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research & consulting

C/007/0012
Received 12/31/14
Task ID #4773

VIA: Email

December 31, 2014

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

RE: Wellington Prep Plant(C/007/0012): Fines Removal for Reclamation at Wellington (C/007/0012)

Dear Mr. Haddock:

Price River Terminal (PRT) is planning to have the slurry fines on the east side of the Price River removed as part of their continuing reclamation activities. The fines will be extracted and taken to the Sunnyside Cogeneration Plant in Sunnyside, Utah by Salvage Services.

Attached please find an amendment to Wellington's Mining & Reclamation Plan (MRP) that describes these operations. Along with this cover letter, the document contains the appropriate C1/C2 forms as well as a Redline/~~Strikeout~~ version of the proposed changes and instructions for insertion to the current MRP.

Please contact me anytime with any questions or comments.

Sincerely,

Patrick D. Collins, Ph.D.
Resident Agent

Attachments

cc: T. Stanley (PRT)

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

APPLICATION FOR COAL PERMIT PROCESSING

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

Permittee: Price River Terminal
Mine: Wellington Prep Plant **Permit Number:** C/007/0012
Title: Slurry Pond Fines Removal by Sunnyside Cogen.
Description, Include reason for application and timing required to implement:
Proposed new reclamation activities

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

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

Please attach one (1) review copy of the application. (Electronic copy included)

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

PATRICIA D. COLLINS — Print Name

Patricia Collins Res. Eng. 12/23/14 — Sign Name, Position, Date

Subscribed and sworn to before me this 23 day of December, 20 14

Marcie S. Clark — Notary Public

My commission Expires: June 21, 20 18

Attest: State of Utah } ss:
County of Utah

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

For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining

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

Permittee: Price River Terminal
Mine: Wellington Prep Plant **Permit Number:** C/007/012
Title: Slurry Pond Fines Removal by Sunnyside Cogen.

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

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☐ Add	☐ Replace	☐ Remove	Section 5.22, Page 1, 12/31/14 of this submittal
☐ Add	☒ Replace	☐ Remove	Replaces
☐ Add	☐ Replace	☐ Remove	Section 5.22, Pages 1-4 of the current MRP
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	Section 5.23, Pages 1-4 (plus figure), 12/31/14 of this submittal
☒ Add	☒ Replace	☐ Remove	Replaces
☐ Add	☐ Replace	☐ Remove	Section 5.22, Pages 1-2 of the current MRP
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Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.	Received by Oil, Gas & Mining

522 COAL RECOVERY (R645-301-522)

Refuse material (fines) was deposited on the Wellington site by previous owners who conducted coal cleaning activities. The current plan describes the slurry ponds to be reclaimed by burial with coarse refuse, followed by covering with topsoil, then revegetation . A modular coal fines wash plant ~~is to be constructed~~was once used on the west bank of the ~~lower coal refuse pond~~Lower Slurry Pond ~~where the vegetation test plot currently exists~~when some of the fines were removed by Covol and later, Techmat. ~~A few feet of coal fines have accumulated in the bottom of the Clear Water Pond and will be removed with heavy equipment during construction. These fines will be stockpiled near the modular wash plant for future processing. Access will be from the northwest side of the pond from an existing road. In the northwest area of the upper refuse pond, a tailings impoundment and retention berm will be constructed. Most of the erected facilities will be more than 100 feet from the County Road. However, the clean coal stockpile, waterlines and power poles/lines will be within 100 feet of Farnham Road . The public will be prevented access by using fencing and gates. The public will be prevented access by using fencing and gates. The coal fines currently stored in the slurry ponds will be processed in the wash plant. This will result in the removal of most of the fines from the slurry ponds prior to reclamation .~~ These operators ~~was~~were granted authorization by the State of Utah, Division of Oil, Gas & Mining (DOGM) to conduct a pilot study to remove coal slurry fines from the pond areas at the Wellington site. ~~Prior to DOGM approval (August 23, 1991), an application was submitted as an permit amendment (April 25, 1991) and deficiencies subsequently addressed (July 15, 1991). Refer to Appendix M of the Mining & Reclamation Plan (MRP) for these documents.~~ Primary purpose of ~~the pilot study was~~these operations were to compare methodologies and costs for fines removal for reclamation and/or marketability. ~~The refuse removal experiment will determine whether the fine refuse can be removed – thus eliminating problem spoils that may hinder revegetation. with the refuse removed, it will be possible to examine more closely the underlying original~~

topography and potential growing media. The results of the attempts to load refuse and examine the original surface will furnish information for use in determining how to best reclaim the ponds. Several outcomes may result from the fine removal experimentation. Some of these are listed below.

(1) It may be found unsafe, unfeasible, or too costly to remove fine refuse from the ponds. If this were the case, the ponds would likely have to be reclaimed in a manner similar to that proposed in the existing MRP.

(2) It may be established that the fine refuse can be removed, but the original topography would be so contaminated with leached salts and so saturated and unstable that it must be covered in order to operate equipment for fines recovery. In this case, the original topography would be cleared of fine salty refuse and covered with coarse refuse as a routine part of the experimental operation. This would leave the coarse refuse pad in place and ready for topsoiling, as described in the existing MRP. The added benefit would be that the first step of reclamation would be complete for areas from which fines had been removed, and also the chance for successful revegetation would be improved, since a major salt source would be removed.

(3) It may be found that the original topography has been contaminated with salts leached from the refuse. If this were the case, the ponds would be ready for reclamation similar to the methods described in the existing MRP. However, even if contaminated, the original topography would probably be less concentrated with salt and other toxins than the existing fine refuse. Thus, the chances for successful revegetation could be enhanced.

(4) It is possible that the original topography may be covered with usable topsoil material that was never recovered (the ponds were put in 1957-58 before topsoil recovery was required), but the surface is so saturated that equipment for fines removal cannot be operated on its surface. If this is the case, topsoil can be removed and stockpiled as fines recovery proceeds and before placement of a coarse

~~refuse working pad. This would leave a coarse refuse pad with a topsoil stockpile ready for placement and revegetation. If usable topsoil is found, DOGM will be contacted for approval of a topsoil storage plan that will be developed when the quality and quantity of topsoil is known.~~

~~(5) It is possible that fines removal will find stable uncontaminated topsoil on which equipment can operate. If this were the case, the fines removal experiment will leave an area of open topsoil ready for revegetation. If the topsoil is compacted by equipment operating on the surface, it can be ripped prior to reseeding. Since a prime purpose of the proposed fines removal experiment is to obtain information on how to best reclaim the ponds, no detailed reclamation plan is submitted with at this time.~~

~~(6) The fines recovery program would maximize the recovery of coal resources by exploring the possibility of using existing coal processing waste as a low grade coal fuel source. The experimental program would determine the cost of recovery and includes a large enough amount of coal fines to develop a market, if such a market exists. If successful, this pilot program could provide a basis for recovery of most or all of the low grade material contained in the slurry ponds.~~

~~(7) The fines removal experiment and any subsequent full scale fines removal are already permitted through the Bureau of Air Quality and air would be protected by following the conditions of that approval order.~~

~~With the authorization from DOGM, the operator agreed to comply with several environmental and engineering provisions previously outlined in the submittal dated July 15, 1991. One of the stipulations was to present monthly reports to DOGM summarizing the past month's activities, plus an outline of activities planned for the following month. The reports continue to be submitted to DOGM on a monthly basis.~~

~~Because the feasibility for removal of the fines is still conceptual, specific methods for recovery have not yet been finalized. If it is determined a viable alternative to reclamation to the present plan, the operator will submit a description of the measures to be used to maximize the use and conservation of the coal resource. The description will assure that coal mining and reclamation operations are conducted so as to maximize the utilization and conservation of the coal, while utilizing the best technology currently available to maintain environmental integrity, so that re-affecting the land in the future through coal mining and reclamation operations is minimized.~~

Sunnyside Cogeneration has a contract with Price River Terminal (PRT) to remove coal refuse fines from the slurry ponds at the Wellington site. Removal of the fines will enable them to be used at a cogeneration power plant as well as being instrumental for initiation of final reclamation for that area of the Wellington site.

5.23 METHODS FOR REMOVING SLURRY FINES FOR RECLAMATION ~~MINING METHODS~~

(R645-301-523)

Most of ~~T~~the ~~Refuse~~ refuse (slurry) fines are ~~completely~~ located within the existing ~~Refuse Basin~~slurry pond basins, with the possible exception of a lesser amount on the west side of the upper basin where they appear to have been placed as a means to increase the volume of the basin back when U.S. Steel Corp. operated the site as a coal cleaning facility. The ~~Refuse~~ Slurry Ponds ~~basin is~~are ~~a~~ large, relatively old basins that contains a substantial amount of coal refuse from the past coal cleaning operations. The ~~Refuse Basin~~Lower Slurry Pond is ~~is~~ separated from the Clearwater ~~Basin~~ Pond on the southwest by a constructed dike. ~~The Refuse Basin is divided by a dike into two main parts that form the Upper Refuse Basin and the Lower Refuse Basin.~~ The upper and lower Slurry Ponds are also separated by a dike between them.

Historically, when the site was used for coal cleaning operations by U.S Steel, refuse was brought from the coal cleaning plant to the east side of the Price River by a pipeline in a slurry mixture. The coarser slurry material was first deposited in an area called the Coarse Slurry Pile. Next, the slurry mixture continued on to the Upper Slurry Pond where finer textured material was deposited and allowed to settle. The slurry mixture then moved on to the Lower Slurry Pond where more fines were once again allowed to settle. Ultimately, water from the refuse slurry mixture ended up in the Clearwater Pond where the "clean" water was recycled and pumped back to the west side of the Price River for use in the coal cleaning plant . ~~The dike for the Lower Basin is higher than the dike for the Upper Basin and therefore, the Upper Basin and the Lower Basin actually form one impoundment that is separated by the Upper Dike. In addition, the Upper Refuse Basin is separated again, with a small dike located in the Northwest corner that is fully contained within the Upper Basin, and therefore, contained by the Lower Basin constructed dike. The Northwest corner dike is intended to provide a separation berm between tailings deposition and initial dredging operations.~~

~~Northwest corner of the Upper Refuse Basin decants, through a separation dike, to the Upper Refuse Basin, which then decants, through a separation dike into the Lower Refuse Basin, which in turn, decants through a separation dike into the Clearwater Basin. The Clearwater Basin is used to reclaim excess water storage from the Refuse Basin and provide recycle process make-up water to the plant. The Refuse Basin contains excess freeboard capacity to completely store peak storm run-off within the Refuse Basin.~~

~~The Refuse Basin and Clearwater Basin are currently dry and have been out of service since the Wellington Coal Cleaning Plant ceased operations in the mid 1980's. The estimated total fines located in the refuse ponds is approximately 1.9 million tons (61 million cubic feet in place at 65 pcf estimated average). The coal fines average 30% moisture and 30% ash by weight in-situ.~~

~~This mining plan facilitates the removal of existing raw coal fines from the Refuse Basin for washing at a new coal preparation plant located on the site. The mining plan requires the completion of a pre-mining construction and plant commissioning phase and a dredge operations mining phase. (See Figure 5.23-1, Mining Sequence for Dredging Operations.)~~

~~The pre-mining construction phase includes dry wheeled or tracked vehicle removal of fines in the Northwest tailings area, upgrading the existing Northwest dike and drain pipe, excavating one dredge starting pit in the Upper Refuse Basin and in the Lower Refuse Basin, the fine refuse, and pulling back of all edge fines material less than 4 feet that may not be accessible by the dredging operation. In addition, existing drains and overflow pipes located in the Upper and Lower dikes will be refurbished and reintroduced to service based on the original design and operation. Shallow inlet and outlet basins and water course ditches will be provided to allow water to gravity flow from the Upper Basin, through the Lower Basin and into the Clearwater Basin. Construction operations will be conducted by use of tracked hydraulic excavator, bulldozer, wheeled front end loader and trucks. Also during construction, all raw coal fines excavated from the pond locations will be transported by truck to either a plant feed stockpile or the Plant North Storage Stockpile. The Plant North Storage Stockpile will provide a storage capacity of approximately 60,000 tons, and will be located between the plant and the course refuse pile, on the north side of the Upper Pond dike access road~~.

~~Plant start-up and comissioning will create tailings that will be discharged into the Northwest tailings area (If the Northwest tailings area construction is not approved in the previously submitted construction amendment, tailings will be temporarily deposited in the Clearwater Basin until the Northwest Tailings Area constructed). Tailings will be deposited as a slurry at a reduced rate of 2044 gpm with approximately 21 tph solids.~~

~~The Dredge Mining phase of the mining plan employs a suction dredge that removes fines from the Refuse Basin and supplies a slurry feed consisting of approximately 115.5 stph raw coal fines at 1847 gpm. The dredge will begin operation as soon as enough tailings water has over flowed from the Northwest Tailings Area to fill the Upper Basin starting pit to a minimum depth of 4 feet. Excess water will flow from the dredging area to the Upper Basin dike decant pipes by way of a shallow open ditch, employed to induce gravity flow. Water from the Upper Basin will decant into the Lower Basin and flow along a shallow open ditch and into the decant pipes to the Clear Water Basin. The dredge will remove material from the Refuse Basin according to a detailed panel removal scheme that will maximize tailings settling and fines removal efficiency. At the end of year 1 of full operation, 100% of the fines will be removed from the Upper Refuse Basin area. Upon completion of fines removal in the Upper Basin, the dredge will be relocated into the starter pit in the northwest corner of the Lower Basin.~~

~~During Year 2 of the mining operation, the dredge will continue removal of the Lower Basin fines. Complete removal of the Lower Pond fines will occur during Year 3 and will conclude the mining operation.~~

~~Tailings will be deposited into the Northwest Tailing Area until filled to capacity during Year 1, at which time tailings will then be deposited into the Upper Basin for the remainder of the life of the project. All tailings generated from the plant during the mining operation will be completely contained in the Upper Basin. Sub-aerial deposition of the tailings will be employed in both the Northwest Area and Upper Basin to achieve maximum deposition density. In addition, flocculants may be used to facilitate proper settling of the tails during Upper Basin dredging operations to prevent plant recycle loading with tails deposition material. Tailings are deposited at a rate of approximately 40 % of the dredge mining rate and at a higher density than the existing refuse, thus allowing the dredging operation to the mine away from deposition area at a continuously increasing rate. All washed tailings are expected to be contained by the Northwest and Upper Basin Ponds.~~

As described in Section 2.41, in the "best-case" scenario for reclamation, the fines would be removed from the slurry ponds prior to revegetation activities at the Wellington site. Sunnyside Cogeneration Plant, located near the town of Sunnyside in Carbon County, Utah, has a contract with PRT to remove the fines from the Upper and Lower Slurry Ponds as well as the fines that were removed and placed adjacent to the Upper Slurry Pond. Sunnyside Cogen has contracted Savage Services to conduct the excavation activities and transportation of the fines to their plant site.

Activities will include excavation and haulage of coal refuse waste. It is expected that the annual, monthly, and daily mined quantities will vary. Records will be maintained to account for the amount of refuse removed and transported.

Mining methods will use a standard mobile fleet of excavation equipment that may include all or some of the following: dozers, front-end loaders, end-dump trucks, belly dump haul trucks, scrapers, track-hoes, and support equipment (water truck, maintenance vehicles). Excavation will be carried out in lifts (following MSHA regulations) across the top of the refuse pile and slurry ponds or by pushing material from the top of the refuse pile down the slopes and pushing material across the slurry ponds. These methods have been selected to assure continued stability of the refuse pile and slurry ponds. One or more or a combination of the above described mining methods may be used throughout the life of this operation, and at all times the outer slopes of the refuse pile will be maintained in a safe and stable condition.

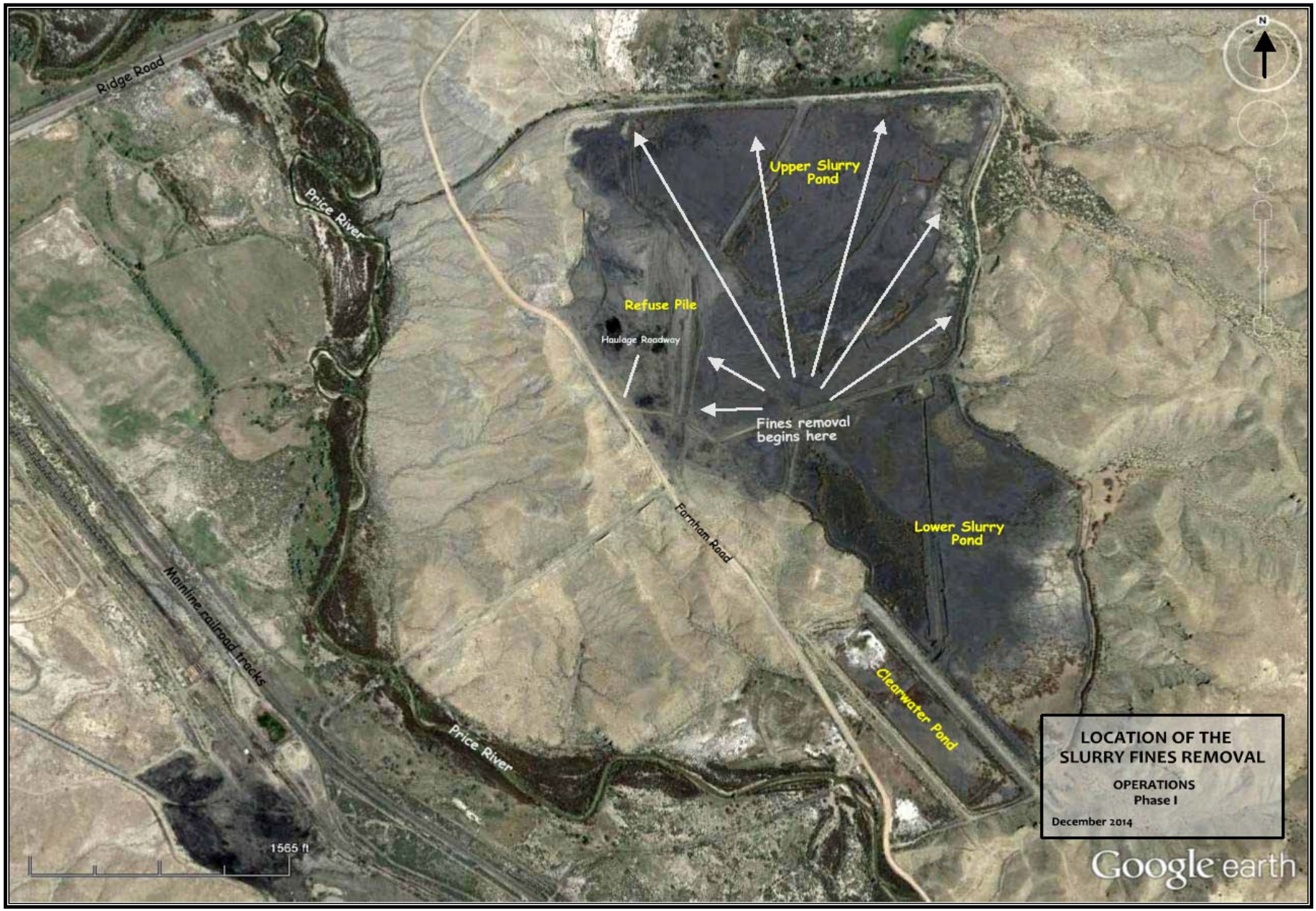
No crushing or screening operations will take place at the Wellington site. No surface blasting has been planned.

Drilling of refuse test holes are planned to assist in obtaining coal quality and how mining will progress. Sampling and testing may be used to insure that materials meet minimum levels of quality.

Existing pads, primary roads, ancillary roads, and pit roads will be utilized. Additional roads may be desired from time to time. Additional design and sediment control facilities for these roads if needed will be provided prior to construction of new roads.

Periodic watering of gravel and dirt roads for dust suppression will be conducted. Periodic grading of gravel and dirt roads to eliminate mud holes and maintain drainage will also be done.

The methods and locations for the fines removal at the site will be refined once the process begins and the conditions encountered onsite are better known. A figure showing the location of the operations and the direction in which the process will continue for the Phase I is provided below.


Ridge Road
Price River
Upper Slurry Pond
Refuse Pile
Haulage Roadway
Fines removal begins here
Farnham Road
Lower Slurry Pond
Mainline railroad tracks
Clearwater Pond
Price River
1565 ft
N
LOCATION OF THE SLURRY FINES REMOVAL
OPERATIONS
Phase I
December 2014
Google earth