

RC 8/3/11 K
Jen



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8/3/11 JAM

August 23, 2011

Tanya R. King, P.E.
Natural Resources Analyst
WDEQ/LQD District II
510 Meadowview Dr.
Lander WY, 82520

RE: GEGR, LLC Application for Small Mining Permit, Rocky Top Rock Pit, TFN 5 4/191
Completeness Review – Not Complete (Second Round Comments)

Dear Tanya;

Enclosed are the responses to the Completeness Review (Second Round Comments dated May 20, 2011. I have stated the comment and then indicate the response. Attached are pages to replace or be added to different sections of the application. They are in the two binders that are included.

Tab I.F Agency Permits

Comment 4

Please provide a summary sheet of each agency with the corresponding permit number. It is acceptable to add the permit number to the page labeled I.F. Permits/Letter to/From Other Agencies. Technical Comment – In Progress

Response

Please replace the Permits and Summary Table in the existing Section I.F with the attached pages I.F.1 and I.F.2 which discuss the agency permits associated with the application.

Tab I-H Appendix B

Comment 6

The county conditional use permit specifically states that no mining may occur within 1000 feet of Klint Clark's home. Please clearly identify the Clark home on the "Ownership within 1/2 mile" map and show its distance from the "affected" area. **Completeness Comment**

Response

Please replace the existing GEGR, LLC Gravel Pit Ownership within 1/2 Mile Map with the attached Map.

Tab Maps

Comment 9

An original USGS topographic map, or high quality equivalent, is required. This map should clearly illustrate the proposed permit area as well as the existing 10 acre LMO. The map should extend at least three miles in all directions from the proposed permit area. **Completeness Comment. Map submitted on 4-11-11 is unacceptable. The map must fit on to one page even if a different page size is used. Completeness Comment.**

Response

Please replace exiting USGS Maps 1-4 with the attached USGS Map 1.

Also, please replace General Map 5, Mine Map 1, and Reclamation Map 1 with the attached maps. Reclamation Map 1 is now located in the Reclamation Plan section of the permit.

Tab Appendix D-3

Comment 17

Per the letter from SHPO, an archeology study will be required for this permit approval. Please provide information that the applicant has or will contact an approved consultant to provide this study. Changed to 17.a. below.

17.a. New comment. During our meeting of March 17, 2011, it was agreed that LQD would waive the archeology study providing the application contain a statement that mining activities would cease and the operator would contact LQD and SHPO if any artifact were discovered. Please provide this statement. **Completeness Comment**

Response

The following paragraph has been added to Appendix D-3; “During excavations by Rocky Top Rock, if any historical or cultural resources are discovered, work will be halted immediately, the Wyoming Department of Environmental Quality-Land Quality Division (WDEQ-LQD) and the Wyoming State Parks and Cultural Resources Division (SHPO) staff shall be contacted and the cultural materials shall be evaluated by an archaeologist or historian meeting the Secretary of Interior’s Professional Qualifications Standards (48 FR 22716. Sept. 1983)”.

Please replace Appendix D-3 Archeological and Resource Information with the attached page Appendix D-3 Archeological and Resource Information.

Tab Appendix D-6

Comment 20

The Ground Water section needs to describe the expected elevation of groundwater and how that elevation may be influenced by local irrigation. How is the ground water associated with local geology. How close will mining be to the groundwater level? **Completeness Comment**

Response

See new Appendix D-6

Comment 21

Wells must be installed for ground water sampling, testing and monitoring.

The sampling and testing program should be discussed. **revised to 21.a. below**

21.a New Comment. Our district hydrologist requests that the hydraulic gradient be determined to evaluate impact on adjacent land owners. One well has been installed on the west side of the permit area, the Mine Map shows a pond into groundwater at elevation 5688 ft. By maintaining the groundwater pond to a elevation where groundwater elevation may be monitored, combined with the installation of one additional well near the shop of office will allow the hydraulic gradient to be determined. Please install one additional well near the office, determine depth to groundwater at each location, determine the hydraulic gradient and illustrate on a map, and per our March 17, 2011 meeting, discuss the sampling and testing program. **Completeness**

Comment In Progress

Response

See new Appendix D-6

Please replace the first two pages of Appendix D-6 with the attached pages Appendix D-6.1 through Appendix D-6.3 and add the attached map entitled Ground Water Monitoring Sites and the attached results of the ground water sampling.

Appendix D-8**Comment 23**

The description of vegetation is inadequate. The site consists of three principle areas; the existing 10 acre pit, the area along the south side that was reclaimed, and the manmade "wetlands" to the west. Vegetation in the existing pit is non-existent and does not need to be addressed. However, complete descriptions of existing vegetation in the other two areas are required in combination with photos and documentation of the species present and their cover and/or productivity. **A representative from NRCS may perform a field inspection and provide a report.** Descriptions should include how transects were conducted and the interval of sampling. (This portion is unnecessary since the application changed to a small mine)

Completeness Comment

Response

See new Appendix D-8 which includes a discussion on the vegetation study and potential wetland areas.

Please replace the first page of existing Appendix D-8 with the attached page.

Mine Plan

Comment 25

The Mine Plan, pages 1 through 4, must contain a discussion of the plan for mining. Near the top of the page titled III. Mine Plan, there should be a general summary of the mine plan. This would include where the staging area/crushers are to be located, how mining will move from the existing pit to Area 2, then to area 3. How will topsoil be stripped, to what depth, and where will it be placed – directed placement and followed by seeding or stockpiled? What will be the method of mining; rubber tire loader and trucks, dozer and loader, or something else. What will be the configuration of the highwalls as mining occurs? What will be the depth of mining. Will material be pushed from top to bottom, or excavated from bottom to top? Will mining occur north east of the ditch (this could be accomplished by putting the ditch in pipe and re-routing it)? Cross-sections showing existing versus final mining topography are required. This section must be very detailed. **Additional information was provided on 04-11-11 but is still incomplete. Pages 4-6 of the new mine plan were missing. Completeness Comment**

Response

Please refer to new Mine Plan.

Comment 26

Page 1 of 4, (page number & reference changed with new pages 4-11-11) item #4 says that topsoil piles will be conical in shape. While the operator is free to stockpile topsoil in any configuration he/she deems best, historical data would suggest that conical piles may overrun the space available in and around the pit. WDEQ/LQD encourages the construction of long, low topsoil piles having side slopes not steeper than 3:1. Piles should be seeded for stabilization and to prevent weed infestation. The depth of stripping topsoil should be discussed in this section. If topsoil is indeed 2-3 feet in depth at the site, WDEQ/LQD will want to see more than 6 inches stripped and stockpiled for reclamation use. Generally at least 12-18” of soil is optimal for reclamation.

Technical Comment partially resolved 4-11-11

Response

Please refer to new Mine Plan section C.

Comment 27

Page 1 of 6, (page number & reference changed with new pages 4-11-11) item #4 says that the overburden will be covered with 6 inches of topsoil, as in item 22 above, if topsoil is indeed 2-3 feet in depth at the site, WDEQ/LQD will want to see more than 6 inches of topsoil used in reclamation. **Technical Comment**

Response

Please refer to new Mine Plan section C.

Comment 28

Page 3, item #9 (page number & reference changed with new pages 4-11-11), indicates that two ponds are used at the site, a groundwater supply pond and a settling/holding pond. Provide illustrations of the locations of the ponds and cross-sections illustrating how they will be constructed. **Technical Comment - in progress no cross sections to date**

Response

Locations of the ponds are shown on General Map 5 along with cross-sections of the ponds.

Comment 32

Provide laboratory test results of the water from the groundwater supply pond and of that in the holding pond (after treatment). **Technical Comment**

8.a New Comment. The administrator of the Water Quality Division questions the need for a flocculating agent for washing gravel. It is preferred not to use any chemical agents as they may get in to the groundwater. If an agent is required, select the most benign one possible such as those used in the drinking water industry. **Technical Comment**

Response

The flocculating agent has been eliminated.

Comment 33

Pages 4-6 were not included with the pages added 4-21-11. This item is no longer on page 3. Page 3, items #9 and #12, the permit application says normal operating hours will be Monday through Friday, 7AM to 7PM. How do the morning hours for truck traffic interfere with school bus traffic. Under item #12, please provide a discussion of school bus hours and how conflicts will be avoided. **Technical Comment**

Response

Please refer to new Mine Plan section I

Comment 34

Pages 4-6 were not included with the pages added 4-21-11. This item is no longer on page 3. Page 3, item #12, Please re-label this item "Prevention of Endangerment and Public Nuisance". **Technical Comment**

Response

Please refer to new Mine Plan section I

Comment 35

Pages 4-6 were not included with the pages added 4-21-11. This item is no longer on page 3. Page 3, item #12, please provide a discussion for this item how lighting used at the pit will affect surrounding houses. **Technical Comment**

Response

Please refer to new Mine Plan section I

Comment 36

Pages 4-6 were not included with the pages added 4-21-11. This item is no longer on page 3. Page 3, item #12, please provide a discussion for this item how noise from crushers will affect surrounding houses. **Technical Comment**

Response

Please refer to new Mine Plan section I

Please replace existing Mine Plan pages 1-6 with the attached Mine Plan, pages MP-1 through MP-9.

Reclamation Plan**Comment 37a**

New comment. The reclamation plan item #1. indicates there will be no permanent ponds, but the reclamation map shows ponds. Please clarify. **Completeness Comment**

Response

See new Reclamation Plan

Comment 40

New comment. Item #3 if there is 2 to 3 feet of topsoil to be stripped on site, a minimum of 12 inches of topsoil must be used in reclamation; not 6 inches. **Technical Comment**

Response

See new Reclamation Plan

Comment 41

New Comment. The Verbiage under item #8 doesn't actually address Erosion, Siltation and Pollution Prevention. Provide additional verbiage. **Technical Comment.**

Response

See new Reclamation Plan

Reclamation Costs

The total acreage to be disturbed by the mine expansion is only 2 acres giving a total disturbance of 12 acres. 2 acres of the 12 will eventually be ponds thus reducing the total acreage to be reclaimed to 10 acres. No additional mining will take place in the southeastern portion of the permit area and no expansion will occur to the west past the existing disturbed boundary.



Reclamation costs were refigured and are shown on page I.C.1.2. Please replace the first two pages of section I.C. with the attached pages I.C.1.1 and I.C.1.2.

Additional Comment from Tanya King

Please address in the SWPPP the clean-up of a potential petroleum spill in the pond water.

Response

The following has been added to page 5 of the SWPPP; "In the event of a petroleum release to pit water, sorbant pads will be applied immediately to control the spill. The sorbant pads will be stored on-site in the machine shed. The pads will be collected and stored in a suitable container and appropriately labeled for management as required by state regulation."

Please replace the existing SWPPP with the attached SWPPP.

Please let us know if you need additional information.

Sincerely,

SUNRISE ENGINEERING, INC.

A handwritten signature in black ink that reads "Clyde Rainey". The signature is written in a cursive, flowing style.

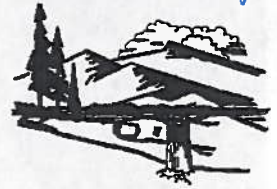
Clyde Rainey
Project Manager

Enclosures



Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matt Mead, Governor

John Corra, Director

May 20, 2011

GECR, LLC
Attn: Ms. Ganelle Edwards
P.O. Box 3258
Alpine, WY 83128



RE: GECR, LLC Application for Small Mining Permit, Rocky Top Rock Pit, TFN 5 4/191
Completeness Review – Not Complete (Second Round Comments)

Dear Gay,

The Wyoming Department of Environmental Quality – Land Quality Division (WDEQ/LQD) is in receipt of the Application for a Large Mining Permit for the Rocky Top Rock pit near Etna, Wyoming. The application was received in the Lander District II office on December 27, 2010 and then again, revised on February 22, 2011, April 11, 2011 and April 21, 2011. We have reviewed the application and have identified deficiencies in the application that make it incomplete. The attached Memorandum – Completeness Second Round Comments explains the deficiencies. We have also provided technical comments where possible to expedite the process.

Since the application has changed from a large mine to a small mine, some requirements have dropped out and are noted on the attached memorandum.

Since, I understand that you may be in the process of evaluating where you are with your consultant, I am sending these comments only to you. You may forward them to your consultant.

Please contact us at (307) 332-3047 with any questions you may have.

Sincerely,

Tanya R. King, P.E.
Natural Resources Analyst
WDEQ/LQD District II

enclosures: TFN 5 4/191 Memorandum of Completeness – Second Round Comments

xc: Cheyenne DEQ/LQD
Mark Moxley – Lander DEQ/LQD
chron file – Tanya



MEMORANDUM

TO FILE: GEGR, LLC, TFN 5 4/191, Convert 908ET to Small Mine
FROM: Tanya King, P.E. – Natural Resource Analyst, WDEQ/LQD District 2
DATE: May 20, 2011
RE: Completeness Review Second Round Comments



Wyoming DEQ/LQD has received several pieces of correspondence with index sheets for insertions and deletions regarding some of the comments listed in the “Completeness Review First Round Comments”. We have not had an actual response letter address in all the comments. I have gone through the information received, and compiled this memo “Completeness Review Second Round Comments”.

The following comments are listed as Completeness or Technical. All completeness issues must be addressed before first public notice can be authorized.

Binder Cover/Cover Page

1. The name on the binder cover and the cover page both list the name of the applicant as GERC, LLC. Please correct these pages, and verify all other pages have the correct GEGR, LLC name. Technical Comment – Resolved 04-11-11

Tab I-C Bonding

2. On page 2, the table showing items in the bond calculation shows 22.5 acres under “Final Grading” and “Reclamation Seeding”. Only 18 acres will be permitted for disturbance. Please change 22.5 acres to 18 acres in the bond calculations. Technical Comment – Resolved 04-11-11
3. On page 2, the table showing items in the bond calculation shows no amount for Mobilization/Demobilization. The bond calculation is to cover the cost if DEQ were to do the reclamation through default of the operator. Therefore a line item for Mobilization/Demobilization is required. Please add this item. Technical Comment – Resolved 04-11-11

Tab I-F Agency Permits

4. Please provide a summary sheet of each agency with the corresponding permit number. It is acceptable to add the permit number to the page labeled I.F. Permits/Letter to/From Other Agencies. Technical Comment – In Progress

Tab I-H Appendix B

5. The map titled GEGR, LLC Gravel Pit Ownership within ½ Mile must show the permit boundary and a line delineating ½ mile from the boundary. Please add these items to the map. **Completeness Comment** – Resolved 04-11-11
6. The county conditional use permit specifically states that no mining may occur within 1000 feet of Klint Clark's home. Please clearly identify the Clark home on the "Ownership within ½ mile" map and show its distance from the "affected" area. **Completeness Comment**

Tab Maps

7. General Map 2, Mining and Reclamation Area Map, illustrates the area not to be mined as "reclamation area". In mining permits the term reclamation is specific to returning the mined area to useful production. Please revise the map to remove the "reclamation area" labels. The area could be called "buffer zone", un-affected area, or may be left un-labeled. Technical Comment – Resolved 04-11-11
8. General Map 5, Contour Map, illustrates the area not to be mined as "reclamation area". In mining permits the term reclamation is specific to returning the mined area to useful production. Please revise the map to remove the "reclamation area" labels. The area could be called "buffer zone", un-affected area, or may be left un-labeled. Technical Comment – Resolved 04-11-11
9. An original USGS topographic map, or high quality equivalent, is required. This map should clearly illustrate the proposed permit area as well as the existing 10 acre LMO. The map should extend at least three miles in all directions from the proposed permit area. **Completeness Comment. Map submitted on 4-11-11 is unacceptable. The map must fit on to one page even if a different page size is used. Completeness Comment.**
10. A survey map of the permit boundary is required to clearly illustrate the metes and bounds survey that describes the property. The map must show all corners and distances between. **Completeness Comment.** – Resolved 04-11-11
11. General Map 5, Contour Map, does not show current topographic conditions. Please re-title to Existing Contour Map and illustrate existing topographic conditions. Technical Comment – Resolved 04-11-11
12. General Map 6, Soil Test Hole Map, illustrates the area not to be mined as "reclamation area". In mining permits the term reclamation is specific to returning the mined area to useful production. Please revise the map to remove the "reclamation area" labels. The area could be called "buffer zone", un-affected area, or may be left un-labeled. Technical Comment – Resolved 04-11-11
13. Mine Map 2, Mine Plan Sequencing Map, illustrates one existing and three proposed topsoil piles. There is currently additional topsoil stockpiled along the



north and east edges of the Limited Mining Operation 908ET. Please show these stockpiles on the map. Technical Comment – ~~Resolved 04-11-11~~

14. Reclamation Map 1, Reclamation Area Map, needs to show topographic contours illustrating how the area will be reclaimed. The contours should include the full depth of the pit, how the perimeter will tie in to surrounding topography (slopes must be 3:1 or less), at any location where water may drain into the pit from the north or east short berms 2-3 feet in height should be provided to prevent water from eroding reclaimed slopes. **Completeness Comment** – ~~Resolved 04-11-11~~

Tab Appendix D-1

15. The page titled D-1 Land Use Information has limited information. Please add the existence of the irrigation ditch, how the west portion has been used and is currently being used; this would include wildlife uses. Note that no houses are in the immediate area. Are the new facilities for the mine, for Three Rivers Construction, or both. Technical Comment – ~~Resolved 04-11-11~~

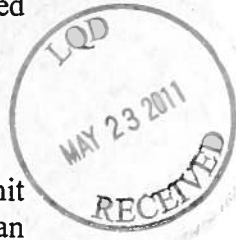
Tab Appendix D-2(missing)

16. Appendix D-2 History, is required for large mines. This section will described the local history, industries, types of transportation in the area over time, etc. **Completeness Comment** – ~~Changed to Small Mine No longer applicable~~

Tab Appendix D-3

17. Per the letter from SHPO, an archeology study will be required for this permit approval. Please provide information that the applicant has or will contact an approved consultant to provide this study. ~~Changed to 17.a. below.~~

17.a. New comment. During our meeting of March 17, 2011, it was agreed that LQD would waive the archeology study providing the application contain a statement that mining activities would cease and the operator would contact LQD and SHPO if any artifact were discovered. Please provide this statement. **Completeness Comment**



Tab Appendix D-4 (missing)

18. Large mine applications require a climatology section. This section will specify elevation, latitude, typical rainfall and snow fall and the months they occur. Wind frequency, direction and duration should be discussed and a wind-rose included. **Completeness Comment** – ~~Changed to Small Mine No longer applicable~~

Tab Appendix D-5

19. The page titled D-5 Topography & Geology, needs to contain a description of the local geology. Please provide a brief description of the local geology. **Completeness Comment** – ~~Resolved 04-11-11~~

Tab Appendix D-6.

The Page titled D-6 Hydrological Data – Water and Waste Water is deficient. Both the Ground Water and Surface Water sections are deficient and there is no discussion at all regarding waste water. Comments 20 through 22 are specific to these issues.

20. The Ground Water section needs to describe the expected elevation of groundwater and how that elevation may be influenced by local irrigation. How is the ground water associated with local geology. How close will mining be to the groundwater level? **Completeness Comment**
21. Wells must be installed for ground water sampling, testing and monitoring. The sampling and testing program should be discussed. **revised to 21.a. below**
21.a **New Comment.** Our district hydrologist requests that the hydraulic gradient be determined to evaluate impact on adjacent land owners. One well has been installed on the west side of the permit area, the Mine Map shows a pond into groundwater at elevation 5688 ft. By maintaining the groundwater pond to a elevation where groundwater elevation may be monitored, combined with the installation of one additional well near the shop of office will allow the hydraulic gradient to be determined. Please install one additional well near the office, determine depth to groundwater at each location, determine the hydraulic gradient and illustrate on a map, and per our March 17, 2011 meeting, discuss the sampling and testing program. **Completeness Comment In Progress**
22. The Surface Water Section needs to characterize the drainage basin. It should discuss the watershed network, watershed delineations, stream channel characterization of the Salt River, potential offsite changes. Surface water quality should be discussed. **Completeness Comment - Changed to Small Mine No longer applicable**



Tab Appendix D-8

23. The description of vegetation is inadequate. The site consists of three principle areas; the existing 10 acre pit, the area along the south side that was reclaimed, and the manmade “wetlands” to the west. Vegetation in the existing pit is non-existent and does not need to be addressed. However, complete descriptions of existing vegetation in the other two areas are required in combination with photos and documentation of the species present and their cover and/or productivity. ***A representative from NRCS may perform a field inspection and provide a report.*** ~~Descriptions should include how transects were conducted and the interval of sampling. (This portion is unnecessary since the application changed to a small mine)~~ **Completeness Comment**

Tab Appendix D-9

24. Correspondence from Wyoming Game & Fish and U.S. Fish & Wildlife alone are not sufficient to constitute the wildlife section. The USFW information was received through the mail. It must be added to the wildlife section of the permit application via an index sheet. A site-specific wildlife survey is required. The

section must delineate any raptor nests and provide a map illustrating the location of the nests. USFW requires monitoring adjacent lands along the Salt River to ensure compliance with the BGEPA and MBTA specifically for bald eagles. A monitoring plan should be included. This section should address the habitat types at the site and the Level I and Level II Species which might be found in those areas, and whether they can be identified at the site during the spring. It was agreed in the meeting of *March 17, 2011, that the local biologist would be contacted to provide a report.*

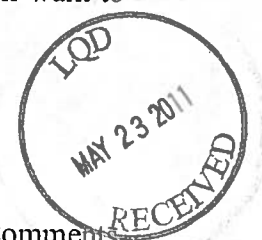
Completeness Comment – Resolved 04-11-11

Tab Mine Plan

25. The Mine Plan, pages 1 through 4, must contain a discussion of the plan for mining. Near the top of the page titled III. Mine Plan, there should be a general summary of the mine plan. This would include where the staging area/crushers are to be located, how mining will move from the existing pit to Area 2, then to area 3. How will topsoil be stripped, to what depth, and where will it be placed – directed placement and followed by seeding or stockpiled? What will be the method of mining; rubber tire loader and trucks, dozer and loader, or something else. What will be the configuration of the highwalls as mining occurs? What will be the depth of mining. Will material be pushed from top to bottom, or excavated from bottom to top? Will mining occur north east of the ditch (this could be accomplished by putting the ditch in pipe and re-routing it)? Cross-sections showing existing versus final mining topography are required. This section must be very detailed. **Additional information was provided on 04-11-11 but is still incomplete. Pages 4-6 of the new mine plan were missing.**
Completeness Comment

26. Page 1 of 4, (*page number & reference changed with new pages 4-11-11*) item #4 says that topsoil piles will be conical in shape. While the operator is free to stockpile topsoil in any configuration he/she deems best, historical data would suggest that conical piles may overrun the space available in and around the pit. WDEQ/LQD encourages the construction of long, low topsoil piles having side slopes not steeper than 3:1. Piles should be seeded for stabilization and to prevent weed infestation. The depth of stripping topsoil should be discussed in this section. If topsoil is indeed 2-3 feet in depth at the site, WDEQ/LQD will want to see more than 6 inches stripped and stockpiled for reclamation use. Generally at least 12-18" of soil is optimal for reclamation.
Technical Comment partially resolved 4-11-11

27. Page 1 of 6, (*page number & reference changed with new pages 4-11-11*) item #4 says that the overburden will be covered with 6 inches of topsoil, as in item 22 above, if topsoil is indeed 2-3 feet in depth at the site, WDEQ/LQD will want to see more than 6 inches of topsoil used in reclamation.
Technical Comment



28. Page 3, item #9 (*page number & reference changed with new pages 4-11-11*), indicates that two ponds are used at the site, a groundwater supply pond and a settling/holding pond. Provide illustrations of the locations of the ponds and cross-sections illustrating how they will be constructed.
Technical Comment - in progress no cross sections to date
29. Page 2, item #8, has the State Engineers Office been contacted regarding permitting these ponds? Please provide documentation. Technical Comment - **Resolved 04-11-11**
30. Page 2, item #8, where in the wash plant process does the water get injections with the anionic solution polymer? Technical Comment - **Resolved 04-11-11**
31. Please provide an MSDS (Material Safety Data Sheet) for the polymer.
Technical Comment - **Resolved 04-11-11**
32. Provide laboratory test results of the water from the groundwater supply pond and of that in the holding pond (after treatment). Technical Comment
8.a **New Comment.** The administrator of the Water Quality Division questions the need for a flocculating agent for washing gravel. It is preferred not to use any chemical agents as they may get in to the groundwater. If a agent is required, select the most benign one possible such as those used in the drinking water industry. Technical Comment
33. *Pages 4-6 were not included with the pages added 4-21-11. This item is no longer on page 3.* Page 3, items #9 and #12, the permit application says normal operating hours will be Monday through Friday, 7AM to 7PM. How do the morning hours for truck traffic interfere with school bus traffic. Under item #12, please provide a discussion of school bus hours and how conflicts will be avoided.
Technical Comment
34. *Pages 4-6 were not included with the pages added 4-21-11. This item is no longer on page 3.* Page 3, item #12, Please re-label this item "Prevention of Endangerment and Public Nuisance". Technical Comment
35. *Pages 4-6 were not included with the pages added 4-21-11. This item is no longer on page 3.* Page 3, item #12, please provide a discussion for this item how lighting used at the pit will affect surrounding houses. Technical Comment
36. *Pages 4-6 were not included with the pages added 4-21-11. This item is no longer on page 3.* Page 3, item #12, please provide a discussion for this item how noise from crushers will affect surrounding houses. Technical Comment



Tab Reclamation Plan

37. A post mining use or uses must be specified for the property in the reclamation plan. Please remove the reference that "Currently there are not specific plans for this property when mining and reclamation are complete".

Completeness Comment – Resolved 04-11-11

37.a. **New comment.** The reclamation plan item #1. indicates there will be no permanent ponds, but the reclamation map shows ponds. Please clarify.

Completeness Comment

38. The reclamation plan should include a discussion of how re-grading of highwalls will follow mining. Will overburden and topsoil be directly placed or moved from stockpiles? Which stockpiles will be used first? Based on the depth of mining, will ponds be left in place? If yes, contact the SEO office for permitting. Provide a map that shows post mining topographic contours. The map will show how final grading ties in to surrounding slopes/property (no slopes may be steeper than 3:1). Illustrate short berms along the north and east sides to prevent surface water from eroding re-graded slopes. Provide representative post-mining cross-sections.

Completeness Comment – Resolved 04-11-11

39. Page 2, item #5, No stockpiles will be allowed to remain idle in reclaimed areas. Please remove reference to idle stockpiles in the Reclamation Plan.

Technical Comment – Resolved 04-11-11

40. **New comment.** Item #3 if there is 2 to 3 feet of topsoil to be stripped on site, a minimum of 12 inches of topsoil must be used in reclamation; not 6 inches.

Technical Comment

41. **New Comment.** The Verbiage under item #8 doesn't actually address Erosion, Siltation and Pollution Prevention. Provide additional verbiage. **Technical Comment.**





SB



*Inserted
11/2/11 JRM*

*RC 10/31/11
jen -*

October 24, 2011

Tanya R. King, P.E.
Natural Resources Analyst
WDEQ/LQD District II
510 Meadowview Dr.
Lander WY, 82520

RE: GEGR, LLC Etna Pit Small Mining Permit Application, Final Public Notice TFN 5 4/191

Dear Tanya;

Enclosed are pages to add to three sections in the application.

Please add the attached pages I.K.2 – I.K.4 to Section I.K, Proof of Final Notice.

Please add the attached pages I.L.2 – I.L.3 to Section I.L, Proof of Filing with County Clerk.

Please add the attached pages I.M.2 – I.M.3 to Section I.M, Proof of Public Mailing.

There are two copies of each section including pages containing the original affidavits and an index.

Please let us know if you need additional information.

Sincerely,

SUNRISE ENGINEERING, INC.

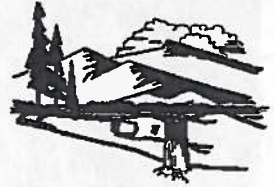
Handwritten signature of Clyde Rainey in cursive.

Clyde Rainey
Project Manager

Enclosures



Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

John Corra, Director

October 6, 2011

GECR, LLC
Attn: Ms. Ganelle Edwards
P.O. Box 3258
Alpine, WY 83128



RE: GECR, LLC Application for Small Mining Permit, Rocky Top Rock Pit, **TEN 5 4/191**
Technical Review – Technically Adequate - Second Public Notice is Authorized

Dear Gay,

The Wyoming Department of Environmental Quality – Land Quality Division (WDEQ/LQD) is in receipt of the Application for a Small Mining Permit for the Rocky Top Rock pit near Etna, Wyoming. The application was received in the Lander District II office on December 27, 2010 and then again, on February 22, 2011, with revisions on April 11, 2011, April 21, 2011, August 24, 2011, and September 14, 2011. The review revealed that the application is **technically adequate** and that **second public notice is authorized**.

Enclosed are the instructions and fill in the blank Format No. 4 for Newspaper Publication and Notification for Proposed Small Mining Permit or Small Mining Permit Amendment. **Please send, via mail or e-mail, the completed document for approval prior to advertising.**

Please note that the following original affidavits are required to be submitted to this office:

1. An affidavit of notice/ mailing specifying the date of the start of the 2nd public notice, that all surface owners of record were notified, and the date that a copy of the mining map was sent to the Wyoming Oil & Gas Commission;
2. An affidavit of publication from the newspaper once the publication process has been completed and,
3. An affidavit of filing from the County Clerk once filing of a permit application document has been accomplished. You may retrieve the application from the County Clerk's office after the 30 day comment period has ended.

Should you have any questions concerning this letter please contact me in Lander at (307) 332-3047.

Sincerely,

Tanya King, P.E.
Natural Resource Analyst
Wyoming DEQ/Land Quality Division

Attachment: Newspaper Publication and Notification for Proposed Small Mining Permit or Small Mining Permit Amendment

xc: **Cheyenne WDEQ/LQD** w/o attachment
Mark Moxley - Lander WDEQ/LQD w/o attachment
Clyde Rainey – Sunrise Engineering (e-mail only)
chron

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

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FAX 332-7726

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WATER QUALITY
(307) 332-3144
FAX 332-7726





Inserted
JRM 9/26/11

JFN 5/4/11
Re 9/26/11
JRM

September 20, 2011

Tanya R. King, P.E.
Natural Resources Analyst
WDEQ/LQD District II
510 Meadowview Dr.
Lander WY, 82520



RE: GEGR, LLC Etna Pit Small Mining Permit Application, 1st Public Notice-Affidavit of Publication

Dear Tanya;

Enclosed are pages I.J.1 through I.J.3 for inclusion into Section I.J, Proof of 1st Public Notice. There are two copies of each page including the original affidavit.

Please let us know if you need additional information.

Sincerely,

SUNRISE ENGINEERING, INC.

Clyde Rainey

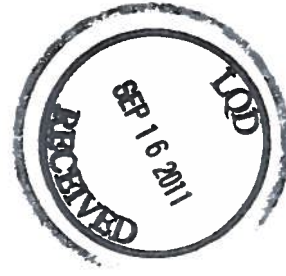
Clyde Rainey
Project Manager

Enclosures



September 12, 2011

*Inserted
JOM*



Tanya R. King, P.E.
Natural Resources Analyst
WDEQ/LQD District II
510 Meadowview Dr.
Lander WY, 82520

RE: GEGR, LLC Application for Small Mining Permit, Rocky Top Rock Pit, TFN 5 4/191
First Round Technical Comments

Dear Tanya;

Enclosed are the responses to the First Round Technical Comments dated September 7, 2011. I have stated the comment and then indicate the response. Attached are pages to replace or be added to different sections of the application. The two copies of the responses are paper clipped separately so they may be exchanged for material in the binders. An index sheet is included with each copy of the materials.

General Comment

You asked that the cover page and introductory page be changed to reflect that Sunrise Engineering has completed the application.

Response

Attached are four pages showing Sunrise Engineering as the preparer of the application. These sheets are to replace the cover page and introductory page in each binder. Also, two binder side cover strips are included to replace the binder strips in each of your binders showing Sunrise Engineering as the preparer of the application.

Please replace the binder covers and introductory page in each binder with the attached cover and introductory pages. Also, please replace the side covers in each binder with the attached side cover sheets.

Technical Comments

Mine Plan

Comment 1

Mine Plan, item I. Prevention and Endangerment and Public Nuisance, No.2 Normal Operating Hours (page MP-5). The application is listed as "Wind River Materials" rather than GEGR, LLC. Please Correct. Please verify the other information in this item is correct.



Response

“Wind River Materials” has been replaced with GEGR, LLC in No. 2, Normal Operating Hours of item I. Prevention and Endangerment and Public Nuisance in the Mine Plan. The other information in this item is correct.

Please replace existing page MP-5 in the Mine Plan with the attached page MP-5

Comment 2

Mine Plan, item J. Solid Waste handling Plan, No. d Petroleum-Contaminated Soils, paragraph two. Please add that the Land Quality Division will also be notified in the event of a spill over twenty-five (25) gallons.

Response

The last sentence of the 2nd paragraph of No. d Petroleum-Contaminated Soils of item J. Solid Waste Handling Plan in the Mine Plan now reads, “Spills over twenty-five (25) gallons will immediately be reported to the Water Quality and Land Quality Divisions.”

Please replace page MP-9 in the Mine Plan with the attached MP-9.

Agency Permits

Comment 3

Please provide proof that a valid permit exists for the septic system.

Response

Item 10 has been added to section I.F Agency Permits. It reads, “A copy of the Lincoln County Wastewater Facility Permit is included in this section”.

Please replace existing page I.F.2 with the attached page I.F.2 and add the attached Lincoln County Wastewater Permit to section I.F Agency Permits.

Please let us know if you need additional information.

Sincerely,

SUNRISE ENGINEERING, INC.

Clyde Rainey
Project Manager

Enclosures

54/191



Department of Environmental Quality



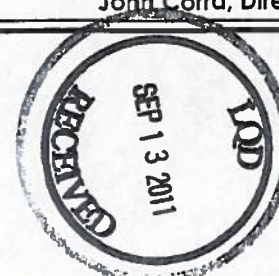
To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

John Corra, Director

September 7, 2011

GECR, LLC
Attn: Ms. Ganelle Edwards
P.O. Box 3258
Alpine, WY 83128



RE: GECR, LLC Application for Small Mining Permit, Rocky Top Rock Pit, TFN 5 4/191
First Round Technical Comments

Dear Gay,

The Wyoming Department of Environmental Quality – Land Quality Division (WDEQ/LQD) is in receipt of the Application for a Small Mining Permit for the Rocky Top Rock pit near Etna, Wyoming. with the most recent revisions received on August 24, 2011.

Since the consultant changed from Eagle Rock Engineering to Sunrise Engineering following several rounds of completeness comments, I recommend that the permit binder and the introductory page (first page in the application binder) be changed to reflect that Sunrise Engineering has completed the application such that (1) questions arising from the Public Notice may be properly directed, and (2) we have the proper consultant on record if the permit goes before the Environmental Quality Council (EQC).

Technical Comments

1. Mine Plan, item I. Prevention of Endangerment and Public Nuisance, No.2 Normal Operating Hours (page MP-5). The application is listed as "Wind River Materials" rather than GECR, LLC. Please correct. Please verify the other information in this item is correct.
2. Mine Plan, item J. Solid Waste Handling Plan, No. d. Petroleum-Contaminated Soils, paragraph two. Please add that the Land Quality Division will also be notified in the event of a spill over twenty-five (25) gallons.
3. Please provide proof that a valid permit exists for the septic system.

If for any reason any other technical issues arise, I will immediately notify you as time is of the essence. Please contact us at (307) 332-3047 with any questions you may have.

Sincerely,

Tanya R. King, P.E.
Natural Resources Analyst
WDEQ/LQD District 2, Lander Office

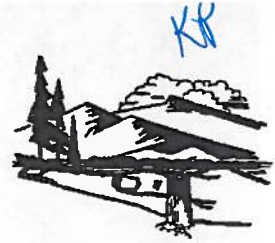
xc: Cheyenne DEQ/LQD
Mark Moxley – Lander DEQ/LQD
Sunrise Engineering – Clyde Rainey, PO Box 609, Afton, WY 83110
chron file – Tanya





Department of Environmental Quality

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Matt Mead, Governor

John Corra, Director

Certified Mail # 7007 1490 0002 1550 4230



August 29, 2011

GECR, LLC
Attn: Ms. Ganelle Edwards
P.O. Box 3258
Alpine, WY 83128

RE: GECR, LLC Application for Small Mining Permit, Rocky Top Rock Pit, TFN 5 4/191
Completeness Review – Complete - First Public Notice is Authorized

Dear Gay,

The Wyoming Department of Environmental Quality – Land Quality Division (WDEQ/LQD) is in receipt of the Application for a Small Mining Permit for the Rocky Top Rock pit near Etna, Wyoming. The application was received in the Lander District II office on December 27, 2010 and then again, on February 22, 2011, with revisions on April 11, 2011, April 21, 2011, and August 24, 2011. We have reviewed the application, deemed it complete, and authorize the applicant to proceed to First Public Notice.

There will be minimal technical comments that need to be addressed before authorization to proceed to Second Public Notice.

Please contact us at (307) 332-3047 with any questions you may have.

Sincerely,

Tanya R. King, P/E.
Natural Resources Analyst
WDEQ/LQD District 2, Lander Office

enclosures: Sample Format First Public Notice

xc: Cheyenne DEQ/LQD
Mark Moxley – Lander DEQ/LQD
Sunrise Engineering – Clyde Rainey, PO Box 609, Afton, WY 83110
chron file – Tanya

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Department of Environmental Quality

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Matt Mead, Governor

John Corra, Director

May 17, 2011

GECR, LLC
Attn: Ms. Ganelle Edwards
P.O. Box 3258
Alpine, WY 83128



RE: Appendix D8 – Pre Mining Vegetation Small Mine Permit Application **TFN 5 4/191**

Dear Ms. Edwards,

May 16, 2011, WDEQ/LQD received “Appendix D8 – Pre-Mining Vegetation Inventory submitted with an index sheet from your consultant Paul Snarr of Eagle Rock Engineering. The information received does not constitute the information required for Appendix D8 of a Small Mine Application as described in our on line “Small Mine Handbook”, or in the WDEQ/LQD Chapter 9 Non-Coal Rules and Regulations. The information provided was an inspection from Lincoln County Weed and Pest. This report did outline several noxious weeds at the site that will need to be sprayed prior to further disturbance.

Attached, please find an example of the minimum information that will be accepted as Appendix D8 to your Small Mine Application. When you or your consultant submits the information, please include color photographs of the vegetation areas described (with close up views) and a map clearly illustrating the location of each photograph.

All further submittals must be identified with the temporary filing number TFN 5 4/191 which ties the information to this application.

Each and every page of all further submittals must be clearly numbered with a unique page number.

If you have any questions, please contact me at (307) 332-3047.

Sincerely,

Tanya R. King, P.E.
Natural Resource Analyst

enclosure: Appendix D-8 EXAMPLE

xc: **Cheyenne DEQ/LQD**

Mark Moxley – Lander DEQ/LQD

Paul Snarr – Eagle Rock Engineering, 1331 Fremont Ave., Idaho Falls, Idaho 83402

chron file – Tanya

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Section II.F

APPENDIX D-8: Pre-mining Vegetation Community Information

On May 15, 2007, at the request of the land owner, the Natural Resources Conservation Service (NRCS) in Pinedale, Wyoming performed an onsite investigation of the 80 acre expansion area and provided a site investigation report. The report presented in this appendix describes the existing vegetation (percent species composition on a dry-weight basis by ocular estimate); estimated and projected annual production; as well as a similarity index. NRCS determined by onsite inspection that the entire expansion area consists of one ecological site. Correlations with soil survey documentation was made onsite and included in the raw data summary of the report, which is available at: <http://efotg.nrcs.usda.gov/treemenuFS.aspx?Fips=56035&MenuName=menuWY.zip>.

In discussions with NRCS personnel, it was learned that their assessment of the expansion area is that it has been heavily overgrazed and may have been used as a sheep concentration area in the past. Vegetation is very sparse, and even the sagebrush present is in "very bad shape". Rock and bare dirt comprise most of the surface, limiting somewhat the viability of vegetation in the area. As stated in the NRCS report, "Production may actually be higher on these [disturbed] sites." Reclamation, in other words, may improve the range condition of the Mesa Road Mine.

A copy of a 2002 NRCS range mapping follows this page, which similarly describes the original permit area. The range mapping in the original site investigation shows the location of the range sites and a listing of vegetation types common to the range sites. As indicated in Section IV, Reclamation Plan, the landowner has approved the seed mixture recommended by the NRCS in the original vegetation survey.



II.F.D - 1

-RECEIVED-

NOV 20 2007

LAND QUALITY DIV.
DIST II

May 15, 2007

 To: NERD Gas Company
 Re: Small Mining Permit

Based upon a site investigation, the existing vegetation (percent species composition on a dry-weight basis by ocular estimate) for the area described as SW4 NW4 & NW4 SW4 of Sec 5 T30N R109W is:

(See map for location) – Loamy, 10-14" Ppt Zone, Foothills and Basins West

GRASSES (35%):

Thickspike wheatgrass	10%
Sandberg/Canby bluegrass	10%
Bottlebrush squirreltail	10%
Needleandthread	5%

FORBS (5%):

Hood's Phlox (Dominant Forb)
 Daisy
 Biscuitroot
 Hollyleaf clover
 Pricklypear cactus
 Wild Onion

Annual mustards (non-native)

SHRUBS (60%):

Wyoming big sagebrush	60%
Winterfat	Trace

SIMILARITY INDEX (% similarity to the potential plant community): 60

Estimated Annual Production: 350 lbs/acre

The Ecological Site Description, which describes the potential plant communities that exist on this site, can be obtained at the following website:

<http://efotg.nrcs.usda.gov/treemenuFS.aspx?Fips=56035&MenuName=menuWY.zip>

The potential plant community for this site is:

GRASSES (55-80%)

Thickspike wheatgrass	10-30%
Bluebunch wheatgrass	5-15%
Letterman's needlegrass	5-15%
Needleandthread	5-10%
Canby bluegrass	5-10%
Other native grasses	10-20%

FORBS: 5-15%

SHRUBS (15-30%):

Wyoming big sagebrush	10-20%
Other native shrubs	5-10%



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SEP 13 2007

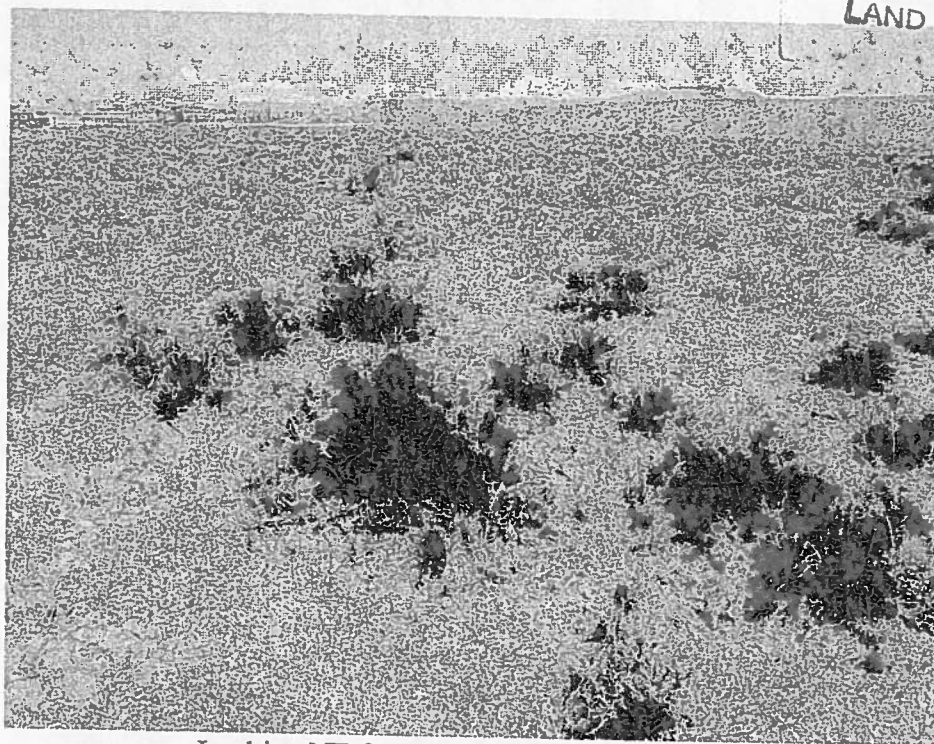
LAND QUALITY DIV.
DIST II

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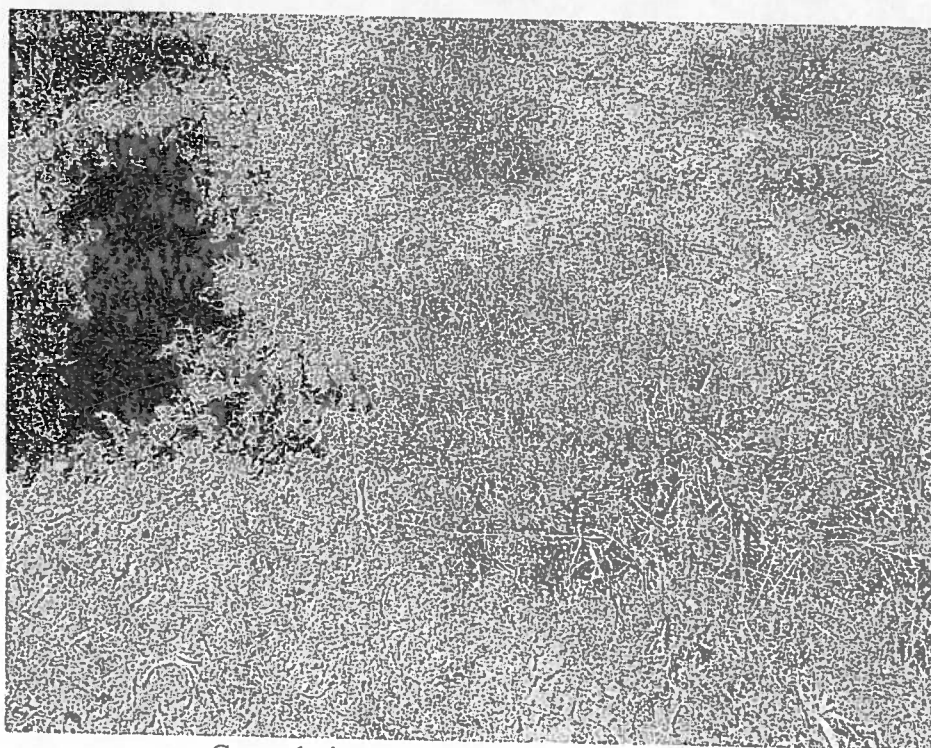
SEP 13 2007

Potential Annual Production: 700-1500 lbs/acre

LAND QUALITY DIV.
DIST II



Looking NE from vegetation inventory site.



Ground view of vegetation inventory site.

The site also contains inclusions of the Shallow Loamy, 10-14" Ppt Zone, Foothills & Basins West site. This site looks similar in production and species composition with a higher proportion of ground covering forbs such as phlox and buckwheat. Many areas on this site have been previously disturbed and have a high proportion of annual mustards, thickspike wheatgrass, and rabbitbrush. Production may actually be higher on these sites.

I hope this information is helpful to you in the application process. If I can be of any further assistance, such as providing assistance with a reclamation planting plan, please don't hesitate to call.

Sincerely,

Karen Clause, Rangeland Management Specialist

Cc: Jennifer Hayward, District Conservationist

-RECEIVED-

[SEP 13 2007]

**LAND QUALITY DIV.
DIST III**



Page II. F. D-4

II.F. APPENDIX D-8: PREMINING VEGETATION COMMUNITY
INFORMATION

At the request of the land owner and the Nerd Gas Company, the Natural Resources Conservation Service (NRCS) in Pinedale, Wyoming performed range mapping of the permit area and provided a recommended reclamation seed mixture. The range mapping identified four separate range sites on the permit area. A copy of the NRCS range mapping report following this page shows the location of the range sites (Map No. 3), a listing of vegetation types common to the range sites, and a recommended seed mixture follows this page. As indicated in Section IV, Reclamation Plan, the landowner has approved the seed mixture. Photographs showing vegetation on the permit area follow the NRCS range mapping report.



Nerd Gas Company
November 15, 2002
Permit No. _____

Page No. II.F.- D8-1

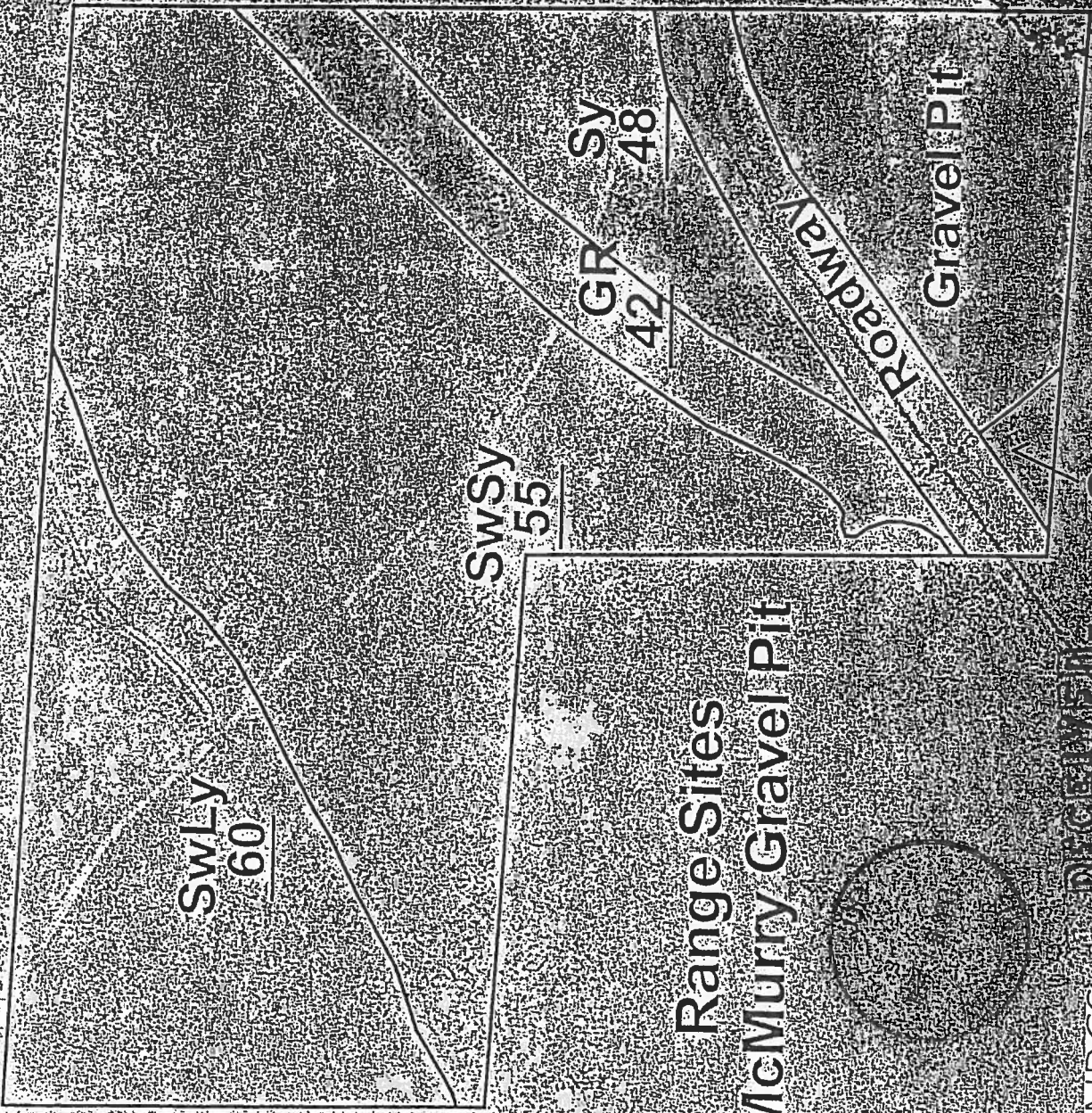
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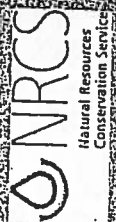
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DIST. II

SWLy - Shallow
SWSy - Shallow
GR - Gravelly
Sy - Sandy

Map No. 3



Range Sites McMurry Gravel Pit



Nerd Gas Company
November 15, 2002
Mine Permit No. 14E-28-3

LEGEND FOR RANGE SITES

Range sites are kinds of native rangelands that differ from each other in their ability to produce significantly different kinds or amounts of original vegetation. Soils, precipitation and geographical location are combined to designate a specific range site. The following range sites are listed in the normally presumed order of the productivity in "Excellent" condition.

Names of the range sites occurring on your ranch are underlined, and these sites are separated by solid lines on your conservation plan map.

Symbol	Range Site Name	Brief Description for GREEN RIVER AND GREAT DIVIDE BASIN - 7"-9" p.z.
WL	Wetland	These soils are poorly drained with water above the surface for part of the growing season. The main vegetation is: decreaseers - Nebraska sedge, northern reedgrass, tufted hairgrass and bluejoint reedgrass; increaseers - inland sedge, Baltic rush, forbs and willows.
Sb	Subirrigated	These are deep, organic soils with a water table near the surface for most of the growing season. The principal vegetation is: decreaseers - basin wildrye, tufted hairgrass and Nebraska sedge; increaseers - western wheatgrass, inland sedge, forbs, shrubby cinquefoil and willows.
SS	Saline Subirrigated	These are deep saline soils that have a water table near the surface for most of the growing season. The main vegetation is: decreaseers - alkali sacaton, basin wildrye and Nuttall alkaligrass; increaseers - alkali muhly, inland saltgrass, western wheatgrass and greasewood.
LL	Lowland	The soils of this site are deep, well drained, with a water table below 3 feet, and are found along streams. The principal vegetation is: decreaseers - basin wildrye, Letterman needlegrass, needleandthread grass, and bluebunch wheatgrass; increaseers - thickspike wheatgrass, needleleaf sedge, cottonwoods and silver buffaloberry.
SL	Saline Lowland	The soils of this site are deep, saline, and usually found along streams. The principal vegetation is: decreaseers - western wheatgrass, alkali sacaton, four-wing saltbush and Gardners saltbush; increaseers - inland saltgrass, inland sedge, alkali muhly, greasewood and rubber rabbitbrush.
Sa	Sands	The soils of this site are coarse textured sands that sometimes form dunes. The vegetation is: decreaseers - needleandthread, thickspike wheatgrass, Indian ricegrass and bottlebrush squirreltail; increaseers - needleleaf sedge, galleta, forbs, shadscale and silver sagebrush.
Sy	Sandy	The soils of this site are mainly loamy kinds of sands that are deep. The main vegetation is: decreaseers - needleandthread grass, bluebunch wheatgrass and Canby bluegrass; increaseers - thickspike wheatgrass, needleleaf sedge, big sagebrush and low rabbitbrush.
Ly	Loamy	The soils of this site are deep loams that usually occur in an upland position. The principal vegetation is: decreaseers - needleandthread grass, bluebunch wheatgrass, Indian ricegrass and winterfat; increaseers - thickspike wheatgrass, Sandberg bluegrass, big sagebrush and low rabbitbrush.
Cy	Clayey	The soils of this site are deep and fine textured that usually occur in the lowland position. The main vegetation is: decreaseers - western wheatgrass, bottlebrush squirreltail, bud sagebrush and Gardners saltbush; increaseers - needleleaf sedge, Sandberg bluegrass, big sagebrush and low rabbitbrush.
DC	Dense Clay	The soils of this site are deep heavy clays that take up water very slowly. The main vegetation is: decreaseers - western wheatgrass, Indian ricegrass and bud sagebrush; increaseers - Sandberg bluegrass, low sagebrush and birdsfoot sagebrush.
SwSy	Shallow Sandy	The soils of this site are sandy loams that are sometimes rather coarse and usually found on southwest facing slopes. The main vegetation is: decreaseers - needleandthread grass, bluebunch wheatgrass, Indian ricegrass and winterfat; increaseers - galleta, needleleaf sedge, forbs and low rabbitbrush.
SwLy	Shallow Loamy	The soils of this site are shallow loams over limestones and shales. The principal vegetation is: decreaseers - bluebunch wheatgrass, Indian ricegrass, needleandthread grass and thickspike wheatgrass; increaseers - needleleaf sedge, Sandberg bluegrass, forbs, low rabbitbrush, low sagebrush and big sagebrush.

-RECEIVED-

NOV 20 2007

LAND QUALITY DIV.
DIST II



Nerd Gas Company
November 15, 2002
Mine Permit No. _____

Page No. 11.F.D-8-5

<u>Symbol</u>	<u>Range Site Name</u>	<u>Brief Description</u>
SwCy	Shallow Clayey	The soils of this site are shallow heavy clays, usually over shale. The main vegetation is: decreaseers - western wheatgrass, bottlebrush squirreltail and bud sagebrush; increaseers - Sandberg bluegrass, needleleaf sedge, forbs, birdsfoot sagebrush, winterfat and low sagebrush.
SwB	Shallow Breaks	The soils of this site are shallow with outcrops of sedimentary rock, usually on south and west facing slopes. The principal vegetation is: decreaseers - bluebunch wheatgrass, Indian ricegrass, needleandthread grass and thickspike wheatgrass; increaseers - needleleaf sedge, Sandberg bluegrass, juniper and big sagebrush.
IC	Impervious Clay	The soils of this site are very tight clays with high amounts of sodium. The main vegetation is: decreaseers - western wheatgrass, bottlebrush squirreltail, Indian ricegrass and Gardners saltbush; increaseers - Sandberg bluegrass, forbs and birdsfoot sagebrush.
SU	Saline Upland	The soils of this site are heavy saline clays that are usually in a lowland position. The main vegetation is: decreaseers - bottlebrush squirreltail, Indian ricegrass and Gardners saltbush; increaseers - Sandberg bluegrass, winterfat and birdsfoot sagebrush.
GR	Gravelly	The soils of this site are very gravelly, sandy and normally occur along streams. The principal vegetation is: decreaseers - bluebunch wheatgrass, Indian ricegrass and needleandthread grass; increaseers - Sandberg bluegrass, needleleaf sedge and low rabbitbrush.
VS	Very Shallow	The soils of this site are very shallow and rocky and usually occur on steep slopes. The principal vegetation is: decreaseers - bluebunch wheatgrass, thickspike wheatgrass and needleandthread grass; increaseers - needleleaf sedge, Sandberg bluegrass, forbs and juniper.
Sh	Shale	The soils of this site are very shallow clays over shale. The main vegetation is: decreaseers - thickspike wheatgrass, Indian ricegrass and Gardners saltbush; increaseers - birdsfoot sagebrush, greenmolly summercypress and forbs.

LEGEND FOR RANGE CONDITION

Range condition is the present stage of vegetation in relation to climax condition for that range site. Range condition provides an approximate measure of any deterioration that has taken place in plant cover and serves as a basis for predicting the degree of improvement possible.

<u>Map Symbol</u>	<u>Range Condition Class</u>	<u>Percent of Present Composition that is Potential for the Range Site</u>
EC	Excellent Condition	76 - 100
GC	Good Condition	51 - 75
FC	Fair Condition	26 - 50
PC	Poor Condition	0 - 25

Range condition classes, within the same range site, are separated by a dotted line.



RECEIVED

NOV 20 2007

LAND QUALITY DIV.
DIST II

Nerd Gas Company
November 15, 2002
Mine Permit No. _____
Page No. 11.F.D-8-6

bh



Tanya King <tanya.king@wyo.gov>

TFN 54/191

Re: GEGR LLC - McNeel Pit

1 message

Tanya King <tanya.king@wyo.gov>

Thu, May 12, 2011 at 9:53 AM

To: John Wagner <john.wagner@wyo.gov>

Cc: Mark Moxley <mark.moxley@wyo.gov>

1. I believe there is not actually a wetland on or adjacent to the property. On the west side of the property is an area we have referred to as a wetland. Apparently this area was "man made" as a result of McNeel building up a berm to keep runoff from the pit from exiting the property. A utility easement (50 feet in width) extends through this area. It has grown up in willows. The terrain in this area is unusually hilly; it may be the area he refers to as a moto-cross track.

We have directed GEGR, LLC to install a well in this general area for the purpose of monitoring groundwater level and sampling for water chemistry.

2. The U.S. Army Corps of Engineers describes the permit area as "entirely upland".

3. The mine plan does not show disturbance in the "man made wetland" area.

4. The mine plan anticipates encountering groundwater. We have requested a spill protection control and countermeasure plan specifically for this issue.

A pit exists on the east side of the property where groundwater seasonally occurs (due to local irrigation).

The State Engineers Office responded to GEGR in a letter dated September 9, 2010, that they wouldn't need an additional water right permit unless the excavation encounters groundwater and exposes the aquifer to evaporation.

4. At present the mine plan does not specifically address the management of groundwater when encountered. Please let me know specifically what you are looking for here. We usually see some discussion of leaving a portion of the pit deep to contain all water in one location.

5. All crusher/screening water comes from a permitted well then goes into lined ponds where it is recirculated for reuse. We have requested additional detail on the ponds.

The mine plan discusses storm water discharge/containment to the property. Berms area to be placed above highwalls to prevent surface water from adjacent property from entering the pit.

Thanks for the input and questions. Again, please provide more information on what you are looking for for item #4.

Tanya

On Thu, May 12, 2011 at 8:36 AM, John Wagner <john.wagner@wyo.gov> wrote:
Tanya & Jeremy:

Looking for your reaction to Mr. Smith's comments. Specifically for Tanya:

1. Is there a wetland and how is/was the water managed?
2. If there is a wetland, has the COE determined if it is jurisdictional?



- 3. Does the mine plan call for mining through the wetland?
- 4. Does the mine plan detail how groundwater encountered during mining will be managed?
- 5. Does the mine plan address water use/discharge from crushing & washing activities.

Thanks.

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

From: Theodore Smith <trsmith@silverstar.com>
 Date: Wed, May 11, 2011 at 2:09 PM
 Subject: Re: GECR LLC - McNeel Pit
 To: John Wagner <john.wagner@wyo.gov>
 Cc: Tanya King <tanya.king@wyo.gov>, John Corra <john.corra@wyo.gov>



Dear Mr. Wagner:

Thank you very much for your letter and Director Corra's consideration of our concerns. I am currently out of town on business and I apologize for the delay in responding to your letter.

As the pictures I supplied the DEQ team attending the public meeting in Etna depicted, there has been significant degradation of the wetlands on the Mc Neel pit property. In order to facilitate the construction of a motocross course within the wetlands it was necessary to de-water the wetlands: this water was discharged into the Salt River drainage system. It is most likely the water already contained residue from the mining operations. The photos provided also clearly depict dozer tracks and movement of dirt within the critical area. More specifically associated with the water flow issue; however, is the issue of water discharge control and dewatering for the area being mined. The current mining operations are at the level of the prevailing water table, this is also depicted in one of the pictures proved. There has been no attempt to control the flow of waste water from exposed water table into the wetlands and eventually into the stream flowing toward the Salt River.

The pictures supplied also show the operation of two crushing and washing facilities in non-permitted areas. There has never been an approved plan to control the discharge of this waste water into the Salt River drainage system. In the proposal currently pending before DEQ the application stated they are requesting permission for a Hot Asphalt Plant as well as crushing and washing of rock. No information has been proved on how discharge from these facilities will be processed and prevented from entering into the Salt River water system.

I hope these comments are of assistance.

Sincerely,

Theodore R, Smith

On May 5, 2011, at 10:42 AM, John Wagner wrote:

Mr. Smith:

The Director of the WY Dept. of Environmental Quality, John Corra, asked me to follow-up on your recent correspondence with him regarding the GECR LLC, McNeel Pit. In that correspondence you state: " Moreover, there are additional violations involving water disposal and wetland degradation".

Could you provide me with more information? Specifically, exactly what water disposal and wetland degradation issues you see. Once I have a better idea of the exact nature of your concerns, I can better respond to your inquiry.

—
John F. Wagner

Administrator, Water Quality Division
john.wagner@wyo.gov
307-777-7072

--
John F. Wagner
Administrator, Water Quality Division
Wyoming Dept. of Environmental Quality
john.wagner@wyo.gov
307-777-7072

--
Tanya King, P.E.
Natural Resources Analyst
Wyoming DEQ/Land Quality Division
District 2, Lander Field Office
(307) 332-3047





Tanya King <tanya.king@wyo.gov>

TFN 5/4/11

Re: GECR LLC - McNeel Pit

1 message

John Wagner <john.wagner@wyo.gov>

Thu, May 12, 2011 at 8:47 AM

To: Theodore Smith <trsmith@silverstar.com>

Cc: Jeremy Zumberge <jeremy.zumberge@wyo.gov>, Tanya King <tanya.king@wyo.gov>

Mr. Smith:

Thanks for your response. The Water Quality Division will be working closely with the Land Quality Division on the issues you raise. My understanding is that the current owner of the property has applied for a permit to mine from LQD. Answers to most or all of your questions should come through the LQD permitting process and I have asked LQD to keep me apprised as they review the application for the permit to mine.

John F. Wagner
Administrator, Water Quality Division
Wyoming Dept. of Environmental Quality
john.wagner@wyo.gov
307-777-7072

On Wed, May 11, 2011 at 2:09 PM, Theodore Smith <trsmith@silverstar.com> wrote:

Dear Mr. Wagner:

Thank you very much for your letter and Director Corra's consideration of our concerns. I am currently out of town on business and I apologize for the delay in responding to your letter.

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John F. Wagner
Administrator, Water Quality Division
john.wagner@wyo.gov
307-777-7072



BB



Tanya King <tanya.king@wyo.gov>

Re: GECR LLC - McNeel Pit

1 message

TFN 5 4/19/11

Wed, May 11, 2011 at 4:13 PM

Tanya King <tanya.king@wyo.gov>

To: Theodore Smith <trsmith@silverstar.com>

Cc: John Wagner <john.wagner@wyo.gov>, John Corra <john.corra@wyo.gov>, Mark Moxley <mark.moxley@wyo.gov>

Mr. Smith,

We appreciate your concerns. GERC, LLC. has applied for a Small Mine Permit. DEQ/Land Quality Division is in the process of reviewing the permit application. The U.S. Army Corps of Engineers has been contacted regarding wetlands.

Through the permitting process LQD evaluates mining in relation to groundwater level and impacts it may have. Many of the gravel operations in Star Valley encounter groundwater during mining.

I am personally not aware of a moto-cross tract having been on the site. A disturbance on the west side could be the disturbance you are referencing. Perhaps you could forward me the picture you mentioned in the letter.

Since the application isn't yet complete, I can't provide you with much more comment at this time. When deemed complete the applicant will advertise the project in a newspaper of local circulation. I believe the Kemmerer paper is the Lincoln County newspaper of record. Once the application is deemed technically adequate, the applicant will again advertise for an additional two weeks. There will then be a 30 day period where LQD will take comments on the project. If there are objecting comments, then an Environmental Quality Council hearing will be scheduled.

I trust this will satisfy some of your concerns.

Respectfully,

Tanya King

Natural Resources Analyst/Project Coordinator

Wyoming Department of Environmental Quality/Land Quality Division

District 2 - Lander Office

(307) 332-3047



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John F. Wagner
Administrator, Water Quality Division
john.wagner@wyo.gov
307-777-7072



--
Tanya King, P.E.
Natural Resources Analyst
Wyoming DEQ/Land Quality Division
District 2, Lander Field Office
(307) 332-3047



Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matt Mead, Governor

John Corra, Director

April 26, 2011

GECR, LLC
P.O. Box 3258
Alpine, WY 83128

RE: Temporary Filing No. 5 4/191

Dear Sirs:

Enclosed please find receipt number 9583 in the amount of Three Hundred Forty-Seven Dollars (\$347) to acknowledge receipt of your company's check no. 352 (\$322) and check no. 353 (\$25) for Form 1(s), Small Mining Permit and Form 3, License to Mine filing fees.

Please note that your application is still in review, and if you should have any questions, please contact our office.

Sincerely,

Tina Futa
Administrative Specialist
Land Quality Division

/tf
Enclosure
xc: District II



Mickle, Jennifer

From: Hill, Deanna
Sent: Wednesday, April 20, 2011 11:05 AM
To: Christensen, Ramona; Mickle, Jennifer
Subject: FW: GEGR LLC TFN 5/4/191 - Take 2

Note they are changing the application type to a small mine.

From: King, Tanya
Sent: Wednesday, April 20, 2011 10:54 AM
To: Hill, Deanna
Cc: trctrc@silverstar.com; Paul Snarr
Subject: RE: GEGR LLC TFN 5/4/191 - Take 2

They did change from going to a large mine to a small mine.

22.5 acres with 19 to be affected is correct

I will forward this to remind the applicant that they need to submit fees and an provide and originally signed Form 3

Tanya

From: Hill, Deanna
Sent: Wednesday, April 20, 2011 10:50 AM
To: King, Tanya
Cc: Moxley, Mark
Subject: GEGR LLC TFN 5/4/191 - Take 2

In follow up to my Mary 8, 2011 e-mail and response to documentation recently received:

1. Form ?
 - a. We have received a Form 1s - this TFN has been identified as a large mine, not a small mine?
 - b. They do now have the permit acreage figure (22.5) larger than the acreage to affect (19) which is acceptable.
 - c. The applicant has paid their delinquent taxes to the Secretary of State.
 - d. No fees have been received.
2. Form 3
 - a. We still have not received an originally signed document.
 - b. The applicant has paid their delinquent taxes to the Secretary of State.
 - c. No fees have been received.

Thank you, I am having a delightful day.



EAGLE ROCK ENGINEERING

CIVIL • PLANNING • SURVEYING



Idaho Falls Office

1331 Fremont Ave • Idaho Falls, ID 83402
208.542.2665 • Fax 522-2664

Rexburg Office
310 North 2nd East Suite 135 • Rexburg, ID 83440
208.359.2665 • Fax 522-2664

Department of Environmental Quality
Land Quality Division
Attn: Tanya King, PE
510 Meadow View Drive - District 2 Field Office
Lander, WY 82520

*Inserted
4/14/11*

LQD

APR 13 11

RECEIVED

April 6, 2011

TFN 54/191

*Wrong TFN to,
should be
54/191
called Tanya - in
mtg until 1:00 pm*

RE: GECR, LLC DBA ROCKY TOP GRAVEL PIT – APPLICATION REVIEW

Tanya,

Per your Completeness Review March 4, 2011 you will find the attached re-
form – Index Sheets for Mine Permit Amendments or Revisions. All changes
made except Item No's 16, 18, and 22 which were directed for a large mine

*Gen,
Call Tanya
if you have
questions.
sharko-re*

I have contacted a vegetative specialist and he indicated he would perform
the willows and vegetation on site; however I understand Lincoln County also has someone
to do this. I will get this to you as soon as weather permits.

Should you have any questions or concerns feel free to contact me at (208) 542-2665.

Thank you,

Paul Snarr, Engineering Project Manager
Eagle Rock Engineering and Land Surveying

ROUTING REQUEST	
TO <u>Dee</u>	TFN <u>54/191</u>
<input checked="" type="checkbox"/> PREPARE RESPONSE <i>Form 1 OK?</i> <i>OK to supersede other form?</i>	
DATE <u>4/14/11</u>	FROM <u>Jan</u>

Cc: GECR, LLC
Attachments: Review Comments and DEQ Form for Revisions

MEMORANDUM

TO FILE: GECR, LLC, TFN 5 4/191, Convert 908ET to Large Mine
FROM: Tanya King, P.E. – Natural Resource Analyst, WDEQ/LQD District 2
DATE: April 6, 2011
RE: Completeness Review First Round Comments

WDEQ/LQD acknowledges the difficulty in preparing a complete, technically adequate large mine permit application. We are available for questions and encourage them. It is suggested that you refer to WDEQ-LQD Guideline No.6 for a complete listing of the information required for a large mine permit application. It is strongly suggested that GECR apply for a small mine permit rather than a large mine permit. It is also suggested that the permit area be revised to include the lands to the north that GECR is negotiating to purchase. If these lands are added at a future date then public notice will again be required. It would be advisable to include these lands in this application.

It will greatly assist both the applicant and WDEQ/LQD with revisions/insertions/deletions, if all pages have a unique page number, i.e. "MP page 1 of 4". On all pages submitted as revisions, please number each with a unique page number. For all revisions, insertions and deletions, please use an index sheet (found on the DEQ web site) to indicate where pages are to be changed.

The following comments are listed at Completeness or Technical. Completeness issues must be addressed before first public notice can be authorized.

Binder Cover/Cover Page

1. The name on the binder cover and the cover page both list the name of the applicant as GERC, LLC. Please correct these pages, and verify all other pages have the correct GECR, LLC name. Technical Comment

Tab I-C Bonding

2. On page 2, the table showing items in the bond calculation shows 22.5 acres under "Final Grading" and "Reclamation Seeding". Only 18 acres will be permitted for disturbance. Please change 22.5 acres to 18 acres in the bond calculations. Technical Comment
3. On page 2, the table showing items in the bond calculation shows no amount for Mobilization/Demobilization. The bond calculation is to cover the cost if DEQ were to do the reclamation through default of the operator. Therefore a line item

for Mobilization/Demobilization is required. Please add this item. Technical Comment

Tab I-F Agency Permits

4. Please provide a summary sheet of each agency with the corresponding permit number. It is acceptable to add the permit number to the page labeled I.F. Permits/Letter to/From Other Agencies. Technical Comment

Tab I-G Appendix B

5. The map titled GEGR, LLC Gravel Pit Ownership within ½ Mile must show the permit boundary and a line delineating ½ mile from the boundary. Please add these items to the map. **Completeness Comment**
6. The county conditional use permit specifically states that no mining may occur within 1000 feet of Klint Clark's home. Please clearly identify the Clark home on the "Ownership within ½ mile" map and show its distance from the "affected" area. **Completeness Comment**

Tab Maps

7. General Map 2, Mining and Reclamation Area Map, illustrates the area not to be mined as "reclamation area". ~~Since~~ In mining permits the term reclamation is specific to returning the mined area to useful production. Please revise the map to remove the "reclamation area" labels. The area could be called "buffer zone", un-affected area, or may be left un-labeled. Technical Comment
8. General Map 5, Contour Map, illustrates the area not to be mined as "reclamation area". In mining permits the term reclamation is specific to returning the mined area to useful production. Please revise the map to remove the "reclamation area" labels. The area could be called "buffer zone", un-affected area, or may be left un-labeled. Technical Comment
9. An original USGS topographic map, or high quality equivalent, is required. This map should clearly illustrate the proposed permit area as well as the existing 10 acre LMO. The map should extend at least three miles in all directions from the proposed permit area. **Completeness Comment.**
10. A survey map of the permit boundary is required to clearly illustrate the metes and bounds survey that describes the property. The map must show all corners and distances between. **Completeness Comment.**
11. General Map 5, Contour Map, does not show current topographic conditions. Please re-title to Existing Contour Map and illustrate existing topographic conditions. Technical Comment
12. General Map 6, Soil Test Hole Map, illustrates the area not to be mined as "reclamation area". In mining permits the term reclamation is specific to

returning the mined area to useful production. Please revise the map to remove the "reclamation area" labels. The area could be called "buffer zone", un-affected area, or may be left un-labeled. **Technical Comment**

13. Mine Map 2, Mine Plan Sequencing Map, illustrates one existing and three proposed topsoil piles. There is currently additional topsoil stockpiled along the north and east edges of the Limited Mining Operation 908ET. Please show these stockpiles on the map. **Technical Comment**

14. Reclamation Map 1, Reclamation Area Map, needs to show topographic contours illustrating how the area will be reclaimed. The contours should include the full depth of the pit, how the perimeter will tie in to surrounding topography (slopes must be 3:1 or less), at any location where water may drain into the pit from the north or east short berms 2-3 feet in height should be provided to prevent water from eroding reclaimed slopes. **Completeness Comment**

Tab Appendix D-1

15. The page titled D-1 Land Use Information has limited information. Please add the existence of the irrigation ditch, how the west portion has been used and is currently being used; this would include wildlife uses. Note that no houses are in the immediate area. Are the new facilities for the mine, for Three Rivers Construction, or both. **Technical Comment**

Tab Appendix D-2(missing)

16. Appendix D-2 History, is required for large mines. This section will described the local history, industries, types of transportation in the area over time, etc. **Completeness Comment**

Tab Appendix D-3

17. Per the letter from SHPO, an archeology study will be required for this permit approval. Please provide information that the applicant has or will contact an approved consultant to provide this study. **Completeness Comment**

Tab Appendix D-4 (missing)

18. Large mine applications require a climatology section. This section will specify elevation, latitude, typical rainfall and snow fall and the months they occur. Wind frequency, direction and duration should be discussed and a wind-rose included. **Completeness Comment**

Tab Appendix D-5

19. The page titled D-5 Topography & Geology, needs to contain a description of the local geology. Please provide a brief description of the local geology. **Completeness Comment**

Tab Appendix D-6.

The Page titled D-6 Hydrological Data – Water and Waste Water is deficient. Both the Ground Water and Surface Water sections are deficient and there is no discussion at all regarding waste water. Comments 20 through 22 are specific to these issues.

20. The Ground Water section needs to describe the expected elevation of groundwater and how that elevation may be influenced by local irrigation. How is the ground water associated with local geology. How close will mining be to the groundwater level? **Completeness Comment**
21. Wells must be installed for ground water sampling, testing and monitoring. The sampling and testing program should be discussed. **Completeness Comment**
22. The Surface Water Section needs to characterize the drainage basin. It should discuss the watershed network, watershed delineations, stream channel characterization of the Salt River, potential offsite changes. Surface water quality should be discussed. **Completeness Comment**

Tab Appendix D-8

23. The description of vegetation is inadequate. The site consists of three principle areas; the existing 10 acre pit, the area along the south side that was reclaimed, and the manmade “wetlands” to the west. Vegetation in the existing pit is non-existent and does not need to be addressed. However, complete descriptions of existing vegetation in the other two areas are required in combination with photos and documentation of the species present and their cover and/or productivity. Descriptions should include how transects were conducted and the interval of sampling. **Completeness Comment**

Tab Appendix D-9

24. Correspondence from Wyoming Game & Fish and U.S. Fish & Wildlife alone are not sufficient to constitute the wildlife section. The USFW information was received through the mail. It must be added to the wildlife section of the permit application via an index sheet. A site-specific wildlife survey is required. The section must delineate any raptor nests and provide a map illustrating the location of the nests. USFW requires monitoring adjacent lands along the Salt River to ensure compliance with the BGEPA and MBTA specifically for bald eagles. A monitoring plan should be included. This section should address the habitat types at the site and the Level I and Level II Species which might be found in those areas, and whether they can be identified at the site during the spring. **Completeness Comment**

Tab Mine Plan

25. The Mine Plan, pages 1 through 4, must contain a discussion of the plan for mining. Near the top of the page titled III. Mine Plan, there should be a general summary of the mine plan. This would include where the staging area/crushers are to be located, how mining will move from the existing pit to Area 2, then to

area 3. How will topsoil be stripped, to what depth, and where will it be placed – directed placement and followed by seeding or stockpiled? What will be the method of mining; rubber tire loader and trucks, dozer and loader, or something else. What will be the configuration of the highwalls as mining occurs? What will be the depth of mining. Will material be pushed from top to bottom, or excavated from bottom to top? Will mining occur north east of the ditch (this could be accomplished by putting the ditch in pipe and re-routing it)? Cross-sections showing existing versus final mining topography are required. This section must be very detailed. **Completeness Comment**

26. Page 1 of 4, item #3 says that topsoil piles will be conical in shape. While the operator is free to stockpile topsoil in any configuration he/she deems best, historical data would suggest that conical piles may overrun the space available in and around the pit. WDEQ/LQD encourages the construction of long, low topsoil piles having side slopes not steeper than 3:1. Piles should be seeded for stabilization and to prevent weed infestation. The depth of stripping topsoil should be discussed in this section. If topsoil is indeed 2-3 feet in depth at the site, WDEQ/LQD will want to see more than 6 inches stripped and stockpiled for reclamation use. Generally at least 12-18” of soil is optimal for reclamation.
Technical Comment

27. Page 1 of 4, item #4 says that the overburden will be covered with 6 inches of topsoil, as in item 22 above, if topsoil is indeed 2-3 feet in depth at the site, WDEQ/LQD will want to see more than 6 inches of topsoil used in reclamation.
Technical Comment

28. Page 2, item #8, indicates that two ponds are used at the site, a groundwater supply pond and a settling/holding pond. Provide illustrations of the locations of the ponds and cross-sections illustrating how they will be constructed.
Technical Comment

29. Page 2, item #8, has the State Engineers Office been contacted regarding permitting these ponds? Please provide documentation. Technical Comment

30. Page 2, item #8, where in the wash plant process does the water get injections with the anionic solution polymer? Technical Comment

31. Please provide an MSDS (Material Safety Data Sheet) for the polymer.
Technical Comment

32. Provide laboratory test results of the water from the groundwater supply pond and of that in the holding pond (after treatment). Technical Comment

33. Page 3, items #9 and #12, the permit application says normal operating hours will be Monday through Friday, 7AM to 7PM. How do the morning hours for truck

traffic interfere with school bus traffic. Under item #12, please provide a discussion of school bus hours and how conflicts will be avoided.
Technical Comment

34. Page 3, item #12, Please re-label this item "Prevention of Endangerment and Public Nuisance". Technical Comment
35. Page 3, item #12, please provide a discussion for this item how lighting used at the pit will affect surrounding houses. Technical Comment
36. Page 3, item #12, please provide a discussion for this item how noise from crushers will affect surrounding houses. Technical Comment

Tab Reclamation Plan

37. A post mining use or uses must be specified for the property in the reclamation plan. Please remove the reference that "Currently there are not specific plans for this property when mining and reclamation are complete".

Completeness Comment

38. The reclamation plan should include a discussion of how re-grading of highwalls will follow mining. Will overburden and topsoil be directly placed or moved from stockpiles? Which stockpiles will be used first? Based on the depth of mining, will ponds be left in place? If yes, contact the SEO office for permitting. Provide a map that shows post mining topographic contours. The map will show how final grading ties in to surrounding slopes/property (no slopes may be steeper than 3:1). Illustrate short berms along the north and east sides to prevent surface water from eroding re-graded slopes. Provide representative post-mining cross-sections.

Completeness Comment

39. Page 2, item #5, No stockpiles will be allowed to remain idle in reclaimed areas. Please remove reference to idle stockpiles in the Reclamation Plan.
Technical Comment

4/19/11
5 5/21/11

King, Tanya

From: terry [wyoming6@silverstar.com]
Sent: Sunday, April 03, 2011 2:38 PM
To: bryan@silverstar.com; jordanm@silverstar.com; dkc@silverstar.com; scanderson6@juno.com; andymigs@aol.com; bwana@silverstar.com; paulcallens@jhreassociates.com; barrtamj@silverstar.com; carol; King, Tanya; brian tallerico
Subject: April 3-Rinehardt II
Attachments: April 3-Rinehardt II.docx

Will be sent Monday morning, but thought that our neighbors might use it as a template without parroting my words. Should bring back the bad memories of the hearings and our being put down by our supposed public officials.



April 3, 2011

Steven A. Deitrich
Division of Air Quality
Dept. of Environmental Quality
122 W. 25th St.
Cheyenne, Wy. 83002
Fax-307-777-5616

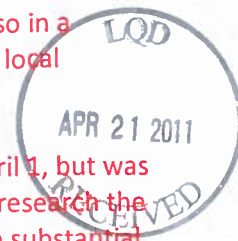
Re: AP-11553, GERC Rocky Top Rock Mine

Dear Mr. Deitrich:

As you and your staff may remember, we went through this process with Evan Construction (File No. 108PZ 09) to prevent the imposition of hazardous and heavy industrial uses in this rural area of Lincoln County, which were in violation of our zoning laws. Lincoln County Commissioners were proposing then, and have now approved, the violation of zoning laws enacted in 1998. This pit is an existing but non-conforming use, which did not have, and has not had, a permit for asphalt and cement batching. That lawsuit was settled, or so we thought, by Evans agreeing that they would drop the matter and could not apply for permits to operate an asphalt or concrete batching plant for a period of two years. That agreement was signed on November 3, and entered in the Court record as an Order of Dismissal on December 20, 2010. Unknown to the many citizens in opposition to the operation of hazardous asphalt production, GERC had applied in November for permission to do just what Evans had been denied, without any notice to the concerned citizens of the impacted area.

No notice was placed in the newspaper of record in Star Valley, the Star Valley Independent, or the most widely read newspaper in the area, the Jackson Hole Daily. Instead, purportedly, a notice was placed in the Kemmerer newspaper, which does not have any circulation in the effected area. In my opinion, this was a deliberate attempt by those charged with protecting the public to avoid the protests that had brought the plans for Evans to place an asphalt plant and cement batch plant to a halt. Sadly, some of our local officials do not seem to work for the citizens of our community, but for outsiders and themselves. This pit, and the permission to run asphalt and cement production, lies a few hundred feet from the new elementary school in Etna. As your staff member stated in a public hearing at the old Etna Elementary School last year, there is no safe level of Benzene. The Planning and Zoning head, John Woodward, has totally ignored the presentation of reams of medical evidence, including testimony and documents from a local physician, Dr. Tallerico, on the dangers of asphalt production in a populated area. I would also point out that a representative of the DEQ was not aware that Evans planned on 300 trucks per day from that pit, some with pups, until I advised of that testimony before our Commissioners. Our supposed representatives have forged ahead on getting asphalt production in a rural area where it is barred by the Land Use Regulations of Lincoln County, but have done so in a deliberately underhanded method designed to avoid public scrutiny until it was too late for local protests.

This writer just learned about what was supposedly being attempted on Friday night, April 1, but was in fact already approved by our county Commissioners, so I have not had sufficient time to research the exact powers and responsibility of the DEQ, and the Air Quality Division. I can speak for the substantial



majority of local citizens when I say that they were likewise blindsided by the plans of our local officials, but who will also be sending letters of protest. The plan bypasses the Land Use Regulations, that bar any "Heavy Industry" in Etna, which is designated "Rural" in the plans, stating "The following uses shall not be allowed in the Industrial Zone of the Etna Community Plan area: Heavy Industrial". Only "Light Manufacturing" (Land Use Regulations, Chap. 1, p.5,E1) is permitted, stating "uses which give rise to excessive noise, vibration, smoke, odor,, dust, fumes, or danger of explosion are excluded" (Land Use Definitions, chap.7,p.7. Heavy Industrial is further defined as "refining of petroleum and other oil products, manufacturing of poisonous, explosive, or other toxic material" (Land Use Definitions, chap.7, p.6). As stated by your representative, there is no level of Benzene that is safe. Asphalt is clearly a petroleum and oil product, and extremely hazardous with its production of multiple hydrocarbons and other byproducts.

In my studied opinion from my representation in the previous action, and my knowledge of the participants, this site will be transferred, by sale or lease to Evans, which appears to have been the plan all along. The permitted location across from an elementary school will certainly draw too much attention and investigation for health reasons if no other. Evans and the Commissioners will then be rid of public protests and any hindrance to their plans to run roughshod over my neighbors and their health, since they could then transfer the now approved asphalt and batch plants to the previous site, and threats to public health will continue to be ignored by our public officials. The actions of the applicants and our public officials speak louder than any thing they could possibly say about their intent. Most reside here for the rural beauty, peacefulness, and the animals we are privileged to watch and enjoy. Evans owns multiple pits in Lincoln County under different corporate names, but all owned by Old Castle of Ireland. They do not need to destroy the serenity and health of our neighborhood to obtain the profits they are seeking , especially when there are areas that will not violate the Land Use laws of Lincoln County.

We are respectfully requesting that DEQ deny this application outright, or in the alternative, to send it back to Lincoln County for reconsideration in full public view, not the back room deals prevalent thus far. Thank you for your consideration of my protest and request.

Sincerely yours,

Terence L. Moore
Attorney at Law
307-690-5742
P.O.Box 5280
Etna, Wy 83118



Hill, Deanna

From: Hill, Deanna
Sent: Tuesday, March 08, 2011
To: K
Cc: B
Subject: T

ROUTING-REQUEST

TO Dee - TFN 54/191 - 08-201

FOR YOUR INFORMATION

FOR YOUR FILE

PER YOUR REQUEST

PREPARE RESPONSE Form 1 + 3 OK?

RETURN No filing fee rec'd.

KEEP OR DISCARD

DATE 3/3/11 FROM Ramona

Forms 1t and 3 received march 3, 2011

1. Form 1t – unacceptable
 - a. It is a photocopy. W
 - b. The **Permit Acres** an
 - c. The applicant must l
"Delinquent" (see below).
 - d. No fees have been received.

2. Form 3 – unacceptable
 - a. It is a photocopy. We need an originally signed document.
 - b. The applicant must be in good standing with the Secretary of State. Presently their Tax Standing is "Delinquent" (see below).
 - c. No fees have been received.
 - d.

Should you wish me to review any of the application, please advise.

ENTITY DETAIL

Name: GEGR, LLC
Filing No: 2007-000535419
Type: Limited Liability Company - Domestic
Old Name:
Fictitious Name:
Sub Type:
Formed in: Wyoming
Term of Duration: Perpetual
Purpose Code:
Principal Office: 50 W Hwy 26
 Alpine, WY 83128 USA

Status: Active
Sub Status: Current
Standing - Tax: **Delinquent**
Standing - RA: Good
Standing - Other: Good
Initial Filing: 03/23/2007
Inactive Date:
Mailing Address: PO Box 3258
 Alpine, WY 83128 USA

	HISTORY	PUBLIC NOTES	PARTIES
--	---------	--------------	---------

ADDITIONAL DETAILS

Registered Agent: Bowers, John D

Agent Address: 685 S Washington
PO Box 1550
Afton, WY 83110 USA

Latest AR/Year: 01196808 / 2010

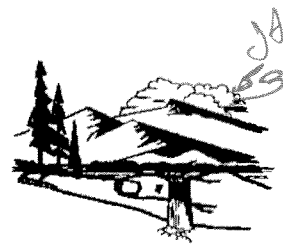
AR Exempt: N

License Tax Paid: \$283.14



Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

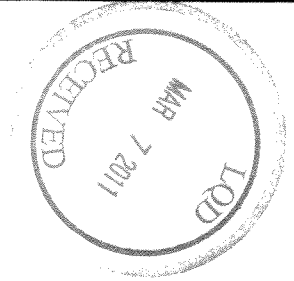


Matt Mead, Governor

John Corra, Director

March 4, 2011

GECR, LLC
P.O. Box 3258
Alpine, WY 83128



Attn: Gay Edwards
RE: GECR, LLC Application for Large Mining Permit, Rocky Top Rock Pit, TFN 5 4/191
Completeness Review – Not Complete (First Round Comments)

Dear Gay,

The Wyoming Department of Environmental Quality – Land Quality Division (WDEQ/LQD) is in receipt of the Application for a Large Mining Permit for the Rocky Top Rock pit near Etna, Wyoming. The application was received in the Lander District II office on December 27, 2010 and then again, revised, on February 22, 2011. We have reviewed the application and have identified deficiencies in the application that make it incomplete. The attached Memorandum – Completeness First Round Comments explains the deficiencies. We have also provided technical comments where possible to expedite the process.

While you have applied for a large mine permit, I believe a small mine permit would better suit your needs. The small mine allows for the disturbance of up to 10 acres per year. Thus after 2 years the operation could have a footprint of 30 acres of affected land. You are only proposing to add eight (8) mineable acres to the existing Limited Mine Operation. For a small mine permit, the hydrology, vegetation, wildlife, mine plans and reclamation plan sections would not need to be as extensive as for a large mine. The small mine permit would still allow you to add extra land in the future. The current application could be easily changed to a small mine by simply filing a Form 1s, to replace the previously submitted Form 1.

If you are intending to add the 10 acre hay field to the north in the future, now is the time to do so, if possible. Amending the permit to add the additional 10 acres later will require that you go through this whole process again, with all the same information and public notice requirements. You may include the 10 acres now with the addition of a lease and landowners consent for that parcel. Then, if later you purchase the land, a few simple revisions to the permit will change the ownership.

I have included some example of minimum requirements for Appendix D-2, History, D-4, Climatology, D-6, Hydrology, D-8, Vegetation, D-9, Wildlife, Mine Plan and Reclamation Plan.

We would suggest that a meeting be scheduled with you and your representative, Paul Snarr with Eagle Rock Engineering, to answer questions and assist in addressing the comments before you submit any additional information. Please contact us at (307) 332-3047 with any questions you may have.

Sincerely,

Tanya R. King, P.E.
Natural Resources Analyst
WDEQ/LQD District II

enclosures: TFN 5 4/191 Memorandum of Completeness – First Round Comments
Sample Appendices

xc: Cheyenne DEQ/LQD
Mark Moxley – Lander DEQ/LQD
Eagle Rock Engineering, Paul Snarr, 1331 Fremont Ave., Idaho Falls, ID 83402
chron file – Tanya (no sample appendices)

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

ABANDONED MINES
(307) 332-5085
FAX 332-7726

AIR QUALITY
(307) 332-6755
FAX 332-7726

LAND QUALITY
(307) 332-3047
FAX 332-7726

SOLID & HAZARDOUS WASTE
(307) 332-6924
FAX 332-7726

WATER QUALITY
(307) 332-3144
FAX 332-7726





MEMORANDUM

TO FILE: GECR, LLC, TFN 5 4/191, Convert 908ET to Large Mine
FROM: Tanya King, P.E. – Natural Resource Analyst, WDEQ/LQD District 2
DATE: March 4, 2011
RE: **Completeness Review First Round Comments**

WDEQ/LQD acknowledges the difficulty in preparing a complete, technically adequate large mine permit application. We are available for questions and encourage them. It is suggested that you refer to WDEQ-LQD Guideline No.6 for a complete listing of the information required for a large mine permit application. It is strongly suggested that GECR apply for a small mine permit rather than a large mine permit. It is also suggested that the permit area be revised to include the lands to the north that GECR is negotiating to purchase. If these lands are added at a future date then public notice will again be required. It would be advisable to include these lands in this application.

It will greatly assist both the applicant and WDEQ/LQD with revisions/insertions/deletions, if all pages have a unique page number, i.e. "MP page 1 of 4". On all pages submitted as revisions, please number each with a unique page number. For all revisions, insertions and deletions, please use an index sheet (found on the DEQ web site) to indicate where pages are to be changed.

The following comments are listed at Completeness or Technical. Completeness issues must be addressed before first public notice can be authorized.

Binder Cover/Cover Page

1. The name on the binder cover and the cover page both list the name of the applicant as GERC, LLC. Please correct these pages, and verify all other pages have the correct GECR, LLC name. Technical Comment

Tab I-C Bonding

2. On page 2, the table showing items in the bond calculation shows 22.5 acres under "Final Grading" and "Reclamation Seeding". Only 18 acres will be permitted for disturbance. Please change 22.5 acres to 18 acres in the bond calculations. Technical Comment
3. On page 2, the table showing items in the bond calculation shows no amount for Mobilization/Demobilization. The bond calculation is to cover the cost if DEQ were to do the reclamation through default of the operator. Therefore a line item

for Mobilization/Demobilization is required. Please add this item. Technical Comment

Tab I-F Agency Permits

4. Please provide a summary sheet of each agency with the corresponding permit number. It is acceptable to add the permit number to the page labeled I.F. Permits/Letter to/From Other Agencies. Technical Comment

Tab I-G Appendix B

5. The map titled GEGR, LLC Gravel Pit Ownership within ½ Mile must show the permit boundary and a line delineating ½ mile from the boundary. Please add these items to the map. **Completeness Comment**
6. The county conditional use permit specifically states that no mining may occur within 1000 feet of Klint Clark's home. Please clearly identify the Clark home on the "Ownership within ½ mile" map and show its distance from the "affected" area. **Completeness Comment**

Tab Maps

7. General Map 2, Mining and Reclamation Area Map, illustrates the area not to be mined as "reclamation area". ~~Since~~ In mining permits the term reclamation is specific to returning the mined area to useful production. Please revise the map to remove the "reclamation area" labels. The area could be called "buffer zone", un-affected area, or may be left un-labeled. Technical Comment
8. General Map 5, Contour Map, illustrates the area not to be mined as "reclamation area". In mining permits the term reclamation is specific to returning the mined area to useful production. Please revise the map to remove the "reclamation area" labels. The area could be called "buffer zone", un-affected area, or may be left un-labeled. Technical Comment
9. An original USGS topographic map, or high quality equivalent, is required. This map should clearly illustrate the proposed permit area as well as the existing 10 acre LMO. The map should extend at least three miles in all directions from the proposed permit area. **Completeness Comment.**
10. A survey map of the permit boundary is required to clearly illustrate the metes and bounds survey that describes the property. The map must show all corners and distances between. **Completeness Comment.**
11. General Map 5, Contour Map, does not show current topographic conditions. Please re-title to Existing Contour Map and illustrate existing topographic conditions. Technical Comment
12. General Map 6, Soil Test Hole Map, illustrates the area not to be mined as "reclamation area". In mining permits the term reclamation is specific to



returning the mined area to useful production. Please revise the map to remove the "reclamation area" labels. The area could be called "buffer zone", un-affected area, or may be left un-labeled. **Technical Comment**

- 13. Mine Map 2, Mine Plan Sequencing Map, illustrates one existing and three proposed topsoil piles. There is currently additional topsoil stockpiled along the north and east edges of the Limited Mining Operation 908ET. Please show these stockpiles on the map. **Technical Comment**

- 14. Reclamation Map 1, Reclamation Area Map, needs to show topographic contours illustrating how the area will be reclaimed. The contours should include the full depth of the pit, how the perimeter will tie in to surrounding topography (slopes must be 3:1 or less), at any location where water may drain into the pit from the north or east short berms 2-3 feet in height should be provided to prevent water from eroding reclaimed slopes. **Completeness Comment**

Tab Appendix D-1

- 15. The page titled D-1 Land Use Information has limited information. Please add the existence of the irrigation ditch, how the west portion has been used and is currently being used; this would include wildlife uses. Note that no houses are in the immediate area. Are the new facilities for the mine, for Three Rivers Construction, or both. **Technical Comment**

Tab Appendix D-2(missing)

- 16. Appendix D-2 History, is required for large mines. This section will described the local history, industries, types of transportation in the area over time, etc. **Completeness Comment**

Tab Appendix D-3

- 17. Per the letter from SHPO, an archeology study will be required for this permit approval. Please provide information that the applicant has or will contact an approved consultant to provide this study. **Completeness Comment**

Tab Appendix D-4 (missing)

- 18. Large mine applications require a climatology section. This section will specify elevation, latitude, typical rainfall and snow fall and the months they occur. Wind frequency, direction and duration should be discussed and a wind-rose included. **Completeness Comment**

Tab Appendix D-5

- 19. The page titled D-5 Topography & Geology, needs to contain a description of the local geology. Please provide a brief description of the local geology. **Completeness Comment**

Tab Appendix D-6.

The Page titled D-6 Hydrological Data – Water and Waste Water is deficient. Both the Ground Water and Surface Water sections are deficient and there is no discussion at all regarding waste water. Comments 20 through 22 are specific to these issues.

20. The Ground Water section needs to describe the expected elevation of groundwater and how that elevation may be influenced by local irrigation. How is the ground water associated with local geology. How close will mining be to the groundwater level? **Completeness Comment**
21. Wells must be installed for ground water sampling, testing and monitoring. The sampling and testing program should be discussed. **Completeness Comment**
22. The Surface Water Section needs to characterize the drainage basin. It should discuss the watershed network, watershed delineations, stream channel characterization of the Salt River, potential offsite changes. Surface water quality should be discussed. **Completeness Comment**

Tab Appendix D-8

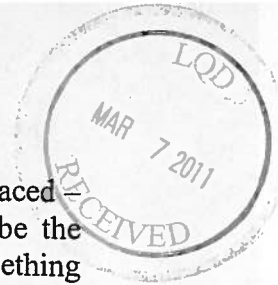
23. The description of vegetation is inadequate. The site consists of three principle areas; the existing 10 acre pit, the area along the south side that was reclaimed, and the manmade “wetlands” to the west. Vegetation in the existing pit is non-existent and does not need to be addressed. However, complete descriptions of existing vegetation in the other two areas are required in combination with photos and documentation of the species present and their cover and/or productivity. Descriptions should include how transects were conducted and the interval of sampling. **Completeness Comment**

Tab Appendix D-9

24. Correspondence from Wyoming Game & Fish and U.S. Fish & Wildlife alone are not sufficient to constitute the wildlife section. The USFW information was received through the mail. It must be added to the wildlife section of the permit application via an index sheet. A site-specific wildlife survey is required. The section must delineate any raptor nests and provide a map illustrating the location of the nests. USFW requires monitoring adjacent lands along the Salt River to ensure compliance with the BGEPA and MBTA specifically for bald eagles. A monitoring plan should be included. This section should address the habitat types at the site and the Level I and Level II Species which might be found in those areas, and whether they can be identified at the site during the spring. **Completeness Comment**

Tab Mine Plan

25. The Mine Plan, pages 1 through 4, must contain a discussion of the plan for mining. Near the top of the page titled III. Mine Plan, there should be a general summary of the mine plan. This would include where the staging area/crushers are to be located, how mining will move from the existing pit to Area 2, then to



area 3. How will topsoil be stripped, to what depth, and where will it be placed - directed placement and followed by seeding or stockpiled? What will be the method of mining; rubber tire loader and trucks, dozer and loader, or something else. What will be the configuration of the highwalls as mining occurs? What will be the depth of mining. Will material be pushed from top to bottom, or excavated from bottom to top? Will mining occur north east of the ditch (this could be accomplished by putting the ditch in pipe and re-routing it)? Cross-sections showing existing versus final mining topography are required. This section must be very detailed. **Completeness Comment**

- 26. Page 1 of 4, item #3 says that topsoil piles will be conical in shape. While the operator is free to stockpile topsoil in any configuration he/she deems best, historical data would suggest that conical piles may overrun the space available in and around the pit. WDEQ/LQD encourages the construction of long, low topsoil piles having side slopes not steeper than 3:1. Piles should be seeded for stabilization and to prevent weed infestation. The depth of stripping topsoil should be discussed in this section. If topsoil is indeed 2-3 feet in depth at the site, WDEQ/LQD will want to see more than 6 inches stripped and stockpiled for reclamation use. Generally at least 12-18" of soil is optimal for reclamation.
Technical Comment
- 27. Page 1 of 4, item #4 says that the overburden will be covered with 6 inches of topsoil, as in item 22 above, if topsoil is indeed 2-3 feet in depth at the site, WDEQ/LQD will want to see more than 6 inches of topsoil used in reclamation.
Technical Comment
- 28. Page 2, item #8, indicates that two ponds are used at the site, a groundwater supply pond and a settling/holding pond. Provide illustrations of the locations of the ponds and cross-sections illustrating how they will be constructed.
Technical Comment
- 29. Page 2, item #8, has the State Engineers Office been contacted regarding permitting these ponds? Please provide documentation. Technical Comment
- 30. Page 2, item #8, where in the wash plant process does the water get injections with the anionic solution polymer? Technical Comment
- 31. Please provide an MSDS (Material Safety Data Sheet) for the polymer.
Technical Comment
- 32. Provide laboratory test results of the water from the groundwater supply pond and of that in the holding pond (after treatment). Technical Comment
- 33. Page 3, items #9 and #12, the permit application says normal operating hours will be Monday through Friday, 7AM to 7PM. How do the morning hours for truck

traffic interfere with school bus traffic. Under item #12, please provide a discussion of school bus hours and how conflicts will be avoided.
Technical Comment

34. Page 3, item #12, Please re-label this item "Prevention of Endangerment and Public Nuisance". Technical Comment

35. Page 3, item #12, please provide a discussion for this item how lighting used at the pit will affect surrounding houses. Technical Comment

36. Page 3, item #12, please provide a discussion for this item how noise from crushers will affect surrounding houses. Technical Comment

Tab Reclamation Plan

37. A post mining use or uses must be specified for the property in the reclamation plan. Please remove the reference that "Currently there are not specific plans for this property when mining and reclamation are complete".

Completeness Comment

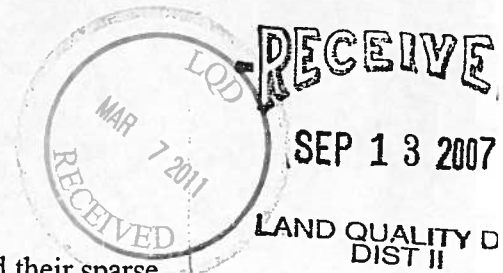
38. The reclamation plan should include a discussion of how re-grading of highwalls will follow mining. Will overburden and topsoil be directly placed or moved from stockpiles? Which stockpiles will be used first? Based on the depth of mining, will ponds be left in place? If yes, contact the SEO office for permitting. Provide a map that shows post mining topographic contours. The map will show how final grading ties in to surrounding slopes/property (no slopes may be steeper than 3:1). Illustrate short berms along the north and east sides to prevent surface water from eroding re-graded slopes. Provide representative post-mining cross-sections.

Completeness Comment

39. Page 2, item #5, No stockpiles will be allowed to remain idle in reclaimed areas. Please remove reference to idle stockpiles in the Reclamation Plan.

Technical Comment

Appendix D-2: History of Project Area



Sublette, Sweetwater, and Lincoln counties are primarily rural, and their sparse population historically relied on livestock ranching (Rosenberg, 1990; Blevins et al., 2004; BLM, 2006d). While ranching remains culturally important in southwestern Wyoming, the region's economy has shifted toward mineral extraction (including natural gas production). Sublette County shifted to natural gas drilling about 1920 (Rosenberg, 1990), Lincoln County shifted to coal mining around 1900, and Sweetwater County shifted to trona mining in 1946. Tourism and travel grew as important economic components following World War II (Western, 2002). In 2004, 784 workers were employed in mineral development, 580 in travel/tourism, and 390 in agriculture in Sublette County. That same year in Lincoln County, 688 workers were employed in agriculture, 684 in mineral development, and 590 in travel. In Sweetwater County, an estimated 4,391 workers were employed in mineral development, 1,820 in travel/tourism, and 195 in agriculture in 2004 (U.S. Department of Commerce, 2006 and Dean Runyan Associates, 2005).

The significance of oil and gas revenues to the region's economy has increased and is expected to grow (BLM, 2006d). In 1985, oil and gas interests contributed over 80 percent of tax revenues in Sublette County (Rosenberg, 1990). In 2005, oil and gas production and ancillary facilities accounted for 96 percent of the total assessed valuation for Sublette County, 55 percent for Lincoln County, and 61 percent for Sweetwater County (Wyoming Department of Revenue, 2006). Since 2000, the assessed valuation growth index for Sublette County has increased substantially and has outpaced the statewide average, but Sweetwater County and Lincoln County have trailed the statewide average. Per-capita assessed valuation revenues from oil and gas production facilities are substantially higher for Sublette County than for neighboring counties or for the Wyoming state average.

Appendix D-4: Climatology



The climate in the region of the Mesa Road Mine is semiarid and continental with short, dry summers and long, cold winters. July and August are the hottest months of the year, while December and January are the coldest. Freezing temperatures can occur anytime of the year (Martner, 1986). The nearest long-term meteorological measurement station is at LaBarge, Wyoming (1958-2003), approximately 35 miles southwest of the project area at an elevation of 6,858 ft (Western Regional Climate Center [WRCC] 2004). Variations in elevation and topography across the region result in variations in site-specific climatic conditions; therefore, site-specific conditions in the region are likely to vary somewhat from location to location. The total annual average precipitation at LaBarge is 8.0 inches, ranging from 17.8 inches (1995) to 3.4 inches (1975). Precipitation is greatest from mid-

spring to early fall, tapering off during the winter months. An average of 30.5 inches of snow falls during the year (annual high 43.6 inches in 1987). According to the National Weather Service (NWS), Pinedale's mean temperature in January is 12.6°F with a mean of 59.8°F in July (Western Regional Climate Center, 2006). High elevation and dry air facilitate thermal radiation gain and loss as evidenced by Pinedale's wide variation between daily minimum and maximum temperatures (BLM, 1999a).

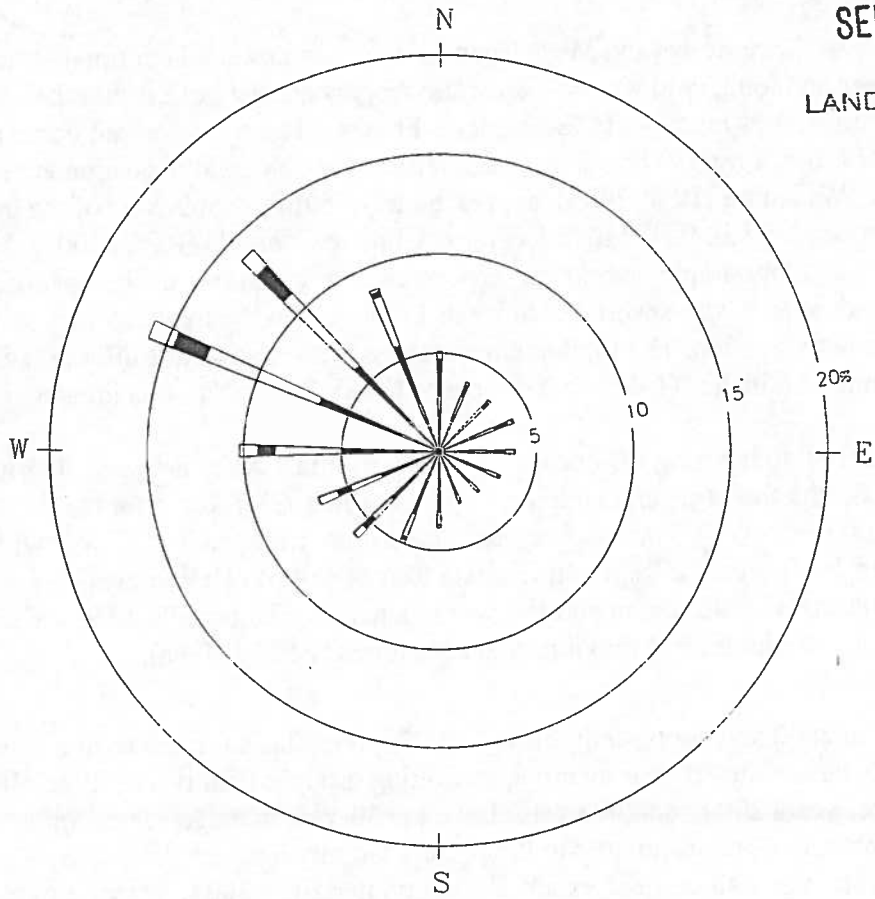
Beginning in 2000 and continuing through 2003, precipitation in the region was consistently below the 30-year average, exhibiting drought conditions. Precipitation during water years 2004 and 2005 was above the 30-year average. Total snowfall (October through April) estimated in the project vicinity has been below the 30-year average of 58 inches since 1987 except during winter 2003-2004. Maximum monthly temperatures, averaged by water year, have generally been above the 30-year average.

The region is subject to strong and gusty winds, reflecting channeling and mountain valley flows due to complex terrain. During the winter, strong winds are often accompanied by snow, producing blizzard conditions. The closest comprehensive wind measurements were collected in the Jonah Infill Drilling Project Area at a meteorological station operated by BP America from 1999 through 2003. A wind rose from the data collected at the meteorological station for years 1999 through 2002 is provided in the following Figure 3.1 (BLM, 2005). Winds in the project area (Table D-4-1) are from the west to northwest approximately 40 percent of the time.

RECEIVED

SEP 13 2007

LAND QUALITY DIV.
DIST II



WINDROSE

Jonah Field
1999 - 2002

WIND SPEED CLASS BOUNDARIES
(MILES/HOUR)

NOTES:
DIAGRAM OF THE FREQUENCY OF
OCCURRENCE OF EACH WIND DIRECTION.
WIND DIRECTION IS THE DIRECTION
FROM WHICH THE WIND IS BLOWING
EXAMPLE - WIND IS BLOWING FROM THE
NORTH 5.1 PERCENT OF THE TIME

BEE-LINE
SOFTWARE

Source: BP America (2004).

Figure 3.1 Wind Rose, Jonah Infill Drilling Project Area, Sublette County, Wyoming, 2005.

RECEIVED

SEP 13 2007

LAND QUALITY DIV.
DIST II



Table D-4-1
Wind Direction Frequency Distribution in the Vicinity
of the Mesa Road Mine Averaged from 1999 Through
2003¹

Wind Direction	Frequency (%)
N	5.3
NNE	3.9
NE	3.5
ENE	3.9
E	3.8
ESE	3.3
SE	2.9
SSE	2.8
S	3.8
SSW	4.8
SW	6.0
WSW	6.6
W	9.9
WNW	15.9
NW	14.4
NNW	9.2

¹ Source: BP America, 2004.

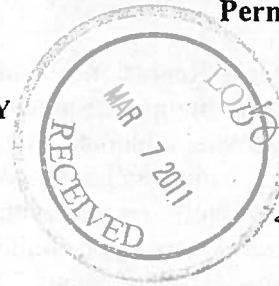
While the annual mean wind speed is 11.2 mph, wind speeds in excess of 19 mph occur more than 12 percent of the time (Table D-4-2).

Table D-4-2
Distribution of Wind Speeds in the Vicinity of the
Mesa Road Mine Averaged from 1999 Through 2003¹

Wind Speed (mph)	Frequency (%)
0 – 4.0	9.1
4.0 – 7.5	25.4
7.5 – 12.1	28.1
12.1 – 19.0	24.7
19.0 – 24.7	7.2
Greater than 24.7	5.5

¹ Source: BP America, 2004.

APPENDIX D6 – HYDROLOGY



sample -
a potential
7-0-10
left in the
recharge area

D6-1 Groundwater

D6-1.1 Groundwater Occurrence

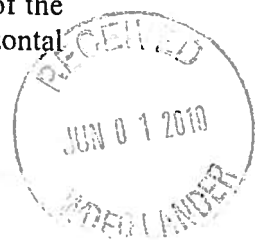
Shallow groundwater occurs in the vicinity of the permit area in the fluvial deposits emplaced by prior glacial events and the modern-day alluvium along the East Fork River. Shallow groundwater in the glacial deposits reportedly occurs almost exclusively from recharge from irrigation, and otherwise would not be present to the same degree as it occurs in its present condition.

Beneath the permit, groundwater occurs in the Pinedale Recessional Formation comprised of loose sand and gravel deposited in an outwash plain of glacial recession origin. Four monitoring wells placed along the permit boundary and groundwater encountered in test pit explorations and the LMO pit indicate that groundwater within the planned affected area ranges about 14 to 30 feet below grade, and can fluctuate seasonally more than 10 feet. Based on field observations of wet surface conditions and subirrigated vegetation, groundwater is near grade in the valley bottom along the river. Water levels obtained from the monitoring wells are tabulated in Table D6-2.

Based on the nature of the deposits encountered, the apparent lack of any confining units and the measured water levels relative to where groundwater was encountered while drilling, the aquifer is best characterized as an isotropic, homogeneous, unconfined (water-table) aquifer. Some confinement probably occurs from the upper clay on the eastern portion of the permit where the water table is higher than the bottom of the clay. Lateral and vertical heterogeneity are evident on a pit-sized scale, and some vertical anisotropy is likely due to layering, but on a permit-sized scale the assumptions of homogeneity and isotropy are probably more representative of the aquifer as a whole. A clay layer is located at the bottom of the glacial deposits that presumably underlies the entire permit area and perches groundwater in the recessional deposits. Based on the inferred geometry of the clay layer and measured water levels at monitoring wells (including seasonal fluctuations), the saturated thickness of the aquifer beneath the permit ranges from about 5 to 30 feet.

Deeper groundwater occurs regionally based on water-supply well depths recorded by the State Engineer's Office (SEO), and is presumably present beneath the clay in the permit area. Wells within three miles of the permit are completed at depths ranging from 42 to 300 feet, suggesting the possibility of a sub-clay occurrence of groundwater. A nearby well for domestic and livestock uses is located in the NE4NE4 of Section 6, and is completed at 125 feet. Aquifer units underlying the Pinedale Recessional in the vicinity of the permit are unknown, but could be either older glacial deposits such as the Main Pinedale, or possibly fractured rock in the underlying Green River Formation or Precambrian sequence.

Groundwater flow across the permit area is shown in Figure D6-1 and is based on measured water levels in the four monitoring wells for August 2009, which represents the seasonal high water table. Groundwater flows across the area to the southwest and toward the East Fork River. Based on the interpolated elevations of the piezometric surface and elevations of the valley bottom, groundwater likely discharges to the alluvium along the river. The horizontal hydraulic gradient based on the contoured piezometric elevations is 0.0087.



The Pinedale Recessional aquifer exhibits moderately high hydraulic conductivity. Well diameter and pump size preclude a practical means for pump testing the monitoring wells, but drawdowns obtained from short-term tests yield reasonable estimates for aquifer parameters using stable-drawdown analysis by Horslev (1951). The data (Table D6-1) indicate hydraulic conductivities on the order of 100 to 300 feet per day. This range of hydraulic conductivity in conjunction with the measured water-table fluctuations corresponds to transmissivities of about 7,000 to 66,000 gallons per day per foot. These values are commensurate with the sand-and-gravel deposits encountered within the permit.

D6-1.2 Groundwater Quality

In consultation with DEQ (2008), characterization of groundwater conditions with four quarters of water-quality sampling from one well that was installed in November 2008 would be permissible for the permit application, providing that monitoring wells would be installed in 2009 and added to the quarterly sampling program. Two additional monitoring wells were installed in June 2009, and, based on information regarding the clay layers, monitoring well EF-5 was added on the southern portion of the permit to replace EF-1 that was completed above the upper clay. Per land-owner request, EF-3 was completed for use as a stock well, which has been permitted by the owner with the State Engineer's Office. The monitoring wells are shown in Figure D6-1, and well-completion information is shown in the drilling logs in Appendix D5.

Since their installation, water samples have been collected quarterly from each monitoring well using standard low-flow purging techniques (EPA, 1996), and submitted for laboratory analyses for parameters specified by DEQ (2005a). Field sampling data are tabulated in Table D6-2, Addendum D6-A contains the sampling field records, and Addendum D6-B contains the laboratory analysis reports.

The laboratory analyses indicate that groundwater beneath the permit is Class I (DEQ, 2005b), suitable for domestic use, and meeting criteria for agricultural and livestock uses (Table D6-2). Total dissolved solids are low, averaging about 90 milligrams per liter. Nitrates are present at an average of about 0.3 milligrams per liter, and boron, iron, manganese and selenium are present at low levels. Groundwater among the four wells is chemically similar, and is characterized as calcium-bicarbonate (Figure D6-2).

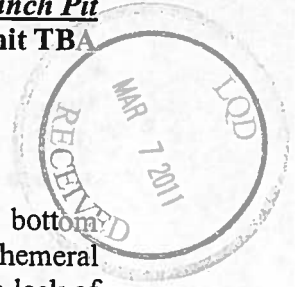
D6-2 *Surface Water*

D6-2.1 Stream Flow in the East Fork River

United States Geological Survey (USGS) stream-gauging from 1938 to 1992 on the East Fork River (Station 9203000), about five miles east of the permit, indicates that the river has a mean annual flow of about 130 cubic feet per second (cfs), and exhibits an average annual peak discharge of about 1,300 cfs (Leopold and Emmett 1997). High flows occur in May, June and July, and are attributable to snow melt. The estimated 2-, 10-, and 100-year peak flows based on peak-flow data are 1,300, 1,700 and 2,000 cfs respectively. Based on the elevation difference between the valley bottom and glacial terraces comprising the affected area in the permit area, none of these floods would be expected to inundate the mine excavation.

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D6-2.2 Watershed Characterization

D6-2.2.1 Watershed Network

The Eastfork River crosses the southeast corner of the permit area, and the valley bottom crosses the southwest corner of the permit. Other than one broad, poorly-defined ephemeral draw, there is no discernable network of watersheds in the vicinity of the permit. The lack of definable watersheds in the area is due to the relatively flat topography. Sub-watersheds of the East Fork drainage become more discernable in the upland areas of the mountains.

D6-2.2.2 Watershed Delineation

The permit area lies within the East Fork River drainage, which extends eastward from the permit then northerly into the Wind River Mountains towards its head waters near Mount Bonneville. The drainage covers 79 square miles from the point of the USGS gauging station. Starting from a point near the southwestern permit corner (Figure D6-3), the drainage covers an additional 16 square miles, yielding a total of 95 square miles from that point. The drainage in upland areas is poorly-defined, but can be separated topographically from Pocket Creek to the north and Muddy River to the south, as shown in Figure D6-3. All mining disturbance will occur in the upland area of the East Fork River drainage; the river channel and its valley bottom will not be disturbed.

One sub-watershed of the East Fork River drainage is located within the permit, and drains to the valley bottom and the river at the point where the East Fork River drainage area is defined as shown in Figure D6-3. The draw is well-defined within the permit area, but becomes poorly-define up-valley, where it fades into the relatively flat topography. The natural drainage of the watershed is disrupted by man-made features, most notably irrigation ditches that intercept and direct runoff away from the natural low-point origin in the East Fork River valley bottom. Highway 353 and gravel roads, including the haul road constructed for the permit, also disrupt runoff within the watershed. This watershed is delineated in Figure D6-3, and covers an area of about 420 acres, 130 acres of which lie within the permit.

D6-2.2.3 Stream Channel Characterization

Mining will not disturb the stream channel of the East Fork River or its valley bottom. Accordingly, characterization of the stream channel is not applicable.

D6-2.2.4 Potential Offsite Changes

There are no known off-site plans or conditions that would affect any reclaimed areas in the permit area. Drainage offsite of the permit is expected to remain in its native state. There are no plans to change any of the topography or surface conditions adjacent to the permit area.

D6-2.3 Surface Water Quality

East Fork River is not classified by DEQ (2007) in its entirety. Based on specific classification by the Wyoming Game and Fish Department's Fish Inventory Database listed by DEQ, the East Fork River in Ranges 108 and 105 is classified as a Class 2AB water, supporting uses of drinking water, game fish, non-game fish, fish consumption, aquatic life, recreation, wildlife, agriculture, industry, and scenic value.



Water samples previously collected by the USGS at Station 9203000 indicate water quality similar to that of the groundwater beneath the permit. The USGS analyses generally indicate surface water with low turbidity and low total dissolved solids.

D6-3 *Water Rights*

D6-3.1 Surface Water Rights

Surface water rights were researched by obtaining information from SEO records in Cheyenne and the SEO online database. Surface water rights within one-half mile of the permit are tabulated in Table D6-3. Although mining will not affect the East Fork River or its valley bottom, two ditches with recorded surface water rights that will be affected by mining run through the permit, and the permit is adjacent to the East Fork River from which numerous surface water rights are associated. Surface water rights within three miles downstream of the permit are therefore also tabulated in Table D6-3. Surface water rights, points of use and ditches are mapped in Figure D6-4.

D6-3.2 Groundwater Rights

Groundwater rights obtained from SEO records are tabulated in Table D6-4, and are mapped within three miles of the permit in Figure D6-5. Recent appropriations for the stock well (Monitoring Well EF-4) and for the withdrawal of mine-pit groundwater are included in the tabulation.

D6-4 *References*

DEQ, Land Quality Division, 2005a. *Guideline No. 8, Hydrology*, Appendix 1, Part IV, March 2005.

DEQ, Land Quality Division, 2008. Meeting with representatives of LQD and Aqua Terra Consultants, November 21, 2008.

DEQ, Water Quality Division, March 16, 2005c. Water Quality Rules and Regulations, Chapter 8, *Quality Standards for Wyoming Groundwaters*, Table 1.

DEQ, Water Quality Division, February 16, 2007. Water Quality Rules and Regulations, Chapter 1, *Wyoming Surface Water Quality Standards*, Wyoming Surface Water Classification List.

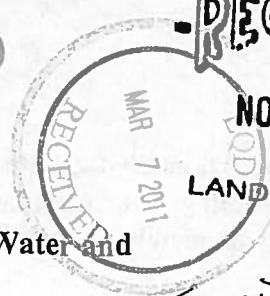
EPA, 1996. *Low Flow Groundwater Sampling Procedures*, R.W. Puls and M.J. Barcelona, Groundwater Issue EPA/540/S-95/504.

Horsley, M.J., April 1951. *Time Lag and Soil Permeability in Ground-Water Observations*, US COE, Bulletin No. 36.

Leopold L.B, and W.W. Emmett, 1997. *Bedload and River Hydraulics – Inferences from the East Fork River, Wyoming*, USGS Professional Paper 1583.



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Section II.D

Appendix D-6: Description of Pre-mining Surface Water and Groundwater

Surface Water

Sample
No POND'S
left
after
Mining

Map No.1 of Appendix "C" shows the surface water regime in the region of the planned permit area. The predominant surface water feature is the New Fork River located about one quarter mile east of the east border of the permit area. The areas within the permit area boundary to be affected by mining and processing are topographically above and about a half mile from the river channel. Therefore, no detailed hydrological data are presented in this application as there are no anticipated impacts on surface waters or water rights. There are no streams that cross the permit area. There are no plans to impound water during the mining activities described in this permit application and there are no physical or permitted stock ponds, reservoirs, or lakes within the permit area.

The Paradise Canal (about 6 feet wide) does cross the permit area but no mining or related disturbance will take place within 25 feet of the canal. The headgate of the Paradise Canal is on the New Fork River about twelve (12) miles north of the permit area. The owners of the land within the permit area have a water right on the Paradise Canal which is the only surface water right within the permit area. A tabulation of surface water rights follows this section and the approximate locations of these rights are plotted on Map No. D-6-1; to the nearest quarter quarter.

Groundwater

According to the records of the Office of the State Engineer the Neil A. and Susan K. McMurry Mesa #1 water well is the only registered water well located within the permit area. The indicated depth to first encountered groundwater in this well is 109 feet below surface. The first completed interval in the well occurs at 325 feet below ground level. The static water level in this well is approximately 60 feet below the surface. There are twenty six (26) registered water wells within three miles of the permit boundary. A tabulation of known groundwater rights within three miles of permit boundary follows this section. The approximate locations of the water wells that occur within 1/2 mile of the project area boundary are plotted on Map No.D-6-1 to the nearest quarter quarter. The planned mining operations should have no impact on surrounding water wells as the expected depth of disturbance (mining) should not come within twenty (20) feet of, or extend below the anticipated depth of the water table. No groundwater was encountered in any of the test pits dug within the planned permit area boundary; and no ground water was encountered during the recent mining of the gravel at the Mesa Road Mine or at the pit in the southern portion of the permit area south of the highway. The depth of the test pits ranged from eleven (11) feet to fourteen (14) feet. The elevation of the bottom of the previously mined gravel pit is approximately ten (10) feet lower than the planned bottom of the Mesa Road Mine gravel pit to be mined on the terrace north of the highway.

Approximately a quarter mile north of the permit area boundary there is a well that, according to the information in the State Engineer's Office, encountered ground water approximately eighty (80) feet below the surface.

If groundwater were encountered in the mining operation and M&N desires to continue removing sand or gravel from that pit, the operator would obtain the necessary permits and create a sump in the pit floor. Should the sump become full of groundwater, M&N would obtain the necessary DEQ discharge permits and the water would be pumped to the land surface and discharged on the undisturbed permit area in such a manner that there will be no significant erosion and no surface runoff from the permit area.

Given the fact groundwater rights are registered to the nearest quarter quarter, there is a possibility of groundwater appropriations in existence on lands adjacent to the proposed permit area.

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Wyoming State Engineer's Office Registered Surface Water Rights Within 1/2 Mile Of The Permit Boundary

Appropriation	Township	Range	Section	Status	Adj Uses	Adj Facility Name	Adj Appropriation	Adj Priority	Adj Source	SW Permit Uses	SW Permit Facility name	SW Permit Applicant	SW Permit Priority	SW Permit Source
C30/122A	30N	109W	5	Adjudicated	IRR	A. Butler Ditch (Enl. of)	Andrew Butler	10/13/1905	New Fork River					
C49/406A	30N	109W	5	Adjudicated	IRR	Bertram Ditch (Enl. of)	Charles Olson	5/19/1908	New Fork River					
C49/406A	30N	109W	7	Adjudicated	IRR	Bertram Ditch (Enl. of)	Charles Olson	5/19/1908	New Fork River					
C73/353A	30N	109W	5	Adjudicated	IRR,STO	Paradise Canal	Carl Ray Jorgensen	9/30/1952	West Fork New Fork River					
C73/353A	30N	109W	6	Adjudicated	IRR,STO	Paradise Canal	Carl Ray Jorgensen	9/30/1952	West Fork New Fork River					
P1432E	30N	109W	7	Point of Use						IRR	Bertram Ditch (original permit No. 3406) (Enl. of)	LIZZIE K. MARTIN	9/25/1905	New Fork River
P1432E	30N	109W	8	Point of Use						IRR	Bertram Ditch (original permit No. 3406) (Enl. of)	LIZZIE K. MARTIN DAVID H.	9/25/1905	New Fork River
P1890E	30N	109W	5	Adjudicated						IRR	Bertram Ditch (Enl. of)	JOHNSTON DAVID H.	5/19/1908	New Fork River
P1890E	30N	109W	6	Adjudicated						IRR	Bertram Ditch (Enl. of)	JOHNSTON DAVID H.	5/19/1908	New Fork River
P1890E	30N	109W	7	Adjudicated						IRR	Bertram Ditch (Enl. of)	JOHNSTON DAVID H.	5/19/1908	New Fork River
P1890E	30N	109W	8	Adjudicated						IRR	Bertram Ditch (Enl. of)	JOHNSTON DAVID H.	5/19/1908	New Fork River
P1941E	30N	109W	5	Point of Use						IRR	Paradise Canal (Enl. of)	FREMONT IRRIGATION CO.	8/25/1908	New Fork River
P6925D	30N	109W	5	Adjudicated						IRR	A. Butler Ditch	ANDREW BUTLER FREMONT	10/13/1905	New Fork River
P21100D	30N	109W	5	Adjudicated						STO,IRR,DOM	Paradise Canal	IRRIGATION COMPANY FREMONT	9/30/1952	New Fork River
P21100D	30N	109W	6	Adjudicated						STO,IRR,DOM	Paradise Canal	IRRIGATION COMPANY	9/30/1952	New Fork River
P31071D	30N	109W	5	UNA						IND,OIL,DRI,TEM	Jonathan Gas Field Water Haul #1	MC MURRY OIL COMPANY	7/26/1993	New Fork River
P31609D	30N	109W	5	UNA						IND,OIL,DRI,TEM	New Fork UMF & Jonathan Field Water Haul	MC MURRY OIL COMPANY	8/27/1996	New Fork River
P31659D	30N	109W	5	UNA						IND,OIL,DRI,TEM	New Fork River Water Haul	ENTERPRISES, INC. HYDAND	11/15/1996	New Fork River
P33130D	30N	109W	5	UNA						IND,TEM	New Fork River Water Haul	ENTERPRISES, INC. HYDAND	10/29/2004	New Fork River
P33204D	30N	109W	5	UNA						IND,TEM	First Energy Services New Fork Water Haul	First Energy Services Company	5/27/2005	New Fork River
P33269D	30N	109W	5	UNA						IND,TEM	New Fork Water Haul 1801-00(019) & APPSCT-1801-00(019) Water Haul No.1	Aaron's Water Service, Inc.	6/23/2005	New Fork River
P33308D	30N	109W	5	UNA						IND,TEM	1801-00(019) Water Haul No.1	WY Dept. of Transportation	9/2/2005	New Fork River

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Water wells located within three miles of the permitted area.

Permit #	Priority	Status	Township	Range	Section	Qtrtr	Applicant	Facility Name	Uses	Well Depth	Static Depth
P147785W	10/25/2002	Good Standing	30N	109W	5	NWNW	NEIL A. MCMURRY	MESA ROAD NO. 1 PINEY CUT-OFF NEW FORK #1	Miscellaneous	410	60
P8430P	10/14/1967	Good Standing	30N	109W	5	NWNE	BUREAU OF LAND MANAGEMENT		Domestic	55	7
P86669W	12/2/1991	Good Standing	30N	109W	5	NWSW	ROBERT E. AND ENA OLSON	OLSON #6 PINEY CUT-OFF NEW FORK RIVER	Domestic	60	23
P101823W	3/22/1996	Unavailable	30N	109W	5	SWNE	USDI, BLM		Miscellaneous	55	7
P7546P	12/31/1937	Good Standing	30N	109W	8	SWNW	ROBERT E. OLSON**ENA OLSON	OLSON #1	Domestic	40	10
P7547P	12/31/1946	Good Standing	30N	109W	8	SWNW	ROBERT E. OLSON**ENA OLSON	OLSON #2	Stock	350	0
P7548P	12/31/1968	Good Standing	30N	109W	8	SWNW	ROBERT E. OLSON**ENA OLSON	OLSON #3	Stock	100	10
P75587W	9/18/1987	Good Standing	30N	109W	8	NWNW	ROBERT E. AND ENA OLSON	OLSON #5	Domestic	75	10
P23979W	7/30/1973	Good Standing	30N	109W	19	SESW	UNITED STATES OF AMERICA	ROSS RIDGE WELL #4310	Stock	555	300
P70113W	5/16/1985	Good Standing	31N	109W	20	SESE	WILKINSON & CO.	WILKINSON #2	Domestic	145	65
P44818W	8/7/1978	Good Standing	31N	109W	21	NWNE	CHARLES C. HALL	THE WATERING HOLE #1	Domestic	56	5.5
P45261W	9/18/1978	Good Standing	31N	109W	21	NWSW	WILKINSON & CO.	WILKINSON #1	Domestic	80	35
P61393W	6/30/1982	Good Standing	31N	109W	21	NWSE	JACK E. WILLIAMS	CHRISTINA RAE #1	Domestic	220	5
P63795W	4/25/1983	Good Standing	31N	109W	21	NWSE	TERRY L. STEGEN	JEREMY #1	Domestic	132	20
P66630W	3/12/1984	Good Standing	31N	109W	21	NWNE	WILLIAM J. & SHARON J. SCHELL	SHELL #1	Domestic	43	5
P98297W	2/10/1995	Good Standing	31N	109W	21	SWNE	LEWIS W. EDWARDS	EDWARDS #1	Domestic	180	2
P99291W	5/24/1995	Good Standing	31N	109W	21	NWSE	WAYNE L. & VIRGINIA P. FELTNER	WATERSDOWN #1	Domestic	120	2
39/10/317W	9/29/2006	Unavailable	31N	109W	21		JAMES D. SULLIVAN	SULLIVAN #1	Domestic		
39/3/192W	7/27/2006	Unavailable	31N	109W	21	SENE	RICHARD & JENNY WILLIAMS	WILLIAMS #1	Domestic		
P27160W	6/28/1974	Good Standing	31N	109W	22	NESE	USDI BLM	CHEVRON SPRING 4121	Stock	-1	0
P23521W	6/26/1973	Good Standing	31N	109W	27	NENE	USDI BLM	CUT-OFF SPRING 4111	Stock	4	-4
P144118W	4/25/2002	Good Standing	31N	109W	32	NESE	NEW FORK PARTNERSHIP	NEW FORK PARTNERSHIP #1 WELL	Domestic,		
P7549P	12/31/1929	Good Standing	31N	109W	32	SWNE	ROBERT E. OLSON**ENA OLSON	OLSON #4	Stock	60	12
P76369W	2/24/1988	Good Standing	31N	109W	32	NWNE	ROBERT E. AND ENA OLSON	BERTRAM #1	Stock	-1	8
P98295W	2/7/1995	Good Standing	31N	109W	32	SESW	JOE SCOTT	SCOTT #1	Stock	60	30
P145884W	7/1/2002	Good Standing	31N	110W	25	NWNW	BURLINGTON RESOURCES OIL & GAS COMPANY LP	GAMMA RAY #1	DOM,STO	120	80
P9613P	6/15/1965	Good Standing	31N	110W	26	SESW	BUREAU OF LAND MANAGEMENT	SOUTH MESA WELL #508	MIS	730	160
									Stock	400	65

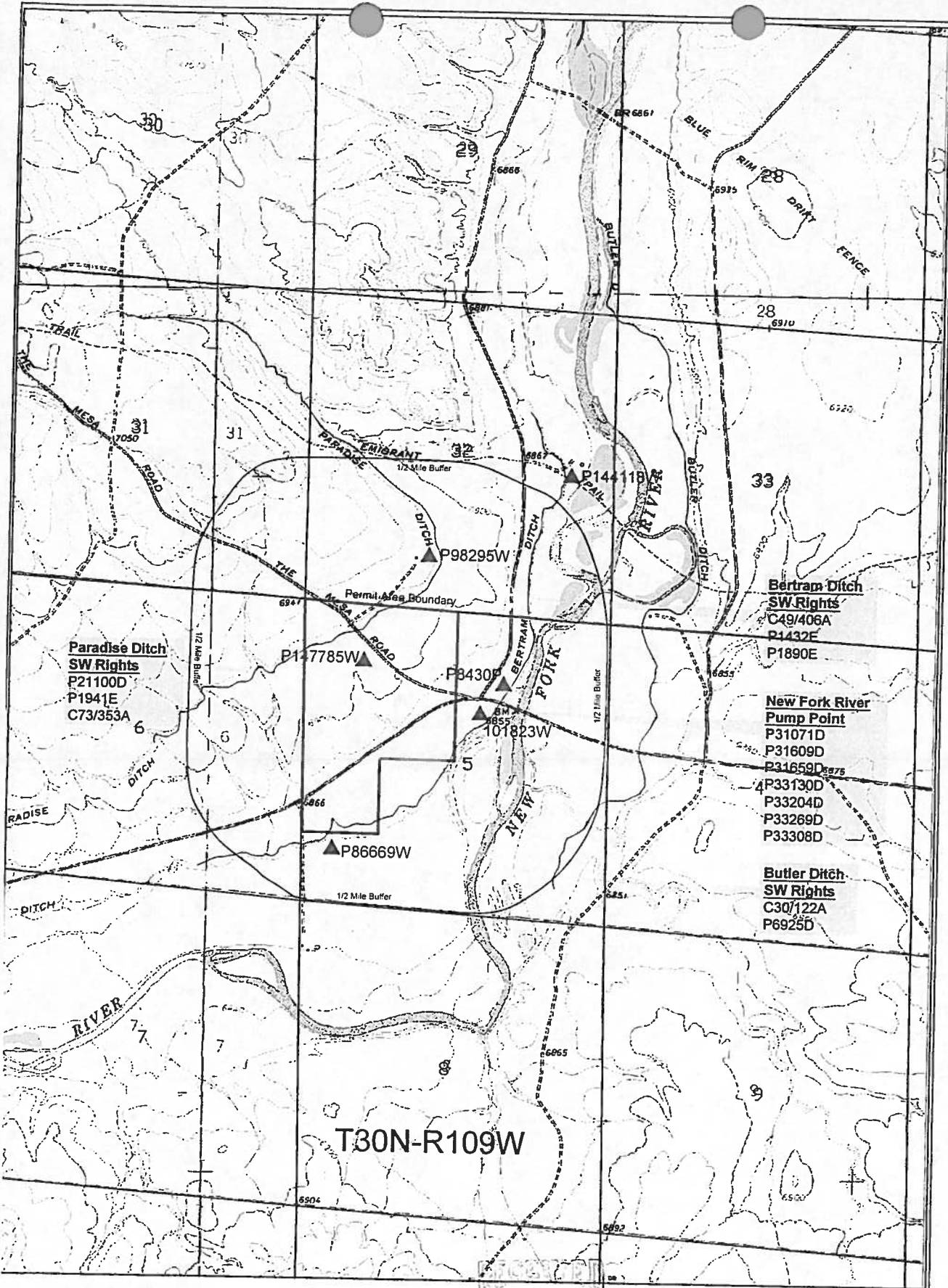
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 from 11/17*



T30N-R109W

Legend:
 ▲ Water Well w/permit number
 □ Surface Water Rights w/permit number

SEP 13 2007

M&N Equipment, LLC
 1701 East "E" Street, PO Box 2490, Casper, Wyoming 82602

Map # D-6-1
 Water Rights

Scale: 1" = 1 mile

Date: 10/10/2006 Date Revised: 6/14/2007 Drawn By: EMH

Mesa Road Mine
 Sublette County, Wyoming





**APPENDIX D-8
PRE-MINING VEGETATION COMMUNITY INFORMATION**

Jennifer Hayward with the NRCS (Natural Resources Conservation Service) performed a vegetation survey within the permit area on July 23, 2009. Her report is included in this appendix. The NRCS also provided a general Rangeland Productivity and Plant Communities document for the Sublette County area.

Photos of vegetation dated June 17, 2009 were taken by Diana Olson with The Permit Connection and are included in this appendix.

Mining will not impact any riparian or wetland areas.

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**LAND QUALITY DIV.
DIST II**

October 29, 2009

To: Diana Olson, The Permit Connection
Noble Construction Small Mine Permit
Re: Vegetation survey conducted for purposes of a Small Mining Permit on
the Bootjack Ranch
From: Jennifer Hayward, District Conservationist, Pinedale NRCS Field Office

Based upon a site investigation completed on July 23, 2009, the existing vegetation (percent species composition on a dry-weight basis by ocular estimate) for the area located in Sec 28 T35N R110W is:

(See map for location) – Loamy, 10-14" Ppt Zone, Foothills and Basins West

Site #1

GRASSES (55%):

Thickspike wheatgrass	10%
Needleandthread	10%
Mutton/Canby bluegrass	15%
Lettermen's Needlegrass	5%
Bottlebrush squirreltail	10%
Crested Wheatgrass	5%

FORBS (15%):

Hood's Phlox	5%
Purple Aster	trace
Pussytoes	5%
Hollyleaf clover	trace
Indian Paintbrush	trace
Astragalus sp.	trace
Buckwheat	5%
Lupie (in wetter draws, not throughout entire area)	

SHRUBS (30%):

Wyoming big sagebrush	25%
Douglas rabbitbrush	5%

SIMILARITY INDEX (% similarity to the potential plant community): 65

Estimated Annual Production: 900 lbs/acre

I completed a line intercept on Site #1 to determine canopy cover for sagebrush. The result is that there is 28% Canopy cover for Wyoming Big Sagebrush for this site.

The Ecological Site Description, which describes the potential plant communities that exist on this site, can be obtained at the following website:

http://esis.sc.egov.usda.gov/esis_report/fsReport.aspx?approved=yes&id=R034AY222WY

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In summary, the potential plant community for this site is:

GRASSES (60-75%)

- Needleandthread 5-10%
- Rhizomatous wheatgrass 10-15%
- Bluebunch wheatgrass 5-15%
- Canby Bluegrass 5-10%
- Lettermen's Needlegrass 10-15%
- Other native grasses 10-20%

FORBS: (10-15%)

SHRUBS (15-25%):

- Wyoming big sagebrush 10-20%
- Other native shrubs 5-10%

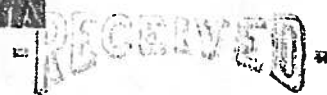
Potential Annual Production: 700-1500 lbs/acre



Photos in color

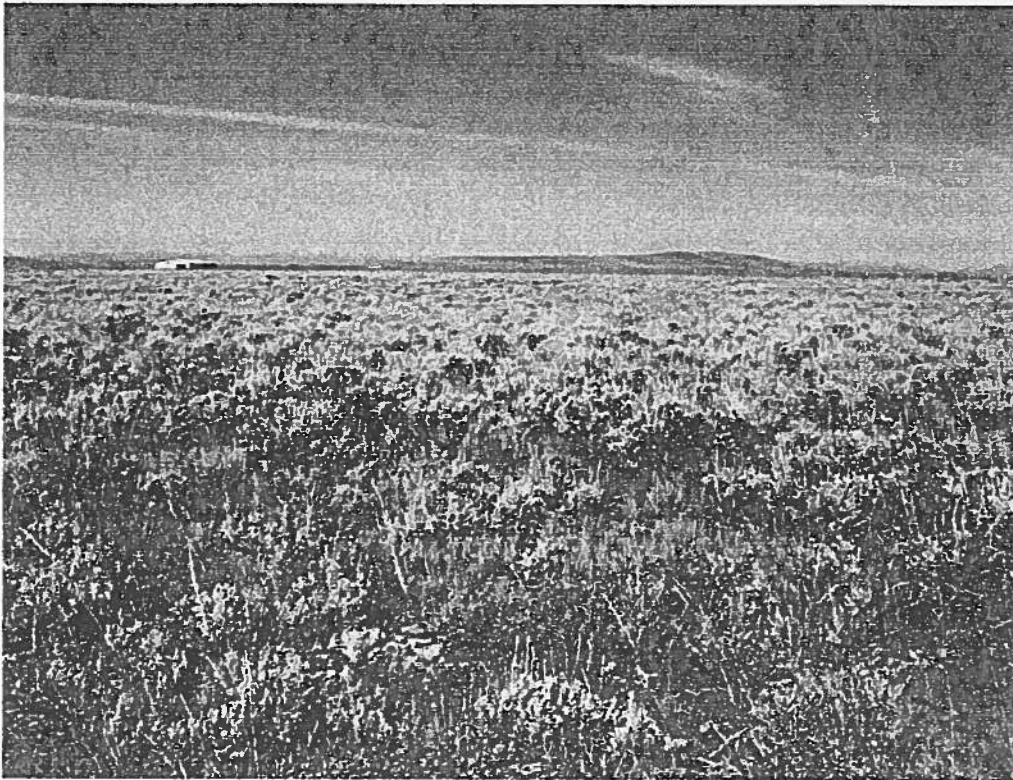


Site 1 Looking South from vegetation inventory site.



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Site 1 Looking West from vegetation inventory site.

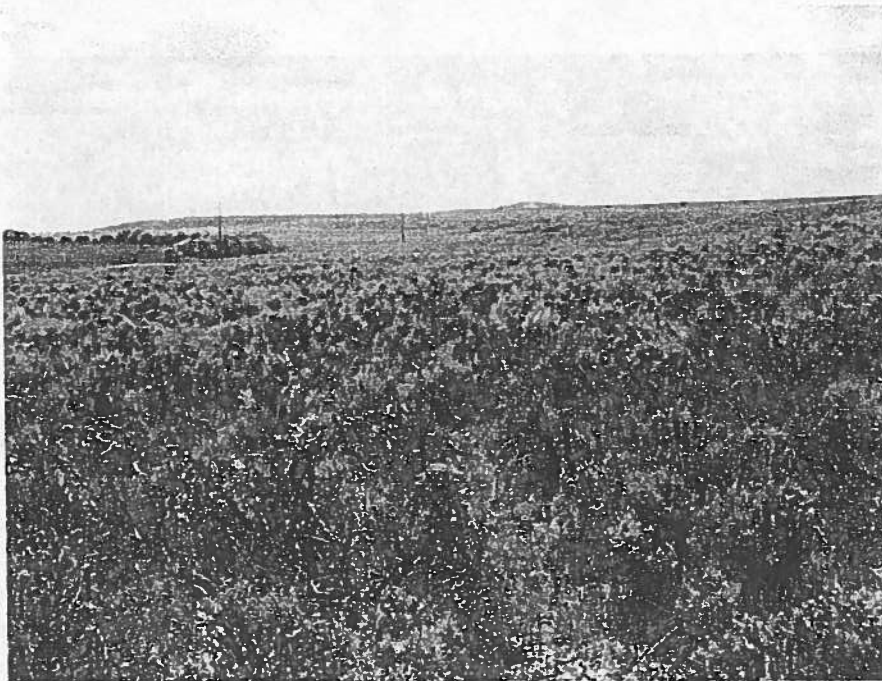
Both sites are Loamy sites. Site #2 has additional moisture influence due to slope and thus has increased production and different forbs in the community. Production is different and is the reason the aerial photo shows this difference but in reality they are the same ecological site and are delineated as the same ecological site.

Site #2 is the same ecological site (Loamy) but has additional moisture due to topographic relief and catchment of snow. The potential is the same. This site looks similar in species composition with a higher proportion of forbs such as lupine and higher in overall production (1100#). In addition to the species located on Site #1 these additional species were noted at Site #2: Stonecrop, Yarrow, Sticktight (weed) and a few other weedy species. Photos are provided below.

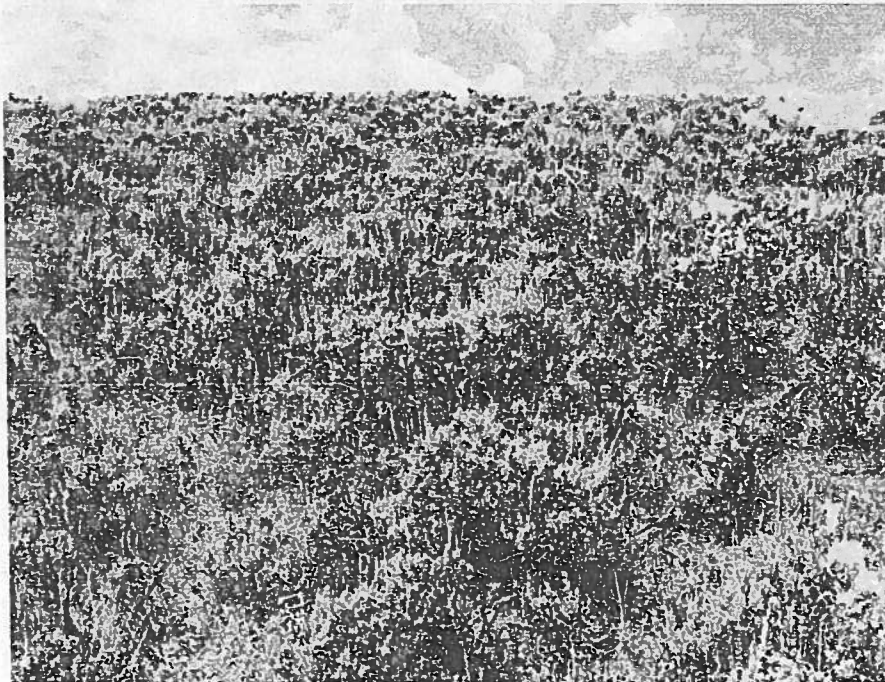
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Site 2 Looking South from vegetation inventory site.

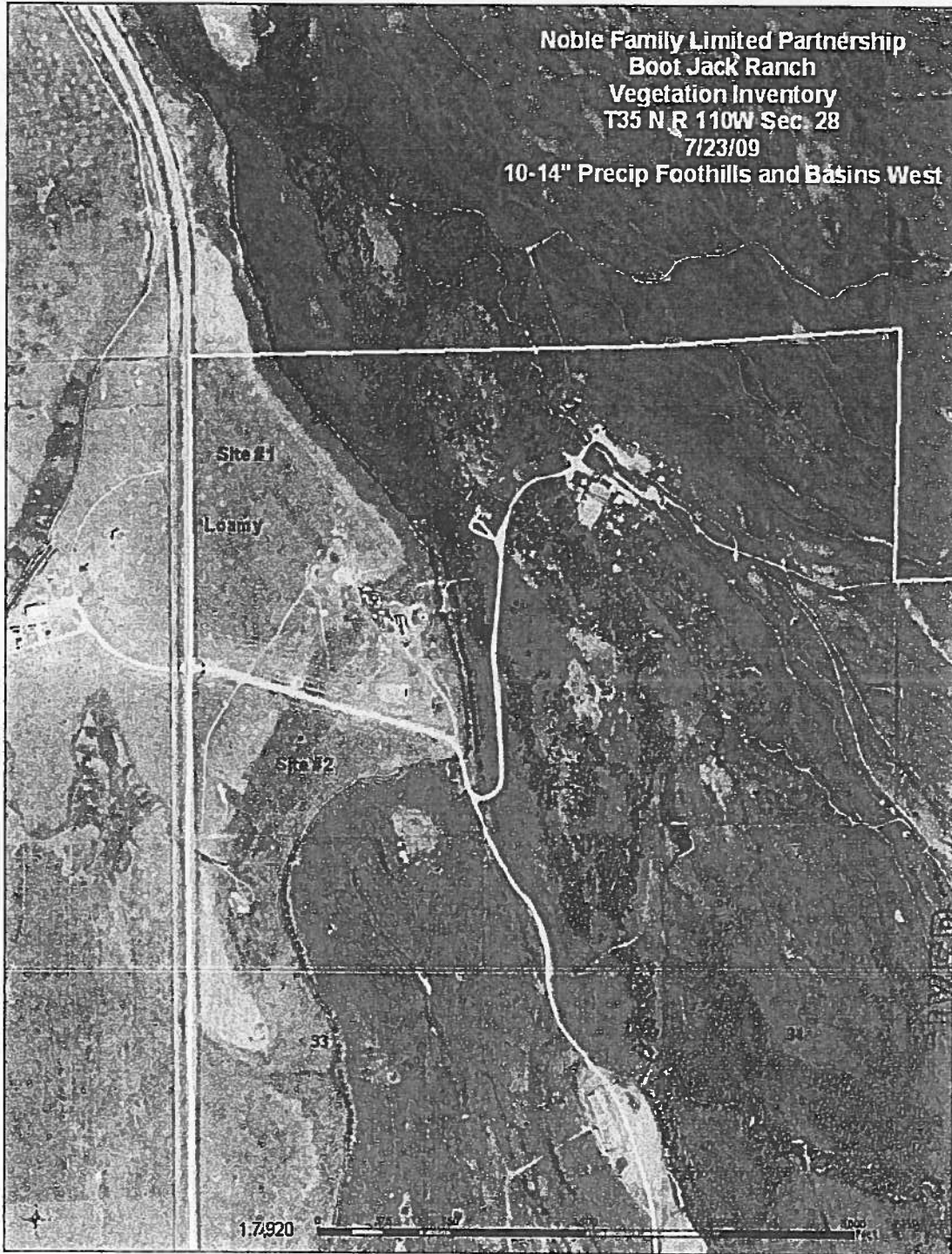



Site 2 Looking West from vegetation inventory site.

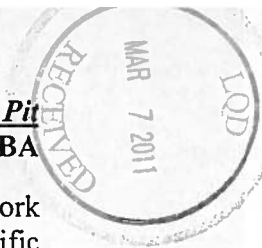
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Potential habitat for the threatened Ute ladies'-tresses Orchid occurs along the East Fork River. This species has not been recorded in the area and was not found during specific surveys completed in late July of 2009. The East Fork River and associated riparian or wetland habitats will not be affected so habitat for this species will not be impacted by this operation.

D8-5.0 Conclusions

This vegetation study provides the baseline data required by the WDEQ-LQD. Methods employed were those previously approved through direct communication with WDEQ-LQD personnel for prior studies on non-coal mine permit areas. Methods also followed those outlined in WDEQ-LQD Guideline No. 2.

D8-6.0 References

Beetle, A. A., 1970. *Recommended Plant Names*, University of Wyoming, Research Journal 31, 124 pp.

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Table D8-3 Shrub Density Data for the McMurry Eastfork Ranch Pit, 2009

Life Form/Species	Vegetation Community Type			
	Mixed Shrub		Meadow	
	#/M ²	#/A	#/M ²	#/A
Shrub				
<i>Artemisia tridentata</i>	0.69	2801	-	-
<i>Chrysothamnus nauseosus</i>	1.10	4468	-	-
<i>Chrysothamnus viscidiflorus</i>	<u>0.80</u>	<u>3250</u>	-	-
Subtotal	2.60	10518	0	0
Subshrub				
<i>Leptodactylon pungens</i>	0.10	421	-	-
All Total	<u>2.70</u>	<u>10939</u>	<u>0</u>	<u>0</u>

#/M² = Number per square meter.
#/A = Number per acre.

Table D8-4 Statistical Evaluations for Percent Cover on the McMurry Ready Mix Eastfork Ranch Pit, 2009

Vegetation Community Type	\bar{X}	S	Parameter	
			N	Nmin
Mixed Shrub				
Total Vegetation Cover (%)	48.3	5.5	20	5
Total Ground Cover (%)	70.4	7.6	20	4
Meadow				
Total Vegetation Cover (%)	68.0	3.7	5	1
Total Ground Cover (%)	87.0	6.2	5	2

\bar{X} = Mean
S = Sample Standard Deviation
N = Number of Samples Collected
Nmin = Number of Samples Needed for Sample Adequacy
% = Percent

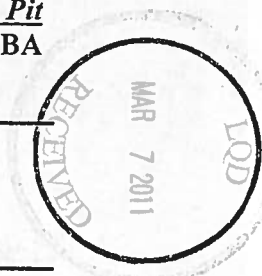
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Table D8-2 Percent Cover Data for the Eastfork Ranch Pit, 2009

Life Form/Species	<u>Vegetation Community Type</u>	
	Mixed Shrub	Meadow
<u>Annual Forbs</u>		
<i>Alyssum desertorum</i>	11.2	2.0
<i>Eriogonum cernuum</i>	0.4	-
<i>Lappula redowskii</i>	0.2	-
<i>Polygonum aviculare</i>	<u>0.2</u>	<u>1.0</u>
Subtotal	12.0	3.0
All Annuals Subtotal	12.0	3.0
Total Vegetation Cover	48.3	68.0
Litter	21.7	19.0
Rock	0.4	-
Bare Ground	29.6	13.0
Total Ground Cover	70.4	87.0



D8-4.4 Statistical Evaluations

Sample adequacy, according to WDEQ-LQD Guideline No. 2, was met for all cover parameters required. Table D8-4 provides a summary of cover sampling results and statistical evaluations.

D8-4.5 Trees

Tree data was collected in 2009 only on areas to be affected by the Eastfork Ranch Pit. The only tree species recorded was the narrowleaf cottonwood (*Populus angustifolia*). The average height of the 26 trees inventoried was 40.2 feet and the average diameter at breast height of these trees was 13.4 inches. Data collected for trees is shown in Addendum D8-C.

D8-4.6 Species List

The list of plant species compiled for the permit area is presented in Addendum D8-B.

D8-4.7 Species of Special Concern and Noxious Weeds

Two species of noxious weeds were observed on the study area. These noxious weed species were quackgrass (*Agropyron repens*) and Canada thistle (*Cirsium arvense*). These noxious weeds were common and were encountered on both disturbed areas and in native vegetation types primarily along the East Fork River. Selenium indicator species were not observed on the permit area. No rare, threatened or endangered species were observed on the permit area.

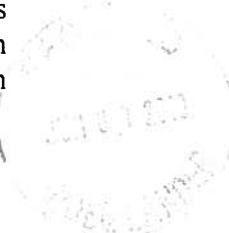
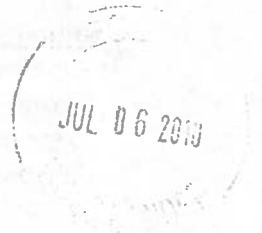
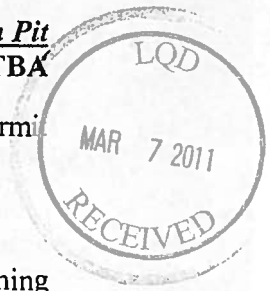


Table D8-2 Percent Cover Data for the Eastfork Ranch Pit, 2009

Life Form/Species	Vegetation Community Type	
	Mixed Shrub	Meadow
<u>Perennial Grass</u>		
<i>Agropyron smithii</i>	0.5	0.5
<i>Agropyron trachycaulum</i>	-	3.0
<i>Agrostis stolonifera</i>	-	2.5
<i>Deschampsia caespitosa</i>	-	3.5
<i>Hordeum jubatum</i>	-	3.5
<i>Muhlenbergia richardsonis</i>	0.2	23.0
<i>Oryzopsis hymenoides</i>	0.3	-
<i>Phleum pretense</i>	0.1	-
<i>Poa ampla</i>	0.2	1.5
<i>Poa pratensis</i>	-	4.5
<i>Poa secunda</i>	7.8	5.0
<i>Sitanion hystrix</i>	2.8	-
<i>Stipa comata</i>	4.4	-
<i>Stipa lettermanii</i>	<u>0.2</u>	<u>-</u>
Subtotal	16.5	47.0
<u>Grasslike</u>		
<i>Carex</i> spp.	-	17.5
<i>Carex filifolia</i>	0.1	-
<i>Carex stenophylla</i>	<u>2.1</u>	<u>-</u>
Subtotal	2.2	17.5
<u>Perennial Forbs</u>		
<i>Antennaria rosea</i>	0.1	-
<i>Erigeron pumilus</i>	0.3	-
<i>Machaeranthera canescens</i>	0.2	-
<i>Phlox hoodii</i>	0.1	-
<i>Potentilla gracilis</i>	<u>-</u>	<u>0.5</u>
Subtotal	0.7	0.5
<u>Shrubs</u>		
<i>Artemisia tridentate</i>	5.0	-
<i>Chrysothamnus nauseosus</i>	8.6	-
<i>Chrysothamnus viscidiflorus</i>	<u>3.3</u>	<u>-</u>
Subtotal	16.9	-
All Perennials Subtotal	<u>36.3</u>	<u>65.0</u>





across the northern portion of the permit area. This road crosses about one mile of the permit area, and will be used to access mining operations within this permit area.

Riparian/Willow Bottom

This map unit is found along the East Fork River and will not be affected by mining activities. Dominant plant species are sedges (*Carex* spp.), willows (*Salix* spp.), rushes (*Juncus* spp.), Kentucky bluegrass (*Poa pratensis*), tufted hairgrass (*Deschampsia caespitosa*) and other plant species typical of wet sites in the area. Most of this map unit is considered wetland and is discussed in Appendix D10. This vegetation community occupies approximately 6.2 acres or 1.9 percent of the permit area. Soils are generally loams or sandy loams and are saturated for a portion of the growing season.

Meadow

The meadow vegetation community type is generally found on relatively flat to gently sloping lowlands but is more of an upland meadow. This type is isolated to one small area of the study area and makes up approximately 2.3 acres or only about 0.7 percent of the permit area. Perennial grasses were the dominant species encountered in cover transects on this vegetation community type. The most dominant individual species was mat muhly (*Muhlenbergia richardsonis*) followed by sedge (*Carex* spp.), Sandberg bluegrass, Kentucky bluegrass (*Poa pratensis*), foxtail barley (*Hordeum jubatum*) and tufted hairgrass (*Deschampsia caespitosa*). Only one perennial forb species was observed in cover transects on this vegetation type which was northwest cinquefoil (*Potentilla gracilis*). This type will be affected by mining activities.

D8-4.2 Cover

Cover data was collected on the mixed shrub and meadow vegetation community types. This data was collected according to the methods outlined previously in this report.

Cover data is summarized in Table D8-2 and field data sheets are included in Addendum D8-C. The data shows that the two vegetation community types sampled were quite different in dominant species and life forms. The mixed shrub type exhibited the highest perennial forb, shrub and annual forb cover. The meadow vegetation community type showed the highest perennial grass and grasslike cover. Overall vegetation cover and total ground cover was greatest for the meadow type.

D8-4.3 Shrub Density

Shrub density data was collected on the mixed shrub and meadow vegetation community types. This data was collected according to the methods outlined previously in this report.

Shrub density data is summarized in Table D8-3 and field data sheets are included in Addendum D8-C. The shrub density data shows the mixed shrub type was dominated by the shrub species rubber rabbitbrush followed by big sagebrush and Douglas rabbitbrush (*Chrysothamnus viscidiflorus*). The subshrub granite pricklygilia (*Leptodactylon pungens*) was also recorded on the mixed shrub type but in lower numbers. No shrub or subshrub species were recorded on the meadow shrub density transects in 2009.



photographs of each unit are shown in Addendum D8-A. Sample sites and photograph locations are plotted on the attached map.

Table D8-1 shows that the mixed shrub type dominated the area. The other vegetation map units present are disturbed lands, riparian/willow bottoms and meadow.

Mixed Shrub

This vegetation community type was the largest type found on the permit area and was generally found on relatively flat to gently sloping uplands. The mixed shrub type was dominated by desert alyssum (*Alyssum desertorum*), rubber rabbitbrush (*Chrysothamnus nauseosus*), Sandberg bluegrass (*Poa secunda*), big sagebrush (*Artemisia tridentata*) and needleandthread (*Stipa comata*).

This vegetation community type makes up approximately 307.5 acres or about 91.7 percent of the permit area. Perennial forbs were also found, but were uncommon, on this vegetation community type. Overall vegetation cover was generally fair for this area. Soils are generally shallow to moderately deep loams and sandy loams.

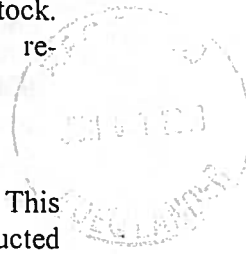
Table D8-1 Vegetation Community Type Acreages on the McMurry Ready Mix Eastfork Ranch Pit, 2009

Vegetation Community Type	Permit Area Acres	Percent	Affected Area Acres	Percent
Mixed Shrub (MS)	307.5	91.71	270.3	92.6
Disturbed Land (DL)	19.3	5.76	19.3	6.61
Riparian/Willow Bottom (R)	6.2	1.85	-	-
Meadow (M)	2.3	0.69	2.3	0.79
TOTAL	<u>335.3</u>	<u>100.0</u>	<u>291.9</u>	<u>100.0</u>

Discussions with the landowner revealed that over 10 years ago the areas mapped as the mixed shrub vegetation community within the permit area had been treated with chemicals to remove big sagebrush. These areas were then irrigated as pastureland for livestock. Irrigation was discontinued and rubber rabbitbrush invaded followed by some re-establishment of big sagebrush and other native plant species.

Disturbed Land

The disturbed land type occupies about 19.3 acres or 5.8 percent of the permit area. This type consists of the Limited Mining Operation area and a gravel road recently constructed



D8-3.3 Cover

Vegetative cover was estimated using 50 meter line transects with a pin drop at one meter intervals for 50 data points per transect. The first hit recorded by the pin was used for the data analysis. Hits were recorded for all vegetative cover and ground cover classes including lichens, litter and rock. The vegetation canopy cover data was recorded by species and life form. Cover data was collected only on the major vegetation types within the study area that will be affected by mining activities.

D8-3.4 Shrub Density

The densities of shrubs and subshrubs were estimated using belt transects 50 meters long by one meter wide. The shrub and subshrub sampling was completed in conjunction with sampling the cover transects. This was accomplished by walking along the right side of the cover transect line with a one meter long rod and recording any shrub or subshrub which was rooted within that one meter span.

D8-3.5 Statistical Evaluations

Vegetation cover and ground cover were subjected to statistical tests in order to determine when sample adequacy was achieved. These tests followed those outlined in WDEQ-LQD Guideline No. 2. The minimum and maximum number of samples collected were also based on WDEQ-LQD Guideline No. 2. A set number of samples (4) was collected on the meadow type which occupies only 2.7 acres within the area to be affected.

D8-3.6 Trees

Trees within the area to be affected were surveyed in 2009. All species of trees were surveyed, by species, for number, height and diameter at breast height (DBH).

D8-3.7 Species List

A plant species list was compiled for the study area. Plant species were identified and named using current taxonomic keys. Scientific names used were those which are currently accepted or most commonly used by the Rocky Mountain Herbarium. Plant species which could not be identified in the field were taken to the herbarium and identified.

D8-3.8 Species of Special Concern and Noxious Weeds

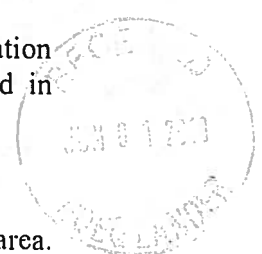
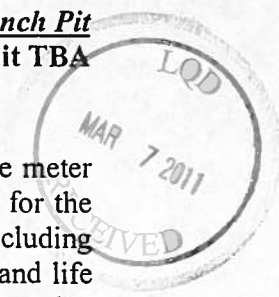
WDEQ - LQD Guideline No. 2 provides lists of plant species which are of special concern either due to rarity or because they are noxious weeds. Some plant species also act as indicators of selenium in the soils. Fieldwork included keeping watch for any species which were included in these categories.

D8-4.0 Results

Field mapping and sampling results are included in this section. Photographs of vegetation community types are provided in Addendum D8-A, the plant species list is included in Addendum D8-B and field data sheets are presented in Addendum D8-C.

D8-4.1 Mapping

Four vegetation community types were delineated on the Eastfork Ranch Pit permit area. These types and acreages for the study area are included in Table D8-1. Representative



APPENDIX D8 – VEGETATION INVENTORY

D8-1 Introduction

Intermountain Resources completed vegetation baseline inventories on the McMurry Ready Mix Eastfork Ranch Pit Area in April of 2008 and April through July of 2009. Vegetation cover and shrub density sampling was completed in July of 2009. Surveys were completed as required by the Wyoming Department of Environmental Quality - Land Quality Division (WDEQ-LQD) for other non-coal mine permit areas. This report uses the data collected and detailed sampling completed in 2008 and 2009 to describe the vegetation types located within the area.

D8-2 Location

The study area is located in Sublette County, Wyoming approximately 13 miles southeast of the town of Boulder. Access is by way of Country Road 353 off of Highway 191. The permit area encompasses portions of Sections 6 and 7 T31N, R106W. Access to the permit area will be through existing roads from Highway 353 and Mathis Lane. As shown on Figure D8-1, the permit area is comprised mostly of rolling upland plains with several irrigation ditches crossing the property. The East Fork River is located immediately south of the permit area and will not be affected by mining activities. Topographical relief is minor with elevations ranging from approximately 7110 to 7170 feet. The site is located within the cold desert shrub vegetation zone.

D8-3 Methods

The methods employed in this study were those approved by WDEQ-LQD for other non-coal mine permit areas. Sampling required the collection of vegetation cover and ground cover data on major vegetation types throughout the permit area. Shrub and subshrub density data was also collected for this permit area. A plant species list was compiled and searches were conducted for species of special concern. The WDEQ-LQD does not require production data for non-coal mine permit areas.

D8-3.1 Mapping

Vegetation types were delineated based on dominant plant species or physical site characteristics. Vegetation community types were also separated based on past or present land use. Photographs were taken of each vegetation community type.

D8-3.2 Sample Site Location

All sample sites within the study area were randomly located. Sites on the study area were chosen with numbers from a random numbers table by plotting these figures on a map of the area using a grid system laid out on the map. The sites were then located in the field and sample points were selected by pacing a predetermined number of steps in two consecutive random compass directions.



Diana Olson
The Permit Connection

Bootjack Pit
June 17, 2009



Photo 3: Bootjack Pit; area west of the current disturbance (1049ET). Standing near the access/haul road looking north.



Vegetation Photos

Page 2

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Photo 1: Bootjack Pit north of the access/haul road looking south.

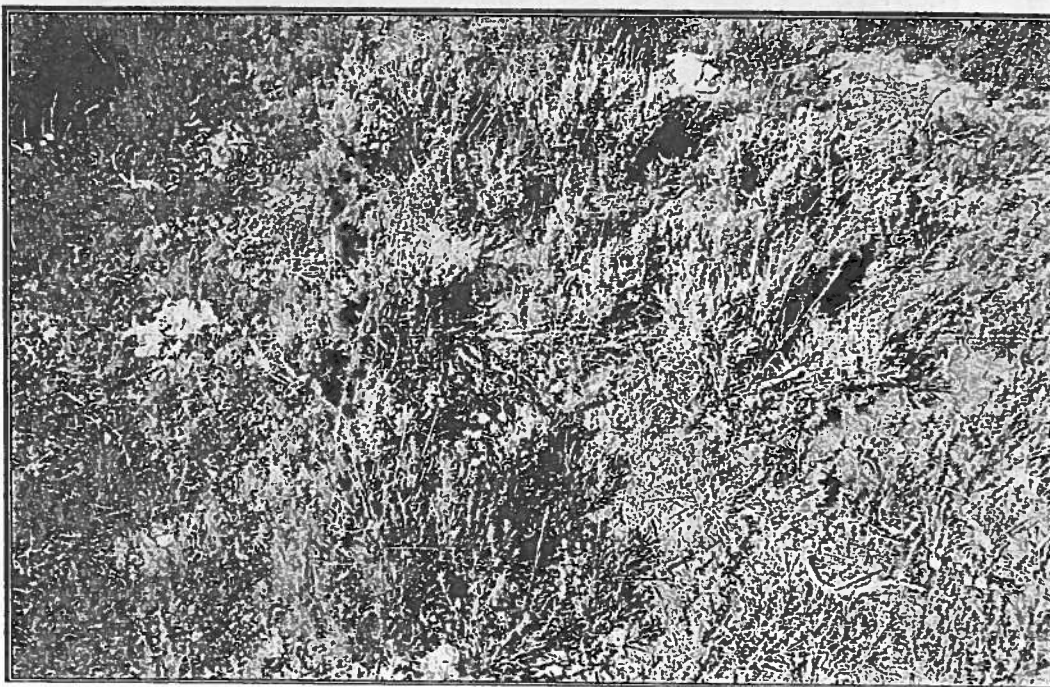
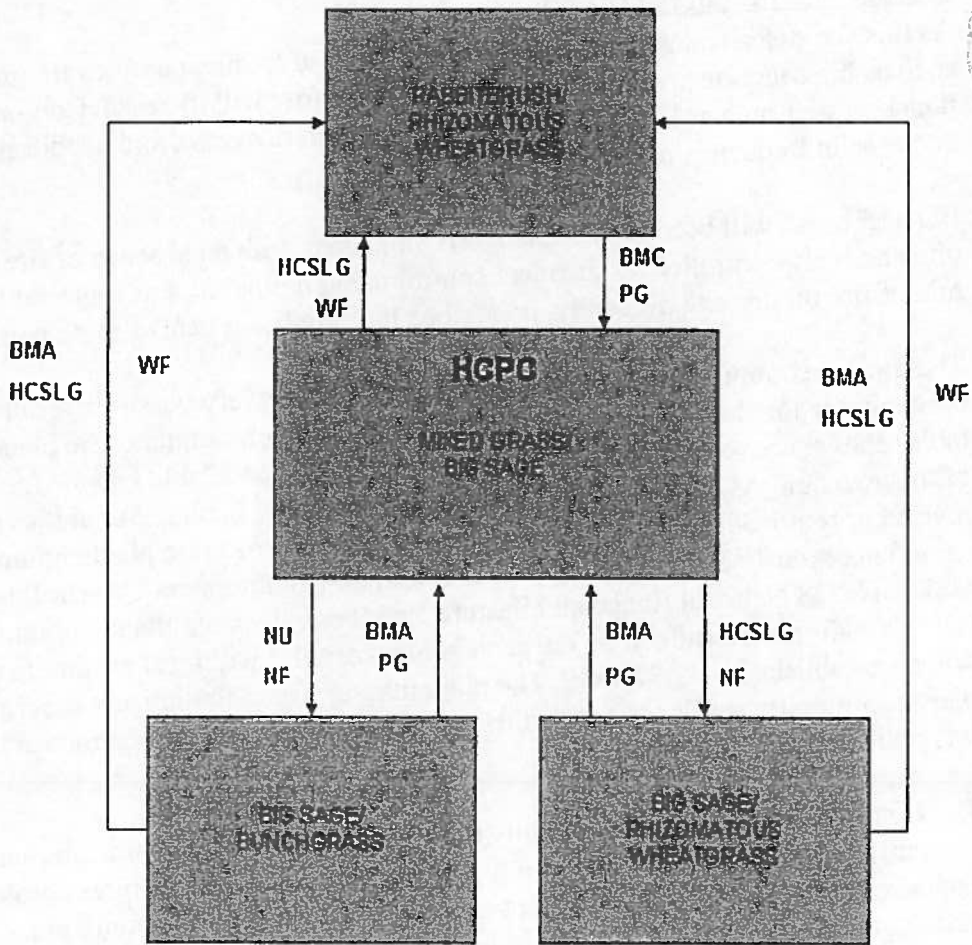


Photo 2: Bootjack Pit closer view of vegetation

Site Type: Rangeland
 MLRA: 34A-Cool Central Desertic Basins and Plateaus

Loamy (Ly) 10-14W
 R034AY222WY



BMA – Brush Management (all methods)
 BMC – Brush Management (chemical)
 BVF – Brush Management (fire)
 EMM – Brush Management (mechanical)
 CSP – Chemical Seedbed Preparation
 CSLG – Continuous Season-long Grazing
 CR – Drainage
 CSG – Continuous Spring Grazing
 HB – Heavy Browse
 HCSLG – Heavy Continuous Season-long Grazing
 HI – Heavy Irrigation
 LPG – Long-term Prescribed Grazing
 MT – Mechanical Treatment (chiseling, raking, pitting)

NF – No Fire
 NS – Natural Succession
 NWC – Noxious Weed Control
 NWI – Noxious Weed Invasion
 NU – Nonuse
 P&C – Plow & Crop (including hay)
 PG – Prescribed Grazing
 RPT – Re-plant Trees
 RS – Re-seed
 SGD – Severe Ground Disturbance
 SHC – Severe Hoof Compaction
 WD – Wildlife Damage (Beaver)
 WF – Wildlife

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Plant Communities

Ecological Dynamics of the Site

As this site deteriorates because of a combination of frequent and severe grazing, species such as big sagebrush, rabbitbrush, phlox, and yarrow will increase. Cool-season bunchgrasses such as bluebunch wheatgrass, Indian ricegrass, and needleandthread will decrease in frequency and production.

Big sagebrush will become dominant on some areas with an absence of fire. Wildfires are often actively controlled so chemical control using herbicides has replaced the historic role of fire on this site. Recently, prescribed burning has regained some popularity.

These plant communities narratives may not represent every possibility, but they probably are the most prevalent and repeatable plant communities. The plant composition tables shown above have been developed from the best available knowledge at the time of this revision. As more data is collected, some of these plant communities may be revised or removed, and new ones may be added. None of these plant communities should necessarily be thought of as "Desired Plant Communities". According to the USDA NRCS National Range and Pasture Handbook, Desired Plant Communities (DPC's) will be determined by the decision-makers and will meet minimum quality criteria established by the NRCS. The main purpose for including any description of a plant community here is to capture the current knowledge and experience at the time of this revision.

The Historic Climax Plant Community (description follows the plant community diagram) has been determined by study of rangeland relic areas, or areas protected from excessive disturbance. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures, and historical accounts have also been used.

The following is a State and Transition Model Diagram that illustrates the common plant communities (states) that can occur on the site and the transitions between these communities. The ecological processes will be discussed in more detail in the plant community narratives following the diagram.

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Area around Bootjack Loamy description

NRCS



Rangeland Productivity

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

This table shows, for each soil that supports rangeland vegetation, the ecological site and the potential annual production of vegetation in favorable, normal, and unfavorable years. An explanation of the column headings in the table follows.

An "ecological site" is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of a site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service (NRCS).

"Total dry-weight production" is the amount of vegetation that can be expected to grow annually on well managed rangeland that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Range management requires knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in the "National Range and Pasture Handbook," which is available in local offices of NRCS or on the Internet.

The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Reference:

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. (<http://www.nrcs.usda.gov/technical/range.html>)

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Rangeland Productivity

Sublette County Area, Wyoming

[Only the soils that support rangeland vegetation suitable for grazing are rated. This report shows only the major soils in each map unit]

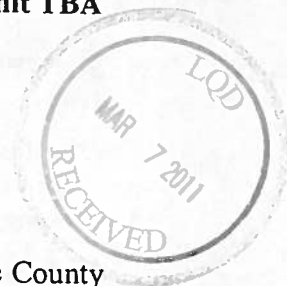
Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year Lb/ac	Normal year Lb/ac	Unfavorable year Lb/ac
1100: Water	--	--	--	--
3201: Blaha	--	--	--	--
Ansel-like	--	--	--	--
3403: Fortyrod, very stony	Loamy (Ly) 15-19" P.Z., Foothills and Mountains West	2,400	2,000	1,400
Fortyrod, extremely bouldery	--	--	--	--
3603: Gelkie	--	--	--	--
Ansel-like, Very Bouldery	--	--	--	--
5606: Irican	--	--	--	--
Boulder, Cobbly	--	--	--	--
Sicklesteets, Very Cobbly	--	--	--	--
NM: Area Not Mapped	--	--	--	--

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APPENDIX D9 – WILDLIFE INVENTORY



D9-1 Location

The McMurry Ready Mix Eastfork Ranch Pit Permit Area is located within Sublette County of Wyoming, approximately 13 miles southeast of the town of Boulder. Access is by way of Highway 353 and Mathis Lane. As shown on Figure D9-1, the permit area is comprised mostly of rolling upland plains with the East Fork River on the south. The current East Fork River channel is not within the permit area but some wetlands associated with this river are within the permit area. The permit area is located in portions of Sections 6 and 7 T31N, R106W. Access to the site is by existing roads already constructed to service adjacent quarries. The permit area occupies approximately 335.3 acres. Topographical relief of the area is minor with elevations ranging from 7110 feet to 7170 feet. General wildlife information provided in this report applies to the permit area and adjacent lands.

D9-2 Methods

Wildlife species and habitats within the study area were determined through field investigations and file searches completed in 2008 and 2009. The file information, as well as the site specific surveys, were used to determine what important wildlife species or categories of species inhabit the study area. The Wyoming Game and Fish Department (WGFD) provided a computer printout of species recorded within the area by their personnel. The local WGFD Biologist and Mr. Tom Christiansen of the WGFD Green River Office were contacted to obtain information on sage grouse. Applicable publications were consulted and field surveys were completed to determine if any threatened or endangered species might occur, or have habitat within the area.

Correspondence from the USFWS and WGFD subsequent to the initial contacts with the these agencies have also been received and are attached as Addenda D9-B and D9-C. Recommendation from these agencies have been addressed in the Mine and Reclamation Plans.

The wildlife field surveys were completed in April of 2008 and April and July of 2009 and included the permit area and one to two mile perimeter. Surveys were completed by traversing all habitat types by vehicle, ATV or on foot. Major emphasis was placed on sage-grouse, threatened or endangered species, raptors, candidate species and Migratory Birds of High Federal Interest.

D9-3.0 Results

D9-3.1 Wildlife Habitats

The permit area was characterized by one major habitat type as shown in Table D9-1. The most abundant habitat type was classified as mixed shrub and occurs primarily on uplands. The mixed shrub type occupies about 317.5 acres or 94.5 percent of the permit area. This type was dominated by rubber rabbitbrush, but several other shrubs were also common. The mixed shrub type was formerly irrigated pasture created by removal of all shrubs. Irrigation was discontinued and shrubs have re-invaded. The meadow habitat type was dominated by



grasses and occupied only about 2.7 acres or 0.8 percent of the permit area. The meadow type is generally found on lowland areas but is not wetland in the permit area.

Disturbed land within the permit area consists of a road that crosses the northern portion of the Eastfork Ranch Pit Permit Area and occupies 19.3 acres or 5.8 percent of the area. This existing road will be used by this operation to access Highway 353 and Mathis Lane.

Wetlands and permanent bodies of water occur along the East Fork River south of the permit area. The East Fork River is not included in the permit area but 6.2 acres of wetlands associated with this river are within the site. These wetlands will not be disturbed by this mining operation. The habitat types outlined above are discussed in more detail in Appendix D8.

Table D9-1 Vegetation/Habitat Type Acreages on the McMurry Ready Mix Eastfork Ranch Pit, 2009

Vegetation/Habitat Type	Permit Area Acres	Percent	Affected Area Acres	Percent
Mixed Shrub (MS)	317.5	94.69	280.3	96.03
Disturbed Land (DL)	19.3	5.76	19.3	6.61
Riparian/Willow Bottom (R)	6.2	1.85	-	-
Meadow (M)	2.3	0.69	2.3	0.79
TOTAL	335.3	100.0	291.9	100.0

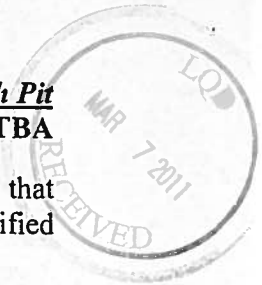
D9-3.2 Wildlife Species

A list of wildlife species which may occur on the entire permit area and adjacent areas is provided in Addendum D9-A. This list also includes wildlife species that may be found associated with the East Fork River which is located south of the permit area. Many of those species dependent on aquatic habitats would not be found on the study area because the site is primarily uplands. The more important species that may inhabit the study area are discussed in the following sections.

Big and Trophy Game

Wildlife field surveys in 2008 and 2009 indicated that pronghorn antelope, mule deer and moose frequented the study area. Pronghorn and mule deer were recorded in the mixed shrub habitat as well as in the meadow habitats. Moose were observed along the East Fork River within the study area during the April surveys.





The WGFD computer printout from their wildlife observation system revealed that pronghorn were the most common big game animal in the area. This area has been classified as spring/summer/fall pronghorn range by the WGFD.

Records from the WGFD wildlife observation system indicate that mule deer may not be abundant on the study area but were observed consistently along the East Fork River along with adjacent meadows, haylands and shrublands during the 2009 study. The permit area is classified by the WGFD as winter/yearlong mule deer range and crucial winter range is located a few miles east of the permit area.

Moose were recorded southeast of the study area in 2009. This species is considered an infrequent transient of the uplands and is more common along the East Fork River. The riparian area and willow bottoms along the East Fork River south of the permit area are classified as crucial winter range for moose. These habitats will not be disturbed by mining operations.

The WGFD has classified the site as generally out of elk range. However, elk may occasionally occur on the site as transients.

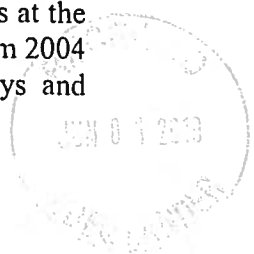
Raptors

Several raptors were observed nesting on or adjacent to the permit area in 2008 and 2009. Several other raptors were observed flying in the study area. The raptor species observed in 2008 and 2009 included the red-tailed hawk, Swainson's hawk, golden eagle, bald eagle, Northern harrier American kestrel, osprey and great horned owl. Only one raptor nest (Swainson's hawk) was located on the permit area itself. Three species of raptors nested within one mile of the permit area. These species included the red-tailed hawk, Swainson's hawk and bald eagle. Four red-tailed hawk nests and two Swainson's hawk nests were active on the study area during the 2008 survey. Three red-tailed hawk nest sites and one bald eagle nest site were active on the study area in 2009. The active bald eagle nest fledged at least one young in 2009. Table D9-2 shows the activities of each nest site in the study area for 2008 and 2009. Ravens also nested on the study area in 2008 and 2009.

Other raptor species that have been observed by the WGFD along the East Fork River several miles from the permit area include the rough-legged hawk and prairie falcon. Addendum D9-A provides a list of raptors observed in the area and other raptors with the potential for occurring in the region.

Upland Game Birds

The sage-grouse and mourning dove were the only upland game bird species observed on the study area during the 2008 and 2009 surveys. The mourning dove is only a seasonal visitor and is most common during late spring, summer and early fall. Sage-grouse strutting ground surveys were completed by Intermountain Resources at dawn on April 21 and 29 of 2008 and May 1 of 2009. One active lek site (Section 17 T31N, R106W) named the Goodwin lek by the WGFD was surveyed and is located over one mile southeast of the permit area. The remainder of the study area was also searched to determine the presence of previously unrecorded lek sites. A total of 31 males were recorded at the Goodwin lek site on April 21 and 35 males were observed on April 29 of 2008. Surveys in 2009 recorded 40 males at the Goodwin lek on May 1. Table D9-3 summarizes the available data for this lek site from 2004 to 2009. Sage-grouse were also observed on the study area during other surveys and appeared to be common in the area but no other leks were found.



Waterfowl and Shorebirds

Natural waterfowl and shorebird habitat exists south of the permit area along the East Fork River. Jurisdictional wetlands are also found along the East Fork River. No disturbance from mining operations will occur in these wetland areas. Irrigation ditches within the mine permit area also provide some waterbird habitat. These irrigation ditches will be relocated during mining. Addendum D9-A provides a list of waterbirds observed in the area and other waterbirds with the potential for occurring in the region.

Table D9-2 Summary of Raptor nests on the McMurry Ready Mix Eastfork Ranch Pit Permit Area

Species/Nest	Legal Description	Nest Substrate	Status	
			2008	2009
Red-tailed Hawk (RT)				
RT-1A	SENW4, Sec. 8 T31N, R106W	Cottonwood	A	I
RT-1B	NWNW4, Sec. 8 T31N, R106W	Cottonwood	-	A
RT-2	NENW4, Sec. 12 T31N, R107W	Cottonwood	A	A
RT-3	NWNW4, Sec. 12 T31N, R107W	Cottonwood	A	BE-1
RT-4	NWNW4, Sec. 1 T31N, R107W	Cottonwood	A	A
Swainson's Hawk (SH)				
SH-1	SWNW4, Sec. 5 T31N, R106W	Willow	A	I
SH-2	NWNW4, Sec. 7 T31N, R106W	Cottonwood	A	I
Bald Eagle (BE)				
BE-1	NWNW4, Sec. 12 T31N, R107W	Cottonwood	RT-3	A

A = Active
I = Inactive

Migratory Birds of High Federal Interest

Several migratory birds of high federal interest (MBHFI) listed by the USFWS as level I species (USFWS, 2002) were observed on the study area in 2008 or 2009 and other MBHFI species have been recorded by the WGFD and BLM in the region. Level I MBHFI species



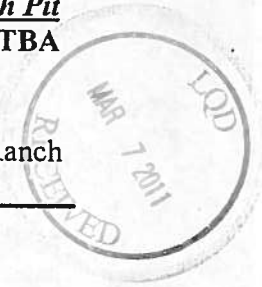


Table D9-3 Sage-grouse Lek Observations on the McMurry Ready Mix Eastfork Ranch Pit Permit Study Area

Lek: 7-Goodwin
Complex: Big Sandy
Location: SE ¼ Section 17, T31N, R106W (UTM Z12, 622286, 4723450)

Date	Number Observed	
	Male	Female
<u>2004</u>		
4/10	33	0
4/15	29	0
4/18	37	0
4/22	34	1
4/26	32	0
<u>2005</u>		
4/4	36	3
4/13	39	8
5/10	0	0
<u>2006</u>		
4/19	33	5
4/26	26	2
5/6	22	0
<u>2007</u>		
4/7	32	0
4/16	39	0
4/26	0	0
<u>2008</u>		
4/3	8	0
4/21*	31	6
4/23	0	0
4/28	23	0
4/29*	35	4
<u>2009</u>		
5/1*	40	0

* Historic observations obtained from the WG&FD.
* Observation made by Intermountain Resources.



The USFWS found in 2010 that, through a Notice of Findings Action (USFWS, 2010) that listing sage grouse range-wide as a T&E species is warranted but precluded by higher priority listing actions. The action allows the WGFD authority to manage the species under an Executive Order issued by the State of Wyoming Executive Department (2008), which establishes Core Areas within which conservation measures would be implemented to protect sage grouse and its habitat. Eastfork Ranch Pit is located within the South Pass Sage Grouse Core Area (WGFD, 2008), the boundary of which is about 2.7 miles northeast of the permit (Figure D9-1).

The sage-grouse frequents the site and a lek is located within two miles of the permit area as discussed in a previous section. The Brewer's sparrow is a common resident and breeder in the summer in the area. The Wilson's phalarope may be common along the East Fork River where this species was observed. The sage sparrow is an occasional summer resident and breeder to the area. The Swainson's hawk was observed nesting in the study area in 2008 but no active nest sites were recorded in the study area in 2009. The long-billed curlew is a common summer resident and probably breeds in the area. The bald eagle is a common winter resident but in 2009 a pair of bald eagles took over an existing red-tailed hawk nest and nested at that site, producing at least one young. Suitable breeding or nesting habitat is not present on the permit area for many of the other Level I MBHFI species listed in Table D9-4. Those species that probably would not inhabit the site are listed in the table as rare for expected occurrence within the permit area.

Threatened or Endangered Species

The bald eagle has been removed from the threatened species list as of July of 2007. Bald eagles have been observed within the study area as discussed previously. This species is now generally a yearlong resident of the area. Nesting habitat is primarily cottonwood trees along the East Fork River and cottonwood trees along tributaries of the East Fork River and along irrigation ditches.

Prairie dog towns are the primary habitats for the endangered black-footed ferret. No white-tailed or black-tailed prairie dog towns were recorded within the study area.

Ferret surveys were not conducted due to the fact that no prairie dog towns were observed on the study area. If prairie dog towns become established on future disturbance areas, then surveys will be completed as required.

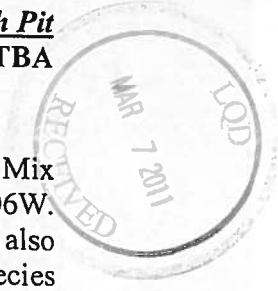
Whooping crane habitat is found only along the East Fork River. Whooping cranes have never been recorded in the area and this mining operation will not affect any crane habitat.

Habitat for the Ute ladies'-tresses orchid occurs in wetlands on the southern corners of the permit area. These wetlands are associated with the East Fork River and will not be disturbed by mining activities. This plant species has not been recorded in the area and was not found during surveys conducted in late July of 2009.

Other Species

Numerous wildlife species, other than those already discussed, were observed during the 2008 and 2009 surveys. These species, and all other species recorded in the region are noted on the species list in Addendum D9-A. That list also includes observations obtained from BLM and WGFD records. This wildlife species list was developed for the entire permit area and adjacent lands. This includes the East Fork River and wetlands adjacent to the river.





D9-4.0 Conclusions

The information presented in this report provides wildlife data for the McMurry Ready Mix Eastfork Ranch Pit Permit Area located in portions of Sections 6 and 7 T31N, R106W. Studies included a one to two mile perimeter around this permit area. A species list was also prepared for the entire survey area. Wildlife habitats were evaluated and important species were documented as required. Disturbances from this project will be based on locations of gravel deposits but impacts to wildlife populations and individual species should be minimal. The East Fork River and associated riparian or wetland habitats will not be disturbed by mining. Measures to protect wildlife recommended by the USFWS and WGFD have been incorporated into the Mine and Reclamation Plans.

Table D9-4 MBHFI (USFWS, 2002, Level I) Species and Expected Occurrence on or near the McMurry Ready Mix Eastfork Ranch Pit Permit

Species	Seasonal Status/Breeding Records in Western Wyoming	Documented on Permit Study Area	Expected on Permit Area
Mountain Plover	Summer/Breeder	No	Rare
Trumpeter Swan	Summer/Breeder	No	Rare
Sage-grouse	Resident/Breeder	Yes	Common
McCown's Longspur	Migrant	No	Rare
Baird's Sparrow	Migrant	No	Rare
Ferruginous hawk	Summer/Breeder	No	Uncommon
Brewer's Sparrow	Summer/Breeder	Yes	Common
Wilson's Phalarope	Summer/Breeder	Yes	Uncommon
Franklin's Gull	Migrant	No	Rare
Sage Sparrow	Summer/Breeder	Yes	Occasional
Swainson's Hawk	Summer/Breeder	Yes	Common
Long-billed Curlew	Summer/Breeder	Yes	Common
Short-eared Owl	Summer/Breeder	No	Uncommon
Northern Goshawk	Summer/Breeder	No	Rare
Peregrine Falcon	Summer/Breeder	No	Rare
Burrowing Owl	Summer/Breeder	No	Rare
Forster's Tern	Summer/Breeder	No	Rare
Bald Eagle	Resident/Breeder	Yes	Common
Upland Sandpiper	Migrant	No	Rare
Black Tern	Summer/Breeder	No	Rare
Whooping Crane	Migrant	No	Rare
Piping Plover	Summer/Breeder	No	Rare



D9-5.0 Sources

Baxter, G. T., and M. D. Stone, 1980. *Amphibians and Reptiles of Wyoming*, Wyoming Game and Fish Department.

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State of Wyoming Executive Department, August 1, 2008. *Greater Sage-Grouse Core Area Protection*, Executive Order 2008-2.

U.S. Fish and Wildlife Service, 2009. *Endangered and Threatened Wildlife and Plants*, Department of the Interior, U.S. Fish and Wildlife Service.

U.S. Fish and Wildlife Service, 2002. *Migratory Bird Species of Management Concern in Wyoming*, U.S. Fish and Wildlife Service, Wyoming Field Office, Cheyenne, Wyoming. 6pp.

U.S. Fish and Wildlife Service, March 5, 2010. *Endangered and Threatened Wildlife and Plants; 12-Month Findings for Petitions to List the Greater Sage-Grouse (Centrocercus urophasianus) as Threatened or Endangered*, 50 CFR Part 17.

Wyoming Game and Fish Department, 2008 and 2009. Personal Communications and Unpublished Information, Pinedale, Green River and Cheyenne, Wyoming.

Wyoming Game and Fish Department, 2004 and updates. *Atlas of Birds, Mammals, Amphibians and Reptiles in Wyoming*, 190 pp.

Wyoming Game and Fish Department, August 15, 2008. *Sage-Grouse Core Breeding Areas Version 2*.



Wyoming Department of Environmental Quality

Air Quality Division

Report Reviews



General Information:

Company Name: FMC Corporation

Facility Name: Soda Ash Facility - Green Ri

Review Month: February 2011

Reviewed By: Tony Hoyt

Facility Type: MAJOR

Report Date: 2/23/2011

Date Received: 2/25/2011

Date Reviewed: 2/25/2011

Report Type:

Annual Report

reports rev'd: 1

Compliance Status: Substantial Compliance

2010 - Fugitive Emissions Control Report (F29): dust suppression system was in place and operated during the calendar year except for spray system operation when unloading coal. Proper boom height being maintained. Hoods and dust collectors operated during the year. Vacuum sweeper had four loads for the year. No DECA mined in 2010. Document was signed by the R/O, James Pearce, on 2/23/11.

Section II.G

APPENDIX D-9: Wildlife Information



In 2002, letters were sent to both the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service advising them of plans to apply for a small mine permit in the area of Section 5, T30N, R109W, in Sublette County. Subsequent letters were submitted to both agencies by M&N in August of 2006 advising them of the plans to add 80 acres to the permit area. A copy of all correspondence is included in this Appendix. The following discussion incorporates all responses in single format

M&N is aware of the prohibitions in the Migratory Bird Treaty Act (MBTA) and will inform all the mine equipment operators and contractors that it is illegal to take any migratory bird including their parts, nests or eggs.

General Issues Addressed in Responses from the Wyoming Game and Fish Department

The 2002 written response from the Wyoming Game and Fish Department (WGFD) states that "There are no known crucial or important terrestrial wildlife habitats in the proposed permit area." Their letter goes on to state that "it will be important to minimize sediment input to the River."

In the 2006 response addressing potential impacts from mining in the proposed 80-acre expansion area, the WGFD states that "As noted for the request for input, the New Fork River, in this reach, has important spawning habitat, especially for brown trout. Because flows are reduced during the fall when brown trout spawn, any sediment inputs could affect spawning success for these fish. We concur with the condition that sediment input into the river from this operation be reduced as much as possible, and preferably eliminated."

It is very unlikely that the planned Nerd Gas Company mining operation will increase the sediment load to the New Fork River as there are no streams feeding the River that cross the areas to be disturbed and the mine pit will be constructed as a small closed basin such that there will no significant runoff from the pit area. The nearest edge of the pit will be about one-half mile from the New Fork River and on the other side of Highway 351.

The WGFD written response in the 2006 correspondence states that "Important habitats that lie within this project area include moose and antelope crucial winter range. There are no known sage grouse leks within or immediately adjacent to this area. Overall, we have no opposition to this project given the juxtaposition of the proposed expansion site and disturbance associated with the present gravel operation, traffic associated with State Highway 351 and the Pinedale Anticline, and the fact that the mine is situated outside of the riparian corridor."

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T&E Species Concerns Addressed in Responses from the U.S. Fish and Wildlife Service and Wyoming Game and Fish Department

Black-footed Ferret

The 2002 U.S. Fish & Wildlife letter refers to avoidance of disturbance of prairie dog communities of 200 acres or greater in order to avoid impacts to Black-footed ferrets. Representatives of the Nerd Gas Company and their permitting consultant walked the complete permit area on October 20, 2002 and did not observe any prairie dogs or prairie dog mounds. Additionally, Nerd Gas Company employees have been in the permit area on numerous occasions in the past 5 years and at no time have any prairie dogs or prairie dog mounds been observed. In addition, the total area proposed for mining is less than 200 acres, so that even if prairie dog burrows did exist within the project area, disturbances as a result of mining within the project area do not pose a problem

The 2006 U.S. Fish and Wildlife Service letter states that "The Service believes it is unlikely the proposed mine amendment will adversely affect any threatened or endangered species. Therefore, you may consider this amendment proposal to be in compliance with the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*)"

Bald Eagle

The 2002 USFWS response states that "A disturbance-free zone of 1 mile should be maintained around all active eagle nests and winter roost sites." The U.S. Fish and Wildlife Service has no record of a Bald Eagle nest or a winter roost site on or within one mile of the original permit area. According to Mr. Scott Smith from the Pinedale office of the Wyoming Game and Fish Department, there are no Bald Eagle nests on or within a mile of the original permit area (based on their most recent survey).

No bald eagle nests are located within 2 miles of the proposed expansion or original project area (see Map D.9 -1 based on the most recent survey data available). Representatives of M&N have frequently visited the permit area and have not observed any bald eagle nests or winter roost sites within one mile of the proposed permit area.

Based on the 2006 U.S. Fish and Wildlife Service letter, no further action in connection with Bald Eagles is contemplated by M&N other than committing to notify the Land Quality Division and the U.S. Fish & Wildlife Service if Bald Eagle nests or winter roost sites are observed in the permit area.

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DIST II



Mountain Plover

The U.S. Fish and Wildlife Service stated in their 2002 letter that the Mountain Plover has been proposed for listing under the Endangered Species act and is also categorized as a Migratory Bird. A field survey was performed (based on the USF&W Service guideline) in the Spring of 2003 to determine the presence of Mountain Plover nests on the lands in the original permit area to be disturbed by mining. No plover sightings or nests were reported as a result of the 2003 survey.

The USFWS has declined to list the Mountain Plover as a T&E species, and no petitions are pending for listing. Therefore, as stated previously, the 2006 USFWS letter does not directly address impacts to T&E species by proposed mining activities in the 80-acre expansion area.

If nests are located within the proposed mining area, M&N will commit to notifying Land Quality Division personnel and the U.S. Fish & Wildlife Service. Based on previous discussions with U.S. Fish and Wildlife Service Staff, if nests are found, it is acceptable to be working on already disturbed ground (e.g., inside the existing pit) during the nesting season.

Sage Grouse

The 2002 U.S. Fish and Wildlife Service Letter addressed potential impacts to Sage Grouse because at the time, Sage Grouse were being considered for listing as a threatened and endangered species. The acreage in the original permit area that would be affected by mining operations was inspected in October 2002 and no Sage Grouse or Sage Grouse leks were noted. On February 6, 2003, Mr. Keith Andrews, Biologist - Pinedale office of the Bureau of Land Management, was contacted to discuss Sage Grouse issues relative to the planned Mesa Road Mine. Mr. Andrews indicated that he was familiar with the location of the planned mine and that he had no concerns relative to any adverse impacts on Sage Grouse. He stated that the nearest known lek site is over two miles from the permit area. Mr. Andrews did not suggest any mitigating actions in connection with the planned mining activity.

In the 2006 response addressing potential impacts from the 80-acre expansion area, the USFWS does not address Sage Grouse directly because the previous petition for listing Sage Grouse as a T&E species was denied and there are no pending petitions for listing.

The WYGFD stated in their 2006 letter that "There are no known sage grouse leks within or immediately adjacent to this area."

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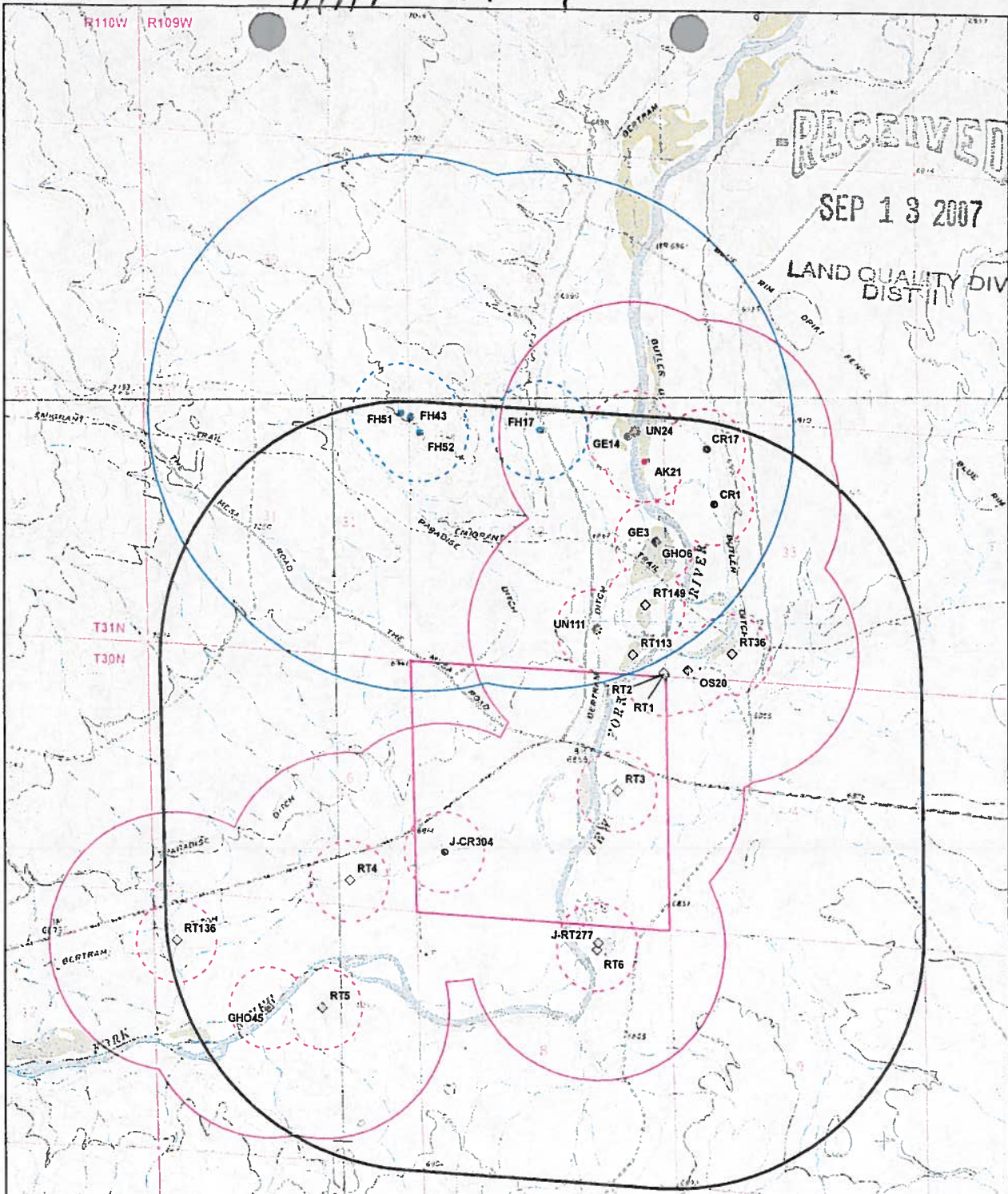
Active Raptor Nests

The USFWS response letter dated October 2, 2006 references the protection afforded raptors by the Migratory Bird Treaty Act (MTBA) and Bald Eagle and Golden Eagle Protection Act (BGEPA). Map II.D - 1 is attached showing data from the most recent survey for active raptor nests in the project area. M&N will be contact the USFWS for guidance should any active raptor nests be observed within 0.5 to 1 mile of active mining operations, depending on the species.

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Legend

- Section 5
- 1.0-mi Buffer around Section 5

Raptor nests

- American Kestrel
- Common Raven
- Ferruginous Hawk
- Golden Eagle
- Great-horned Owl
- Osprey
- Red-tailed Hawk
- Unknown Raptor

Nest Buffers¹

Seasonal Restriction Buffer

All surface-disturbing activity (e.g., road, pipeline, and well pad construction, drilling, completion, workovers) will be restricted from February 1 to August 15 for bald eagle nests with active or unknown activity status and from February 1 to July 31 for ferruginous hawk nests and nests of other raptor species with active or unknown activity status within 1.0 mi of the PAPA (BLM 2000a, pg. A-19, 2003, pg. 4-1, 2004a, pg. 10, 2005a, pg. 10, 2005b, pg. 10).

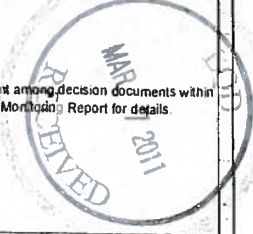
- 1.0-mi Seasonal Restriction buffer for bald eagle and ferruginous hawk nests
- 0.5-mi (other raptors) Seasonal Restriction buffer for nests

No Surface Occupancy (NSO) Buffer

Well locations, roads, ancillary facilities, and other surface structures requiring repeated human presence will not be constructed within NSO buffers of any raptor nest with active or unknown activity status within 1.0-mi of the PAPA (BLM 2000a, pg. A-19, 2003, pg. 4-1, 2004a, pg. 10, 2005a, pg. 10, 2005b, pg. 10).

- 1,000-ft NSO buffer for ferruginous hawk nests
- 825-ft NSO buffer for other raptor nests

¹Details (e.g., time frames) of some restrictions are not consistent among decision documents within the PAPA. Please see Chapter 4.0 of the accompanying 2008 Monitoring Report for details. Protection measures presented on this map generally apply.



MINE PLAN

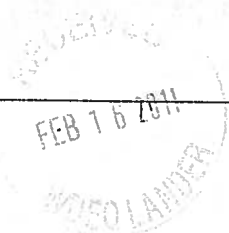
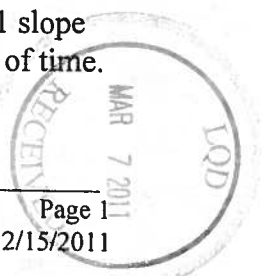
High Plains Ventures, LLC intends to surface mine sand and gravel material from a deposit located in a portion of the NENW and NWNE quarters of Section 29, T34N, R109W in Sublette County, near Pinedale, Wyoming under the terms of a small mine permit to be issued by the DEQ. When approved, this permit would allow for a surface disturbance of approximately 36 acres within a permit boundary of approximately 40 acres. The surface is owned by High Plains Ventures, LLC and the minerals are federally owned. Written permission to disturb the surface is provided under the Surface Owner tab (Form 8). Written permission to mine the minerals is provided under the "Other Permits" tab of this application (a copy of the BLM sales contract). In general this operation will mine a relatively flat topped terrace and lower the elevation by approximately 22 feet. Map 7 shows the pre-mining topography and Map 9 shows the proposed post-mining topography.

There is an existing gravel pit within the proposed permit boundary for this small mine; (Binning) 120ET. High Plains Ventures, LLC has been granted a permit for a ten acre gravel pit within this proposed permit boundary; 1504ET. There is a gravel mining operation adjacent to the north of this proposed permit boundary; (Shriver) 229(c)s. Given the presumed volume of gravel to the north, the volume of gravel extracted in the existing pit, and the geology of the area, High Plains Ventures, LLC has reason to assume that this site will deliver an economical source of gravel. Three additional test holes were dug which confirmed this site will produce an economical gravel source. See Map 3 and for test hole locations.

Currently there is 10.8 acres of disturbance per DEQ GPS performed on July 12, 2010 which was disturbed under Binning 120ET. In 2011 we plan to disturb approximately 3.5 acres under LMO 1504ET; however no mining has taken place under LMO 1504ET at the time of the printing of this page. We project that by the end of the first year of operation (2011) under this small mine permit there will be a maximum of 15 acres of surface disturbance.

DEQ regulations limit the surface disturbance to 10 acres per year. BLM regulations limit the mineral mined to 200,000cy per year. High Plains Ventures, LLC is committed to complying with these limitation. The schedule of mining progress presented in this Mine Plan may vary depending on the demand for product. Actual progression of mining will be updated for each subsequent year in our annual reports.

The plan in general is to start at the north permit boundary and mine in a southerly direction. One exception is Mining Area 2. We would like to clean that area up once mining is complete in Mining Area 1 before proceeding with the north to south general direction of mining. A vertical highwall will be present at the point of active mining. The active highwall will have slopes of 1:1 or flatter with no overhanging edges. High Plains Ventures, LLC plans to create a 3:1 slope or flatter as they progress so as to not leave an extensive highwall for an extended period of time.



Mining Area 2 (2012) Little to no topsoil is available in this area; however, we will make every effort to salvage any topsoil. This topsoil will be placed on final grade in Reclamation Area 2; not stockpiled.

Mining Area 3 (2013) Topsoil will be stripped from Mining Area 3. We plan to place a portion of the topsoil along the eastern edge of Mining Area 3 to create a noise and visual barrier between the mining operation and the nearby residence; the remaining bulk of the topsoil will be placed on the final grade in Reclamation Areas 2 and 3.

Mining Area 4 (2014) Topsoil will be stripped from Mining Area 4. The topsoil will be placed on final grade in Reclamation Area 4; not stockpiled. Various non-permanent structures will be removed from the area.

Mining Area 5 (2015) Topsoil will be stripped from Mining Area 5. We plan to place a portion of the topsoil along the eastern edge of Mining Area 5 to create a noise and visual barrier between the mining operation and the nearby residence. The remaining bulk of the topsoil will be placed on the final grade in Reclamation Area 5; not stockpiled.

Mining Area 6 (2016) Topsoil will be stripped from Mining Area 6. The topsoil will be placed on final grade in Reclamation Area 6; not stockpiled. We will determine at this point whether any of the permanent buildings will remain or be removed as part of the residential development planned for final reclamation.

Mining Area 7 (2017) Topsoil will be stripped from Mining Area 7. We plan to place a portion of the topsoil along the eastern edge of Mining Area 7 to create a noise and visual barrier between the mining operation and the nearby residence; the remaining bulk of the topsoil will be placed on the final grade in Reclamation Areas 6 and 7.

Mining Area 8 (2018) Topsoil will be stripped from Mining Area 8. This topsoil will be placed on final grade in Reclamation Area 8. If by 2018 we have excess topsoil material, we plan to locate the stockpile along the eastern edge of Mining Area 8 as shown on Map 6.

Note: In general, the topsoil stockpiled along the eastern edge of the permit boundary that will create the noise and visual barrier will be contoured with a 3:1 slope and seeded between mid-September and the end of October using the same seed mix used for reclamation. This barrier will stay in place until final reclamation.

Overburden

Based on our test holes, it was determined that there is no overburden. The test holes revealed that the topsoil sits on pit run material.



Material stockpiles

The current disturbance (Binning 120ET) will serve as a location for the mineral processing operation for the first year. Map 5 – Mine Plan Topo shows approximate areas for mineral stockpiles. In general we plan to stockpile processed material in a central location on the pit floor.

Mining facility

The mining facility will be defined as the crusher/screener, port-a-potty, and trash container. The mining facility will move so as to stay close to the active mining but will always be located on the pit floor.

Mining method

The method of mining will be surface excavation. There will be no use of explosives. The equipment will consist of a loader, dozer, and excavator.

Weeds

There are no noxious weeds known to exist within the permit boundary. High Plains Ventures, LLC will monitor the permit area for the introduction of undesirable weed species. The Sublette County Weed and Pest shall be called upon to assist should an infestation occur and control become necessary.

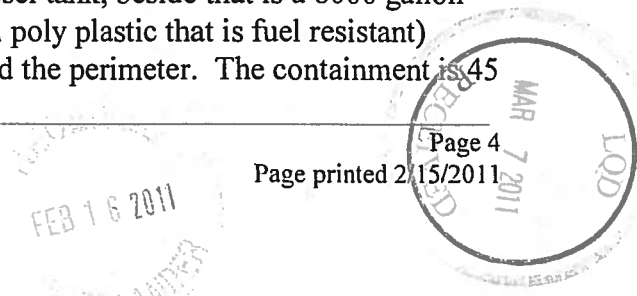
Storm water

Precipitation will collect within the pit and evaporate. If there should be a very high precipitation event, any discharge from the permit boundary has the potential of having elevated levels of suspended sediment. Should storm water leave the permit area, it would be captured in the unnamed naturally occurring drainage located in the southern portion of the permit area. Certified weed-free straw bales will be placed in the drainage to keep sediment from leaving the site (see Map 3). High Plains Ventures, LLC has a storm water pollution prevention plan (SWPPP) on file. We have been issued permit authorization number WYR320658 by the Water Quality Division of the DEQ.

Waste

A large garbage can with a lid and/or a wire cage will be at the site to collect incidental trash. When necessary, the trash will be taken to the local landfill.

Several above ground storage tanks are located on this site and will be utilized by Archer Construction in association with their construction business. These tanks will also be utilized by High Plains Ventures, LLC in association with the mine. The tanks are in line with each other and are as follows: a 1000 gallon gas tank, beside that is a 500 gallon diesel tank, beside that is a 1000 gallon diesel tank, beside that is a 1000 gallon #1 diesel tank, beside that is a 6000 gallon off-road diesel tank. The tanks are in a plastic lined (6 mil poly plastic that is fuel resistant) containment that is 3ft deep with a 2 foot high berm around the perimeter. The containment is 45



feet long and 33 feet wide. This containment was built to engineered specifications and we were told it will hold 16,000 gallons.

If an unforeseen event should occur like a significant spilling of fuel, operations will stop. The contaminated soil will be placed in barrels to be disposed of at an approved disposal site. The DEQ will be notified of the spill. The High Plains Ventures, LLC SPCCP (Spill Prevention, Control, and Countermeasure Plan) is an addendum to the Mine Plan and a copy is located at the end of the Mine Plan.

Hydraulic oil and some toxic products will be stored at the site. These products are associated with equipment maintenance and will be kept in a storage building. We will routinely be available on site to keep our storage building organized and as clean as possible.

No hazardous waste will be generated at this mine site. No hazardous waste or non-hazardous waste will be disposed of within the permit area.

Public Nuisance Issues

There are three homes within 300 feet of this permit boundary. They are identified under the "Other Owner Consent" tab of this application. No other public buildings, schools, churches, parks, or cemeteries are within 300 feet of the permit boundary.

There are 186 land parcels/lots within ½ mile of the permit boundary; see Map 1, also see Appendix B. Information available on the Sublette County Map Server documents that several parcels are owned by one person or company. We will be notifying 105 landowners via mail with a copy of the public notice from the local newspaper.

Dust from mining, crushing/screening, and truck traffic will be the primary contributor to air emissions. Water will be applied to the dirt surfaces by a water truck as needed to control dust. Mag-chloride will be applied to the main haul road unless there is an objection from the residents. In that event, a water truck will be used to control dust on the haul road. The crusher/screener has a water spray to control dust. We will post a maximum speed limit on the haul road at 20 mph. We will instruct drivers of the haul trucks to not use jake brakes.

Mining will take place from 8:00am to 5:00pm Monday through Friday and hauling will take place from 8:00am to 6:00pm Monday through Friday, with occasional weekend activity of four to five haul trucks. We will not operate on federal holidays. Due to the fact that a sage grouse lek is located within 2 miles of this project, Wyoming Game & Fish recommended limited facility use from 6:00pm to 8:00am during March 15 to May 15. High Plains Ventures, LLC will adopt this recommendation.

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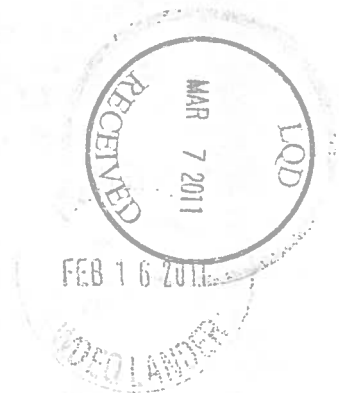
No homeowners were willing to let us build an official bus stop at the end of BD Blvd. High Plains Ventures, LLC is committed to suspending haul truck activity for thirty minutes (3:20pm to 3:50pm Monday through Friday) to allow the kids to get home. The mornings won't be an issue because operations will not start until 8:00am which is after the buses will be done with their route in this area.

The permit area is currently fenced. High Plains Ventures, LLC is committed to maintaining the fence to keep children and animals out of the mining area.

High Plains Ventures, LLC will post a permit identification sign upon entering the permit area, on the haul road immediately off BD Blvd. and Billie Lane, with the following information provided:

HPV – Pit 1
High Plains Ventures, LLC
409 W. Adams, Ste. D
Riverton, WY 82501

Local contact: Mike McCullough
(307) 231-2329
DEQ Permit No. _____
Speed Limit 20 MPH





Archer Construction Inc.
Oil Contingency Plan

Oct 10/10
Page 1 of 4

Introduction:

Archer Construction Inc. (ACI) has developed this plan to prevent any damage, or minimize any damage, to the environment, in case of an accidental release of any fuels, antifreeze, or any other hazardous or non-hazardous material that may be used in any operation we may be involved in. ACI is active with small to large equipment in the gravel crushing operations. Due to the type of work we accomplish, there could be a release of fuel, oil, hydraulic fluid, and anti-freeze. We as workers trained to clean up these releases completely, and deal with the situation promptly, in the proper way. The following information is designed to help our workers in any event that may occur in the course of their day to day work. This plan is designed for our operations in Pinedale, WY, High Plains Ventures Property. This is currently being used as a gravel storage and the shops and office are used in day to day construction operations.

Access to the property is West out of Pinedale on Highway 187 to County Road 14 on BD Blvd. Follow BD Blvd. to the end and you are at High Plains Ventures (HPV) property.

Contractor:

When receiving fuel from a fuel distributor. ACI requires that any truck that enters our site will be DOT inspected and meet 40 CFR 112.7, paragraph (k) for qualified Oil-filled Operational Equipment.

Spill Procedures:

Procedures that all delivery trucks and equipment is inspected to ensure all hatches are locked down and hatch gaskets are sound and seating properly. All valves are checked and verified that there is no leakage.

409 West Adams, Suite D Riverton, WY 82501
Phone: 1-307-856-5066 Cell: 1-307-851-9163 Fax 1-307-856-9243
Email: randy.archer@archerconstructioninc.com
www.archerconstructioninc.com

Archer Construction Inc. is an Equal Opportunity Employer
and a Drug Free Workplace.

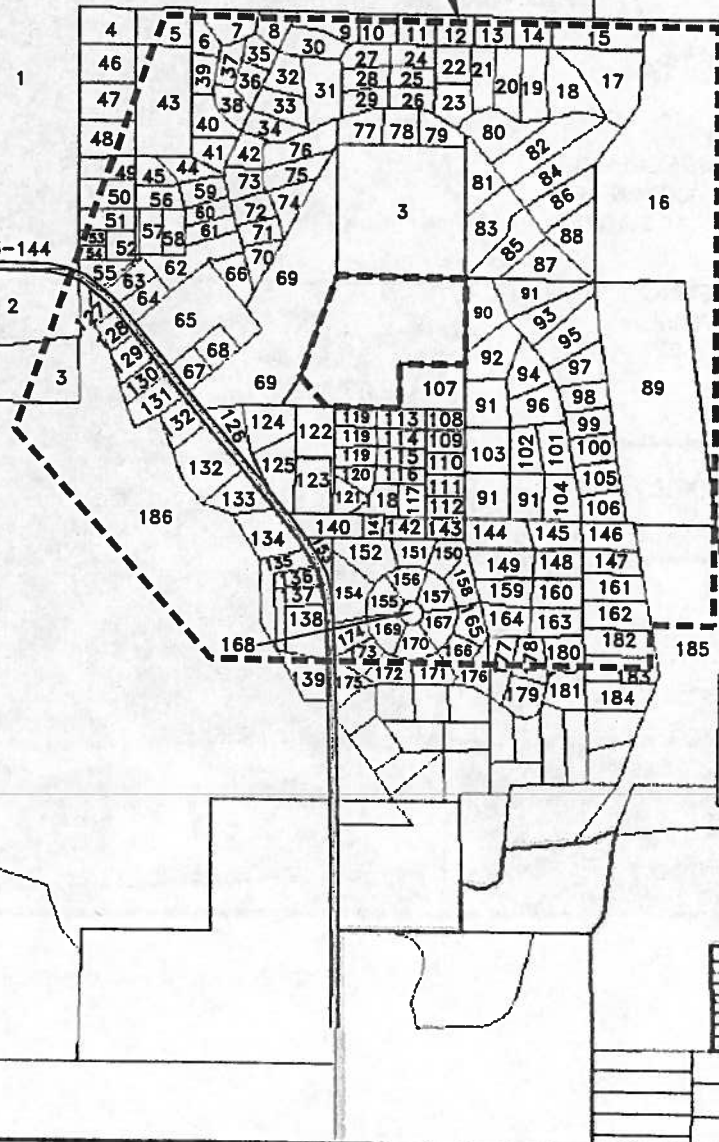
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6 2011

1/2 MILE BOUNDARY

EHMAN LANE CR 23-144

WILLOW LAKE ROAD CR 23-119



LEGEND

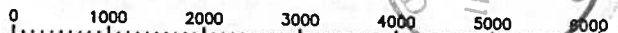


HIGH PLAINS VENTURES PIT 1 PERMIT BOUNDARY

78

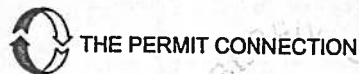
PROPERTY OWNER ID

NOTE: NUMBERS THAT ARE REPEATED REPRESENT PROPERTY OWNERS THAT OWN MULTIPLE PROPERTIES UNDER ONE DEED.



SCALE IN FEET

SOURCE: SUBLETTE COUNTY MAPSERVER, AERIAL PHOTO, 2009



SURFACE OWNERS WITHIN 1/2 MILE
T34N, R109W, SEC 29

HIGH PLAINS VENTURES LLC
PROPOSED HIGH PLAINS VENTURES PIT 1
PINEDALE, WYOMING

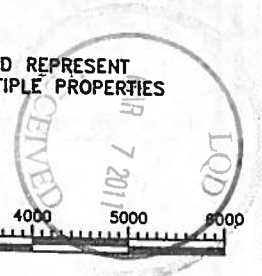
Prepared By:
D. OLSON

Reviewed By:
D. OLSON

Date:
1/2011

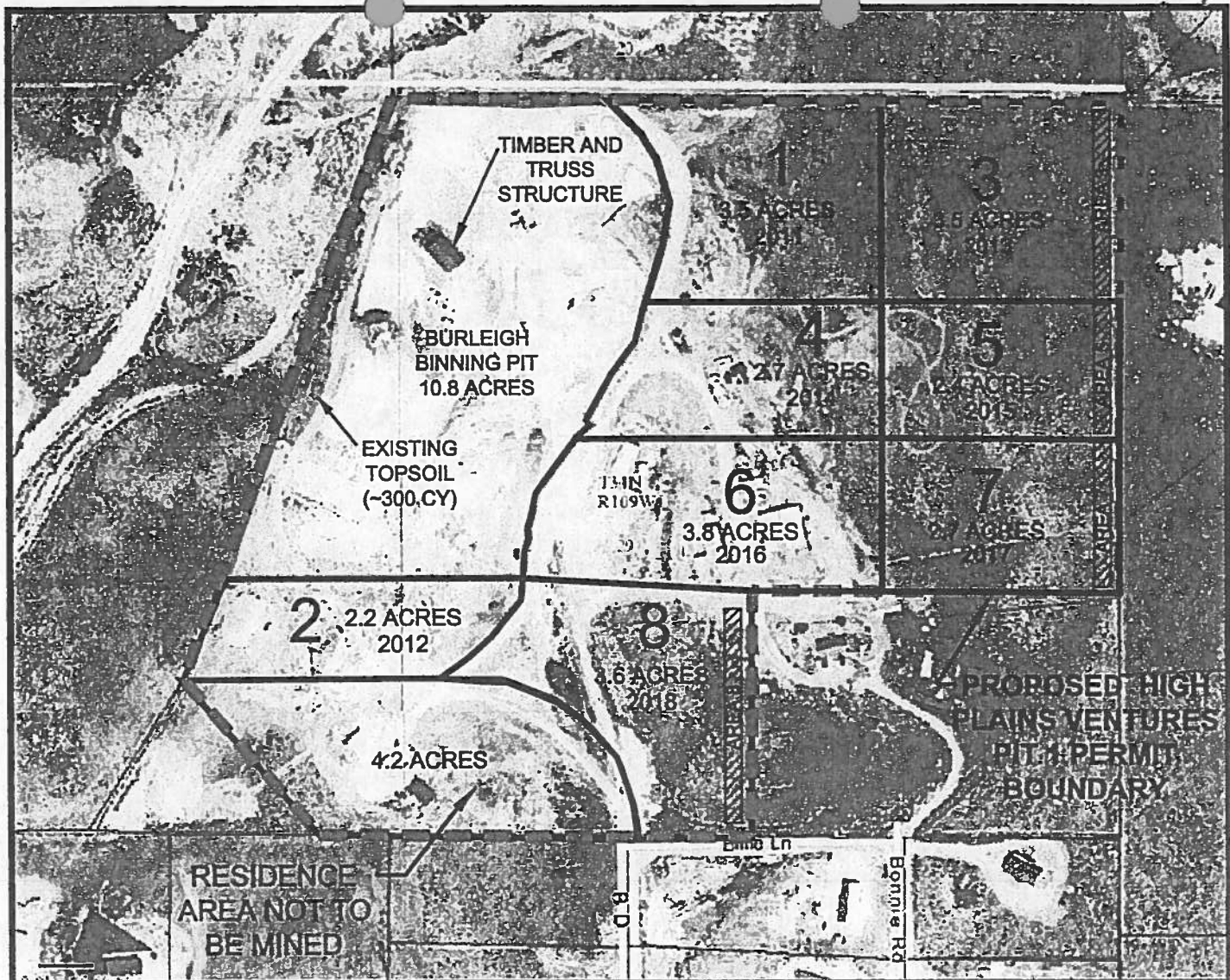
Project No:
TFN 5 6/170

MAP 1




DIANA OLSON
26 SPRING VALLEY DR.
LANDER, WY 82520
307-349-4598


FEB 7 6 2011



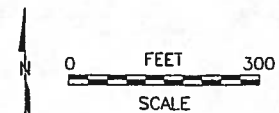
NOTE: THIS IS A GENERALIZED MINE PLAN.

LEGEND

 EXISTING BURLEIGH BINNING PIT BOUNDARY (10.8 ACRES)

 TOPSOIL STOCKPILE AREA

6
2016
ORDER OF PROGRESSION AND PROJECTED TIME FRAME



NOTE: SCALES ARE APPROXIMATE AND ARE NOT TO BE RELIED ON AS A SURVEY.

SOURCES: SUBLETTE COUNTY WYOMING MAP SERVER GIS AERIAL PHOTOGRAPH, 2009
RIO VERDE ENGINEERING, 2010

Drawing Created 3-20-2010 By: J.O. Drafted By TOTMM graphics:

2009 The Permi Rev. Info: Date: 7-2011



THE PERMIT CONNECTION

DIANA OLSON
26 SPRING VALLEY DR.
LANDER, WY 82520
307-349-4598

MINE PLAN - AERIAL
T34N, R109W, SEC 29
HIGH PLAINS VENTURES LLC
PROPOSED HIGH PLAINS VENTURES PIT 1
PINEDALE, WYOMING

Prepared By:
D. OLSON

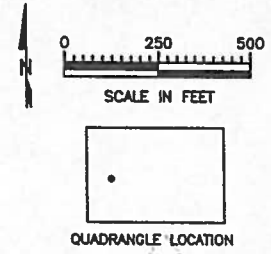
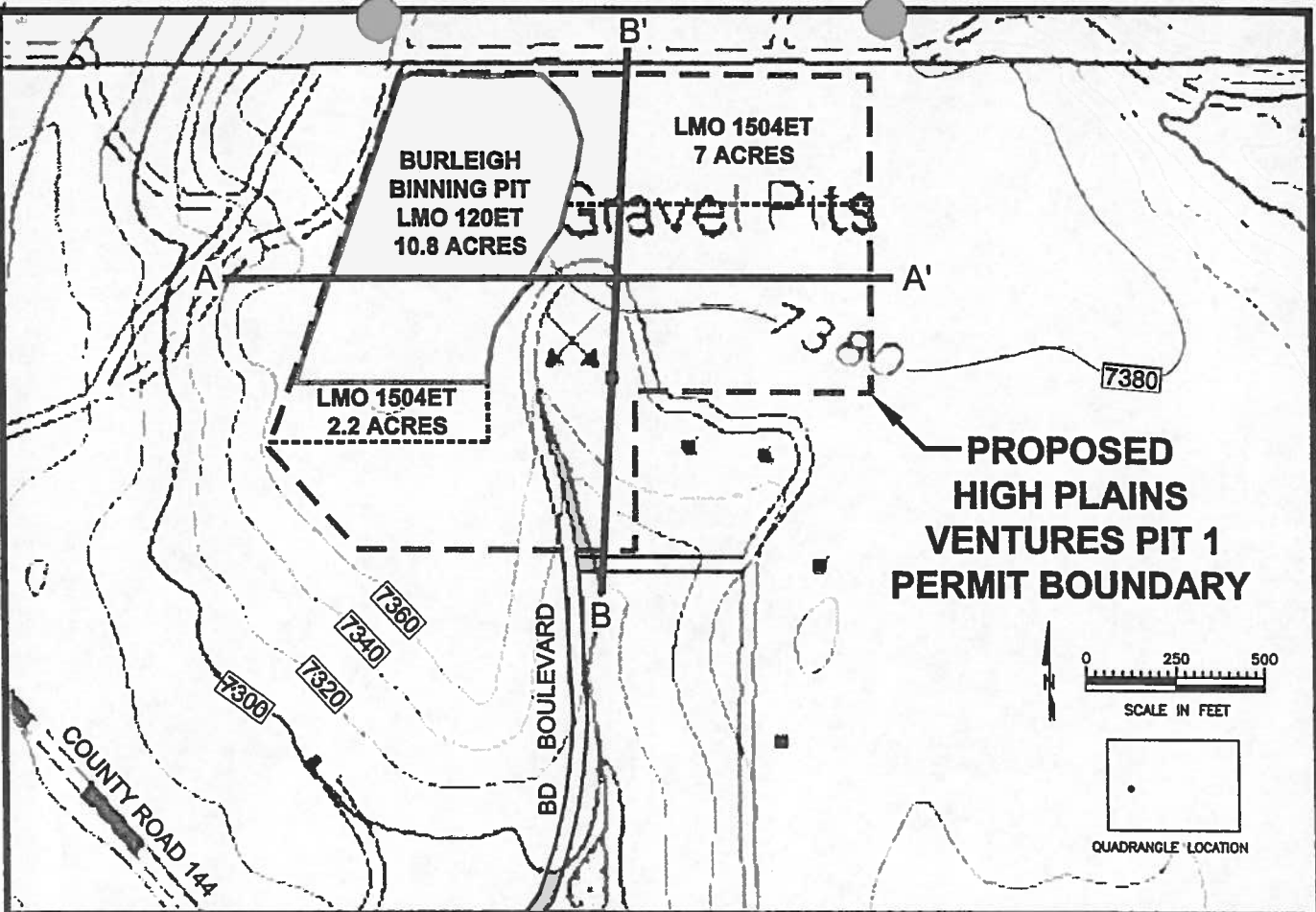
Reviewed By:
D. OLSON

Date:
1/2011

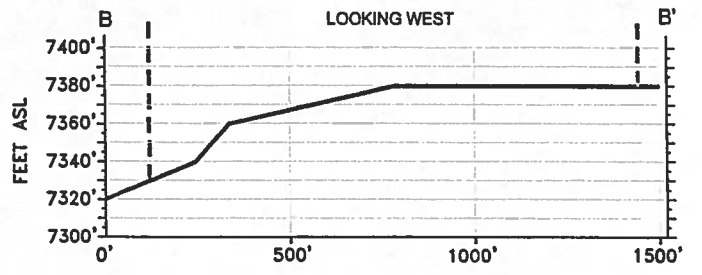
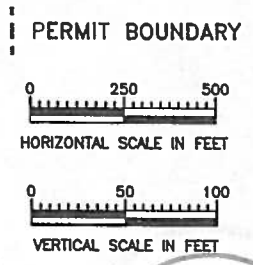
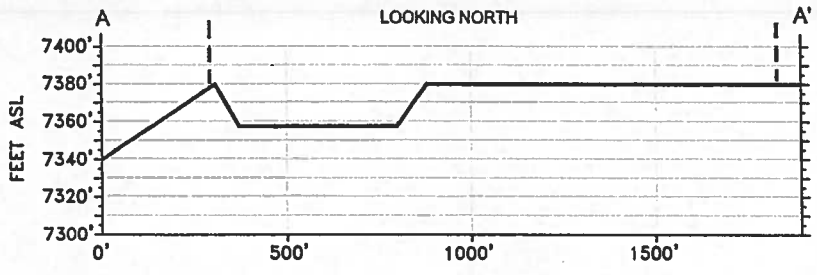
Project No:
TFN 5 6/170

MAP 6

DEQ-MAP-7 HPV-PIT-.ind.DWG



SOURCES: MAPCARD SUBSCRIPTION, 2009
 USGS TOPO, PINEDALE, WYOMING
 QUADRANGLE - 1991
 RIO VERDE ENGINEERING, 2010



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J. Olson

2009 T. mlt Connection
 Drawing Created 3-25-2010
 Rev. Info: Date: 1-22-2011 By: J.O. Drafted By TOTMM graphics:



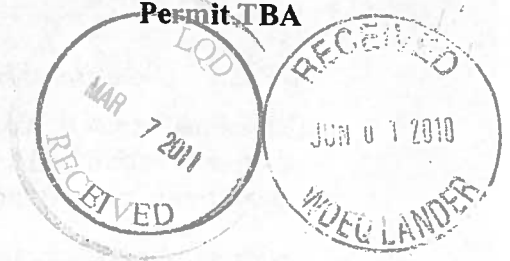
DIANA OLSON
 26 SPRING VALLEY DR.
 LANDER, WY 82520
 307-349-4598

**PRE-MINING PLAN
 CROSS-SECTION PROFILE**
 T34N, R109W, SEC 29
 HIGH PLAINS VENTURES LLC
 PROPOSED HIGH PLAINS VENTURES PIT 1
 PINEDALE, WYOMING

Prepared By:
 D. OLSON
 Reviewed By:
 D. OLSON
 Date:
 1/2011

Project No:
 TFN 5 6/170
MAP 7

RECLAMATION PLAN

**RP-1 Postmining Land Uses**

As specified in the Mine Plan, the most plausible mining sequence is limited to resource extraction depths that result in a reclaimed surface near the seasonally high water table and a post-mining surface without impounded water. The corresponding land use, and the land preferred by the landowner, will include agriculture and wildlife habitat. Accordingly, the main body of this Reclamation Plan presents reclamation commensurate with the 20-year plan specified in the Mine Plan that represents the most reasonable and likely mining progression and reserves recovery. Reclamation related to the Long-Term Conceptual Plan, for which the maximum recovery of reserves is completed, leaving a single, postmining reservoir, is included separately as Addendum RP-A.

RP-2 Contouring Plan for Affected Lands

Postmining topography (PMT) on affected lands will be consistent with expected land uses, supporting livestock grazing and wildlife habitat. PMT in affected areas outside of the mine pits will be nearly identical to premining topography, while topography inside the pits will change significantly, where sand and gravel will be permanently removed. The topography in the mined area will reflect the planned pit-bottom geometry and the reclaimed slopes along the highwall, as well as an assumed 20 percent of the extracted material that will be used as backfill. PMT will exhibit similar topographic variation compared to that of surrounding native topography, and will be blended into the native topography to the extent possible. The contoured PMT for the first 20 years of mining as specified in the main body of the Mine Plan is shown in Figure RP-1.

The 20-percent backfill is distributed in the PMT to give some topographic variation. The PMT exhibits a 3H:1V slope into the lowest elevation on the western portion of permit, while long, linear slopes are avoided by incorporating some variation along the highwalls. The distribution of postmining slopes exhibits a greater frequency of slopes in the 5- to 35-percent range due to the regraded highwalls. This change correspondingly reduces the frequency of the most common slopes (between 0 and 5 percent) by about 3 percent, and increases the mean slope across the permit area to about 3.1 percent. Postmining slopes are shown in Figure RP-2, which includes a histogram comparison between the premining and postmining slope distributions.

RP-2.1 Highwall Reclamation

Excavated highwalls will exhibit slopes at the natural angle of repose for granular material of about 30 degrees. These slopes will be reclaimed by pushing native material over the reposed highwall to a slope no steeper than 3H:1V. Mined material of a less saleable nature may also be used to reduce the highwall slopes. Additional contouring will be completed with dozers to blend the reclaimed slopes with the native topography.

After the highwalls have been topsoiled, vegetation, as prescribed in Section RP-5, will be established to minimize erosion. If revegetation proves to be insufficient for limiting erosion of the reclaimed highwalls, various forms of erosion control measures may be used to minimize soil erosion.

RP-2.2 Reclaimed Highwall Stability

Reclaimed highwall slopes will be 3H:1V or shallower. This slope for granular material is inherently stable and is not anticipated to fail. A 3H:1V slope is expected to be stable regardless of the presence of any pit groundwater.

RP-2.3 Erosion and Drainage

Erosion will be controlled by replacing topsoil and vegetation on all reclaimed areas. With the exception of the reclaimed highwalls and one bench-like feature (resulting from excavation to the upper clay inferred on the eastern portion of the permit), all surfaces in the proposed PMT exhibit slopes that are similar to native, premining terrains and are expected to withstand erosion once topsoil and vegetation are replaced. Erosion on the pit floor is expected to be minimal because the floor will be graded to gentle slopes (about 1 to 2 percent) to allow for drainage into the pit. Other affected areas outside of the mine pits will retain their relatively flat, native slopes and as such will be subject only to limited erosion. Some limited sedimentation is expected in graded affected areas, control for which is addressed with the Surface Drainage Plan (Section MP-3.1). Additional erosion control on topsoiled areas will be addressed with topsoil conservation measures discussed below.

RP-3 Surface Preparation for Topsoil Replacement

Prior to topsoil replacement, reclaimed surfaces will be scarified to minimize topsoil slippage and enhance root penetration. Scarification will be particularly useful where surfaces have been compacted or where the material is of a fine-grained nature, such as reclaimed highwalls, affected areas where materials processing or staging has occurred, and pit access roads.

RP-4 Topsoil Replacement**RP-4.1 Method of Replacement**

It is anticipated that topsoil will be transferred as direct-haul from stripping areas, although some soil may be transferred from topsoil stockpiles. Direct-haul is preferred because of the commitment to annually reclaim sage-grouse habitat. Rubber-tired scrapers or loaders and haul trucks will be used to transfer and emplace topsoil. Adjustments to the initial emplacement to achieve the desired topsoil depth may be done with a dozer or grader, depending on the area of replacement.

Topsoil will be replaced everywhere land has been mined or affected by mining operations. For the 20-year Mine Plan, it is anticipated that topsoil will be replaced everywhere within the affected area, because impounded water is not expected.

RP-4.2 Schedule for Replacement

The general reclamation sequence is shown as a topsoil replacement sequence in Figure RP-3, and assumes that load-out will be in its current location. Assuming the planned rate of production, topsoil replacement is anticipated during the latter part the first year of mining, which will facilitate the first area of sage-grouse habitat reclamation. In following years, the same acreage will ideally be annually reclaimed so that the planned mining sequence can be maintained.



Topsoil replacement scheduling will probably vary substantially depending on market conditions, project needs, production rates, and haul road/ramp planning. Topsoil will be replaced as dictated by the reclamation of the pit perimeter, pit floor, and any affected areas outside of the area of mining. After initial reclamation efforts, topsoil replacement is anticipated to be ongoing, on a yearly basis, but may be less frequent depending on mining production and any additional affected areas that are reclaimed.

RP-4.3 Special Soil Reconstruction

Special soil separation and replacement will not be implemented for reclamation. Standard soil replacement will be adequate to replace pasture land, and wetlands will not be affected, precluding the need for corresponding special reconstruction.

RP-4.4 Minimum Topsoil Replacement Depth

Based on the available salvaged topsoil volume (Table D7-1) and the anticipated affected area to be reclaimed, an average of 15 inches of topsoil is available to reclaim the entire mine. The topsoil volume salvaged in the Limited Mining Operation (which roughly corresponds to 18 inches of cover), combined with initial topsoil salvage efforts will provide a surplus for ongoing reclamation and will ensure that a positive topsoil balance is available as mining and reclamation progress. The surplus will increase correspondingly with the area covered by water, if present. The applicant acknowledges the responsibility of topsoil reclamation that will ensure successful re-establishment of vegetation.

RP-4.5 Erosion Control and Water Conservation Practices

Erosion of newly topsoiled areas will be minimized by prompt revegetation. Additional erosion control such as erosion control netting and mulching may be utilized on reclaimed highwall slopes to provide additional protection from erosion. Mulch may also be used to conserve soil moisture if hot weather conditions persist.

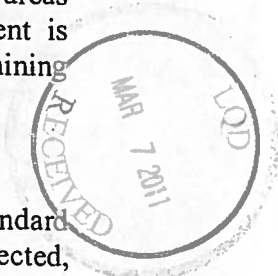
RP-4.6 Soil Amendments

Soil amendments are not anticipated. The soil analyses indicate that all topsoil designated for salvage is suitable and will have adequate organic matter to re-establish vegetation. Use of cover crops and mulch for erosion control and soil moisture conservation will provide some beneficial amendment of organic matter to the topsoil.

RP-5 Revegetation Practices

RP-5.1 Nurse Crops and Mulch

Nurse crops may be considered for stubble mulch to enhance the re-establishment of vegetation, although it is preferable to revegetate without a nurse crop because of the resulting delay related to commitments for rolling reclamation. If utilized, an annual, fast-growing small grain such as barley, wheat, oats or millet will be planted to minimize erosion, enhance soil moisture retention and provide organic matter to the soil. This nurse crop will be established for one growing season, followed by planting of the permanent seed mix the next fall. The exact amount of nurse crop seed will be determined by monitoring the success of revegetation but is anticipated to be at least 5 pounds per acre.



In lieu of a nurse crop, weed-free, native hay may be considered that would be applied at a rate of about two tons per acre, mechanically spread and crimped into the soil after the permanent seed mix has been planted. This type of mulch provides similar benefits to the revegetation efforts as those from nurse crops, including erosion control, enhanced soil moisture retention and increased organic matter. The application of native hay would also be more beneficial in maintaining the mining sequence schedule and the commitment for rolling reclamation for sage-grouse habitat restoration.

The specific methods for nurse crops and mulching will be determined by continually evaluating the success of revegetation efforts. The mulch type, seed mix, application rate and any potential adjustments to the cover crop method will be documented in annual reports.

RP-5.2 Permanent Seed Mixtures

The permanent seed mixture was chosen to establish postmining land use preferred by the landowner to support agricultural use, as well as the restoration of suitable sage-grouse habitat. The relative simplicity of the vegetation distribution will yield revegetation that focuses on pasture re-establishment in selected portions of the affected area. An upland, sagebrush/grass seed mixture is also included to re-establish native vegetation that will be beneficial to wildlife, especially sage-grouse.

An upland seed mix containing at least 0.3 pounds of Wyoming big sage brush per acre will be applied to 50 percent of the affected area, and will include the reclaimed highwalls, any upland affected areas surrounding the highwall perimeter, and a portion of the perimeter on the pit bottom (Figure RP-1). The interior portion of the pit bottom will be restored with a pasture seed mix to support livestock grazing.

*Seed for
Brush.*

Note that the reclaimed area includes the western ends of the pit advancement, to depict the reclamation commitment as if the mine had ceased operation after 20 years of mining. Assuming the continued advancement of the mine, however, the western end would not be reclaimed until the mining sequence along the western boundary of the permit is completed.

The seed mixes are designed to optimize vegetation production and diversity, and are based on plant and site compatibility, compatibility within the seed mix, and the requirement to restore sage brush. The seed mix is listed in Table RP-1. The extent of vegetation reclamation will coincide with topsoil replacement, and is assumed to cover the entire extent of the affected area. This assumption is based on the reclaimed pit-bottom surface at the seasonal high water table, with no postmining pit water.

Seed mixtures may be modified to address site-specific conditions or to improve vegetation success. Limited availability or excessive cost of a particular species may also constrain seeding operations. Additions, deletions or substitutions to the seed mixes may be implemented based on the on-going evaluation of vegetation success. Any substitutions will be proportional to the overall seed mix, and will be of the same life form and applied at the same rate as the removed species. Any changes to the approved seed mix will have prior DEQ approval. Seed mixes, application rates and planting locations will be documented in annual reports.

The primary seeding method will be drill seeding along topographic contours. Broadcast seeding will be used for sagebrush and rabbitbrush, which will be seeded separately from the core grass and forb mixture.



Seeding times will be based on favorable regional climatic conditions, site-specific environmental conditions and operator experience. It is anticipated that seeding will occur after September 15 to facilitate the rolling reclamation schedule. However, depending on local climate conditions and the status of topsoil reclamation efforts, seeding may also occur prior to May 15.

RP-5.3 Temporary Seed Mixtures

Temporary revegetation for topsoil stockpiles, hydrologic control structures, and any temporary affected areas will be established with the reclamation seed mix listed in Table RP-1. The same seeding methods used for permanent revegetation will be used to establish temporary vegetation.

RP-5.4 Protection of Newly Seeded Areas

Special protection of newly seeded areas is anticipated to limit livestock grazing on seeded areas. Fencing or livestock relocation will be utilized for at least five years per landowner preference and the needs of livestock grazing. This period will also be beneficial for evaluating the re-establishment of sage brush. There is no public access to the areas to be reclaimed, and no other potential disturbance other than that by native wildlife is likely. Fences may be removed or relocated at the conclusion of mining and final reclamation, depending on landowner preference or use of the reclaimed lands for grazing.

RP-5.5 Tree Restoration

Tree restoration at Eastfork Ranch Pit will consist of a one-for-one replacement of all trees that are removed. Trees similar in species to the narrow-leaf cottonwood will be replanted as seedlings in areas that provide seasonal subirrigation. Based on existing tree establishment, locations along irrigation ditches will be prime areas to plant seedlings. The reclaimed pit bottom along the bottom of the highwall slope may also be considered, because of the potential for postmining subirrigation associated with the water table. Fencing around individual seedlings may be utilized if damage from foraging is evident. Re-establishment of trees, including any volunteer growth, will be monitored and documented in annual reports.

RP-5.6 Postmining Husbandry

Reclaimed areas will be monitored to evaluate the success of revegetation and, if necessary, implement conservation practices to improve grazing land or enhance wildlife habitat. Unanticipated conditions following seeding may require mitigation to restore healthy reclamation, and may include plowing, disking, harrowing, surface repairs or reseeding. Additional husbandry practices may include mowing, burning or herbicide application to control undesirable growth or weeds that may inhibit desirable plant species.

All reclaimed areas will be protected from livestock grazing for at least five years. Protection from grazing may be reconsidered if the vegetation is capable of renewing itself with properly managed grazing and without supplemental irrigation or fertilization. The re-establishment of an area for livestock grazing will be determined by collaboration among the applicant, the land owner and DEQ.



RP-5.7 Evaluating Reclamation Success

The reclamation goals for postmining vegetation are:

- vegetation that is self-renewing under natural conditions
- vegetation cover of perennial species approximately equal to that of premining conditions
- species composition and diversity capable of supporting the intended uses of livestock grazing and wildlife habitat

These goals will be achieved during one growing season, no earlier than the fifth full growing season prior to full bond release.

RP-5.7.1 Vegetation Restoration Evaluation

The Extended Reference Area (EXREFA) concept will be used to evaluate revegetation success for all herbaceous and shrub vegetation. The EXREFA will consist of selected undisturbed lands within or adjacent to the permit area and may be delineated by individual plant community types.

The baseline vegetation survey (Table D8-1 of Appendix D8) indicates that sufficient acreage of the dominant community type (mixed sagebrush) within the permit area will remain undisturbed for use as an EXREFA. Additional or alternative acreage adjacent to the permit may need to be included if the meadow community type is to be evaluated. Such an alternative will be selected in consultation with DEQ and the land owner. To determine the EXREFA for which to compare to reclaimed areas, the vegetational composition of each reclaimed area will be evaluated by qualitative field inspections, and will be based on the premining vegetation as documented in Appendix D8.

RP-5.7.2 Evaluating Grazing Pressure and Wildlife Habitat Restoration

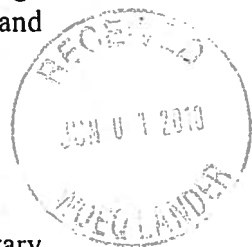
Assessments of the vigor of the vegetation stand and degree of root development will be used to evaluate the grazing pressure on reclaimed lands. Any potential that a stand will not react favorably to grazing pressures will prompt postponement of grazing. Reclaimed areas will be evaluated after grazing has ensued use to evaluate any negative impacts and ensure that the vegetation remains healthy and self-sustaining.

The evaluation of reclamation success for wildlife habitat relies primarily on the assessment of reclaimed vegetation communities. Restoring vegetation to its premining conditions will provide fundamental habitat components for wildlife. Restored grasses will provide fawn-rearing and foraging for upland game, forage and nest habitat for raptors and small birds, and forage and den sites for small mammals and rabbits. The shrubs will provide winter forage for upland game and escape cover, nest and den sites for small mammals, birds, rabbits, and predators.

RP-6 Final Hydrologic Restoration

RP-6.1 Final Drainage System

The final drainage system, consisting of the reclaimed pit after 20 years of mining, will vary substantially from the premining drainage system in appearance but not in function. Surface water runoff that originally flowed through the mine site and into East Fork River will be



captured by the reclaimed pit. Because the PMT is completely incised into the native topography, additional drainage systems outside of the affected area are not necessary.

RP-6.2 Permanent Impoundments

Design details for the permanent postmining impoundment, which is characterized by the incised, reclaimed pit after 20 years of mining, are shown in Figure RP-4. The impoundment is a permanent topographic feature resulting from mining, and does not serve a formal postmining purpose for sedimentation control. However, because the associated watershed will consist largely of reclaimed land, the impoundment will inherently serve a temporary sediment control purpose. As such, the existing storm water permit will be updated to include this temporary function of the permanent postmining impoundment.

The impoundment lies within the watershed defined in Appendix D6 and shown in Figure D6-3. The contributing sub-watershed to the impoundment, delineated in Figure RP-4, is defined at its low-point origin at the impoundment outlet, and is 380 acres (the source area cited in the Hydrologic Design Calculations table in Figure RP-4).

A permit application to appropriate surface water has also been submitted to the State Engineer's Office (SEO). Although it is unlikely to construct the reservoir as specified in the Long-Term Conceptual Plan, the SEO recommends that this conceptual plan be used in the application to conservatively appropriate surface water. The appropriation will then be in place for postmining conditions, regardless of the final configuration of the reclaimed pit.

RP-6.3 Aquifer Restoration and Postmining Monitoring

Aquifer restoration is not anticipated at East Fork Ranch Pit. The planned reclaimed surface will remain near or above the seasonal high water table, minimizing the likelihood of groundwater occurrence in the reclaimed pit. During unusually wet years, or years in which upslope irrigation is increased, groundwater may occur temporarily in the reclaimed pit bottom late in the season. The geometry of the piezometric surface is expected to remain unchanged near the pit, and groundwater flow through the area is expected to be similar to that prior to mining, with similar groundwater contributions downgradient to the alluvium in the valley bottom. Some consumptive loss from evapotranspiration from subirrigated vegetation is expected, but will be a minor proportion of the overall groundwater and surface water resources in the vicinity of the pit.

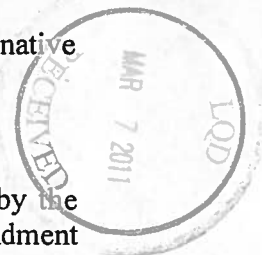
Operational monitoring of groundwater will be beneficial to determine if postmining monitoring is necessary. Based on the highly conductive aquifer and the likelihood of adequate flushing through the pit, there are no anticipated effects to groundwater quality. Accordingly, postmining monitoring of groundwater is not anticipated.

RP-6.4 Wetlands Mitigation

The planned affected area does not include any mapped wetlands. There are therefore no plans for any wetlands mitigation.

RP-6.5 Impacts to the Hydrology of the Permit and Adjacent Area

Postmining impacts to the hydrology within and adjacent to the permit area are not expected. There are no anticipated effects to groundwater quality from mining.



Unanticipated impacts to the alluvial aquifer may occur from accidental surface releases of petroleum. Postmining mitigation or monitoring may be considered in the unlikely event that such a release occurs. The containment of on-site petroleum and mitigation plans for petroleum spills specified in the Mine Plan minimize the likelihood for any impacts to the aquifer.

There are no anticipated postmining impacts to the East Fork River. Consumptive loss of groundwater from evapotranspiration that would otherwise discharge to the river is expected to be minimal compared to the overall groundwater resource in the vicinity of the pit. Sedimentation control through reclamation efforts will also serve to minimize any likelihood of impacts to East Fork River. Postmining water quality in the East Fork River downstream of the permit area is expected to reflect that of premining conditions.

RP-7 Special Reclamation Standards

All mining facilities will be removed after mining is completed, including the truck scale, mine office, portable generator, water storage tank (if installed), petroleum ASTs, and any other ancillary equipment. All of these areas will be blended into the reclaimed topography and reclaimed. Access into the reclaimed pit areas will remain as a permanent road on the northern portion of the permit.

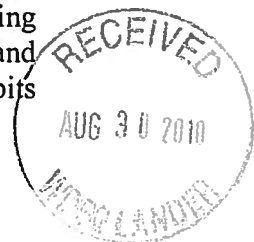
RP-8 Reclamation Schedule

Reclamation will generally follow the mining sequence (Figure RP-3), and assumes that the load-out and general mine facilities will remain in their current locations. Reclamation units are a logical progression of reclamation that will maximize reclamation efficiency, provide sufficient room for continuing mining operations, and allow continuing restoration of sage-grouse habitat. Reclamation within each unit will begin as soon as practical after mining within each block is completed in order to maintain acreage for sage-grouse habitat restoration as well as ongoing mining operations. This schedule will allow the mining sequence to continue without interfering with reclamation activities and will allow room for other mining operations such as aggregate processing and stockpiling. The last reclamation unit will encompass affected areas outside of the mined area and will include access routes, process and storage areas, and other areas affected by mining-related operations. The last reclamation unit also includes the removal of the truck scale and mine office. During this last phase, there may also be additional reclamation of access routes that were utilized within previously reclaimed units.

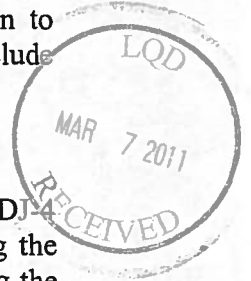
Reclamation within each unit will likely begin with highwall grading and will be followed by pit-floor grading, topsoiling and revegetation. It is anticipated that reclamation in each unit will be ongoing, as activities to implement reclamation, monitor its success, and correct any deficiencies are expected to occur well beyond the initial reclamation efforts in each unit.

The reclamation unit sequence is designed to allow access to mining operations that will generally avoid reclaimed areas as mining progresses. However, it is possible that a single access road will remain through selected reclaimed units as mining progresses to access mining-related operations or topsoil stock piles.

The reclamation succession and the anticipated dates of reclamation shown in Figure RP-3 assume that the mining sequence progresses as planned. Changes in planned mining production or unanticipated conditions may change the mining and reclamation plans and alter the sequences shown in Figure RP-3. The overall intent, however, is to reclaim the pits



in a unit fashion that follows the mining sequence and provides a logical succession to reclamation. Reclamation efforts will be documented in annual reports, which will include expected reclamation schedules for the following year.



RP-9 Reclamation Costs

The reclamation performance bond calculated for the first year of mining is in Section ADJ4 of the Adjudication section. The performance bond will be adjusted every year using the latest Guideline 12 costs or annual inflation rates if Guideline 12 is not published during the reporting period. Updated bond estimates will be submitted with annual reports to DEQ for review and approval.

RP-10 Public Nuisance and Safety

Reclamation will be on-going during mining, and will pose no more public nuisance or safety issues than those expected from mining operations. The rural location of the mine is in itself beneficial for minimizing public nuisance due to noise, dust and visual impacts related to reclamation activities. Dust from reclamation operations will be abated with water as necessary. Reclamation activities will occur during the same hours as mining operations. Lands successfully reclaimed will inherently create no more dust than would be expected from native lands.

Final reclaimed lands released from bond by DEQ will have no public nuisance or safety concerns. Access to the reclaimed mine will remain as that used for mining operations.

Reclaimed topography, soils and vegetation are inherently designed for the protection of plant life and wildlife, including migratory birds and sage-grouse. During reclamation, the applicant will adhere to the National Bald Eagle Management Guidelines (U.S. Fish and Wildlife Service, May 2007, *National Bald Eagle Management Guidelines*) to maximize the protection of eagles and other migratory birds. The guidelines will help inform the applicant of circumstances on and within the vicinity of the permit area for which provisions of the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act may apply to mining activities at the mine. The U.S. Fish and Wildlife Service will be consulted in the event that such provisions may be considered. Consultation may also be considered to evaluate the ongoing success of sage-grouse habitat restoration.





EAGLE ROCK ENGINEERING

CIVIL ◦ PLANNING ◦ SURVEYING
IDAHO FALLS (208) 542-2665 READING (208) 359-2665
Fax (208) 522-2664
1331 Fremont Ave, Idaho Falls, ID 83402



February 17, 2011

Department of Environmental Quality
Land Quality Division
Attn: Tanya King, PE
510 Meadow View Drive - District 2 Field Office
Lander, WY 82520

54/191

RE: GECR, LLC DBA ROCKY TOP GRAVEL PIT – REVISED APPLICATION

Tanya,

Attached are the revised application binders for your review. All items as discussed have been modified per your first review. The list of changes and explanations per your review is also attached with this letter.

We just received reply from the US Fish and Wildlife office today and installed under Permits from Other Agencies. This was the last item from your list we were waiting for.

As per our discussion regarding the West portion of the gravel pit being a wet land, the owner has installed utilities within this area and excavated a test hole and found this to be a good gravel source. We still left a fairly good buffer along the West line for reclamation. This area was found to be an area where all storm water accumulated.

Should you have any questions or concerns feel free to contact me at (208) 542-2665.

Thank you,

Paul Snarr, Engineering Project Manager
Eagle Rock Engineering and Land Surveying, PC

Cc: GECR, LLC
Attachments: Review Comments/Changes as Discussed

EAGLE ROCK ENGINEERING & LAND SURVEYING, PC

OFFICE MEMORANDUM



IDAHO FALLS (208) 542-2665
REXBURG (208) 359-2665

DATE: January 27, 2011 Revised

Project Code: 10052

TO: PROJECT FILE

FROM: PAUL SNARR
Engineering Project Manager

Project Identification:
GECR, LLC DEQ Application

RE: DEQ APPLICATION

Phone call with Tanya King, PE Wyoming DEQ/Land Quality Division District Field Office regarding missing data for the application as sent - (307) 335-6758 or (307) 332-3047.

- Filing fees \$100 plus \$10/acre of mining area total – possibly 15 acres made out to DEQ
- Form 3 - \$25 filing fee **COMPLETE \$305 from our office and will be reimbursed by GECR, LLC**

Form 1 – Remove 10 acre exempt

- Permit Acres and Approved remove 10 acre exempt **COMPLETE**
- Need definitive map with 10 acre area shown and what will be mined – very clear – don't include the shop, office or fuel tanks this opens up further applications. Don't include the wetland area and reclaimed area. **COMPLETE**

1E

- Need a letter from the ditch company confirming we won't be doing work around/with the ditch – possibly state we will not be within 20'-30' of the ditch due to ingress/egress easement? This is the Baker Heap Ditch contacts are Kendall Jenkins 307-880-2642 and Robert Choma 307-413-2842 – Robert is working on letter. I called the State Engineers Office for the Ditch Information as told to do by DEQ and talked to Chris Couch 307-777-6172 and she could not help with ditch contacts. Just started making calls. I also called and talked to Jon Clark (307) 883-2690 and he does not use the ditch and talked to Lance Bateman(307) 880-0220 and he also indicated he would not want to sign – he said he was on the lower end of the ditch. **I called Tanya with DEQ and explained the situation and she indicated to insert the letter I had drafted to Baker Heap Irrigation along with a memo explaining phone conversations and e-mail from Jade Henderson with the Wyoming State Engineers office Board of Control. COMPLETE**
- Revise table of contents with this letter. **COMPLETE**



APP A

- This section should only have Clarence and Gay as Mineral/Surface Owners. Check the deed to ensure they are the mineral owners. **COMPLETE**

App B

- Map showing 1/2 mile radius with all ownerships listed on the map (1 map only not multiple pages) Called Lincoln County GIS Destry and he will send the map via email 2-1-2011. **COMPLETE**
- Show Et All and Tax Exempt note on table "See end of this Section" **COMPLETE**

APP C

- Take all easements out and create a tab "Easements" and show in Table of Contents behind Deeds. **COMPLETE**
- Need Map showing 1/4 Sections **COMPLETE**
- Need legal with only that portion we will definitely be mining (guessing 15 acres eliminating the reclamation areas and shop/wetlands) **COMPLETE**
- Remove Quit Claim Deeds that do not pertain **COMPLETE**

APP D5

- Take all Maps out and create "MAP" tab – change table of contents for this. **COMPLETE**
- Need additional verbiage for the topography and geology of the area – 1st paragraph describe the area in general – 2nd paragraph describe permit site. **COMPLETE**
- Reclamation – what will the end use be such as cattle grazing – shed will remain and will be a permanent shop and office – scales will be moved. **COMPLETE**
- Need to verify top soil thickness if we are going to mine the green hatched area (possibly leave this off) **COMPLETE**

Maps

- All maps show total acreage boundary and total effected area
- Map 1 – title better-what map is showing permit boundary – solid line 1 color showing permit boundary and 1 color showing area to be mined **Vicinity Map**
- Map 2 – Title with purpose – what is this map – Vicinity Map? **Mineral Reclamation Map**
- Map 3 – Utility Map show permit boundary and mining area **Utility Map 1**
- Map 4 – Good **Utility Map 2**
- Map 5 – Delete **Contour Map**
- Map 6 – Delete or insert title on it **Soil Test Hole Map**
- Map 7 – Contour Map – show mining area and total boundary different colors and title map
- Map 8 – Can't use DEQ map – use our own with test hole information and title better
- Remove soil data and create "Soil Information" tab – add to table of contents

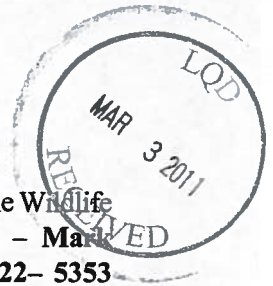
REVISED MAP SECTION COMPLETELY

APP D7

- Top Soil assessment – need more verification of soil types – talk to local NRCS and see what they may have get a letter of soil types and better maps. **Dayle Funka Soil Conservationist with NRCS (307) 886-9001 Ext 109 dayle.funka@wy.usda.gov COMPLETE**

APP D8

- More information on vegetation – Willows, Alfalfa, Wheat Grass – Talk to NRCS in Lincoln County. **COMPLETE**



APP D9

- US Fish and Wildlife – need information regarding birds and raptors in the area call Pinedale Wildlife Survey Aquatic Life – Wyoming Wildlife Consultants (307) 367-2765 Greg Shedd – Mark Sattelberg and Donna Odonnell with US Fish and Wildlife (307) 772-2374 Ext 222– 5353 Yellowstone Road Suite 308 A, Cheyenne, WY 82009 Sent Donna letter email and sending original. **Donna odonnell@fws.gov Consultants wanted \$4-\$5K to do this – Wrote letter to US Fish and Wildlife on 1-20-11 to Mark Sattleberg – this was turned over to Biologist Mark Bellis (307) 352-0377 Ext 222 under #WY 11 TA 0105 talked to Mark Bellis a couple of times the last on 2-3-11 and he sent to his supervisor Dan Blake (307) 772-2374 Ext 227 – Called Dan on 2-4-11 and he indicated we should get a letter this next week – did not forsee issues.**

Mine Plan

- Verbage on active high walls slopes – shape of piles with 3:1 slopes and seeded if idle for a period of time. Idea of when area will be mined 5 or 10 years – what equipment will be used to mine and shape slopes – insert they will have a temporary asphalt plant approve through the county – possible notes from county and possibly have a temporary concrete batch plant. **COMPLETE**
- Map 1 - show **Top Soil Stripping Sequence Map** and where the stockpile will be – all soil stock piles (no mineral piles are needed **COMPLETE**)
- Map 2 - **Mine Plan Sequence Map** - mine plan sequence of mining ie next 2 acres – next 2 acres etc... show direction of mining. **COMPLETE**
- Do not include fuel storage area in plan or need to fill out spill forms if all fuel in tanks and equipment holds more than 1320 gallons **COMPLETE**

Reclamation Plan

- Final information of pit – grazing with house and shop – whatever we guess the site may become. **COMPLETE**
- Need permanent seed mix – grazing mixture – detail what seeding will be on the slopes and how the site will be smoothed and seeded (by drill?) **COMPLETE**
- **Reclamation Map** – show what the area will look like when completed **COMPLETE**

COMPLETED THE MAIN DRAFT 2-4-11 – WAITING FOR US FISH AND WILDLIFE CONCERNING BIRDS AND RAPTORS



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
5353 Yellowstone Road, Suite 308A
Cheyenne, Wyoming 82009



In Reply Refer To:
ES-61411/WY11CPA0091

TFN 54/191
FEB 11 2011

Paul Snarr, Engineering Project Manager
Eagle Rock Engineering and Land Surveying, PC
1331 Fremont Ave.
Idaho Falls, ID 83402



Dear Mr. Snarr:

Thank you for your letter of January 20, 2011, received in our office on January 26, regarding the permitting process to modify the Rocky Top Gravel Pit located at Section 10, Township 35 North, Range 119 West, Lincoln County, Wyoming. The mine is authorized under a 10-acre mining exemption, but the owners, GEGR, LCC, want to obtain a regular gravel mining permit and expand operations to 22.2 acres.

In response to your request, the Service is providing you with the following information pursuant to the Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703, and the Bald and Golden Eagle Protection Act (BGEPA), 16 U.S.C. 668. Other fish and wildlife resources are considered under the Fish and Wildlife Coordination Act and the Fish and Wildlife Act of 1956, as amended, 70 Stat. 1119, 16 U.S.C. 742a-742j. Wetlands are afforded protection under Executive Orders 11990 (wetland protection) and 11988 (floodplain management), as well as section 404 of the Clean Water Act.

Using the map that you provided and follow up research, we note that the mine is located within 0.5 miles of the Salt River, which can serve as viable habitat for a host of bird species including bald eagles (*Haliaeetus leucocephalus*). Although you noted that surveyors did not observe birds or raptors at the mine, we recommend monitoring for bald eagles along the portions of the Salt River in proximity to the mine to ensure you remain in compliance with the BGEPA and MBTA.

Migratory Birds: The MBTA, enacted in 1918, prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulations, and does not require intent to be proven. Section 703 of the MBTA states, "Unless and except as permitted by regulations ... it shall be unlawful at any time, by any means or in any manner, to ... take, capture, kill, attempt to take, capture, or kill, or possess ... any migratory bird, any part, nest, or eggs of any such bird..." The BGEPA, prohibits knowingly taking, or taking with wanton disregard for the consequences

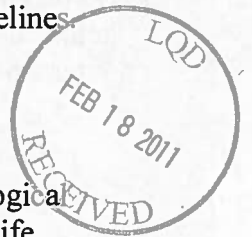
protective provisions of the MBTA and BGEPA may apply to their activities. These guidelines are available on our web page at <http://www.fws.gov/migratorybirds/baldeagle.htm>. In western states with more open habitats additional conservation recommendations may also apply. Please note, our office in collaboration with the Wyoming Game and Fish Department, will be developing additional guidelines to adequately address the unique conditions of our state. We will issue a notice when the guidelines specific to Wyoming are completed. Additionally, the Service has proposed a permit structure under the BGEPA that is similar to the permit structure that exists under the Act for unavoidable impacts. However, this structure is currently undergoing public comment and is not yet in place. Please contact our office if you have any questions regarding this permit structure or the delisting decision. You should also contact our office if you require technical assistance regarding any planned or ongoing activities related to the requirements of the MBTA, BGEPA, or the National Bald Eagle Management Guidelines.

Wetlands/Riparian Areas

Wetlands may be impacted by the proposed project. Wetlands perform significant ecological functions which include: (1) providing habitat for numerous aquatic and terrestrial wildlife species, (2) aiding in the dispersal of floods, (3) improving water quality through retention and assimilation of pollutants from storm water runoff, and (4) recharging the aquifer. Wetlands also possess aesthetic and recreational values. If wetlands may be destroyed or degraded by the proposed action, those wetlands in the project area should be inventoried and fully described in terms of their functions and values. Acreage of wetlands, by type, should be disclosed and specific actions should be outlined to avoid, minimize, and compensate for all unavoidable wetland impacts.

Riparian or streamside areas are a valuable natural resource and impacts to these areas should be avoided whenever possible. Riparian areas are the single most productive wildlife habitat type in North America. They support a greater variety of wildlife than any other habitat. Riparian vegetation plays an important role in protecting streams, reducing erosion and sedimentation as well as improving water quality, maintaining the water table, controlling flooding, and providing shade and cover. In view of their importance and relative scarcity, impacts to riparian areas should be avoided. Any potential, unavoidable encroachment into these areas should be further avoided and minimized. Unavoidable impacts to streams should be assessed in terms of their functions and values, linear feet and vegetation type lost, potential effects on wildlife, and potential effects on bank stability and water quality. Measures to compensate for unavoidable losses of riparian areas should be developed and implemented as part of the project.

Plans for mitigating unavoidable impacts to wetland and riparian areas should include mitigation goals and objectives, methodologies, time frames for implementation, success criteria, and monitoring to determine if the mitigation is successful. The mitigation plan should also include a contingency plan to be implemented should the mitigation not be successful. In addition, wetland restoration, creation, enhancement, and/or preservation does not compensate for loss of stream habitat; streams and wetlands have different functions and provide different habitat values for fish and wildlife resources.



Migratory Bird Species of Management Concern in Wyoming

(Migratory Birds of High Federal Interest)

Based on the *Wyoming Bird Conservation Plan* (Cerovski et al. 2000)

May 2, 2002

U.S. Fish and Wildlife Service, Wyoming Field Office,
5353 Yellowstone Road, Suite 308A, Cheyenne, Wyoming 82009

The Wyoming Field Office of the U.S. Fish and Wildlife Service (Service) has compiled the following list from the ongoing work among State and Federal agencies, non-governmental organizations, and the interested public that produced the Wyoming Bird Conservation Plan. This list will now serve as our list of Migratory Bird Species of Management Concern in Wyoming, in place of the previous list based on the Migratory Nongame Birds of Management Concern in the United States: the 1995 List. The Wyoming Bird Conservation Plan identified priority species based on a number of criteria (see below) using the best information available for these generally un-studied species. In many cases, this list reflects identified threats to habitat because no information is available on the species population trends. In some cases it reflects identified population declines though no causal factors have been identified.

The following tables and explanatory text are taken directly from the Wyoming Bird Conservation Plan (Cerovski et al. 2000). For more information on this listing process, this report is available from our Wyoming Field Office, 5353 Yellowstone Road, Suite 308A, Cheyenne, Wyoming 82009; or Wyoming Game and Fish Department (WGFD), Nongame Branch, 260 Buena Vista, Lander, Wyoming 82520.

Table 1. **Level I Species (Conservation Action)**. Species clearly needs conservation action. Includes species of which Wyoming has a high percentage of and responsibility for the breeding population, and the need for additional knowledge through monitoring and research into basic natural history, distribution, etc.

Species	PIF Score ^a	AI ^b	PT ^c	Primary Habitat Type(s)
Mountain Plover ^d	28	4	3	Shortgrass Prairie, Shrub-steppe
Trumpeter Swan	26	3	3	Wetlands
Sage Grouse	26	5	3	Shrub-steppe
McCown's Longspur	26	3	2	Shortgrass Prairie, Shrub-steppe
Baird's Sparrow	26	2	3	Shortgrass Prairie
Ferruginous Hawk	23	4	3	Shrub-steppe, Shortgrass Prairie
Brewer's Sparrow	23	5	5	Shrub-steppe, Mountain-foothills Shrub
Wilson's Phalarope	22	3	5	Wetlands
Franklin's Gull	22	3	3	Wetlands
Sage Sparrow	22	5	2	Shrub-steppe, Mountain-foothills Shrub

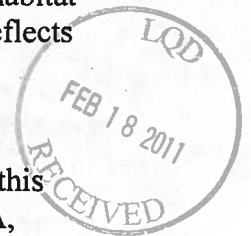


Table 2. **Level II Species (Monitoring)**. The action and focus for the species is monitoring. Includes species of which Wyoming has a high percentage of and responsibility for the breeding population, species whose population trend is unknown, species that are peripheral for breeding in the habitat or state, or species for which additional knowledge is needed.

Species	PIF Score ^a	AI ^b	PT ^c	Primary Habitat Type(s)
Calliope Hummingbird	23	5	3	Mid Elevation Conifer, Montane Riparian
Lewis' Woodpecker	23	3	3	Low Elevation Conifer, Plains/Basin Riparian
Cassin's Kingbird	22	3	3	Juniper Woodland, Plains/Basin Riparian
Lark Bunting	22	4	4	Shortgrass Prairie, Shrub-steppe
American White Pelican	21	3	3	Aquatic
Williamson's Sapsucker	21	3	3	Mid Elevation Conifer
Black-backed Woodpecker	21	3	3	Mid Elevation Conifer, High Elevation Conifer
Gray Flycatcher	21	3	3	Juniper Woodland, Mountain-foothills Shrub
Juniper Titmouse ^d	21	3	3	Juniper Woodland
Dickcissel	21	3	3	Shortgrass Prairie
Chestnut-collared Longspur	21	2	3	Shortgrass Prairie
Harlequin Duck	20	3	3	Montane Riparian
Snowy Plover	20	3	3	Wetlands
Black-chinned Hummingbird	20	2	3	Plains/Basin Riparian, Shrub-steppe
Rufous Hummingbird	20	2	3	Mid Elevation Conifer
Red-naped Sapsucker	20	3	2	Aspen
Three-toed Woodpecker	20	4	3	Mid Elevation Conifer, High Elevation Conifer
Willow Flycatcher	20	3	4	Montane Riparian, Plains/Basin Riparian
Hammond's Flycatcher	20	2	3	High Elevation Conifer with Aspen, Montane Riparian
Cordilleran Flycatcher	20	3	3	Montane Riparian, Mid Elevation Conifer
Pygmy Nuthatch	20	3	3	Low Elevation Conifer
Marsh Wren	20	3	4	Wetlands
American Dipper	20	3	3	Montane Riparian
Plumbeous Vireo	20	3	3	Mid Elevation Conifer, Low Elevation Conifer
Townsend's Warbler	20	3	3	High Elevation Conifer, Mid Elevation Conifer
Dusky Flycatcher	19	3	2	Low Elevation Conifer, Aspen, Mountain-foothills Shrub
Western Bluebird	19	3	3	Juniper Woodland, Low Elevation Conifer



Wyoming Partners In Flight Process for Prioritizing Species

Wyoming Partners In Flight participants developed the current list of priority species based on a combination of the seven criteria in the national Partners In Flight Priority Database (Carter et al. 1997). This database serves as a defensible method of prioritizing both species and habitats in need of conservation. The criteria include Wyoming-dependent and Wyoming-independent factors. The Wyoming-independent criteria are constant over a species' range and do not vary for each species. The Wyoming-dependent criteria were the key components used to prioritize species and their conservation action needs. In the absence of any more rigorous statewide surveys, Breeding Bird Survey data dating back to 1968 were used to determine population trends in Wyoming.

Criteria

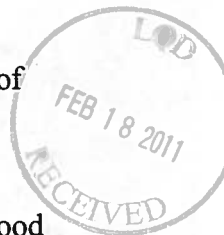
Within each criterion below, a species was given a rank score ranging from 1 to 5, with 1 being the least critical rank and 5 the most critical. Each ranked species could potentially receive a low score of 7 and a high score of 35. However, setting conservation goals based only on total score could be misleading; therefore, each total score was reviewed in conjunction with its component parts. In Wyoming, species were initially ranked using total score, area importance, and population trend.

1. Relative Abundance (RA) - The abundance of a bird, in appropriate habitat within its entire range, relative to other bird species. This criterion gives an indication of a species' vulnerability to withstand cataclysmic environmental changes. A low score would indicate a higher relative abundance, therefore reducing the risk of complete extirpation from losses in one or more regions. Higher scores indicate a lower relative abundance, thus more vulnerability to drastic losses or population changes.

2. Breeding Distribution (BD) - A relative measure of breeding range size as a proportion of North America (defined as the main body of the continent, excluding Greenland, through Panama and the islands of the Caribbean, comprising an area of 22,059,680 km² [National Geographic Society 1993]), and as such it provides an index of a species' vulnerability to random environmental events. High scores indicate localized breeding, thus a higher likelihood of serious decline from drastic environmental changes. Low scores indicate wide breeding distribution, therefore less likelihood of extirpation. Used for breeding birds only.

3. Non-breeding Distribution (ND) - A relative measure of non-breeding, or winter, range size as a proportion of North America, and as such it provides an index of a species' vulnerability to random environmental events. High scores indicate localized distribution on the non-breeding grounds. Low scores indicate wide distribution on the non-breeding grounds, therefore less likelihood of extirpation. Used for wintering birds only.

4. Threats on Breeding Grounds (TB) - The ability of a habitat in an area to support populations of a species in that area. Two factors are considered here: 1) each species' demographic and ecological vulnerability (the potential inability of a species to recover from population loss by normal reproductive effort due to low reproductive rate, high juvenile mortality, or both; and the level of ecological specialization of a species and, hence, its potential inability to withstand environmental change), and 2) habitat loss or disruption (a combination of the amount of habitat or conditions necessary for survival and reproductive success that has been lost since 1945, and the amount that is anticipated to be lost in the future). High scores indicate either a large loss of habitat or a species that is an extreme ecological specialist. Low scores





Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

John Corra, Director

January 11, 2011



Eagle Rock Engineering
Attn: Paul Snarr
1331 Fremont Ave.
Idaho Falls, Idaho 83402

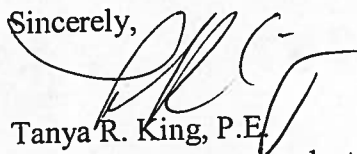
RE: Mine Permit Application GECR, LLC Rocky Top Rock Pit, TFN 5 4/191

Dear Paul,

Per our telephone conversation on Friday January 7, 2011, I am returning the application package to you as it needs significant additional information and clarification. We discussed the requirements in detail on the telephone.

Please contact me at (307) 332-3047 with any questions you may have.

Sincerely,


Tanya R. King, P.E.
Natural Resources Analyst

enclosure: 2 binders- Mine Permit Application

xc: Cheyenne DEQ/LQD
Mark Moxley – Lander DEQ/LQD
GERC, LLC, Attn: Gay Edwards, PO Box 3258, Alpine, WY 83128
chron file – Tanya



Christensen, Ramona

From: Christensen, Ramona
Sent: Friday, January 07, 2011 10:24 AM
To: King, Tanya; Mickle, Jennifer
Cc: Moxley, Mark; Naylor, Sarah
Subject: RE: TFN 5 4/191 GERC, LLC Rock Top Rock Pit

Will do.

Sent back 11/7/11

Ramona Christensen
Records Manager
State of Wyoming
DEQ-Land Quality Division
Herschler Bldg., 3rd Flr. West
122 West 25th St.
Cheyenne, WY 82002
rchris@wyo.gov

Phone: 307-777-7053
Fax: 307-777-5864

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: King, Tanya
Sent: Friday, January 07, 2011 10:14 AM
To: Christensen, Ramona; Mickle, Jennifer
Cc: Moxley, Mark; Naylor, Sarah
Subject: TFN 5 4/191 GERC, LLC Rock Top Rock Pit

Ramona/Jenn

Please return the TFN 5 4/191 binder to Lander. I have talked with the applicant and their consultant and I am going to send both copies of the application back to them as the application is grossly incomplete.

Please return the status to preliminary.

Thanks

Tanya

Christensen, Ramona

From: Christensen, Ramona
Sent: Thursday, January 06, 2011 1:07 PM
To: Moxley, Mark
Cc: King, Tanya
Subject: RE: GREC aka Rocky Top Rock

OK. I will change the TFN from preliminary to **pending** as of the date we received the volume/form 1 to 1/6/2011. Thanks.

Ramona Christensen
Records Manager
State of Wyoming
DEQ-Land Quality Division
Herschler Bldg., 3rd Flr. West
122 West 25th St.
Cheyenne, WY 82002
rchris@wyo.gov

Phone: 307-777-7053
Fax: 307-777-5864

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From: Moxley, Mark
Sent: Thursday, January 06, 2011 12:59 PM
To: Christensen, Ramona
Cc: King, Tanya
Subject: GREC aka Rocky Top Rock

Ramona,

There is already a TFN for this application TFN 5 4/191. It is a conversion of 908ET to a small mine. They used the wrong form. The TFN will change from Prelim to active.

Thanks
MM

Mark Moxley
LQD District 2 Supervisor
510 Meadowview Drive
Lander, WY 82520
(307) 332-3047
e-mail mmoxle@wyo.gov
FAX (307) 332-7726

TFN Form

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EDIT MODE

FORMS

New TFN
TFN List
Mine Menu

FILES

File Structure

REPORTS

Query Form

Company

Mine

Permit

Query

Add:9/7/2010 JM
Mod:1/6/2011 RC

GEGR LLC, Permit: 5 4/191

Bk/Etry/Pg / /

Received Approved

Name
Change Change# Acres

TFN Title

TFN Details

Form Employee Company

Term Status Term Num Term Date

Amend Num Revise Num License Num License Date

Lic Term Date Other Status

Dist / County / Mineral

Mine Type

TFN Verification Types

Available Verification Types
 Backfill Quality
 Drainage Functionality
 Groundwater Hydrology
 Land Use
 Permanent Impoundments

Chosen Verification Types

TFN Description

TFN Notes
CONVERSION OF 908ET TO A LARGE MINE PERMIT:PRELIMINARY INFO RECD 9/2/2010; APPLICATION VOLUME AND FORM 1 RECD 1/6/2011

Update this TFN

Mickle, Jennifer

From: King, Tanya
Sent: Tuesday, September 07, 2010 12:44 PM
To: Mickle, Jennifer
Subject: RE: new TFN please

Thank you

From: Mickle, Jennifer
Sent: Tuesday, September 07, 2010 6:23 AM
To: King, Tanya
Subject: RE: new TFN please

Tanya~

I assigned **TFN 5 4/191** to this request. Please send down anything you have on this to our attention.

Thanks Jen

From: King, Tanya
Sent: Thursday, September 02, 2010 4:31 PM
To: Mickle, Jennifer
Subject: new TFN please

Hi Jenn

I need a TFN for a **preliminary** project. GECR, LLC the new licensees of 908ET will be sending an application to convert to a regular mine.

Tanya King, P.E.
Natural Resource Analyst
Wyoming DEQ/Land Quality Division
District 2 Field Office Lander, WY
(307) 335-6758 or 332-3047