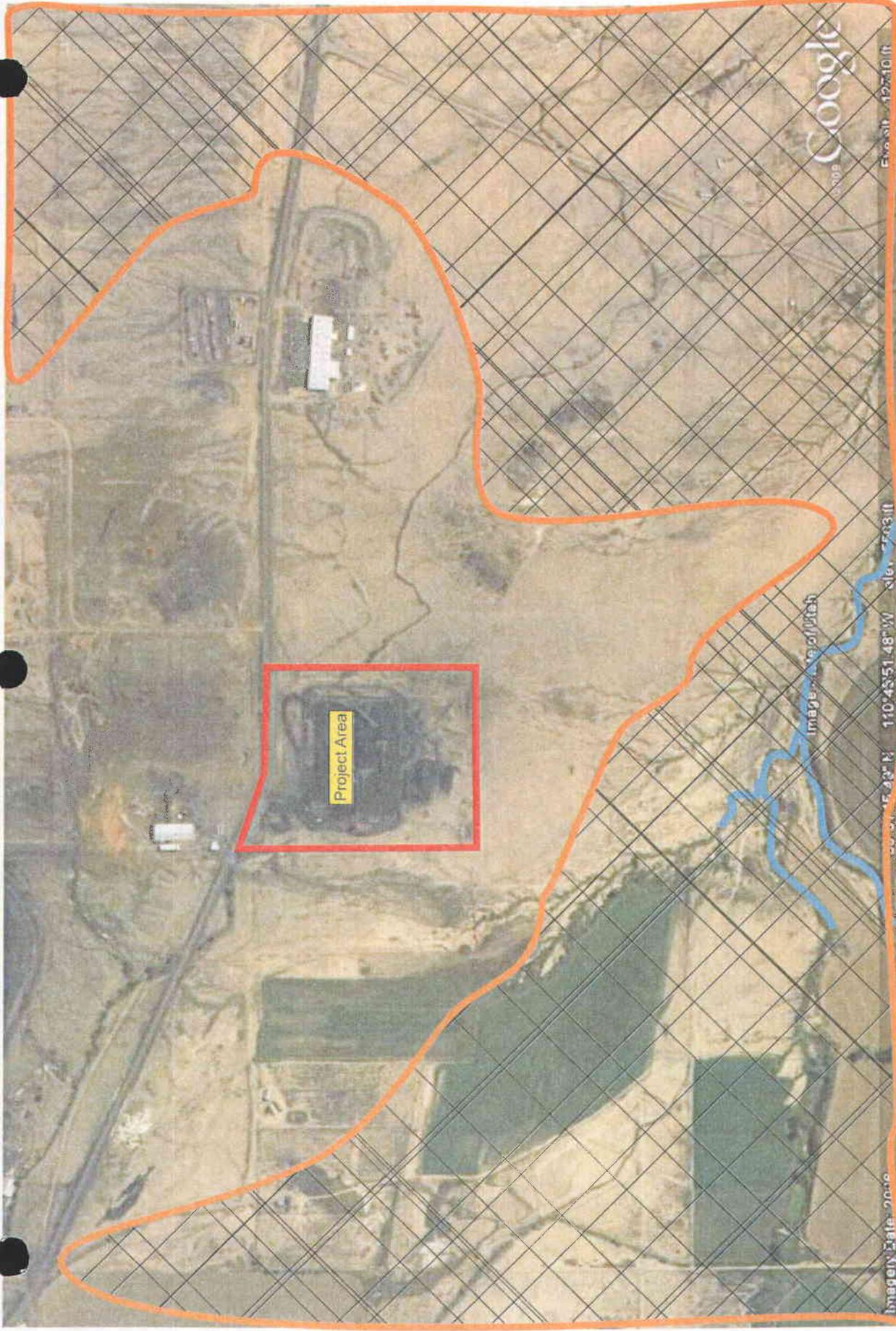
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Vegetative Communities

Wellington Dry-Coal Cleaning Facility
Section 14, Township 15 South, Range 10 East





Potential Habitat

-  Bluehead sucker
-  Prairie Dog and Burrowing Owl

Wildlife Habitat

Wellington Dry-Coal Cleaning Facility
 Section 14, Township 15 South, Range 10 East



APPENDIX B

(Federally Listed Threatened, Endangered, and Candidate Species for Carbon County, Utah)

Table B-1. Federally Listed Species for Carbon County, Utah

Common/Scientific Name	Status	Suitable Habitat	Habitat Present
Uinta Basin Hookless Cactus <i>Sclerocactus glaucus</i>	Threatened	Uinta Basin hookless cactus is found on river benches, valley slopes, and rolling hills of the Duchesne River, Green River, and Mancos formations. It is found in xeric, fine textured soils overlain with cobbles and pebbles, growing in salt desert shrub and pinyon-juniper communities, at elevations ranging from 1360 to 2000 meters.	No
Clay Phacelia <i>Phacelia argillacea</i>	Endangered	Clay phacelia is found in fine textured soil and fragmented shale derived from the Green River Formation. It grows on barren, precipitous hillsides in sparse pinyon-juniper and mountain brush communities, at elevations ranging from 1840 to 1881 meters.	No
Humpback Chub <i>Gila cypha</i>	Endangered	The humpback prefers deep, fast-moving, turbid waters often associated with large boulders and steep cliffs in the Colorado River.	No
Bonytail <i>Gila elegans</i>	Endangered	Large, fast-flowing waterways of the Colorado River system.	No
Colorado Pikeminnow <i>Ptychocheilus lucius</i>	Endangered	The Colorado pikeminnow thrives in swift flowing muddy rivers with quiet, warm backwaters.	No
Razorback Sucker <i>Xyrauchen texanus</i>	Endangered	Reproducing populations remain only in the middle Green River in Utah and in an off-channel pond in the Colorado River near Grand Junction. The razorback is most often found in quiet, muddy backwaters along the river.	No
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i>	Endangered	Dense riparian habitats with high canopies comprised of willow and cottonwoods.	No
Black-footed Ferret <i>Mustela nigripes</i>	Endangered Extirpated	Usually found on shortgrass and midgrass prairies in close association with prairie dogs	No

County Lists of Utah's Federally Listed Threatened(T), Endangered(E), and Candidate(C) Species

Disclaimer: This list was compiled using known species occurrences and species observations from the Utah Natural Heritage Program's Biodiversity Tracking and Conservation System (BIOTICS); other federally listed species likely occur in Utah Counties. This list includes both current and historic records. (Last updated on July 1, 2008).

Beaver County

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E
Utah Prairie-dog	<i>Cynomys parvidens</i>	T

Box Elder County

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Fat-whorled Pondsail	<i>Stagnicola bonnevillensis</i>	C
Lahontan Cutthroat Trout	<i>Oncorhynchus clarkii henshawii</i>	T
June Sucker	<i>Chasmistes liorus</i>	E
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	C
Gray Wolf	<i>Canis lupus</i>	E Extirpated

Cache County

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Maguire Primrose	<i>Primula maguirei</i>	T
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	C
Brown (Grizzly) Bear	<i>Ursus arctos</i>	T Extirpated
Canada Lynx	<i>Lynx canadensis</i>	T

Carbon County

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Uinta Basin Hookless Cactus	<i>Sclerocactus glaucus</i>	T
Clay Phacelia	<i>Phacelia argillacea</i>	E
Humpback Chub	<i>Gila cypha</i>	E
Bonytail	<i>Gila elegans</i>	E
Colorado Pikeminnow	<i>Ptychocheilus lucius</i>	E
Razorback Sucker	<i>Xyrauchen texanus</i>	E
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E
Black-footed Ferret	<i>Mustela nigripes</i>	E Extirpated

Daggett County

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Ute Ladies'-tresses	<i>Spiranthes diluvialis</i>	T
Humpback Chub	<i>Gila cypha</i>	E
Colorado Pikeminnow	<i>Ptychocheilus lucius</i>	E
Razorback Sucker	<i>Xyrauchen texanus</i>	E
Black-footed Ferret	<i>Mustela nigripes</i>	E Extirpated
Brown (Grizzly) Bear	<i>Ursus arctos</i>	T Extirpated
Canada Lynx	<i>Lynx canadensis</i>	T

Cache County (con't)

<u>Common Name</u>	<u>Scientific Name</u>	<u>State Status</u>
WESTERN TOAD	BUFO BOREAS	SPC
YELLOW-BILLED CUCKOO	COCCYZUS AMERICANUS	S-ESA

Carbon County

<u>Common Name</u>	<u>Scientific Name</u>	<u>State Status</u>
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	SPC
BLACK-FOOTED FERRET	MUSTELA NIGRIPES	S-ESA
BLUEHEAD SUCKER	CATOSTOMUS DISCOBOLUS	CS
BONYTAIL	GILA ELEGANS	S-ESA
BURROWING OWL	ATHENE CUNICULARIA	SPC
COLORADO PIKEMINNOW	PTYCHOCEILUS LUCIUS	S-ESA
COLORADO RIVER CUTTHROAT TROUT	ONCORHYNCHUS CLARKII PLEURITICUS	CS
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FLANNELMOUTH SUCKER	CATOSTOMUS LATIPINNIS	CS
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
HUMPBACK CHUB	GILA CYPHA	S-ESA
KIT FOX	VULPES MACROTIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
RAZORBACK SUCKER	XYRAUCHEN TEXANUS	S-ESA
ROUNDTAIL CHUB	GILA ROBUSTA	CS
SMOOTH GREENSNAKE	LIOCHLOROPHIS VERNALIS	SPC
SOUTHWESTERN WILLOW FLYCATCHER	EMPIDONAX TRAILLII EXTIMUS	S-ESA
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN RED BAT	LASIURUS BLOSSEVILLII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
WHITE-TAILED PRAIRIE-DOG	CYNOMYS LEUCURUS	SPC

Daggett County

<u>Common Name</u>	<u>Scientific Name</u>	<u>State Status</u>
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	SPC
BEAR LAKE SCULPIN	COTTUS EXTENSUS	SPC
BLACK-FOOTED FERRET	MUSTELA NIGRIPES	S-ESA
BLUEHEAD SUCKER	CATOSTOMUS DISCOBOLUS	CS
BROWN (GRIZZLY) BEAR	URSUS ARCTOS	S-ESA
CANADA LYNX	LYNX CANADENSIS	S-ESA
COLORADO PIKEMINNOW	PTYCHOCEILUS LUCIUS	S-ESA
COLORADO RIVER CUTTHROAT TROUT	ONCORHYNCHUS CLARKII PLEURITICUS	CS
FLANNELMOUTH SUCKER	CATOSTOMUS LATIPINNIS	CS
FRINGED MYOTIS	MYOTIS THYSANODES	SPC
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
HUMPBACK CHUB	GILA CYPHA	S-ESA
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
RAZORBACK SUCKER	XYRAUCHEN TEXANUS	S-ESA
ROUNDTAIL CHUB	GILA ROBUSTA	CS
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC

APPENDIX C
(Correspondence with Utah DWR)



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Wildlife Resources
JAMES F. KARPOWITZ
Division Director

September 23, 2008

Chris Jensen
Canyon Environmental
326 Stadium Avenue
Provo, Utah 84604

Subject: Species of Concern Near the Dry-Coal Cleaning Facility Near Wellington, Utah

Dear Chris Jensen:

I am writing in response to your email dated September 23, 2008 regarding information on species of special concern proximal to the dry-coal cleaning facility located in Section 14 of Township 15 South, Range 10 East, near Wellington, Carbon County, Utah.

The Utah Division of Wildlife Resources (UDWR) does not have records of occurrence for any threatened, endangered, or sensitive species within the project area noted above. However, in the vicinity there are recent records of occurrence for burrowing owl, bluehead sucker and white-tailed prairie-dog. All of the aforementioned species are included on the *Utah Sensitive Species List*.

The information provided in this letter is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, and because data requests are evaluated for the specific type of proposed action, any given response is only appropriate for its respective request.

In addition to the information you requested, other significant wildlife values might also be present on the designated site. Please contact UDWR's habitat manager for the southeastern region, Chris Wood, at (435) 613-3709 if you have any questions.

Please contact our office at (801) 538-4759 if you require further assistance.

Sincerely,

Sarah Lindsey
Information Manager
Utah Natural Heritage Program

cc: Chris Wood, SERO



APPENDIX D
(Site photos)

SITE: Wellington Dry-Coal Cleaning Facility
Project: Earthfax 08-007

Photograph 1

North view of site.



Photograph 2

East view along south edge of the site.



Photograph 3

West view along south edge of site.



SITE: Wellington Dry-Coal Cleaning Facility
Project: Earthfax 08-007
Photograph 4

North view along east edge of site.



Photograph 5

Northwest view of the northwest corner of site.



Photograph 6

South view along west edge of site.



SITE: Wellington Dry-Coal Cleaning Facility
Project: Earthfax 08-007
Photograph 7

East view of site.



Photograph 8

South view of site.



Photograph 9

Southwest view from site.



CHAPTER 4 LAND USE AND AIR QUALITY

4.10 Land Use

4.1.1 Environmental Description

4.1.1.1 Premining Land Use

The northern 10 acres within the permit area were purchased by COVOL Engineered Fuels, LC from Terra Systems Inc. in 2003. The southern 20 acres within the permit area were sold to COVOL Engineered Fuels, LC in 2005 by Price City. ~~Both parcels were previously undeveloped.~~ Due to its high alkaline and saline content, the land is poorly suited for agriculture. Construction of the facility was initiated in July 2005, and limited operations began in January 2006.

Land Use Map. Zoned land use in the vicinity of the site is indicated on Figure 4-1.

Land Capability. The land capability of the permit and adjacent areas is suited to its current industrial zoning status. The soils are composed primarily of alkaline, saline, weathered shale that do not readily support agricultural activities. The Natural Resources Conservation Service indicates that these soils have a poor revegetation potential due to the lack of precipitation and infertile soil properties (Jensen and Borchert, 1988). The native vegetation consists of a salt desert community that is poorly suited for wildlife and livestock use.

Land Use Description. According to the development code of Carbon County, Utah (Carbon County, 2003), the surface lands are zoned I-2 (General Industrial) as follows:

"The I-2 General Industrial zone has been established for the purpose of providing a place where firms engaged in mining and related activities, and/or heavy manufacturing,

processing and fabrication of goods and materials, can locate with minimum conflict or deleterious effect on surrounding properties and the natural environment, and with a high degree of protection from encroachment of residential and commercial uses. It is also the intent of this zone to promote the economic well being of the people within the County and to broaden the tax base."

The land has also been zoned by Wellington City as M-1 (light industrial). Permitted uses under this zoning classification include a variety of industrial and manufacturing operations (see Appendix 1-4).

COVOL operates a dry coal cleaning facility at the site, separating coal from waste rock using a dry (air-enhanced) process. This work is done on a toll basis, with COVOL not having ownership of the coal or the byproducts. All material is shipped off site in accordance with client contracts once processing is completed. Activities at the site are in accordance with the I-2 and M-1 zoning as described above.

Cultural and Historic Resources Information. ~~The site area is not conducive to human historic habitation or use. No cultural or historic resources are known to have existed in the permit area prior to facility construction. A Class I cultural resource inventory of the area surrounding the COVOL facility was conducted from the records of the Utah State Historical Preservation Office ("SHPO"). The results of this survey are provided in Appendix 4-1. As indicated, 10 inventories have extended to areas within 1 mile of the COVOL facility, with only one cultural resource site identified within this 1-mile radius. This site was an insignificant lithic scatter located more than 500 feet from the COVOL site. Its location with respect to the COVOL facility is not shown in Appendix 4-1 due to SHPO data restrictions. No cultural resource sites have been identified within the COVOL facility boundaries.~~

4.1.1.2 Previous Mining Activity

No previous mining activity occurred in the permit area.

4.1.2 Reclamation Plan

4.1.2.1 Postmining Land Use Plan

As indicated in Section 2.2.2.2 of this application, the soil at the COVOL facility is poorly suited for agricultural use. Furthermore, native vegetation in the area is poorly suited for rangeland use of the site (see Section 3.2.1). Hence, in accordance with R645-301-413.120, rather than restoring the land to its pre-disturbance use it will be restored to a higher or better post-operations industrial land use consistent with the current zoning of the site and adjacent areas. The extent of site restoration following operations is discussed more fully in Section 5.40 of this permit application.

The land occupied by the COVOL Dry Coal Cleaning Facility will adequately support future industrial land uses after operations are complete ~~and the site has been graded, topsoil has been stockpiled, and drainage controls have been constructed.~~ The Applicant intends that the post-operational land uses will be consistent with the industrial land use plans approved by Carbon County and Wellington City. Final reclamation activities will be completed in a manner consistent with that intended post-operation industrial land use and in accordance with Carbon County and Wellington City zoning ordinances. Given its excellent access via Ridge Road, its gentle terrain, and the existence of utilities, the land will have value as an industrial site following closure of the COVOL facility.

4.1.2.2 Land Owner or Surface Manager Comments

COVOL owns and operates the facility. Thus, surface land owner comments are not required. All operations will be conducted in accordance with applicable local, State, and Federal regulations.

4.1.2.3 Suitability and Capability

Final fills will not contain excess spoils.

4.1.3 Performance Standards

4.1.3.1 Postmining Land Use

The proposed post-operations land uses will be industrial. The land is capable of supporting such a land use.

4.1.3.2 Determining Premining Uses of Land

The post-operations land use is the same as that which existed before the operation began.

4.1.3.3 Criteria for Alternative Postmining Land Uses

No alternative post-operations land uses are anticipated.

4.1.4 Alternative Land Use

No alternative post-operations land uses are anticipated.

4.20 Air Quality

This section includes descriptions of plans to comply with the Clean Air Act and applicable Utah or federal statutes and regulations pertaining to air quality standards.

4.2.1 Air Quality Standards

COVOL's operations are being conducted in compliance with the requirements of the Clean Air Act and the Utah Air Quality Regulations.

4.2.2 Compliance Efforts

Air emissions from the facility comply with applicable local, state, and federal standards, and are permitted with the Utah Division of Air Quality (DAQ) under Approval Order (AO) DAQE#AN2952001-05 issued on June 30, 2005. Under the permit, the facility qualifies as a minor source of particulate emissions. Controls at the facility include dust suppression of the roadways with water, a telescoping drop chute on the primary stacking conveyor, enclosed screen and crusher, and fixed discharge chutes on the stacking conveyors and at the truck loadout stations. A copy of the AO is included in Appendix 4-12. A copy of a letter from COVOL to DAQ concerning the onset of production is also included in Appendix 4-2. This permit allows for 7.12 tons of PM₁₀ emissions per year, provided that COVOL complies with the stipulations of the permit. These stipulations are summarized in the following paragraphs.

Fabric Filter Baghouses. All of the exhaust from the air cleaning tables is channeled through baghouses before being discharged to the atmosphere. The fabric filters used in each baghouse will comply with the specifications for porosity and differential pressure as specified in the AO.

Opacity. Visible emissions from the components of the facility are restricted to the following opacity limits:

- Crushers: 15%
- Screens: 10%

- Conveyor Transfer Points: 10%
- Baghouse Exhaust Stacks: 10%
- Haul Road Traffic/Vehicles: 20%
- All other points: 20%

Process Limitations. The facility is limited to processing no greater than 1,500,000 tons of coal per rolling 12-month period.

Fugitive Dust Controls. Standard procedures, including water and/or chemical treatment of roads and other areas with vehicle traffic, will be followed in accordance with the AO. Storage piles will also be sprayed with water as necessary. In-plant haul roads will be limited to a total length of 0.69 miles, with a speed limit of 10 miles per hour. They will be paved and swept as needed, as per the AO.

Other Controls. Conveyors and stackers are covered or enclosed. Discharge chutes have been installed on radial stacker conveyor drops and truck loadouts at the alternate product loading hopper and the product storage silo.

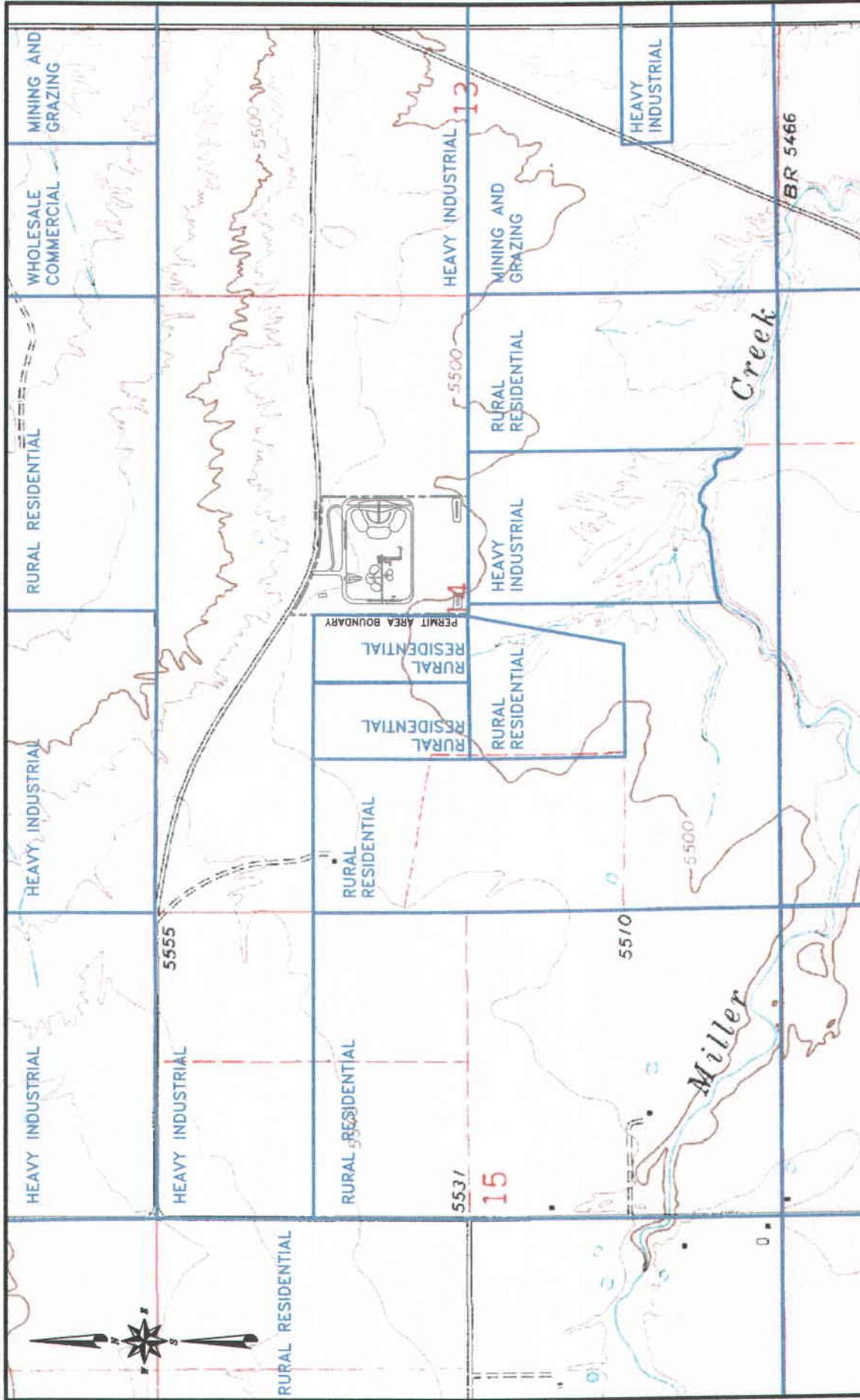
4.2.3 Monitoring Program

DOGM does not require an air monitoring program for the COVOL Dry-Coal Cleaning Facility at this time. A monitoring program has been established with the DAQ under AO# AN2952001-05. The program includes the installation of manometers to measure the differential pressures across the filters in the baghouses, a protocol for measuring opacity from fugitive dust road emissions, and specifies the types of records to be maintained for control measures that are applied. Additional details for the DAQ air monitoring program are included in the AO document, which is included in Appendix 4-12.

REFERENCES

Carbon County, 2003. The Development Code for Carbon County, Utah. Revised March 2003.

Jensen, Earl H. and James W. Borchert, 1988. Soil Survey of Carbon Area, Utah. U.S. Department of Agriculture Soil Conservation Service. 294 pp.



BASE MAP: 7.5' USGS QUADRANGLE
 PRICE, UTAH 1972
 LAND USE INFORMATION TAKEN FROM THE CARBON
 COUNTY GEOGRAPHIC INFORMATION SYSTEM, ACCESSED
 OCTOBER 2007

FIGURE 4-1. LAND USE MAP

COVOL Engineered Fuels, LC
Dry-Coal Cleaning Facility

Permit Application
~~January-October 2008~~ March 2009

APPENDIX 4-1

Class I Cultural Resource Inventory



Canyon Environmental
326 East Stadium Avenue
Provo, UT 84604
Phone: 801.602.6883 Fax: 801.341.0005
www.canyonenvironmental.com

September 5, 2008

Rich White
EarthFax Engineering, Inc.
7324 South Union Park Ave.
Suite 100
Midvale, UT 84047

Subject: Class I File Cultural Resources File Search for the Wellington Dry-Coal Cleaning Facility on behalf of COVOL Engineered Fuels, LC

Address: Section 14, Township 15 South, Range 10 East

Dear Mr. White:

Canyon Environmental has conducted a Class I Literature Search for the above mentioned site at the Utah State Historic Preservation Office (SHPO) on behalf of COVOL Engineered Fuels, LC. The Class I was conducted in order to comply with requirements set forth by the Utah Division of Oil, Gas, and Mining (DOGM).

The proposed Dry-Coal Cleaning Facility will comprise approximately 30 acres and will be developed on lands that have been previously disturbed (Figure 1). DOGM has requested that a File Search be conducted to determine the extent and disposition of any cultural resources that have been previously identified in the surrounding area.

The file search was conducted on September 3, 2008 at the Utah State Historic Preservation Office in Salt Lake City, Utah. The file search identified 10 previously conducted inventories and one cultural resource site within a one-mile radius of the proposed project area. According to the information obtained from SHPO, the proposed project area has not been previously surveyed for cultural resources. The file search results are described in the Table 1.1.

Table 1.1 Previous Cultural Resource Inventories Conducted in the Vicinity of the Project Area and Applicable Findings

Project No.	Company Name	Project Name	Findings¹
U-77-UA-0318b,f,s	U of U	Green River Reservoirs / Plants/ pipeline / Transmission Lines	42CB130, 42EM969-974 & 976-990
U-78-UA-0245b,s	U of U	Denver and Rio Grande Spur Line	42EM1072-1079, 42CB336-340, 733
U-80-UB-0722p	UTARC	Coal Plant in Castle Valley	None

Table 1.1 Previous Cultural Resource Inventories Conducted in the Vicinity of the Project Area and Applicable Findings

Project No.	Company Name	Project Name	Findings¹
U-81-FS-0945f	USFS	Ira Holley Phosphate Development, Little Diamond Creek	None
U-84-SJ-448b,s	Sagebrush	Cultural Resource Survey of Several GEO Seismic Services; Geophysical Transects in Southern Carbon County	42CB491
U-87-BL-0332b	BLM	Wellington land Sale	None
U-89-AF-301b,s	AERC	CRE of Proposed Ridge Road Development in Carbon County	42CB577
U-96-BS-0186b,s	Baseline	CRI of Emery Telephone Fiber Optic Line in Emery and Carbon Counties	42EM2440-2441
U-04-BE-1098p	BOR	North Creek Lateral	None
U-05-PD-0052b,p,s	PIII Assoc.	Carbon Canal	42CB 571, 1040, 1270, 1356, 2321-2322, 3376-3377

Ten cultural resource inventories have been conducted within a one-mile radius of the proposed project area. The proposed project area was not included in any of the previously conducted inventories.

One previously identified cultural resource site (42CB130) was identified within a one-mile radius of the proposed project area. The site was identified as an historic site with no determination of eligibility. The previously identified site is located more than 500 feet in distance from the proposed project area.

Based upon the findings of the Class I inventory, no cultural resource sites have been identified within the proposed project area boundaries. Nor have any sites been identified in the immediate vicinity about the proposed project area.

Please review the above cultural resource file search results and if you have any questions, contact me at 801-602-6883.

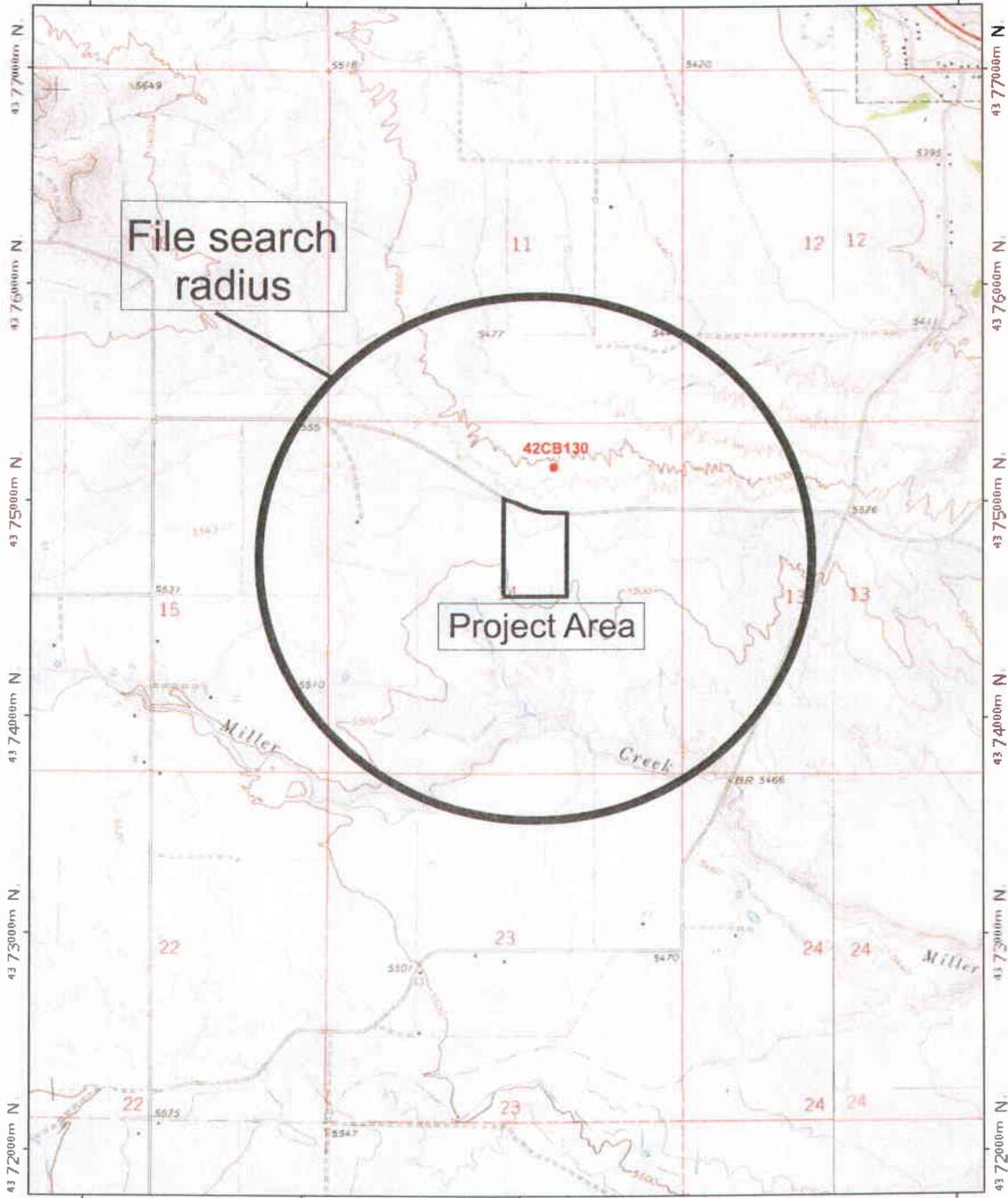
Sincerely,

Chris Jensen
 Archaeologist
 Canyon Environmental



TOPO! map printed on 09/05/08 from "Oil field cultural projects.tpo" and "Untitled.tpg"

518000m E. 519000m E. 520000m E. WGS84 Zone 12S 522000m E.



518000m E. 519000m E. 520000m E. WGS84 Zone 12S 522000m E.



0 1000 FEET 0 500 1000 METERS

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TOPOGRAPHIC MAP

Wellington Dry-Coal Cleaning Facility
Section 14, Township 15 South, Range 10 East



USGS TOPOGRAPHIC MAP:
Price, Utah 7.5 Min Quadrangle

Figure 1
Job No. C080001

COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
~~January October 2008~~ March 2009

APPENDIX 4-12

Utah Division of Air Quality
Approval Order

CHAPTER 5 ENGINEERING

5.10 Introduction

This chapter provides a discussion of general engineering aspects, an operation plan, a reclamation plan, design criteria, and performance standards related to the COVOL Dry-Coal Cleaning Facility. The existing and proposed facilities have been or will be designed, located, constructed, maintained, and reclaimed in accordance with the operation and reclamation plans.

It should be noted that this facility is used for coal cleaning and is not a coal mine. Thus, several of the sections in this chapter that refer to mining operations are not applicable and have been noted as such.

5.1.1 General Requirements

This permit application includes descriptions of the proposed coal cleaning and facility reclamation operations together with the appropriate maps, plans, and cross sections. Methods and calculations utilized to achieve compliance with the design criteria are also presented.

5.1.2 Certification

Where required by the regulations, cross sections and maps in this permit application have been prepared by or under the direction of, and certified by, qualified registered professional engineers or land surveyors. As appropriate, these persons were assisted by experts in the fields of hydrology, geology, biology, etc.

5.1.2.1 Cross Sections and Maps

Previously Mined Areas. There are no previously mined areas near the facility.

Surface Facilities. A general site map showing the locations of structures, coal cleaning equipment, conveyors, and piles in addition to surface drainage is shown on Plate 5-1. This map includes the locations of topsoil and coal material stockpiles, ~~alternate product piles~~, runoff control structures, and sedimentation ponds. Except for the sedimentation ponds, no other water treatment facilities exist at the site. Plate 5-1 also shows the locations of air pollution control equipment.

The following facilities or activities do not exist or occur within the permit area:

- Coal mining,
- Excess spoil,
- Durable rock fills,
- ~~Permanent s~~Storage/disposal of coal mine waste,
- Coal processing waste banks, dams, or embankments, and
- Disposal of non-coal (non-waste rock) waste

It should be noted that, since COVOL toll processes material received from off-site clients, some of this material may have been classified at those off-site operations as coal mine waste or coal processing waste. However, this material is received and processed by COVOL as coal. Prior to receipt within the permit area, COVOL will evaluate the material to ensure that it can be economically processed. If COVOL cannot economically process the material, the material will be rejected and not allowed on site. Material that is accepted by COVOL is processed to generate one of two (or both) products: high-quality coal and/or low-quality (low-BTU) coal. This coal is then shipped off site in accordance with contract requirements. None of the material processed or generated within the permit area is considered coal mine waste or coal processing waste.

Surface Configurations. The topography noted on Plate 5-1 is based on ~~pre-disturbance dataa~~ survey of the site performed in September 2008. Site grading at the facility has been minimal, and there are a handful of material stockpiles as shown on Plate 5-1. Site reclamation is expected to involve only minor amounts of earthwork.

Hydrology. Certified maps and cross sections associated with the hydrology of the COVOL Dry-Coal Cleaning Facility area are provided in Chapter 7.

Geology. Certified maps and cross sections associated with the geology of the COVOL Dry-Coal Cleaning Facility area are provided in Chapter 6.

5.1.2.2 Plans and Engineering Designs

All plans and engineering designs presented in this permit application were prepared by or under the direction of and certified by a qualified registered professional engineer.

Excess Spoil. No excess spoil will be generated from the permit area.

Durable Rock Fills. No durable rock fills will exist in the permit area.

Coal Mine Waste. No coal mine waste will be ~~permanently~~ stored in the permit area.

Impoundments. Two impoundments are present at the site – one in the southeast corner and one in the southwest corner (see Plate 5-1). They are intended to temporarily contain runoff from the disturbed areas of the site. They were designed and certified by a professional engineer using current, prudent, engineering practices.

Primary Roads. All roads within the permit area are considered primary roads as defined in R645-301-527.120. These roads have been certified by a professional engineer as meeting the requirements of R645-301-534.200 and R645-301-742.420 (see Appendix 5-1).

Variance from Approximate Original Contour. There has been no significant variance from the original contour at this facility. Thus, no variance from the approximate original contour of the site is being requested. Since the facility is located on land zoned for heavy industrial use, future industrial uses of the property will benefit from any site grading which has already been performed.

5.1.3 Compliance with MSHA Regulations and MSHA Approvals

5.1.3.1 Coal Processing Waste Dams and Embankments

No coal processing waste dams or embankments exist within the permit area.

5.1.3.2 Impoundments and Sedimentation Ponds

No impoundments or sedimentation ponds in the permit area meet the size criteria of 30 CFR 77.216(a).

5.1.3.3 Underground Development Waste, Coal Processing Waste, and Excess Spoil

No underground development waste, coal processing waste, or excess spoil is disposed of in the permit area.

5.1.3.4 Refuse Piles

There is no ~~permanent~~-coal refuse stored in the permit area.

5.1.3.5 Underground Openings to the Surface

There are no underground openings within the permit area.

5.1.3.6 Discharges to Underground Mines

No discharges occur from the surface to underground mine workings in the permit area.

5.1.3.7 Surface Coal Mining and Reclamation Activities

No surface coal mining and reclamation activities occur in the permit area.

5.1.3.8 Coal Mine Waste Fires

No coal mine waste will be stored in the permit area. If any coal-related ~~mine waste~~ fires occur within the permit area, these will be reported immediately to MSHA and DOGM. Immediate remedial action will be taken as deemed necessary by COVOL to protect public health and safety as well as the environment. Following initial remedial efforts, a long-term plan will be formulated in discussion with MSHA and DOGM to extinguish any existing fires and prevent future fires.

5.1.4 Inspections

5.1.4.1 Excess Spoil

Excess spoil is not generated at the COVOL Dry-Coal Cleaning Facility.

5.1.4.2 Refuse Piles

No ~~permanent~~ refuse piles will be located in the permit area.

5.1.4.3 Impoundments

Inspections of the sedimentation ponds associated with the COVOL Dry-Coal Cleaning Facility will be made at least quarterly. A report of inspection will be prepared by a qualified individual and maintained on site after each inspection.

No new impoundments are planned for construction at the site. If new impoundments are constructed, they will be inspected during and after construction in accordance with R645-301-514.300.

All sedimentation ponds associated with the COVOL Dry-Coal Cleaning Facility will be inspected annually by a registered professional engineer. A certified report will be prepared by a registered professional engineer and submitted to DOGM shortly after each inspection. This report will indicate whether or not the impoundment has been constructed and maintained as designed and

in accordance with the approved plan and the R645 rules. The report will also include a discussion of any apparent instability, structural weakness or other hazardous conditions, depth and elevation of any impounded waters, existing storage capacity, existing or required monitoring procedures and instrumentation, and any other aspects of the structure affecting stability, as noted during the inspection. A copy of the inspection report will be maintained at the facility office.

No impoundments that are subject to 30 CFR 77.216 currently exist or are planned within the permit area. If impoundments subject to 30 CFR 77.216 are constructed in the future, these impoundments will be inspected in accordance with 30 CFR 77.216-3.

5.1.5 Reporting and Emergency Procedures

5.1.5.1 Slides

Due to the relatively level plant site, the potential for slides is essentially nonexistent. However, if a slide occurs within the permit area that may have a potential adverse effect on the public, property, health, safety, or the environment, COVOL will notify DOGM by the fastest available means following discovery of the slide and will comply with any remedial measures required by DOGM.

5.1.5.2 Impoundment Hazards

If any examination or inspection of an impoundment discloses that a potential hazard is associated with that impoundment that may have an adverse effect on the public, property, health, safety, or the environment, the person who examined the impoundment will promptly inform DOGM of the finding and of the emergency procedures formulated for public protection and remedial action. If adequate procedures cannot be formulated or implemented, DOGM will be notified immediately.

5.1.5.3 Temporary Cessation of Operations

Prior to a temporary cessation of operations within the permit area that will last for a period of 30 days or more or as soon as it is known that a temporary cessation will extend beyond 30 days, COVOL will submit to DOGM a notice of intention to cease or abandon operations. This notice will include the following:

- A statement of the exact tonnage of coal which has been cleaned by the facility prior to cessation of operations,
- A discussion of the extent and kind of reclamation activities which will have been accomplished prior to cessation of operations, and
- An identification of the regrading, revegetation, environmental monitoring, and water treatment activities that will continue during the temporary cessation.

During the temporary cessation, COVOL will support and maintain all surface access and will also secure all facilities. The exterior fence surrounding the operations will be maintained and all gates will be closed and locked to prevent unauthorized access to the site by humans and animals, including access to subsurface bins and reclaim tunnels.

5.20 Operation Plan

5.2.1 General

5.2.1.1 Cross Sections and Maps

Previously Mined Areas. There are no active, inactive, or abandoned underground workings, including openings to the surface, within the permit and adjacent areas. No previously surface-mined areas exist within the permit area.

Existing Surface and Subsurface Facilities and Features. Plate 5-1 depicts the following information:

- The location of surface and subsurface features within, passing through, or passing over the permit area, including major electric transmission lines and pipelines (no agricultural drainage tile fields exist within the permit area),
- Each public road located in or within 100 feet of the permit area, and
- The location of each sedimentation pond within the permit area (there are no permanent water impoundments, coal processing waste dams, or coal processing embankments within the permit area).

Buildings located in the permit area are noted on Plate 5-1, while those within 1,000 feet of the permit area are noted on Figure 5-1, including an identification of the current use of the buildings.

Landowner, Right-of-Entry, and Public Interest. Figure 5-2 shows the boundaries of lands and the names of present owners of record of those lands, both surface and subsurface, included in or contiguous to the permit area. COVOL is the owner of all lands within the permit area, as indicated on the legal description provided on the warranty deeds in Appendix 1-3. The permit area consists of 30 fee acres. No Federal or State land exists within the permit area. As the owner of the property, COVOL has a legal right to operate on all of the lands within the permit area. Operations are conducted within 100 feet of a public road as indicated on Plate 5-1.

Mining Sequence and Planned Subsidence. No mining will occur at this facility. Therefore, no subsidence is anticipated.

Land Surface Configuration. Only minor grading of the site has occurred from its pre-disturbance operations condition. Original site elevations across the facility dropped approximately 30 feet from north to south, resulting in an average slope of approximately 2% (see Plate 5-1).

Surface Facilities. Plate 5-1 shows the locations of the following surface facilities:

- Buildings, utility corridors, and facilities to be used,
- Coal weighing, unloading, separating, stacking, and loading facilities,
- Air emissions controls,

- Sedimentation ponds,
- Roads, and
- Stockpile areas.

The ~~disturbed-fenced~~ area shown on Plate 5-1 is the same as the land area for which a performance bond or other guarantee has been posted.

It should be noted that the size and location of coal stockpiles shown on Plate 5-1 are correct based on the survey date of September 2008. However, these piles are dynamic in their configuration, changing in size based on processing requirements. Although the pile sizes may change from time to time, the piles will remain generally as located on Plate 5-1.

The location of the topsoil stockpiles ~~is-are~~ shown on Plate 5-1. No ~~permanent~~ coal processing waste banks, dams, or embankments exist in the permit area. Similarly, no ~~permanent~~ spoil or coal preparation waste sites exist in the permit area.

General refuse that is generated on site is stored in dumpsters at the locations indicated on Plate 5-1. This waste consists predominantly of paper, cardboard, and miscellaneous garbage. This non-hazardous, non-toxic, non-coal, non-waste rock refuse is disposed of periodically at the East Carbon Development Company landfill.

Transportation Facilities. Roads that have been constructed, used, or maintained by COVOL in the permit area for the mining and reclamation operations are shown on Plate 5-1. All of the conveyors in the permit area are also shown. Drainage structures associated with the roads are discussed in Section 7.5.2.2. A standard road cross section is provided on Figure 5-3.

As indicated on Plate 5-1, roads within the permit area consist of the following:

- Access road
- Loop road

- Scale road
- Scale bypass road
- Dump bin road
- Loading silo road

These roads are all constructed with the typical cross section shown in Figure 5-3. Road widths vary from 12 to 40 feet within the permit area, depending on the type of vehicle and purpose of the road. The gradient of the access road is approximately 4%. Gradients of the remaining roads are generally 1 to 2% except in short reaches to access loading/unloading areas (where gradients of up to 5% are achieved). The road surface throughout the permit area consists of minus 2-inch material that has been compacted in place. No significant cuts were made during construction of any of the roads. Fill embankments, constructed of the same materials used for the road surface, are located primarily along the Dump bin road and the Loading bin road, as shown on Plate 5-1. The locations of culverts and drainage ditches associated with the permit-area roads are also noted on Plate 5-1.

5.2.1.2 Signs and Markers

Permit Identification Signs. A permit identification sign has been placed so that it is visible from where the facility access road joins Ridge Road. The sign measures 4 feet by 8 feet and contains the following information:

- The name, business address, and telephone number of the permittee and
- The permanent program permit number as obtained from DOGM.

The sign will be retained and maintained until after the release of all bonds for the permit area.

Perimeter Markers. The perimeter of the facility (disturbed area boundary) is marked with a fence.

Buffer Zone Markers. Since the facility is not located near a perennial or intermittent stream channel, there are no stream buffer zone markers at the site.

Topsoil Markers. A marker will be placed on ~~the each~~ topsoil stockpile indicating that it contains topsoil.

5.2.2 Coal Recovery

Coal recovery at the COVOL Dry-Coal Cleaning Facility is performed using air and vibratory methods to derive useable grades of coal from high-ash coal delivered from nearby coal mining operations.

5.2.3 Mining Methods

No mining occurs at this facility. This is a dry-coal cleaning facility in which coal is brought from off-site mine sources and processed into a value-added product.

5.2.4 Blasting and Explosives

Blasting and explosives will not be ~~stored or~~ used at the site.

5.2.5 Subsidence

There will be no underground mining or subsidence at this facility. Hence, no pre-subsidence survey will be conducted, no areas need to be protected from subsidence, no subsidence control plan will be developed, no subsidence control measures will be implemented, no subsidence damage repair will be performed, and no public notice of underground mining activities will be required.

5.2.6 Mine Facilities

Although the COVOL Dry-Coal Cleaning Facility is not a mine, it contains coal processing equipment that is detailed in the following sections.

5.2.6.1 Mine Structures and Facilities

The COVOL Dry-Coal Cleaning Facility was constructed from July 2005 to January 2006. The facility layout is noted on Plate 5-1. Table 5-1 lists the existing structures at the facility. All structures are actively maintained and are in good functional condition. All of the structures were constructed specifically for use as coal cleaning facilities, have been used and maintained since construction, and are considered adequate to meet the requirements of R645-301.

Selected structures and facilities will be removed following operations in accordance with the reclamation plan discussed in Section 5.40.

5.2.6.2 Utility Installation and Support Facilities

Utility Installations. All operations will be conducted to prevent damage, destruction, or disruption of services provided by electric lines, telephone transmission stations, water lines, and sewer lines which pass over, under, or through the permit area. Since there is no planned subsidence on site, all utilities are located within non-subsidence zones.

Support Facilities. Support facilities at the COVOL Dry-Coal Cleaning Facility will be operated in accordance with the permit issued for the facility. Support facilities will be located, maintained, and used in a manner that:

- Prevents or controls erosion and siltation, water pollution, and damage to public or private property,
- To the extent possible, using the best technology currently available, minimizes damage to fish, wildlife, and related environmental values, and
- Minimizes additional contributions of suspended solids to stream flow or runoff outside the permit area.

All support facilities will be removed following operations in accordance with the reclamation plan discussed in Section 5.40.

Water Pollution Control Facilities. Water pollution control facilities at the COVOL Dry-Coal Cleaning Facility consist of two sedimentation ponds and the appurtenant structures associated with them. Also, a septic system handles sanitary waste from the site office building. The sedimentation ponds and the septic system will remain intact for the next land user following operations. A discussion of the ability of these ponds to meet the permanent impoundment criteria of R645-301-733.220 through 733.226 is provided in Section 7.3.3.2 of this permit application. Site reclamation is discussed in Section 5.40.

The sedimentation ponds and appurtenant structures have been constructed as discussed in Chapter 7 and are used and maintained as discussed in Section 5.3.3.7.

5.2.7 Transportation Facilities

5.2.7.1 Road Classification

The access road that leads to the facility from Ridge Road is used to transport coal and is classified as a primary road. Interior roads at the facility are also used to transport coal and classified as primary.

5.2.7.2 Description of Transportation Facilities

No surface conveyors (other than those used to transfer and temporarily stockpile coal and byproduct) or rail systems have been or will be constructed, used, or maintained within the permit area.

Road Specifications. Cross sections and profiles of roads that are used or maintained by COVOL are provided in Figure 5-3. Information regarding road drainage is presented in Chapter 7. Additional information regarding permit-area roads is provided in Section 5.2.1.1.

~~The facility access road (Ridge Road)~~ is a paved county road that extends from State Highway 10, just south of Price, Utah to U.S. Highway 191 in Wellington, Utah (a distance of approximately 7 miles). The facility ~~haul-loop~~ road encircles the facility which includes a broad area in which materials are stockpiled (see Plate 5-1). Once full operations commence and are sustained, ~~these loop roads~~ will be paved pursuant to the Utah Division of Air Quality Approval Order for the operation.

Roads within the permit area are maintained and repaired as needed using a front-end loader to remove wash-board bumps and fill potholes. This maintenance work is performed at least once per month (more often, if needed). At least once each year a grader is brought on site to rework the road surfaces as needed and clean roadside ditches. After the loop road is paved, maintenance of this surface will include repairs to potholes and other defects that affect the normal operability of the road. This maintenance will occur as needed to ensure the safety and proper functioning of trucks and equipment. Any roads within the permit area that are damaged by a catastrophic event, such as a flood or earthquake, will be repaired as soon as practical after the damage has occurred.

Drainageway Alterations. No alterations or relocations of natural drainageways are required within the permit area to accommodate the needs of transportation systems.

5.2.8 Handling and Disposal of Coal, Excess Spoil, and Coal Mine Waste

5.2.8.1 Coal Handling and Transportation

No coal is mined at the site. All coal is trucked to the site, where it is weighed, cleaned, temporarily stockpiled, and trucked off site to its end-use destination.

5.2.8.2 Overburden

No overburden is removed, handled, stored, or transported within the permit area.

5.2.8.3 Spoil, Coal Processing Waste, Non-Coal Waste, and Mine Development Waste

Excess Spoil. No spoil is generated at the COVOL Dry-Coal Cleaning Facility.

Coal Processing Waste. As indicated in Section 5.1.2.1, COVOL processes all material on site as coal, even if some of this material was classified by client facilities as coal processing waste. The facility will incorporate all of its "coal processing waste" into one of its end products. Hence, this material is considered a product and not a waste. The facility is operated so that all of the coal cleaning products and byproducts are marketable either as high-quality coal or low-quality coal. This is accomplished by blending various grades of coal so that they satisfy the ash requirements of its customers. Thus, the plant will be operated without requiring permanent storage of not generate coal processing waste.

Non-Coal Mine Waste. Non-coal waste generated in the permit area is temporarily stored in dumpsters and is regularly collected to be disposed of at the East Carbon Development Company landfill. No non-coal waste is permanently disposed of within the permit area. No non-coal waste that is defined as hazardous in 40 CFR 261 is currently generated at the facility. If such waste is generated in the future, it will be handled in accordance with the requirements of Subtitle C of the Resource Conservation and Recovery Act and any implementing regulation.

Underground Development Waste. No underground development waste is generated at the COVOL Dry-Coal Cleaning Facility.

Minimization of Acid, Toxic, and Fire Hazards. The sources of coal at the COVOL Dry-Coal Cleaning Facility are located in the Book Cliffs, Wasatch Plateau, and Emery Coal Fields,

which historically have not produced acid or toxic coals. Furthermore, coal is only temporarily stored at this facility, the native soils in the permit area are alkaline (see Section 2.2.2.2), and sediment and precipitation runoff is controlled by drainage ditches and sedimentation ponds. Thus, it is anticipated that hazards due to acid or toxic coal are either non-existent or greatly minimized by the lack of deleterious materials in the parent product, the temporary nature of on-site storage prior to processing, and the alkaline nature of the native soils at the site that serves to neutralize the effects of potential acidity.

Because ~~debris-coal~~ that is generated at the mine site cleaned in the permit area is only temporarily stored at the facility, there is no significant potential for this ~~debris-coal~~ to spontaneously combust. ~~Fire extinguishers are kept on mobile equipment in the mine yard to extinguish any fires that may occur.~~ Any coal fires that do occur will be handled as outlined in Section 5.1.3.8. No waste materials that constitute a fire hazard (i.e. grease, lubricants, paints, and flammable liquids) are accumulated where the temporary stockpiles are located.

5.2.8.4 Dams, Embankments, and Impoundments

No dams, embankments, or impoundments are used for the handling or disposal of coal, overburden, excess spoil, or coal mine waste in the permit area.

5.2.9 Management of Mine Openings

There are no mine openings at the COVOL Dry-Coal Cleaning Facility.

5.30 Operational Design Criteria and Plans

5.3.1 General

This application contains a general plan for each sedimentation pond within the permit area. No other water impoundments or coal processing waste banks, dams, or embankments exist in the

permit area. Since subsidence will not occur at the site, and no underground mining has occurred beneath the site, no damage will result to facility structures due to subsidence.

5.3.2 Sediment Control

Sediment-control measures for the COVOL Dry-Coal Cleaning Facility are described in Section 7.3.2. The sedimentation structures at the facility consist of two sedimentation ponds on the southeast and southwest corners of the yard, and a system of drainage ditches that report to them. Runoff-control structures have been designed to convey runoff in a non-erosive manner.

In addition to the use of sedimentation ponds and properly designed runoff-control facilities, sediment yields in the permit area are minimized by disturbing the smallest practicable area during the construction or modification of surface facilities, and contemporaneously reclaiming areas suitable for such reclamation.

5.3.3 Impoundments

5.3.3.1 Slope Stability

Except for small berms along the crests, the sedimentation ponds are constructed below grade. Slope stability analyses are, therefore, not necessary.

5.3.3.2 Foundation Considerations

The sedimentation ponds are constructed below grade in stable, natural soil. Cross sections of the sedimentation ponds are presented in Chapter 7 of this document.

5.3.3.3 Slope Protection

The outslopes and inslopes of the sedimentation ponds are periodically inspected for signs of surface erosion. The inlets and outlets of the ponds are armored with rip rap.

5.3.3.4 Embankment Faces

Sedimentation pond inslopes will be revegetated to protect erosion. Riprap has also been placed to protect pond slopes and embankments near the discharge structures.

5.3.3.5 Highwalls

No highwalls are located within the permitted boundary.

5.3.3.6 MSHA Criteria

No sedimentation ponds in the permit area meet the size criteria of 30 CFR 216(a).

5.3.3.7 Pond Operation and Maintenance Plans

Each sedimentation pond is designed in accordance with R645-301-740. Details of these designs are presented in Chapter 7.

The sedimentation ponds are operated as containment structures, with spillways to discharge water during a storm that exceeds the design capacity. Excess water following a runoff event is held in the ponds until the suspended sediment settles. Water then evaporates, soaks into the ground, or is decanted using a portable pump. Water that is pumped from the ponds will be used for dust suppression at the site.

Inspections of the sedimentation ponds are conducted on a quarterly basis (see Section 5.1.4.3). Maintenance that is required to keep the ponds in good working condition is performed on an as-needed basis.

Sediment is removed from the ponds when it accumulates to 60 percent of the design sediment storage volume. If coal collects in the ponds, this coal will be processed in the coal cleaning facility. Non-coal sediment will be blended with the byproduct material.

5.3.4 Roads

5.3.4.1 Location, Design, Construction, Reconstruction, Use, Maintenance, and Reclamation

Control of Damage to Public or Private Property. All roads used by COVOL were designed in accordance with applicable county and facility-use requirements. By designing according to these standards, damage to public or private property has been minimized.

Road Surfacing. The surface of the facility access road from Ridge Road to the office trailer and the ~~haul-loop~~ road within the permit area is currently surfaced with gravel and is maintained to minimize ruts and pot holes (see Section 5.2.7.2). Once full operations have commenced and are sustained, all roads within the facility will be paved ~~with an asphalt/rock-chip surface~~. No acid- or toxic-forming materials have been or will be used in the road surfaces.

Slope Stability. There are two road embankments within the permit area (~~the dump bin road and the loading silo road~~). ~~One embankment has been constructed for the truck dump hopper and one embankment has been constructed for the alternate loadout hopper.~~ No road slope stability issues have been noted at the site. Given the low profile of these structures and their historic stability, no slope stability analyses of road embankments are considered necessary.

5.3.4.2 Environmental Protection and Safety

Safety and environmental protection were primary concerns during the design and construction of the access road. The grade, width, and surface materials used for the roads were selected to be appropriate for the planned duration and use of the roads.

5.3.4.3 Primary Roads

~~The~~ All facility ~~access roads~~ has have been designed, constructed, and will be maintained to meet the requirements of Utah Administrative Rules R645-301-358, R645-301-527.100, R645-301-527.230, R645-301-534.100, R645-301-534.200, R645-301-542.600, R645-301-542.600, and R645-301-762. Furthermore, the roads has have the following characteristics:

- ~~It is~~ They are located on a stable surface,
- ~~It has~~ They have been constructed with a sufficiently durable surface for the traffic volume and vehicle speeds on the road,
- ~~It is~~ They are routinely maintained, and
- Culverts have been designed, constructed, and are maintained to withstand the loads imparted by the vehicle traffic on the road.

5.3.5 Spoil

No spoil is generated in the permit area.

5.3.6 Coal Mine Waste

Since there is no coal mining at this facility, there is no generation of coal mine waste. The COVOL Dry-Coal Cleaning Facility has been designed to operate so that all ~~“coal processing waste”~~ material brought on site is converted into a marketable product. Therefore, this material is considered a product, not a waste. This is accomplished by blending various grades of coal products for use at client locations. Although some of the material that is temporarily stockpiled at the site may ~~be have been~~ considered “coal processing waste at the off-site location from which it is shipped,” ~~no permanent storage of this~~ the material occurs is considered coal prior to receipt on site by COVOL (see Section 5.1.2.1). Since ~~these coal storage~~ piles in the permit area are frequently disturbed, no compaction is necessary.

5.3.7 Regraded Slopes

Given the relatively flat nature of the site, rReclamation of this facility will not involve significant regrading of slopes.

5.40 Reclamation Plan

5.4.1 General

As indicated in Section 2.2.2.2 of this application, the soil at the COVOL facility is poorly suited for agricultural use. Furthermore, native vegetation in the area is poorly suited for rangeland use of the site (see Section 3.2.1). Hence, in accordance with R645-301-413.120, rather than restoring the land to its pre-disturbance operations use it will be restored to a higher or better post-operations industrial land use consistent with the current zoning of the site and adjacent areas. Since the future owner of the site has not yet been identified, the specific industrial use of the site cannot yet be established. This use will, of necessity however, be consistent with the land-use zoning of the site or such variances to that zoning as permitted by the zoning authority at the time. The extent of site restoration following operations will be determined in consultation with the future land owner. At the end of COVOL operations at the site, COVOL will provide the following to DOGM:

- The name of the entity responsible for post-mining land use,
- A statement from that entity identifying their needs for the property, and
- A right of entry agreement between COVOL and the site user if other than COVOL.

Alternatively, if this information cannot be provided, COVOL will provide DOGM with a clear and concise description of methods to be used for reclamation of the site.

Under the industrial post-operation land-use scenario, the extent of future site reclamation is not currently known. However, the following minimum conditions will be met at the end of COVOL operations at the site:

- All coal product piles or other created stockpiles will be cleaned up to a reasonable level and the site will be graded to the extent required by the future land-owner agreement.
- Permanent structures will be removed unless their continued presence is consistent with the post-operations land use, and
- No physical hazards (e.g., exposed wiring, trip/fall/trap hazards, etc.) will be left in place.

For the sake of developing a reclamation cost estimate, it is assumed in this permit application that the 9.7-acre area south of the facility loop road will be reclaimed/revegetated, with the runoff- and sediment-control structures being retained for use by the future landowner. This area is noted on Plate 5-2. It is also assumed for the sake of reclamation cost estimating that all surface structures will be removed from the remaining areas and, given the economic value of the material, that all coal will have been sold and removed from the area prior to reclamation. As noted in several sections of this Chapter, no coal mine waste exists or is generated at the site. It is furthermore assumed that all coal, trash, and toxic materials will be removed or reclaimed and the ground will be regraded upon site closure as indicated on Plate 5-2. Items assumed to remain following closure of the site include site roads, parking areas, utilities, the septic system, drainage-control structures, the exterior fence, and ramps (see Plate 5-2).

5.4.1.1 Commitment

Upon the permanent cessation of operations at the COVOL Dry-Coal Cleaning Facility, COVOL will reclaim the site so that it is compatible with future industrial uses for which the property is zoned. This will include removal of ~~any remnants of remaining~~ coal stockpiles, ~~coal residue~~, and coal processing structures and equipment. Stockpiled topsoil will be redistributed over ~~the areas not intended for re-disturbance by the future site owner~~ the 9.7-acre area south of the facility loop road and ~~these~~ this areas will be revegetated using the approved seed mix. Since future uses of the property are expected to benefit from existing site improvements, much of the site, including roads, parking areas, ramps, utilities, fencing, drainage control structures, and the septic system will be left in place.

5.4.1.2 Surface Coal Mining and Reclamation Activities

No surface coal mining and reclamation activities will be conducted in the permit area.

5.4.1.3 Underground Coal Mining and Reclamation Activities

No underground coal mining and reclamation activities will be conducted in the permit area.

5.4.1.4 Environmental Protection Performance Standards

The plan presented herein is designed to meet the requirements of R645-301 and the environmental protection performance standards of the State Program.

5.4.2 Narratives, Maps, and Plans

5.4.2.1 Reclamation Timetable

A timetable for the completion of each major step in the reclamation plan is presented in Table 5-2.

5.4.2.2 Plan for Backfilling, Soil Stabilization, Compacting, and Grading

Since reclamation is intended to restore the site for future industrial use, no significant backfilling, soil stabilization, compacting, or grading will occur. Any ~~residual coal and~~ remaining coal piles will be removed and either sold as a product or ~~properly disposed of~~ returned to the original owner. ~~It is anticipated that the volume of materials to be removed will not exceed 1,500 cubic yards.~~ After the coal processing equipment is removed, stockpiled topsoil will be redistributed over the disturbed areas not intended for re-disturbance by the future site owner and these areas will be revegetated using the approved seed mix. The sedimentation ponds and

appurtenant ditches will be left in place for the next landowner. A discussion of the ability of these ponds to meet the permanent impoundment criteria of R645-301-733.220 through 733.226 is provided in Section 7.3.3.2 of this permit application.

As has been mentioned previously, the site needs of an as-yet undefined future landowner have not yet been determined. It is assumed for bonding purposes that the roadways and their associated fill areas, as well as the runoff control ditches and sedimentation ponds, will be needed to support the site uses of future landowner following closure of the COVOL facility. If the roadways, fill areas, bin/reclaim tunnels, and drainage structures are not needed by the future landowner, the responsibility to remove these structures will be subject of contract arrangements between COVOL and the future landowner.

5.4.2.3 Final Surface Configuration Maps and Cross Sections

It is intended that the final surface configuration will be very similar to the current site. The site office and processing structures will be removed. However, no extensive site regrading is anticipated. The anticipated final surface configuration is shown on Plate 5-2.

5.4.2.4 Removal of Temporary Structures

Coal processing equipment and structures will be removed during reclamation. To the extent possible, these structures and facilities will be salvaged. Those materials requiring off-site disposal will be placed in a licensed landfill. Final decisions regarding salvage or disposal of structures and equipment will be made just prior to reclamation following an assessment of the salvageability of the structures and equipment.

To support the continuing industrial use of the site, several structures will be left in place. These structures include the following:

- Septic system,
- Roads and parking areas,
- Truck dump and loadout hopper embankments,
- Diversions, culverts, and sedimentation ponds, and
- Perimeter fence

5.4.2.5 Removal of Sedimentation Ponds

The sedimentation ponds will be left in place for the future landowner. A discussion of the ability of these ponds to meet the permanent impoundment criteria of R645-301-733.220 through 733.226 is provided in Section 7.3.3.2 of this permit application.

5.4.2.6 Roads

All roads and parking areas within the permit area will be left in place for the future landowner.

5.4.2.7 Final Abandonment of Mine Openings and Disposal Areas

There are no mine openings or disposal areas within the permit area.

5.4.2.8 Estimated Cost of Reclamation

The estimated cost to reclaim the COVOL Dry-Coal Cleaning Facility is provided in Chapter 8. Estimated quantities of materials involved in reclamation are also provided in Chapter 8.

5.50 Reclamation Design Criteria and Plans

5.5.1 Casing and Sealing of Underground Openings

There are no underground openings within the permit area.

5.5.2 Permanent Features

5.5.2.1 Small Depressions

Site reclamation will be performed to restore the facility for future industrial use. Roads and diversions will be left in place. Due to the low slope angles present at the site and the presence of roads and diversions to intercept surface runoff, small depressions will not be necessary.

5.5.2.2 Permanent Impoundments

No **permanent**-coal or coal waste impoundments exist within the permitted boundary. The two sedimentation ponds will be left intact for the future landowner. A discussion of the ability of these ponds to meet the permanent impoundment criteria of R645-301-733.220 through 733.226 is provided in Section 7.3.3.2 of this permit application.

5.5.3 Backfilling and Grading

Plans for backfilling and grading of the site upon reclamation have been presented in Section 5.4.2.2. This plan was designed to comply with the applicable requirements of R645-301-500 and R645-301-700. As indicated in Section 5.4.2.2, backfilling and grading operations will be conducted in a controlled manner.

5.5.3.1 Disturbed Area Backfilling and Grading

Approximate Original Contour. The disturbed area will not be significantly altered from the approximate original contour.

Elimination of Highwalls, Spoil Piles, and Depressions. No highwalls or spoil piles exist at the site. Two depressions that serve as sedimentation ponds will be left intact for the future landowner. A discussion of the ability of these ponds to meet the permanent impoundment criteria of R645-301-733.220 through 733.226 is provided in Section 7.3.3.2 of this permit application.

Slope Stability. No significant slopes exist within the permitted boundary that will require regrading.

Erosion and Water Pollution. Existing sediment-control structures will be left in place to minimize water pollution and erosion. Additional water-quality concerns do not exist at the site (see Chapter 7).

Post-Mining Land Use. The disturbed area will be backfilled and regraded in a manner that supports the post-mining industrial land use.

5.5.3.2 Spoil and Waste

Spoil. No spoil is generated within the permit area.

Refuse Piles. No refuse piles exist within the permit area.

Coal Processing Waste. ~~No Coal processing waste exists within the permit area is blended so that it can be sold for offsite uses.~~ It is possible that small quantities (less than 1,500 yd^3 tons) of coal ~~processing waste will be present during~~ exist on site prior to reclamation. If so, this ~~waste coal will either be sold or returned to the original owner as a byproduct or properly disposed of at an offsite location prior to reclamation of the site.~~

5.5.3.3 Exposed Coal Seams, Acid- and Toxic-Forming Materials, and Combustible Materials

Exposed Coal Seams. No coal seams will be exposed as part of this operation.

Acid- and Toxic-Forming Materials. No acid-forming materials exist at the site.

Combustible Materials. No combustible materials will be exposed as part of coal cleaning operations. All combustible materials that are used or produced during operations will be disposed of off site at a proper disposal facility.

5.5.3.4 Cut-and-Fill Terraces

No cut and fill terraces are present at the facility.

5.5.3.5 Highwalls From Previously Mined Areas

No highwalls exist within the permit area.

5.5.3.6 Approximate Original Contour

The facility has been constructed in a relatively flat area, part of which was previously ~~used for industrial purposes~~ disturbed. Only minor alterations have been made to the original contour to level the site and to achieve proper drainage of storm water runoff. Since the site remains relatively level, the existing contour approximates the original contour. In addition, the site will be used for industrial purposes following reclamation of the facility; therefore, no substantial regrading of the site is needed during reclamation.

5.5.3.7 Backfilling and Grading - Thin Overburden

No surface coal mining and reclamation activities involving thin overburden occur within the permit area.

5.5.3.8 Backfilling and Grading - Thick Overburden

No surface coal mining and reclamation activities involving thick overburden occur within the permit area.

5.5.3.9 Regrading of Settled and Revegetated Fills

No regrading of settled and revegetated fills is anticipated in the permit area.

5.60 Performance Standards

Coal mining and reclamation operations at the COVOL Dry-Coal Cleaning Facility will be conducted in accordance with the approved permit and the requirements of R645-301-510 through R645-301-553.

TABLE 5-1

Permit Area Structures

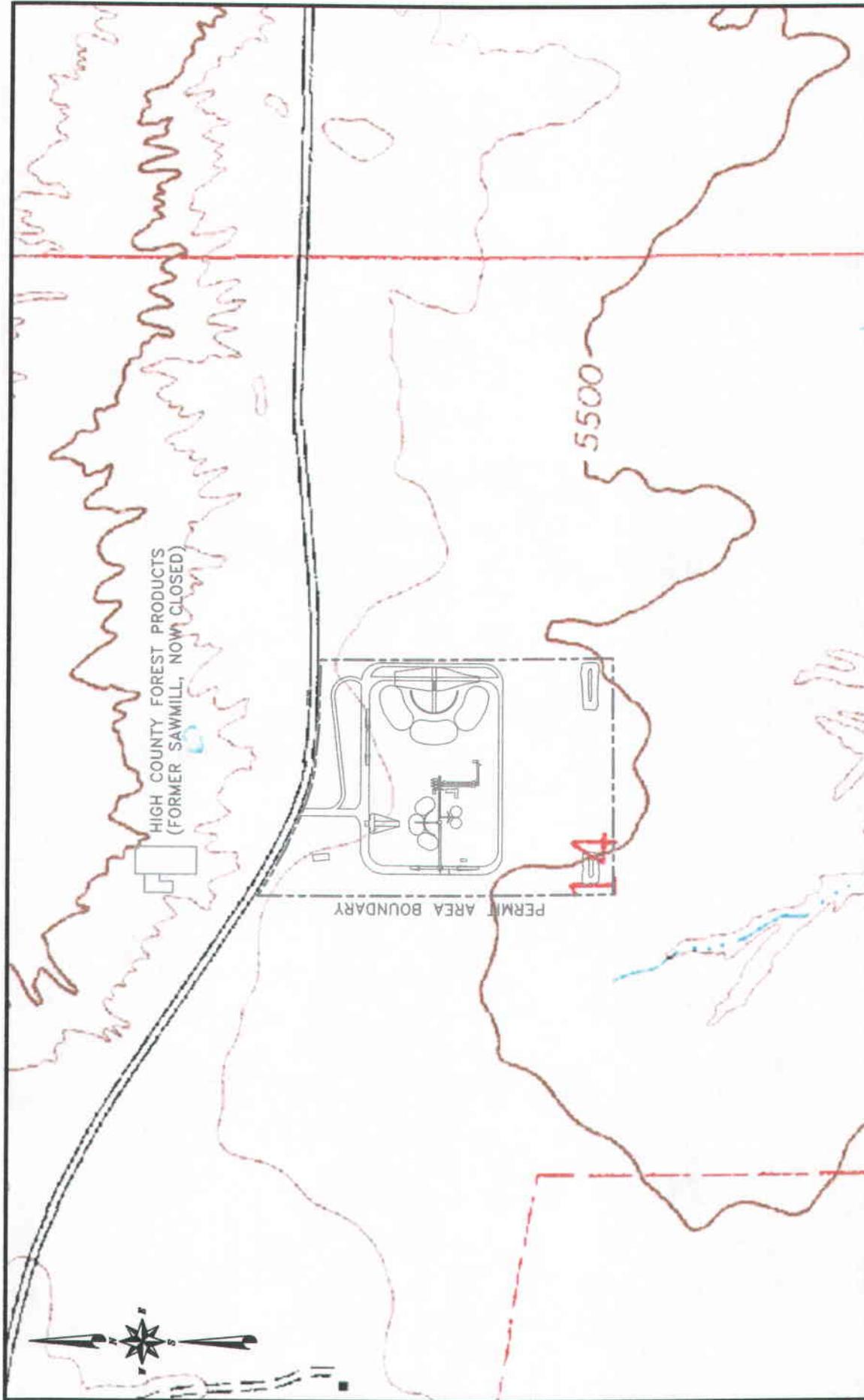
Structure ^(a)
Truck Scale (TS-1)
Truck Scale (TS-2)
Truck Dump Hopper
Blending Hopper
Plant Feed Hopper
Alternate Truck Loading Hopper
Radial Stacker Feed Conveyor (C-01)
Plant Feeder Conveyor (C-02)
Screen Feed Conveyor (C-03)
Fines Feed Conveyor (C-04)
Coarse Feed Conveyor (C-05)
By-Product Conveyor (C-06)
Product Conveyor (C-07)
200 Ton Bin Feed Conveyor
Self-Cleaning Belt Magnet
Screen with Support Structure
Crusher with Support Structure
Air Jigs with Fans and Support Structure
Bag Houses with Fans
Collected Dust Transport System
Raw Feed Radial Stacker (RS-01)
Product Radial Stacker (RS-02)
By-Product Radial Stacker (RS-03)
Diverter Gate
200 Ton Bin
Loading Chutes with Flow Control Gates

^(a) See Plate 5-1 for location within the facility

TABLE 5-2

Revegetation Reclamation Timetable

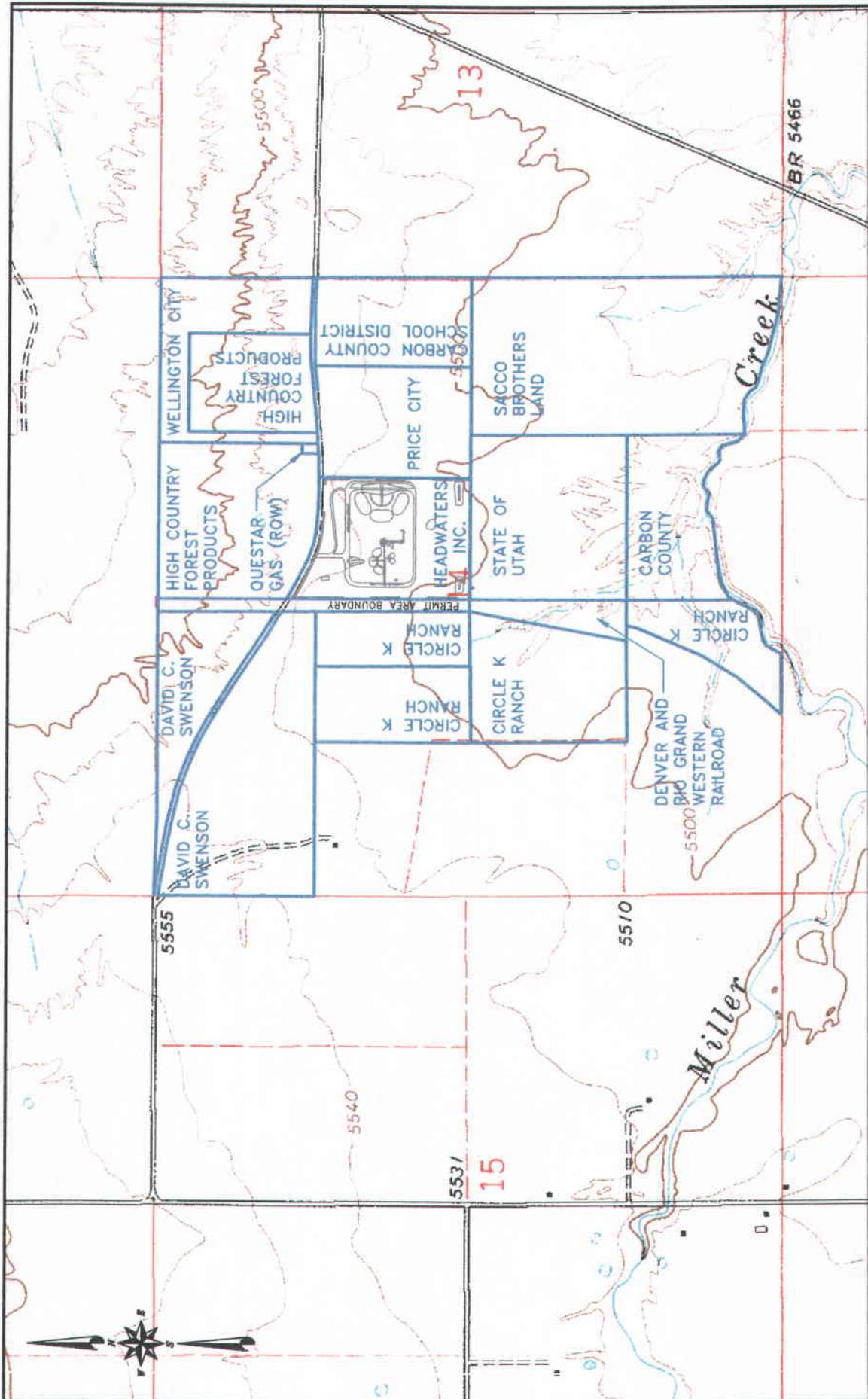
Activity	Approximate Time
Stockpile residual coal-bearing materials on site	½ week
Process residual coal-bearing materials in facility	2 weeks
Remove coal and process byproduct	½ week
Remove coal-processing equipment <ul style="list-style-type: none"> • Conveyors C-1 through C-8 • Radial stackers RS-1 through RS-3 • Air jig/baghouse • Crusher • Truck dump • Silo • Plant feed hopper • Alternate loadout hopper • Truck scales TS-1 and TS-2 	4 weeks
Remove remaining structures to be retained	1 week
Grade minor areas and spread topsoil	½ week
Revegetate regraded areas	½ week
APPROXIMATE TOTAL TIME	9 weeks



BASE MAP: 7.5' USGS QUADRANGLE
PRICE, UTAH 1972



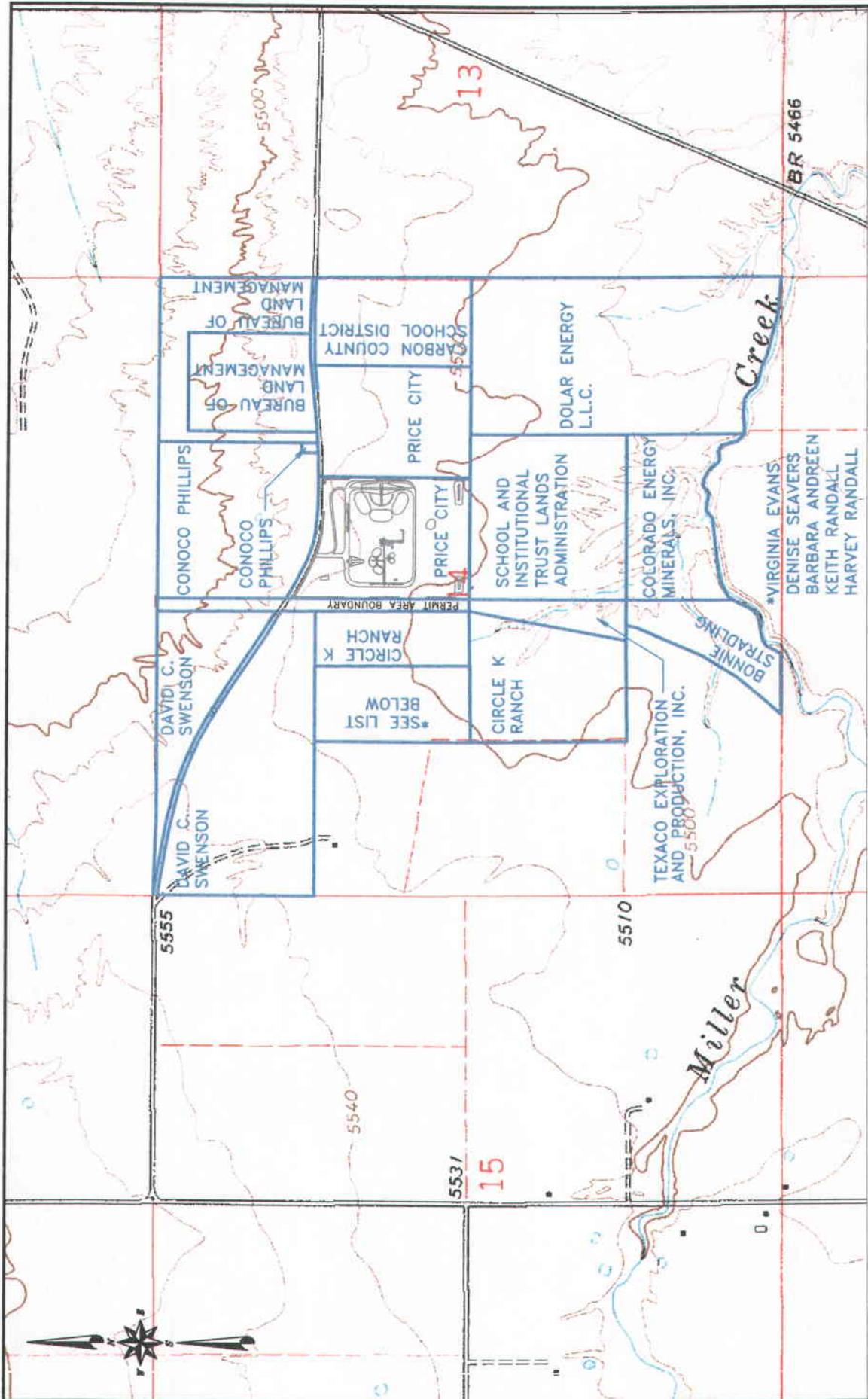
FIGURE 5-1. BUILDINGS IN AND WITHIN 1000 FEET OF PERMIT AREA



BASE MAP: 7.5' USGS QUADRANGLE
 PRICE, UTAH 1972
 OWNERSHIP: INFORMATION TAKEN FROM THE CARBON
 COUNTY GEOGRAPHIC INFORMATION SYSTEM



FIGURE 5-2A. LAND OWNERSHIP (SURFACE)



BASE MAP: 7.5' USGS QUADRANGLE
 PRICE, UTAH 1972
 OWNERSHIP: INFORMATION TAKEN FROM THE CARBON
 COUNTY RECORDERS OFFICE RECORDS



FIGURE 5-2B. LAND OWNERSHIP (SUBSURFACE)

COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
~~January-October 2008~~ March 2009

APPENDIX 5-1

Road Certification

CHAPTER 7

HYDROLOGY

7.10 Introduction

7.1.1 General Requirements

This chapter presents a description of:

- Existing hydrologic resources within the permit and adjacent areas;
- Proposed operations and the potential impacts to the hydrologic balance;
- Methods of compliance with design criteria;
- Applicable hydrologic performance standards; and
- Hydrologic reclamation plans for the COVOL Dry-Coal Cleaning Facility.

7.1.2 Certification

All appropriate maps, plans, and cross sections presented in this chapter have been certified by a qualified, registered professional engineer.

7.1.3 Inspection

Impoundments associated with the mining and reclamation operations will be inspected as described in Section 5.1.4.3 of this document.

7.20 Environmental Description

7.2.1 General Requirements

This section presents a description of the pre-operational hydrologic resources within the permit and adjacent areas that may be affected or impacted by the operation and reclamation of the facility and site.

7.2.2 Cross Sections and Maps

7.2.2.1 Location and Extent of Subsurface Water

~~Based on published information and logs of nearby wells~~ Data collected from the Savage Coal Terminal, located about 0.25 mile north of the COVOL permit area, indicates that groundwater occurs in is potentially located in both shallow, discontinuous, perched Quaternary unconsolidated deposits above bedrock and in the Ferron Sandstone Member of the Mancos Shale, which is approximately 700 feet below the ground surface at the permit area (Savage Services Corporation, 1983). These two potential water-bearing units are separated by the Bluegate Shale Member of the Mancos Shale, which is highly impermeable. A generalized hydrostratigraphic cross section of the ~~permit and adjacent~~ areas is presented in Figure 7-1.

Shallow, perched groundwater may occur in the area in disconnected, unconsolidated materials that overly relatively impermeable bedrock. The primary sources of recharge to these layers are precipitation, infiltration from losing reaches of streams, irrigation, and groundwater discharge from bedrock. These water-bearing units generally range in thickness from a few feet to up to several tens of feet. Groundwater in these units generally contains high total dissolved solids ("TDS") concentrations (Gloyn et al., 2003). Groundwater monitoring wells and a French drain installed at the Savage Coal Terminal, located approximately 0.25 mile north of the COVOL Dry-

Coal Cleaning Facility, were constructed from 6 to 20 feet deep into this these materials. Water samples from these wells often contain over 2,000 mg/L TDS (Savage Services Corporation, 1983).

COVOL installed a monitoring well in the permit area in December 2008. Since shallow groundwater generally follows the surface contour, the direction of shallow groundwater flow beneath the permit area was assumed to be toward the southeast. To monitor the effects, if any, of facility operation, the well was installed near the southeast corner of the operating facility at the location indicated in Figure 7-2. This well was drilled using hollow-stem auger methods to a depth of 13 feet in the Mancos Shale, at which point refusal was encountered. The well was completed with 2-inch diameter PVC screen and casing, with a 20- to 40-mesh silica sand filter pack and a bentonite surface seal. Lithologic and completion logs for the well are provided in Appendix 7-1.

The monitoring well was sampled on December 24, 2008, with the data collected during that monitoring event presented in Table 7-1. As indicated, the depth to groundwater in December 2008 was 12.0 feet. The water had a temperature of 12.1°C, with a field pH of 7.40 and a field specific conductance of 9.900 mS. The water is a sodium-sulfate type, with a total dissolved solids concentration of 11,000 mg/L. Total and dissolved iron concentrations were detected at 300 and <0.050 mg/L, respectively. Total and dissolve d manganese concentrations were detected at 3.9 and 0.57 mg/L, respectively. These findings are consistent with the generalized hydrostratigraphic diagram presented in Figure 7-1 and the data collected from the nearby Savage Coal Terminal.

The Ferron Sandstone consists of very fine-grained, silty sandstone with abundant interbedded carbonaceous shale. It is located about 700 feet below the ground surface of the permit area, and is approximately 80 feet thick in the region (Gloyn et al, 2003). A coal-bed methane well constructed in Township 14S Range 10E, SLBM (one township north of the permit area) and completed in the Ferron Sandstone contained 6,500 to 9,000 mg/L TDS (Gloyn et al, 2003). Another well drilled into the Ferron Sandstone about 0.3 mile north of the coal cleaning facility did not encounter any groundwater (source: DOGM Oil and Gas Well Database).

7.2.2.2 Location of Surface Water Bodies

A map showing the location of surface water bodies in the area, ~~including the only nearby water right~~, is provided in Figure 7-23. A listing of water rights data is presented in Appendix 7-12. ~~As indicated in that appendix, 69 point-of-use water rights exist in Section 14, T. 15 S., R. 10 E. (the section in which the permit area is located). The vast majority of these rights are held by the Price River Water User's Association and represent water that is diverted remote from the permit area and delivered via distribution systems throughout the region for industrial use (as well as limited stockwatering and domestic use). The only point-of-diversion water rights filed in the vicinity of the facility is~~ Section 14 are for stock watering on Miller Creek (see Figure 7-23). This map also shows the locations of the facility sedimentation ponds, which are the only permitted discharge locations at the site.

7.2.2.3 Locations of Monitoring Stations

~~As indicated in Section 7.4.2.2, all runoff from the permit area flows into sedimentation ponds located in the downstream portions of the site. These ponds were constructed to contain far more than the quantities of sediment and runoff required by the DOGM regulations. Hence, surface outflows from the permit boundary are not anticipated except under conditions of extreme precipitation. Since all surface runoff from the permit area will flow into the sedimentation ponds, No surface or groundwater monitoring stations other than the pond outlets have been installed for this facility. The locations of these ponds are shown on Plate 5-1. COVOL is required to monitor the discharges from these ponds in accordance with UPDES discharge permit No. UTR000685 issued by the Utah Division of Water Quality.~~

~~However, COVOL will installed one monitoring well during the fourth quarter of in December 2008 to monitor groundwater at the downgradient edge of the permit area. The location of this monitoring well, as shown on Figure 7-2, will be was selected in consultation with DOGM.~~

Groundwater resources are not used at or near the site, and it is unlikely that they are impacted by

activities within the permit area. The shallow ~~Quaternary sediments~~ groundwater beneath the site ~~are~~ is not beneficially used and ~~likely contains~~ poor quality water, as indicated in Section 7.2.2.1.

The facility uses municipal water and site runoff is controlled in accordance with the R645 rules and a Storm Water Pollution Prevention Plan. ~~There are n~~ No perennial water bodies occur within the permit ~~or adjacent~~ areas.

7.2.2.4 Location and Depth of Water Wells

No water-supply wells ~~or groundwater monitoring wells~~ currently exist in the permit ~~or adjacent~~ areas. However, as noted above, a monitoring well will be ~~was~~ installed within the permit area in the fourth quarter of 2008. Stratigraphic and completion logs of this well will be ~~are~~ provided after it is installed in Appendix 7-1.

7.2.2.5 Surface Topography

Surface topographic features in the permit and adjacent areas are shown on Plate 5-1. Note that, other than the sedimentation ponds, the topography shown on this map was surveyed prior to site grading at the facility. The size and locations of the sedimentation ponds are based on a survey performed ~~by EIS Environmental and Engineering Consulting (EIS, 2007) and superimposed on the pre-existing topography in September 2008.~~ The site is relatively flat and only minor site regrading was performed to facilitate the drainage of storm water runoff. Since the existing site contours approximate the original site contours and the sedimentation ponds have a great deal of extra capacity, the hydrology calculations discussed in this chapter should adequately represent site conditions.

7.2.3 Sampling and Analysis

~~In accordance with the agreement between COVOL and DOGM, no groundwater sampling has been conducted at this facility. A groundwater monitoring well will be installed within the permit area during the fourth quarter of 2008. Water-level data and water-quality samples were collected in December 2008 and will be collected from this well on a quarterly basis for the first year following installation of the well and during the first year of reclamation after plant operations cease. Analytical parameters will to be analyzed are listed in Table 7-1. These parameters were determined in consultation with DOGM.~~

As discussed in Section 7.2.2.3, all runoff from the permit area flows into sedimentation ponds located in the downstream (southern) portion of the site. Hence, surface water monitoring will consist of sampling discharges (if any) from the sedimentation ponds in accordance with the UPDES permit.

7.2.4 Baseline Information

Surface water, groundwater, and climatic resource information is presented in this section to assist in determining the baseline hydrologic conditions which exist in the area of the facility. This information provides background data on the hydrologic balance of the area.

7.2.4.1 Groundwater Information

A brief discussion of groundwater information is included in section 7.2.2.1 of this document. Groundwater in the vicinity of the COVOL Dry-Coal Cleaning facility has been found in localized shallow, perched zones within unconsolidated surficial materials weathered from the Bluegate Shale and within the Ferron Sandstone. Based on the findings from a groundwater monitoring wells drilled for the nearby Savage Coal Terminal in the permit area, shallow groundwater is saline, contains high levels of dissolved solids, and is generally poorly suited for drinking or irrigation (~~Savage Services Corporation, 1983~~).

7.2.4.2 Surface Water Information

The COVOL Dry-Coal Cleaning Facility is located on land that drains to the south toward Miller Creek, located approximately 2000 feet south of the permit area. Drainage occurs as overland flow or in ephemeral washes that flow in direct response to precipitation events. Based on field observations of vegetation, geomorphic conditions, and the presence of some surface water in the late summer/early autumn of 2007 and 2008 as well as the late winter/early spring of 2009, it appears that Miller Creek is a small-perennial stream at its location south of the permit area. These observations are supported by the fact that Miller Creek appears on the USGS topographic map of the area as a solid line (the symbol used for perennial streams). Miller Creek stream that feeds into the Price River in Wellington, Utah. The Price River is a tributary of the Green River. Stream gage data collected from 1972 to 1986 shows that the average annual flow volume of the Price River just below its confluence with Miller Creek is 105,565 acre-feet (Utah Division of Water Resources, 2000). No historical stream gage data exist for Miller Creek.

Figure 7-23 shows a tributary to Miller Creek approximately 400 feet southwest of the southwest corner of the permit area. Based on field observations of vegetation, geomorphic conditions, the lack of surface water, and the lack of a well-defined surface flow path within the greater channel, this tributary is appear to be an ephemeral channel that receives surface runoff in response to rainfall and snowmelt events. These observations are supported by the limited drainage area and the fact that this stream is represented on the USGS topographic map with a symbol other than a solid line. Irrigation return flow may also discharge into this channel 900 to 1000 feet south-southeast of the permit area.

As part of the UPDES permit, water samples will be collected from the sedimentation ponds before any impounded water is released. A copy of the UPDES Permit is included in Appendix 7-23. Published water quality data for the Price River show a decrease in water quality as it flows from the Wasatch Plateau toward the Green River. This decrease is attributed to the presence of soluble minerals in the surrounding rocks (principally the Mancos Shale), saline soils,

and irrigation return flows (Savage Services Corporation, 1983). Typical TDS values are 400 mg/L in the upper reaches of the Price River, 600 to 2,400 mg/L near Wellington, and 2,000 to 4,000 mg/L at Woodside, which is several miles downstream (Savage Services Corporation, 1983).

7.2.4.3 Geologic Information

Geologic information related to the permit and adjacent areas is presented in Chapter 6 of this document.

7.2.4.4 Climatological Information

Based on regional data collected from June 1980 to January 2005, normal annual precipitation at the permit area is about 9.2 inches per year. Most of this precipitation occurs during July through September as a result of summer thunderstorms (Western Regional Climate Center - <http://www.wrcc.dri.edu/index.html>).

The station closest to the facility that reports wind data is located at the airport at Price, Utah (approximately 5 miles west of the facility). The average annual wind speed at this location between 1996 and 2006 was 6.8 mph (Western Regional Climate Center web site).

The normal annual temperature at the Price Warehouses, Utah station (located 5 miles west of the facility) is 49.9° F. Seasonally, this temperature varies from a normal monthly low of 13.4° F in January to a normal monthly high of 90.0° F in July (Western Regional Climate Center web site).

7.2.4.5 Supplemental Information

No supplemental information is required at this time.

7.2.4.6 Survey of Renewable Resource Lands

The existence and recharge of aquifers in the permit and adjacent areas is discussed in Sections 7.2.2.1 and 7.2.4.1 of this document.

7.2.4.7 Alluvial Valley Floor Requirements

Information regarding the presence or absence of alluvial valley floors in the permit and adjacent areas is presented in Chapter 9 of this document.

7.2.5 Baseline Cumulative Impact Area Information

Information concerning the hydrology of the region is available in various publications, including Mundorff (1972), Waddell et al. (1981), Waddell et al. (1982), Waddell et al. (1986), and Gloyn et al. (2003). Since the hydrologic impact of the operations will be insignificant, it is not anticipated that revisions ~~are~~ will be needed to the Cumulative Hydrologic Impact Assessment of the area.

7.2.6 Modeling

No numerical groundwater or surface water modeling was conducted in support of this document.

7.2.7 Alternative Water Source Information

No surface mining has been or will be conducted in the permit and adjacent areas. Therefore, this section does not apply to the COVOL Dry-Coal Cleaning Facility.

7.2.8 Probable Hydrologic Consequences

This section addresses the probable hydrologic consequences of coal cleaning and reclamation operations in the permit and adjacent areas. Mitigating measures are discussed generally in this section and as well as in Section 7.3 of this document.

7.2.8.1 Potential Impacts to Surface and Groundwater

Potential impacts of coal cleaning on the quality and quantity of surface and groundwater flow are discussed in the facility's Storm Water Pollution and Prevention Plan and may include the following:

- Coal ~~fin~~es, equipment fuels and fluids from the truck dump and coal storage area;
- Equipment fuels and fluids from the front end loader;
- Coal ~~fin~~es and lubricant from the conveyor belt; and
- Coal ~~fin~~es and lubricant from the silo.

A copy of the SWP3 is included in Appendix 7-~~34~~. These potential impacts are addressed in the following sections of this document.

7.2.8.2 Baseline Hydrologic and Geologic Information

Baseline geologic information is presented in Chapter 6 of this document. Baseline hydrologic information is presented in Sections 7.2.4.1 and 7.2.4.2 of this document.

7.2.8.3 PHC Determination

Potential Impacts to the Hydrologic Balance. Potential impacts to the hydrologic balance are addressed in the following subsections of this document.

Acid- or Toxic- Forming Materials. ~~No acid- or toxic-forming materials are present at the COVOL Dry-Coal Cleaning Facility. As noted in Section 5.2.8.3, the coal processed in the permit~~

area comes from coal fields that historically have not produced significant acid or toxic materials. This greatly minimizes the potential for acid- or toxic-forming materials to be present at the site. Furthermore, coal is only temporarily stored in the permit area, the native soils at the site are alkaline, and sediment and runoff are retained on site through the use of sedimentation ponds. This further minimizes the potential for drainage from the site to adversely affect water quality, vegetation, public health, and safety of workers and the public.

Sediment Yield. The potential impact of mining and reclamation on sediment yield is an increase in sediment in the surface waters downstream from disturbed areas. Sediment-control measures (such as sedimentation ponds, drainage ditches, etc.) have been designed and constructed to minimize this impact. All runoff from the facility is directed toward one of two on-site sedimentation ponds that allow for sediment to settle. The ponds contain spillways to control discharge in the unlikely event that the ponds overflow. All runoff controls are regularly inspected (see Section 5.1.4) and maintained. The facility operates under UPDES Permit UTR000685, and also has a Storm Water Pollution Prevention Plan and a Spill Prevention Control and Countermeasure Plan. Copies of these permits are attached in Appendices 7-2, 7-3, and 7-4 respectively.

Acidity, Total Suspended Solids, and Total Dissolved Solids. Probable impacts of operations on the acidity and total suspended solids concentrations of surface and groundwater in the permit and adjacent areas were addressed previously in this section.

Flooding or Streamflow Alteration. The disturbed area is isolated from surrounding areas by runoff control structures such as earthen berms, diversion ditches, and sedimentation ponds. Runoff from all disturbed areas flows to sedimentation ponds prior to discharge to adjacent undisturbed drainages. Since ~~there will be~~ no mining or exploration will occur at this site, there will be no impact on flooding or stream flows due to subsidence.

Groundwater and Surface Water Availability. Runoff controls at the site will minimize impacts to adjacent surface resources. As noted in Section 7.2.4.2, impacts to groundwater are also considered to be insignificant due to a combination of limited groundwater resources, poor groundwater quality, and relatively impermeable geologic materials at the site. Furthermore, the coal cleaning facility uses limited amounts of water, thereby further minimizing potential adverse impacts to surface and groundwater.

Potential Hydrocarbon Contamination. Diesel fuel, oils, greases, and other hydrocarbon products are stored and used at the site for a variety of purposes. Diesel is stored in an above-ground tank that is provided with secondary containment. Spills onto the ground have the potential to occur during filling of the storage tank or filling of mobile equipment. Similarly, spills from drums containing greases and other oils may potentially occur during use at the site.

The probable future extent of the contamination caused by diesel and oil spillage is expected to be small for four reasons. First, all tanks and drums are stored in secondary containment structures that prevent leaks from reaching the ground. Second, spills caused by filling operations outside of the secondary containment structures will be minimized due to the economic value of the product. Third, because the tanks and drums are located above ground, leakage from the tanks can be readily detected and repaired. Finally, the Spill Prevention Control and Countermeasure Plan included in Appendix 7-45 mandates inspection, training, and operational measures to minimize the extent of contamination resulting from the use of hydrocarbons at the site.

Road Salting. No salting of the haul road occurs within the permit area. Hence, no impact will result from this action in the permit or adjacent areas.

Coal Haulage. Coal is hauled on the haul road within the permit area. Coal spillage will be promptly picked up. In addition to spills, wind may carry coal dust or small pieces of coal away

from the open top of coal trucks. The impact from fugitive coal dust is considered to be insignificant due to the fugitive dust control measures implemented at the site.

7.2.9 Cumulative Hydrologic Impact Assessment (CHIA)

Information is provided in this application that will allow DOGM to update a Cumulative Hydrologic Impact Assessment if necessary.

7.30 Operation Plan

7.3.1 General Requirements

This permit application includes an operation plan which addresses the following:

- Groundwater and Surface Water Protection and Monitoring Plan
- Design Criteria and Plans
- Performance Standards
- Reclamation Plan.

7.3.1.1 Hydrologic-Balance Protection

Groundwater Protection. As indicated in Section 7.2.8.3, No significant potential exists for acid- or toxic-forming materials are disposed of at the site to be present in the permit area. If these materials are found to be present, they will be handled in accordance with Section 7.3.1.3. In this manner, COVOL will manage operations to prevent or control discharges of pollutants to the groundwater.

Surface Water Protection. A runoff control plan has been implemented to minimize, to the extent possible, additional contributions of suspended solids to streamflow outside the permit

area, and otherwise prevent water pollution. COVOL will maintain adequate runoff- and sediment-control facilities to protect local surface waters.

7.3.1.2 Water Monitoring

Groundwater Monitoring. ~~No COVOL will installed one groundwater monitoring well within the permit area during the fourth quarter of 2008 is conducted at this facility. Monitoring parameters of this well will be determined in consultation with DOGM occur as outlined in Section 7.2.3.~~

Surface Water Monitoring. ~~No streams exist within permit or adjacent areas. The closest perennial stream (Miller Creek) is located about 2000 feet south of the permit area. Therefore, only storm water will be monitored where it discharges from the sedimentation ponds. Surface water monitoring is of these discharges will be conducted in the permit and adjacent areas in accordance with the requirements of the UPDES permit.~~

7.3.1.3 Acid- and Toxic-Forming Materials

~~Acid- and toxic-forming materials are not permanently stored at the COVOL Dry-Coal Cleaning Facility. In the event that acid- or toxic-forming materials are brought to the facility, they will be handled appropriately. As noted in Section 7.2.8.3, no significant potential exists for acid- or toxic-forming materials to be present at the site or to adversely affect water quality, vegetation, public health, and safety of workers and the public. To further minimize the potential for surface- and groundwater contamination, COVOL will request data concerning acid- and toxic-forming materials from clients who provide the coal that is being processed. If such materials are present (based on a comparison of the client-provided data with DOGM guidelines) and this coal will be retained on site for longer than one month, sample all coal and coal waste that remains on site after an inactive period of 30 days. COVOL will collect one sample for every 2,000 yd³ of the residual coal on-site material, composite these samples for the like material, and have this sample analyzed~~

for acid-and toxic-forming materials in accordance with Tables 7 and 8 of DOGM's Guidelines for the Analysis of Topsoil and Overburden. CoalMaterial that is verified to contain acid- and toxic-forming materials will be processed no longer than one month following the receipt of verifying analyses of the COVOL samples.

7.3.1.4 Transfer of Wells

No wells exist at the facility.

7.3.1.5 Discharges

Two UPDES discharges are associated with the COVOL Dry-Coal Cleaning Facility – one for each sedimentation pond.

7.3.1.6 Stream Buffer Zones

The facility is not located within 100 feet of any perennial or intermittent stream channels. Thus, no buffer zones have been designated.

7.3.1.7 Cross Sections and Maps

The locations of water rights for current users of surface water in the general area are provided on Figure 7-23. Discharges associated with the sedimentation ponds are located as presented on this figure.

7.3.1.8 Water Rights and Replacement

Since there is no surface mining at the COVOL Dry-Coal Cleaning Facility, this section does not apply. COVOL will replace the water supply of an owner of interest in real property who

obtains all or part of his or her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source, where the supply has been adversely impacted by contamination, diminution, or interruption proximately resulting from activities conducted by COVOL in the permit area.

7.3.2 Sediment Control Measures

The existing sediment control measures within the permit area have been designed, constructed, and maintained to prevent additional contributions of sediment to streams or to runoff outside the permit area. In addition, they have been designed to meet applicable effluent limitations, and minimize erosion. The structures to be used for the runoff control at the site include diversion channels, sedimentation ponds, containment berms, silt fences, and road diversions and culverts.

7.3.2.1 Siltation Structures

The siltation structures within the permit area consist of the sedimentation ponds described in Section 7.3.2.2.

7.3.2.2 Sedimentation Ponds

Two sedimentation ponds store precipitation runoff from the facility. Ordinarily, runoff collected in these ponds is allowed to evaporate or percolate into the ground. Sediment that accumulates in the ponds will be removed as needed. Runoff may be pumped out of the sediment ponds and used for dust suppression in accordance with the air quality permit.

Compliance Requirements. All sedimentation ponds will be maintained until the site is reclaimed or transferred to a future landowner. The sedimentation ponds were designed to contain sediment in addition to the runoff resulting from the 10-year, 24-hour storm event. The spillways

for the sedimentation ponds were designed to adequately pass the peak flow resulting from the 25-year, 6-hour precipitation event.

MSHA Requirements. The sedimentation ponds at the site do not meet the size criteria of MSHA requirements defined in 30 CFR 77.216.

7.3.2.3 Diversions

The objective of the runoff control plan is to isolate, to the maximum degree possible, runoff from disturbed areas ~~from that of undisturbed areas~~. All diversion ditches are maintained with adequate erosion protection in the ditch sections where flow velocities are great enough that a ditch lining is necessary. Adequate ditch capacities are maintained in all ditch sections. Culverts are kept free of debris. Detailed diversion design is presented in Section 7.4.2.

7.3.2.4 Road Drainage

Road drainage facilities include diversion ditches, culverts, and containment berms. Additional road drainage design information is presented in Section 7.4.2. All road drainage diversions will be maintained and repaired as needed following the occurrence of a large storm event. Culvert inlets and outlets will be kept clear of sediment and other debris.

7.3.3 Impoundments

7.3.3.1 General Plans

~~There are t~~wo sedimentation ponds operateing at the facility as described in Section 7.3.2.2.

Certification. All maps and cross sections of the sedimentation ponds have been prepared by or under the direction of and certified by a qualified, registered, professional engineer.

Maps and Cross Sections. The topography and cross sections for the sedimentation ponds are located on Plate 7-1. The geometry of drainage channels and the sedimentation ponds were measured in the field, and placed on the map using an aerial photograph of the site.

Narrative. A description of each sedimentation pond is presented in Sections 7.3.2.2 and 7.4.2 of this document.

Subsidence Survey Results. Since ~~there is~~ no mining occurs at the site, a subsidence survey is not presented.

Hydrologic Impact. The hydrologic and geologic information required to assess the hydrologic impacts of the impoundments can be found in Section 7.2.4 and Chapter 6, respectively.

Design Plans and Construction Schedule. ~~There are n~~No additional impounding structures are proposed for the facility at this time. Designs of all existing structures are described in this document.

7.3.3.2 Permanent and Temporary Impoundments

Requirements. Impoundments at the facility consist of the two sedimentation ponds. These ponds will be retained following closure of the site for use by the future landowner to control runoff from the property. They have been designed and constructed using current, prudent, engineering practices. Since they have been constructed below grade, they are considered to be stable. Specific hydrologic design criteria for each impoundment are presented in Section 7.4.3. Each impoundment will be inspected regularly based on the schedule contained in Section 5.1.4.3.

The sedimentation ponds meet the requirements for retention as permanent impoundments as indicated below:

- R645-301-733.221: The future use of the ponds would be for runoff and sediment control. The ponds were designed in accordance with the requirements of the R645 rules, which requirements are consistent with the storm-water control requirements of the Utah Division of Water Quality. Thus, the size and configuration of the impoundments is adequate for their future intended use as storm-water control structure.
- R645-301-733.222: The ponds have been designed to meet the water-quality requirements of the R645 rules, which rules are consistent with Utah and federal water-quality standards for storm-water control structures. Hence, discharges from the ponds will meet applicable effluent limitations and will not degrade the quality of receiving waters below applicable Utah and federal water-quality standards.
- R645-301-733.223: The ponds will function in the future as runoff-control structures. As such, their operation is independent of water-level fluctuations.
- R645-301-733.224: The ponds are designed as runoff- and sediment-control structures. It is not intended that they be accessed by water users, either now or in the future.
- R645-301-733.225: The effect of the ponds on the quantity and quality of water in the general area is discussed in Section 7.2.8.3 of this application. Beneficial effects to water quality and insignificant effects on water quantity will continue in the future.
- R645-301-733.226: The ponds were designed to serve as storm-water control structures. This is accomplished by retaining sediment and detaining runoff on site to minimize the effects of site development on adjacent lands. The ponds are suitable to serve these functions in the future.

Hazard Notifications. The sedimentation ponds will be examined for structural weakness and erosion at least four times per year.

7.3.4 Discharge Structures

The discharge structures at the site include the spillways on the sedimentation ponds. These discharge structures are described in Section 7.4.4.

7.3.5 Disposal of Excess Spoil

~~There is a~~ No excess spoil is generated at the facility.

7.3.6 Coal Mine Waste

No coal mine waste is stored at the facility.

7.3.7 Noncoal Mine Waste

Non-coal mine waste is not stored ~~and or~~ disposed of on site (see Chapter 5).

7.3.8 Temporary Casing and Sealing of Wells

~~There are no~~ The future groundwater monitoring wells at the facility will be constructed in compliance with R645-301-748.

7.40 Design Criteria and Plans

7.4.1 General Requirements

This section includes site-specific plans that incorporate minimum design criteria for the control of drainage from disturbed ~~and undisturbed~~ areas. Refer to Appendix 7-56 for a description of the hydrologic design methods used to design the sedimentation ponds and diversion structures at the facility.

7.4.2 Sediment Control Measures

7.4.2.1 General Requirements

Design. Existing sediment control measures have been designed, constructed and maintained to:

- Prevent additional contributions of sediment to stream flow or to runoff outside the permit area,
- Meet the effluent limitations defined in R645-301-751, and
- Minimize erosion to the extent possible.

Measures and Methods. The sediment control measures at the facility include:

- Retention of sediment within the disturbed area
- Diversion of runoff using channels or culverts through disturbed areas to prevent additional erosion
- Provide straw bale dikes, riprap, dugout ponds, silt fencing, and other measures that reduce overland flow velocities, reduce runoff volumes or trap sediment.

7.4.2.2 Siltation Structures

General Requirements. Additional contributions of suspended solids and sediment to stream flow or runoff outside the permit area is being prevented to the extent possible using two sedimentation ponds as siltation structures. They are located in the southeast and southwest corners of the disturbed area. Each structure has been certified by a qualified registered professional engineer. They have been designed, constructed and maintained as described in Chapter 5 and Sections 7.3.3 and 7.4.3.

Sedimentation Ponds. The sedimentation ponds are designed to work individually. One pond receives runoff from the eastern portion of the disturbed area, and one pond receives runoff from the western portion of the disturbed area. ~~The sedimentation ponds within the downstream portion of the disturbed area.~~ Neither of the ponds is located within a perennial stream channel.

Sediment Storage Volume. The sedimentation ponds were designed to contain sediment in addition to runoff from the design storm event. The expected annual sediment volume reporting to

each of the sedimentation ponds was calculated using a modified form of the Universal Soil Loss Equation developed specifically for conditions in Utah (Israelsen et al., 1984). As indicated in Table 7-1-2 and Appendix 7-67, the calculated annual sediment volume deposited in the eastern sedimentation pond is 333 cubic feet, and the calculated annual sediment volume deposited in the western sedimentation pond is 134 cubic feet.

The east and west sedimentation ponds have been constructed to store 16,930 and 12,730 cubic feet of sediment, respectively. These volumes correspond to approximately 51 and 95 years of average annual sediment storage for the east and west ponds, respectively. The practical effect of the substantial sediment storage life of the ponds will be to provide excess runoff storage during the period of facility operation. Based on a bottom elevation of 5,493.8 feet in the east sedimentation pond and 5,498.2 feet in the west sedimentation pond, the elevation in each sedimentation pond corresponding to the maximum sediment storage is 5,498.6 feet in the east pond (4.8 feet above the bottom) and 5,505.4 feet in the west pond (7.2 feet above the bottom). The 60% sediment cleanout elevations for the east and west sedimentation ponds are 5,497.3 feet and 5,503.4 feet, respectively (3.5 and 5.2 feet above the bottoms, respectively). Refer to Appendix 7-67 for sediment storage calculations.

Detention Time. Given the substantial storage volume of the ponds relative to standard site requirements, an adequate detention time will be provided in each pond to allow the effluent to meet UPDES limitations. Prior to discharge of pond water to the adjacent area, this water will be sampled to ensure that it meets the above-referenced effluent limitations. Water may be periodically pumped from the ponds and used for dust suppression within the permit area.

Design Runoff Event. The sedimentation ponds are designed to fully contain runoff resulting from the 10-year, 24-hour precipitation event. The drainage characteristics, including contributing area, runoff curve number, and hydraulic length were calculated as shown in Appendix 7-67. The runoff storage volumes for the design event were calculated to be 36,970 and 14,850 cubic feet for the east and west ponds, respectively. In order to contain runoff from the design

precipitation event and the design sediment volume, the elevations of the spillways were located at 5,503.8 feet and 5,508.0 feet for the east and west sedimentation ponds, respectively.

Sediment Removal. Sediment will be removed from the when the sediment level reaches an elevation corresponding to 60% of the total sediment storage volume. As noted in Plate 7-1 and Appendix 7-67, the 60% clean-out elevation is 5,497.3 feet and 5,503.4 feet for the east and west sedimentation ponds, respectively. Sediment that contains a significant amount of coal will be processed at the coal cleaning facility. Sediment that contains an insignificant amount of coal will be blended with byproduct produced at the facility.

Excessive Settlement. The sedimentation ponds within the permit area were excavated into natural soil. Excessive settlement has not been observed and, given the excavated construction, is not anticipated in the future at either sedimentation pond.

Embankment Material. Sedimentation pond embankment materials are free of sod, large roots, frozen soil, and acid- or toxic forming coal-processing waste.

Compaction. During construction the sedimentation ponds, the limited embankments were compacted using standard construction practices.

MSHA Sedimentation Ponds. The sedimentation ponds at the site do not meet the size criteria of MSHA requirements defined in 30 CFR 77.216.

Sedimentation Pond Spillways. Each sedimentation pond is equipped with a swale on its downstream side that serves as a spillway. Each spillway is trapezoidal in cross section and measures approximately 2 feet deep and 1 foot wide with 1H:1V side slopes. These spillways were designed to safely discharge the peak flow resulting from the 25-year, 6-hour precipitation event (see Appendix 7-67). If the ponds spill, this water will discharge as overland flow, eventually reaching Miller Creek if it does not first infiltrate. The design spillway event was modeled using

HydroCAD 8.5 computer software. Since the sedimentation ponds contain sufficient volume to contain several years' worth of sediment yield, it is likely that the ponds will not spill during COVOL operations.

In the eastern pond, the peak inflow during the 25-year, 6-hour precipitation was calculated to be 9.99 cubic feet per second ("cfs"), and the peak outflow through the spillway was calculated to be 2.29 cfs with a peak velocity of 2.01 feet per second ("fps"). Since the peak outflow velocity is less than approximately 5 fps, it is considered non-erosive, and erosion protection is not required. The peak stage during this event was calculated to be 5,504.3 feet (10.5 feet above the pond bottom).

In the western pond, the peak inflow during the 25-year, 6-hour precipitation was calculated to be 3.24 cfs, and the peak outflow was calculated to be 0.04 cfs with a peak velocity of 0.46 fps. Since the peak outflow velocity is less than approximately 5 fps, it is considered non-erosive, and erosion protection is not required. The peak stage during this event was calculated to be 5,508.03 feet (9.8 feet above the pond bottom).

Other Treatment Facilities. ~~There are n~~No other water treatment facilities are located within the permit area.

Exemptions. No exemptions to the requirements of R645-301-742.200 and R645-301-763 are being sought by this application.

7.4.2.3 Diversions

General Requirements. The diversions within the permit area consist of drainage ditches and culverts. All diversions within the permit area have been designed to minimize adverse impacts to the hydrologic balance, to prevent material damage outside the permit area, and to assure the safety of the public. They have been designed, located, constructed, maintained, and used to:

- Be stable
- Provide protection against flooding and resultant damage to life and property
- Prevent, to the extent possible, additional contributions of suspended solids to stream flow outside the permit area
- Comply with all applicable local, state, and federal laws and regulations

Peak discharge rates from the drainages within the permit area were calculated for use in determining the adequacy of the existing diversion ditches and culverts. Since the diversions will remain in place for the future landowner following cessation of COVOL operations, runoff was calculated assuming permanent diversion structures based on the 100-year, 6-hour precipitation event of 1.74 inches. Curve numbers were based on those defined in Appendix 7-67. A description of the methods used to determine the peak discharge rates is presented in Appendix 7-78.

Watershed boundaries for the facility are presented on Plate 7-2. The disturbed area boundary is surrounded by a berm along the upstream edge and its sides in order to divert runoff around the site. Thus, the watersheds that drain the facility consist only of disturbed areas. The watershed contributing to the east sedimentation pond has been divided into five sub-watersheds which total 17.4 acres in area. The watershed contributing to the west sedimentation pond has been divided into three sub-watersheds which total 7.0 acres in area. The remaining 5.6 acres of the site are situated along the edges of the facility, outside of the diversion ditches, and is not disturbed. All of the area within the watersheds reporting to the ditches and the sedimentation ponds has been considered to be disturbed in the hydrology calculations.

The size and location of each existing diversion ditch and culvert were mapped using an aerial photograph of the site and verified in the field. All diversions are shown on Plate 7-2. The capacity and freeboard of each diversion ditch were determined based on the minimum ditch slope, while the maximum velocity and need for erosion protection were verified based on the maximum ditch slope. The capacity of each culvert was determined using the minimum culvert slope and the outlet velocity and riprap protection was verified using the culvert outlet slope. Slopes were

measured from a pre-construction contour map of the site. A description of the methods used to determine diversion capacities, flow velocities, and erosion protection requirements is presented in Appendix 7-56. All diversion calculations are presented in Appendix 7-78.

Diversion of Perennial and Intermittent Streams. There are no diversions of perennial or intermittent streams at the facility.

Diversion Ditches and Culverts. A summary table of the geometry, channel slope, peak discharge, erosion protection, maximum flow velocity and minimum depth values for each diversion ditch and culvert at the facility is presented in Table 7-23. Diversion hydrology calculations are detailed in Appendix 7-78. Each ditch and culvert has been constructed to safely pass the peak flow resulting from the 100-year, 6-hour precipitation event. A description of the diversion ditches and culverts within the facilities area is presented below. The ditches are named according to the watersheds that they drain. Ditches prefixed by the letter "E" ultimately report to the east sedimentation pond, and ditches prefixed by the letter "W" ultimately report to the west sedimentation pond. Since some watersheds are drained by culverts instead of ditches, the ditches are not numbered strictly chronologically. Refer to Plate 7-2 for the locations of each watershed and diversion structure.

- **Ditch E-1 (Upper).** This ditch exists on the east edge of the permit area just within the permit area boundary. It conveys runoff from the northern portion and eastern edge of the site southward toward the east sedimentation pond. This V-shaped ditch is approximately 1,100 feet long, is 1.5 feet deep, and has 1H:1V side slopes. It begins at the outlet of culvert C-1 and continues to the outlet of culvert C-2.
- **Ditch E-1 (Lower).** This ditch conveys runoff southward from the outlet of culvert C-2 to the inlet of the east sedimentation pond. This V-shaped ditch is approximately 700 feet long, has 1.5H:1V side slopes, and is 1.5 feet deep.
- **Ditch E-3.** This ditch conveys runoff from the southeastern corner of the inner yard to the east sedimentation pond. This trapezoidal ditch has an eastern side slope of 1H:1V and a western side slope of 2.5H:1V. It is 1.5 feet deep, has a 6-inch bottom width, and is approximately 550 feet long.

- **Ditch E-4.** This ditch conveys runoff southward from the region between the top of the truck dump hopper embankment and the road on the east edge of the permit area. This V-shaped ditch has an eastern side slope of 3H:1V and a western side slope of 1H:1V. It is one foot deep and approximately 950 feet long.
- **Ditch E-5.** This ditch conveys runoff eastward along the southern edge of the permit area toward the east sedimentation pond. It captures runoff from the eastern watershed of the inner yard that is not captured by ditch E-3. Ditch E-5 is V-shaped with 4H:1V side slopes. It is 1 foot deep and approximately 515 feet long.
- **Ditch W-1 (Upper).** This ditch runs along the west edge of the permit area just within the permit area boundary. It conveys runoff from the northern portion and western edge of the site southward toward the west sedimentation pond. This V-shaped ditch has 2H:1V side slopes. It is 2 feet deep and approximately 1,400 feet long. It begins just west of the northwest corner of the yard access road and extends to the outlet of culvert C-3.
- **Ditch W-1 (Lower).** This ditch runs from the outlet of culvert C-3 to the inlet of the west sedimentation pond. It conveys runoff from the W-1 (Upper) Ditch and the W-2 Ditch into the west sedimentation pond. Ditch W-1 (Lower) is V-shaped with 2H:1V side slopes. It is 2 feet deep and approximately 700 feet long.
- **Ditch W-2.** This ditch runs on the east side of the silo and its access road, and drains the area located to the east. It drains into culvert C-3, which feeds into Ditch W-1 (Lower). Ditch W-2 is V-shaped with a western side slope of 4.5H:1V and an eastern side slope of 1H:1V. It is 1 foot deep and approximately 1,050 feet long.
- **Ditch W-3.** This ditch conveys runoff westward along the southern edge of the permit area toward the west sedimentation pond. It captures runoff from the area south of the perimeter access road that drains toward the west sedimentation pond. Ditch W-3 is V-shaped with 4H:1V side slopes. It is 1 foot deep and approximately 395 feet long.
- **Culvert C-1.** This culvert conveys runoff under the truck turn-around road in the northeastern corner of the site. It provides drainage for the area enclosed by the road embankments for the yard perimeter road and the truck turn-around. The culvert is 45 feet long and consists of 18-inch diameter corrugated polyethylene pipe. Riprap with a median diameter of 3 inches will be placed in the channel bottom for a distance of 10 feet downstream from the culvert outlet to provide erosion protection.
- **Culvert C-2.** This culvert conveys runoff under the road in the southeastern corner of the permit area. It provides drainage for the area enclosed by the road

embankments for the yard perimeter road and the truck dump hopper. The culvert is 45 feet long and consists of 18-inch diameter corrugated polyethylene pipe.

- **Culvert C-3.** This culvert conveys runoff under the road in the southwestern corner of the permit area. It provides a route for drainage from Ditch W-2 to travel under the road and into Ditch W-1 (Lower). The culvert is 30 feet long and is constructed from 18-inch diameter corrugated polyethylene pipe. Riprap with a median diameter of 3 inches will be placed in the channel bottom for a distance of 10 feet downstream from the culvert outlet to provide erosion protection.

7.4.2.4 Road Drainage

Roads at the facility include an access road that leads from Ridge Road into the main yard, a road around the perimeter of the main yard, and a truck turnaround north of the main yard. All of the roads have been constructed to include adequate drainage control with the use of diversion ditches, culverts, and containment berms. None of the roads are located in the channel of an intermittent or perennial stream. All roads have been located to minimize downstream sedimentation and flooding. Diversion ditches and culverts for all roads are described in Section 7.4.2.3 above.

7.4.3 Impoundments

The existing impoundments within the permit area consist of two sedimentation ponds along the southern boundary of the disturbed area. Pertinent information regarding these ponds is presented in Sections 7.3.2.2 and 7.4.2.2.

7.4.4 Discharge Structures

The discharge structures within the permit area consist of the spillways on each sedimentation pond. The spillways have been designed to safely pass the peak discharge resulting from the 25-year, 6-hour rainfall event, assuming starting pond storage equal to the 60% sediment

cleanout volume and the 10-year, 24-hour runoff volume. Detailed information for each sedimentation pond is presented in Sections 7.3.2.2 and 7.4.2.2.

Each sedimentation pond is equipped with a swale on its downstream side that serves as a spillway. Small embankments have been constructed adjacent to the spillways. Each spillway is trapezoidal in cross section and measures approximately 2 feet deep and 3 feet wide with 1H:1V side slopes. The spillways are ~~is~~ armored with rip rap ($D_{50} = 4$ inches). If they spill, this water will discharge as overland flow toward Miller Creek.

7.4.4.1 Erosion Protection

Each discharge structure was evaluated to determine the adequacy of the existing riprap and the hydraulic capacity of the structure during the 25-year, 6-hour precipitation event. The calculations for the discharge structures within the facilities area are presented in Appendix 7-67. Peak discharges from all of the discharge structures during their design events did not exceed 5 feet per second (fps). Thus, the flows are considered non-erosive.

7.4.4.2 Design Standards

All discharge structures within the permit area were designed and constructed according to standard engineering design procedures.

7.4.5 Disposal of Excess Spoil

~~There is n~~No excess spoil is generated or disposed of within the permit area.

7.4.6 Coal Mine Waste

7.4.6.1 General Requirements

~~There is n~~No coal mine waste ~~that is~~ permanently stored on site.

7.4.6.2 Refuse Piles

~~There are n~~No refuse piles are located at the facility.

7.4.6.3 Impounding Structures

~~There are n~~No impounding structures within the permit area ~~that are~~have been constructed of coal mine waste or are used to impound coal mine waste.

7.4.6.4 Return of Coal Processing Waste to Underground Workings

~~There are n~~No underground workings are located at this facility.

7.4.7 Disposal of Noncoal Mine Waste

Disposal of noncoal waste is discussed in Chapter 5.

7.4.8 Casing and Sealing of Wells

~~There are no wells located at the facility.~~ The groundwater monitoring well to be installed in the permit area will be cased and sealed at the surface to prevent potential acid or other toxic drainage from entering groundwater via the well. The surface will be completed with a lockable steel casing to protect the well and ensure the safety of people, livestock, wildlife, and machinery.

7.50 Performance Standards

All operations and reclamation will be conducted to minimize disturbance to the hydrologic balance within the permit and adjacent areas, prevent material damage to the hydrologic balance outside the permit area, and support approved post operations land uses.

7.5.1 Water Quality Standards and Effluent Limitations

Discharges of water from disturbed areas will be in compliance with all applicable Utah and federal water quality laws and regulations and with applicable effluent limitations for coal mining contained in 40 CFR Part 434.

7.5.2 Sediment Control Measures

All sediment control measures will be located, maintained, constructed and reclaimed according to plans and designs presented in Sections 7.3.2, 7.4.2, and 7.6.0.

7.5.2.1 Siltation Structures and Diversions

Siltation structures and diversions will be located, maintained, constructed and reclaimed according to plans and designs presented in Sections 7.3.2, 7.4.2, and 7.6.3.

7.5.2.2 Road Drainage

All roads will be located, designed, constructed, reconstructed, used, maintained and reclaimed according to plans and designs presented in Sections 7.3.2.4, 7.4.2.4, and 7.6.2. All roads have been designed to:

- Control or prevent erosion and siltation by maintaining or stabilizing all exposed surfaces in accordance with current, prudent engineering practices;
- Control or prevent additional contributions of suspended solids to stream flow or runoff outside the permit area;

- Neither cause nor contribute to, directly or indirectly, the violation of effluent standards given under Section 7.5.1.
- Minimize the diminution to or degradation of the quality or quantity of surface- and ground-water systems;
- Refrain from significantly altering the normal flow of water in streambeds or drainage channels.

7.5.3 Impoundments and Discharge Structures

Impoundments and discharge structures will be located, maintained, constructed and reclaimed as described in Sections 7.3.3, 7.3.4, 7.4.3, 7.4.5, and 7.6.0.

7.5.4 Disposal of Excess Spoil, Coal Mine Waste and Noncoal Mine Waste

Handling and disposal of coal mine waste and noncoal mine waste is described in Sections 7.3.6, 7.3.7, 7.4.6, 7.4.7, 7.6.0 and Chapter 5.

7.5.5 Casing and Sealing of Wells

There are no wells located at the facility. When no longer needed, the groundwater monitoring well in the permit area will be abandoned in accordance with R645-301-765 and the requirements of the Utah Division of Water Rights.

7.60 Reclamation

7.6.1 General Requirements

A detailed reclamation plan for the facility is presented in Section 5.40. In general, COVOL will ensure that all temporary structures are removed and reclaimed. Permanent diversions will be maintained properly and will meet the requirements of the approved reclamation plan for permanent

structures and impoundments. COVOL will renovate the diversion structures if necessary to meet the requirements of R614-301 and R614-302 and to conform to the approved reclamation plan.

7.6.2 Roads

All site roads will be retained for use under the operational industrial land use.

7.6.2.1 Restoring the Natural Drainage Patterns

The facility does not interfere with natural drainage patterns that require restoration.

7.6.2.2 Reshaping Cut and Fill Slopes

~~There are n~~No cut and fill slopes ~~are~~ located at the facility.

7.6.3 Siltation Structures

7.6.3.1 Maintenance of Siltation Structures

All siltation structures will be maintained in accordance with the approved reclamation plan.

7.6.3.2 Removal of Siltation Structures

It is anticipated that siltation structures at the site will be retained following reclamation, for use by the future landowner, in accordance with the reclamation plan presented in Section 5.40.

7.6.4 Structure Removal

A timetable for the removal of each structure is presented in Table 5-2.

7.6.5 Permanent Casing and Sealing of Wells

~~There are no wells located at the facility. When no longer needed, the groundwater monitoring well in the permit area will be abandoned in accordance with R645-301-765 and the requirements of the Utah Division of Water Rights.~~

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TABLE 7-1

Results of Groundwater Analyses,
 COVOL Monitoring Well

Parameter	Dated Sampled		
	24 Dec 2008		
<u>Field Analyses (units as indicated)</u>			
Depth to water (ft)	12.0		
Temperature (°C)	12.1		
pH (std units)	7.40		
Specific conductance (mS)	9,900		
<u>Laboratory Analyses (mg/L)</u>			
Bicarbonate as CaCO ₃	270		
Calcium	390		
Carbonate as CaCO ₃	<10		
Chloride	84		
Iron, dissolved	<0.050		
Iron, total	300		
Magnesium	270		
Manganese, dissolved	0.57		
Manganese, total	3.9		
Nitrate/Nitrite as N	0.34		
Potassium	36		
Sodium	1,900		
Sulfate	5,700		
Total dissolved solids	11,000		

TABLE 7-12

Summary of Sedimentation Pond Data

	East Pond	West Pond
Assumed bottom elevation (ft)	5,493.8	5,498.2
Assumed crest elevation (ft)	5,505.8	5,510.0
Total Storage Capacity (ft ³)	53,900	36,070
Calculated Annual Sediment Volume (ft ³)	333	134
10-Year, 24-Hour Precip. Runoff Volume (ft ³)	36,970	14,850
Sediment Storage Capacity (ft ³)	16,930	21,220
60% Sediment Storage Cleanout Volume (ft ³)	10,160	12,730
Sediment Cleanout Elevation (ft)	5,498.6	5,505.4
Peak Stage of 10-Year, 24-Hour Precipitation Event Plus 60% Sediment Storage Capacity (ft)	5,503.0	5,506.4
Invert elevation of 3-foot wide armored spillway (ft)	5,503.7	5,508.0
Peak Pond Inflow Due to 25-Year, 6-Hour Precipitation Event (cfs)	9.99	3.24
Peak Pond Outflow due to 25-Year, 6-Hour Precipitation Event (cfs)	2.29	0.08
Peak Pond Outflow Velocity due to 25-Year, 6-Hour Precipitation Event (fps)	2.0	0.5
Peak Stage of 25-Year, 6-Hour Precipitation Event Following a 10-Year, 24-Hour Precipitation Event with Pond Full to 60% of Sediment Storage Capacity (ft)	5,504.3	5,508.0

Notes:

- Refer to Appendix 7-67 for calculations related to sedimentation pond design
- Pond dimensions were surveyed by EIS Environmental and Engineering Consulting in November 2007. Absolute elevations were assumed by superimposing the survey data on the pre-construction topography provided by Mine and Mill Engineering. Each pond has a berm extending approximately 2 ft above the ground surface.

TABLE 7-23

Summary of Drainage Ditch and Culvert Data

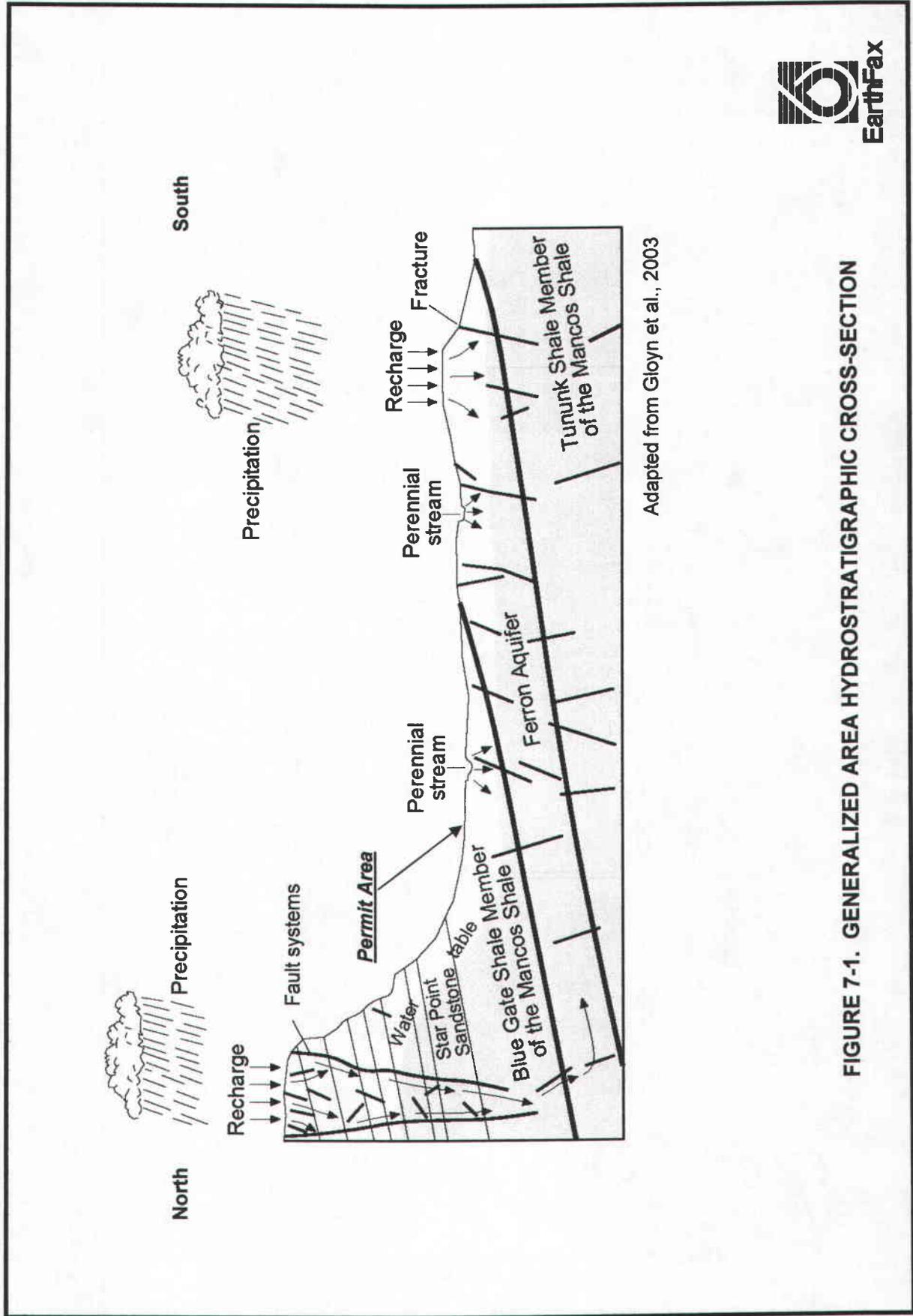


FIGURE 7-1. GENERALIZED AREA HYDROSTRATIGRAPHIC CROSS-SECTION

G:\LIC 10091\0...ermit_application\Drawings\Fig7-2.dwg, 3/27/2009 2:49:03 PM

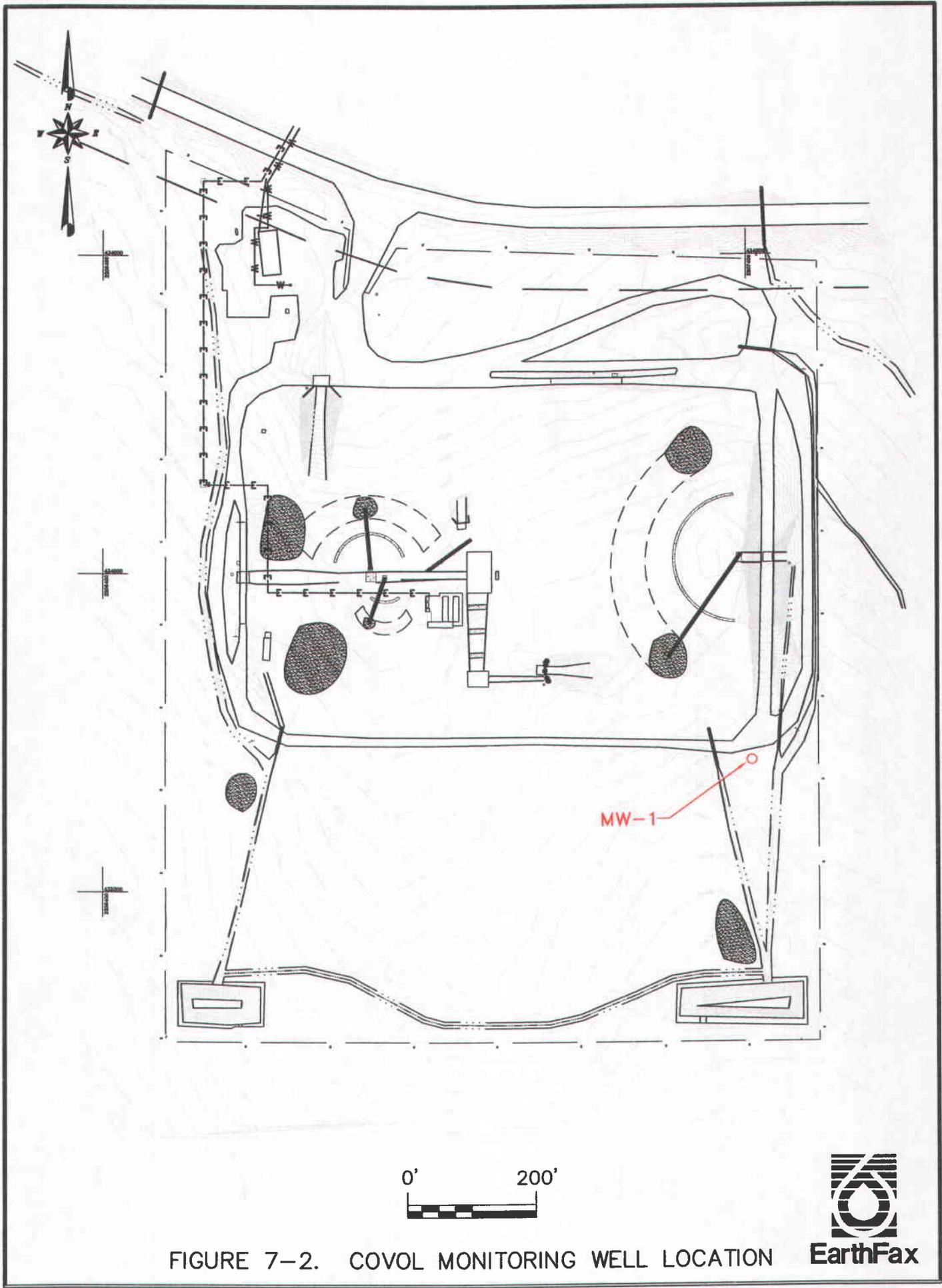
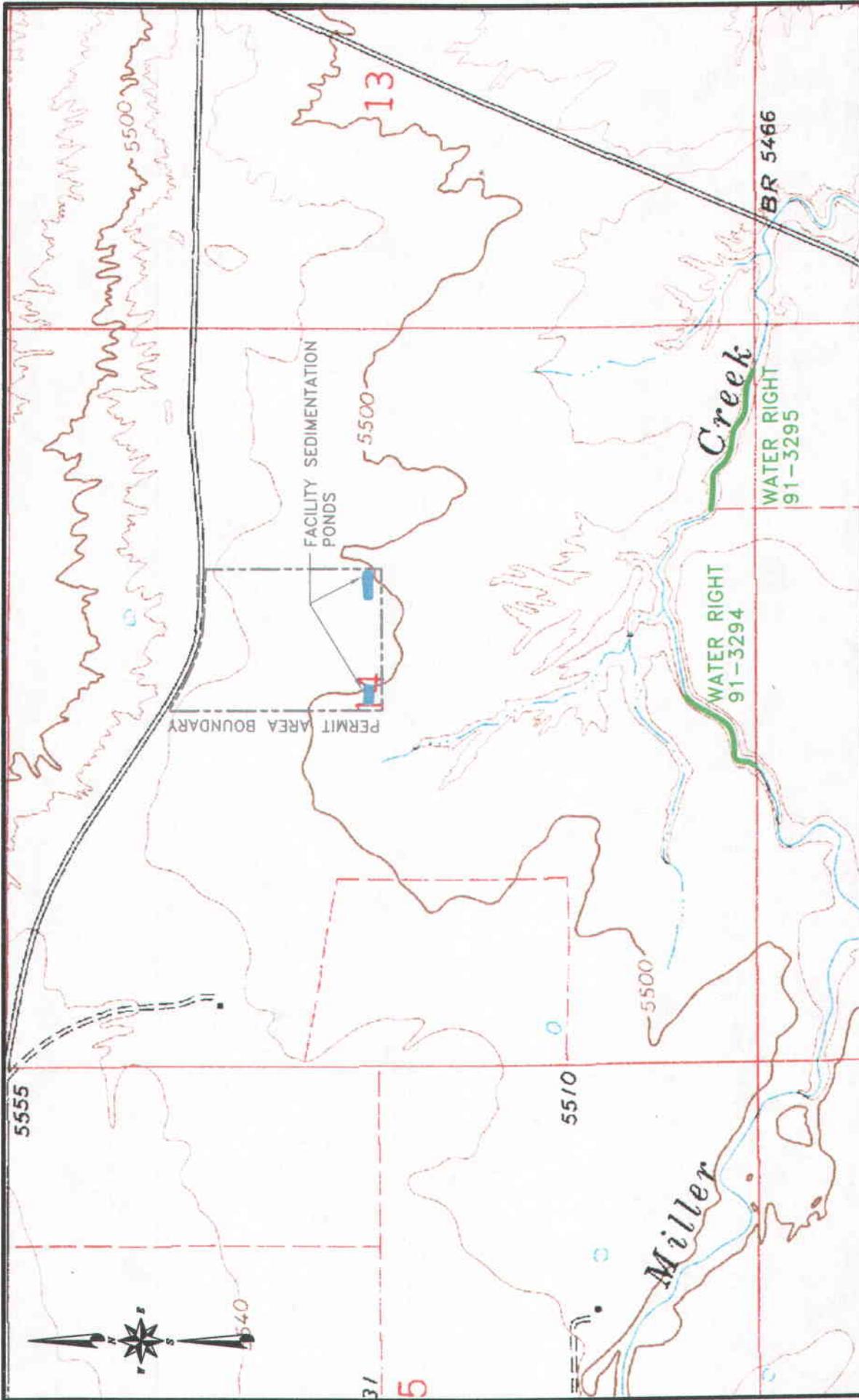


FIGURE 7-2. COVOL MONITORING WELL LOCATION





BASE MAP: 7.5' USGS QUADRANGLE
PRICE, UTAH 1972



FIGURE 7-3. SURFACE POINT-OF-DIVERSION WATER RIGHTS AND PERMITTED FACILITY DISCHARGE LOCATIONS

APPENDIX 7-1

Monitoring Well Lithologic and Completion Log

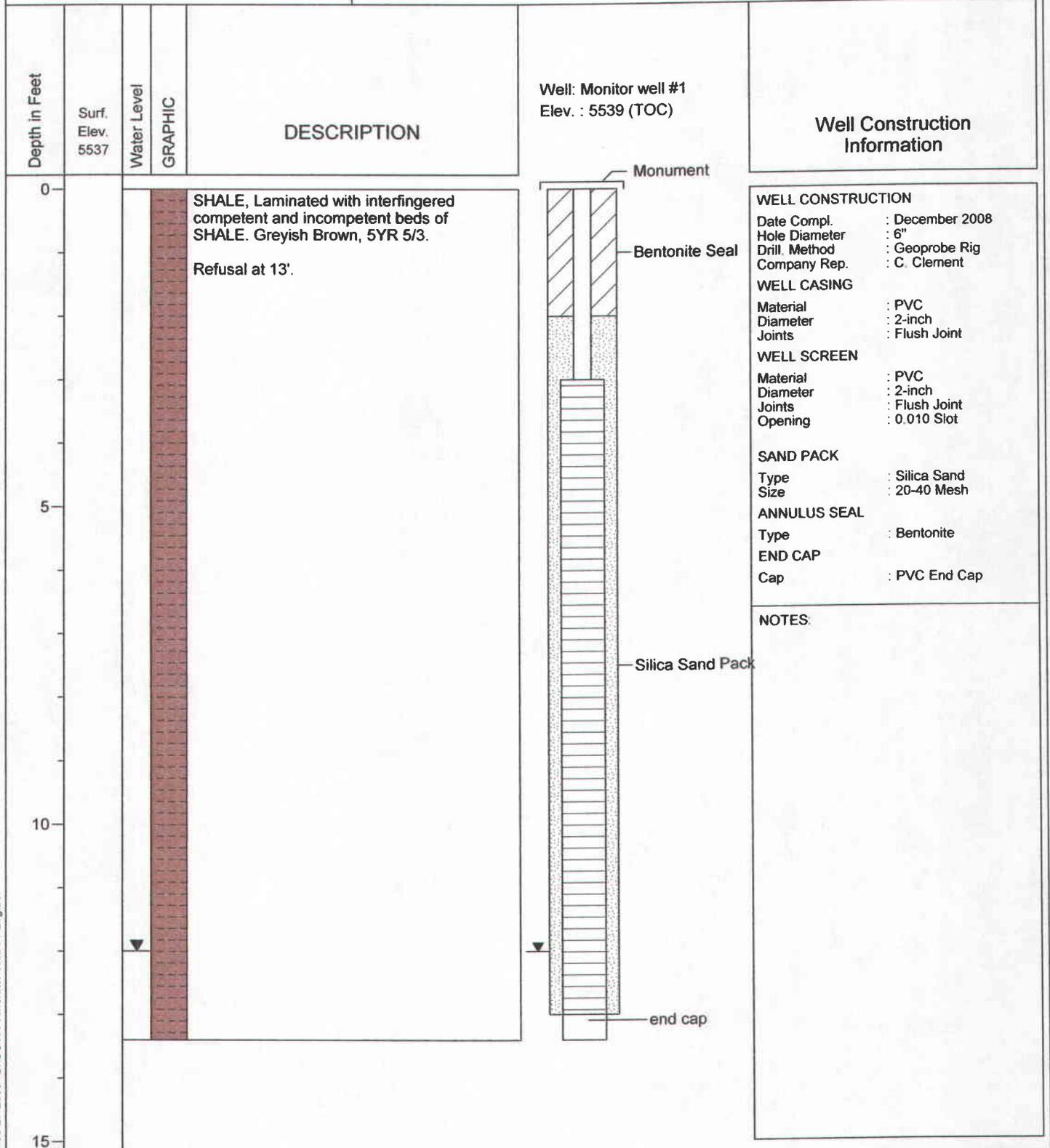


Monitor Well # 1

Headwaters Incorporated
Covol Engineered Fuels Facility
Wellington, UT
Project UC1091

Date Started : Dec 24, 2008
Date Completed : Dec 24, 2008
Hole Diameter : 6" auger
Drilling Method : Geoprobe Rig
Sampling Method : Grab

Company Rep. : C. Clement
Northing Coord. :
Easting Coord. :
Survey By :
Logged By : B. Heller



COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
~~January-October 2008~~ March 2009

| **APPENDIX 7-12**

Water Rights Data

COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
January ~~October~~ 2008 March 2009

APPENDIX 7-23

Utah Pollutant Discharge
Elimination System Permit

COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
~~January~~ ~~October 2008~~ March 2009

APPENDIX 7-34

Storm Water Pollution
Prevention Plan

COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
~~January-October 2008~~ March 2009

|

APPENDIX 7-45

Spill Prevention, Control and
Countermeasure Plan

COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
January ~~October~~ 2008 March 2009

APPENDIX 7-56

Hydrologic Design Methods

COVOL Engineered Fuels, LC
| Dry-Coal Cleaning Facility

Permit Application
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|

APPENDIX 7-67

Sedimentation Pond Hydrology Calculations

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~~January-October 2008~~ March 2009

APPENDIX 7-78

Drainage Channel and Culvert
Hydrology Calculations