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June 30, 2014

Ms. Evelyn Rosborough
U. S. Environmental Protection Agency
Permit Processing Team (6WQ-NP)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

RE: DRAFT NPDES PERMIT NO. NM0030996 – EL SEGUNDO MINE

Dear Ms. Rosborough:

Lee Ranch Coal Company (LRCC) has reviewed the draft NPDES Permit No. NM0030996 (Permit) formulated by the U.S. Environmental Protection Agency (USEPA) for the El Segundo Mine on May 30, 2014, and sent out for Public Notice on May 31, 2014. LRCC's comments on the draft permit are provided in the following sections.

Fact Sheet

1. Page 3, Item I under "CHANGES FROM THE PREVIOUS PERMIT": This section lists several changes from the previous permit issued on December 29, 2008 with an expiration date of January 31, 2014. LRCC does not agree with the USEPA's changes listed under the first, fourth and sixth bullets under this section for reasons explained in the following sections.

2. Page 3, Item II "APPLICANT LOCATION and ACTIVITY" LRCC disagrees with the language in the second paragraph under Item II used to describe potential discharges from multiple outfalls to each respective receiving stream. The current language, "many discharges from multiple outfalls are to…" is misleading and suggests these outfalls have occurred or are occurring, when in fact no discharge from any of the outfalls in this permit have occurred since the permit was issued. In addition, and because the ponds associated with these outfalls have been designed and built to treat the equivalent runoff from a 100-year, 6-hour rainfall event, there is little potential for future discharges from any of the outfalls for the life of the El Segundo Mine, much less the upcoming 5-year term of the soon to be renewed permit. Accordingly, LRCC suggests the language be revised to clearly state that any future discharges have the potential to discharge to the receiving streams listed.

3. Page 6, Part V, Section B.2 "Western Alkaline Coal Mining Operation, 40 CFR 434.85": LRCC understands the logic of USEPA's language that states that there is no alternative numeric effluent limits for Western Alkaline Coal Mining (WACM) at 40 CFR 434.80. However, LRCC believes the USEPA correctly allowed for the El Segundo

Mine to comply with the effluent limits for TSS and pH established for reclamation areas at 40 CFR 434.52 under Subpart E, Post Mining Areas in lieu of those prescribed under 40 CFR 434.80 (WACM), yet used language and permit structure that indicated these effluent limits were "alternatives" under WACM in the current and administratively extended El Segundo NPDES Permit (Part 1, Section A.4.6), which may not comport with the rule language.

Regardless, the USEPA's permit writer (Mr. Isaac Chen) appropriately allowed the use of the Subpart E effluent limits in the current El Segundo NPDES permit for those cases where the disturbed area above the outfall may not be completely reclaimed. LRCC believes it is prudent to first evaluate these areas and all Best Management Practices (BMPs) that remain to be or have been implemented above these outfalls using an appropriate computer model in order to verify that average annual sediment yields will be less than pre-mining conditions as required by the rule. One good reason for this is to make sure vegetation has been adequately re-established to a sufficient cover to be effective at controlling erosion and sediment. If the modeling verifies this, LRCC can confidently develop appropriate sediment control plans for the ponds that will be eligible for coverage under the WACM effluent limits and subsequently submit the plans to the regulatory agency for review along with a request to modify the NPDES permit. Until this process is completed, numeric effluent limitations associated with the Post-Mining Area (Subpart E) category should remain in effect. The modification would involve removing the existing numeric, technology-based effluent limitations (settleable solids and pH) and replace them with the requirement to comply with the approved Sediment Control Plans for those outfalls as the only applicable effluent limitation.

LRCC's NPDES Permit for the Lee Ranch Mine (No. NM0029581), recently issued in September 2010, correctly and clearly identifies the reclamation conditions above any outfall where the WACM effluent limits must be applied (see Page 2, Part II.E of the Lee Ranch Mine NPDES Permit). Relevant sections of this permit that apply to WACM effluent limits include:

- "This subpart applies to any outfall that 100% of its associated drainage is as western alkaline coal mining operations from reclamation areas, brushing and grubbing areas, topsoil stockpiling areas, and regraded areas where the discharge, before any treatment, meets all the following requirements:…" (Item 1); and
- No later than three (3) months prior to any discharge from the above areas, the operator must submit a sit specific Sediment Control Plan (Plan) approved by the State mining agency under the authority of SMCRA to EPA…"

The referenced language above is clearly in line with the intent of the WACM effluent limits as the USEPA intended them to apply to Western coal mining operations (see Federal Register, Volume 67, Number 15, Wednesday, January 23, 2002). The draft El

Segundo NPDES permit contains no similar language that specifies WACM applies to any outfall with 100 percent of its drainage as characterized by conditions defined under the WACM effluent limits. And, the draft El Segundo Mine NPDES permit contradicts the language in the current Lee Ranch Mine NPDES permit by requiring a Sediment Control Plan to be developed and submitted "…within 6 months of the effective date of the permit, a site specific Sediment Control Plan (SCP) to the permitting authority…'. LRCC firmly believes the WACM requirements as written in the draft El Segundo Mine NPDES permit should mimic those written and approved by the same NPDES permitting authority within the last several years for the Lee Ranch Mine NPDES Permit, which do indeed comport with the spirit and intent of the WACM rules. Accordingly, LRCC asks the USEPA to revise the terms and conditions of the El Segundo NPDES Permit related to reclamation areas.

4. Page 7, Part V, Section B.4.b "Toxics": The permit states that the samples that were collected and submitted in the renewal application for toxics "did not represent any actual discharges". While this is true, these samples were taken from within the sedimentation ponds that drain active mining areas. In reality, the concentrations that were observed are conservative, considering that the water had not yet undergone full treatment. The sediment ponds are designed in such a way that the prolonged holding times allow for further treatment of the water through increased settling of solids, biological uptake by macrophytes and microbes, and chemical attenuation in bottom sediments. Moreover, the fact that the concentrations of all toxics were below the detection limit should be sufficient evidence that there is no reasonable potential to believe these pollutants are present in even trace amounts, let alone concentrations that would exceed the standard. Again, as expressed in previous comments, there is no potential source of these pollutants onsite.

In fact, the only pollutants that were in measurable concentrations were metals, due to the metals within the suspended sediment in the runoff prior to final treatment. The portions of the metals associated with the sediments that are measured in total metals analyses are primarily in non-toxic forms. This is why the New Mexico State water quality standards focus on metals in the dissolved form.

Furthermore, sampling and analyzing for toxics is extremely costly, difficult to sample and plan for, and adds extensive work for the sampling crew. While the samples were not taken during a discharge event, they are representative of the quality expected in a discharge event since they were composed of onsite runoff and pumpage. Therefore, this water quality would be representative of both pumped discharges and stormwater discharges. Again, these samples are actually representative of a "worst-case" scenario, since the water contained within the pond had not yet undergone what would be considered the full treatment potential of the sediment pond. For these reasons, the toxics contained in Form 2C that were measured below detection limits should be removed from

the analysis requirements. Furthermore, the Form 2C metals that had measureable concentrations should be compared to the standards using a statistical reasonable potential analysis to determine which metals present have a reasonable potential to exceed the standard.

5. Pages 7-8, Part V, Section B.4.d "Total Dissolved Solids – Colorado River Salinity Control Program": The Total Dissolved Solids (TDS) water quality based limits (WQBELs) should be eliminated from the draft permit for several reasons. First and foremost, the USEPA has implemented WQBELs for TDS for no reason other than referencing a basin-wide program established by EPA for the Colorado River in December 1974, and a basin-wide policy that was reviewed in 1999. There is no evidence that the outfalls at the El Segundo Mine have any reasonable potential to influence salinity within the Colorado River Basin because surface water flows in the vicinity of the El Segundo Mine are typically of short duration, and commonly dissipate completely due to infiltration along the downstream sand bed channels (LRCC, 2014). In addition, comparisons of stream gauging data collected at Peabody's Kayenta Mining Complex, situated in a similar geologic setting and semi-arid climate, and a U.S. Geological Survey stream gauging station some 70 miles downstream indicate considerable amounts of runoff generated in the upper portions of the basin can be completely lost due to channel transmission losses for runoff events up to 200 acre-feet in volume (PWCC, 2014). The distance from the El Segundo Mine to the San Juan River is roughly 70 miles along similar sand bed ephemeral channels, and any discharges from outfalls that drain to this upper tributary to the Colorado River will likely never reach the river. The USEPA has drafted TDS WQBEL's for all outfalls at the El Segundo Mine regardless whether any future discharges flow into tributaries of the Colorado River. LRCC points out the fact that many of these outfalls are located outside of the Colorado River Basin (see Section II of the USEPA's Fact Sheet), and have zero potential to discharge to this basin.

Imposing a limit on total dissolved solids (TDS) is not feasible for this operation due to several additional important points. First, alluvial materials in the arid west often have high salinity due to the high evaporation rates and saline geologic materials in these areas. Dissolved solids concentrations vary seasonally and can be high during the initial stages of a thunderstorm due to watershed flushing. At El Segundo Mine, dissolved solids concentrations at undisturbed upstream locations of the receiving streams ranged from 135 mg/L to 1,197 mg/L between 2009 and 2013. Runoff from within the mine area drains similar soil types and underlying geology and is expected to be comparable in quality. This shows that the sediment ponds that were constructed to treat the equivalent runoff from a 100-year, 6-hour runoff event would actually decrease the overall salt loading, for those ponds constructed within the Colorado River Basin. Again, LRCC points out the fact that many of these outfalls are located outside of the Colorado River

Basin (see Section II of the USEPA's Fact Sheet), and have zero potential to discharge to this basin.

Second, the primary method of treating for dissolved solids is Reverse Osmosis (RO). RO is known to be cost-prohibitive in the majority of applications. The primary method for treating runoff onsite is through sedimentation ponds, which have limited treatment capability for the major dissolved ions. Due to the storage capacity of these sediment ponds, any discharge would likely be due to an extreme precipitation event. An event of such a large magnitude would likely overwhelm any active treatment system such as RO.

The TDS limitation that is proposed (1/ton per day cumulative) allows a discharge volume of only 0.2 MGD at the ambient concentrations. Again, a precipitation event sufficient to cause a discharge would be of such a magnitude that it would easily exceed the proposed limit based on the discharge volume expected. LRCC requests that the TDS limit be removed altogether and changed to "report only". As an alternative, LRCC proposes that the limit only apply to intentional discharges (e.g. pumping) and not be applied to discharge caused by precipitation events and stormwater runoff. Finally, only those outfalls that have the potential to discharge within the Colorado River Basin should be considered for the TDS WQBEL, not those that have the potential to discharge within the Rio Grande Basin.

6. Pages 8-9, Part V, Section D "Whole Effluent Toxicity": The New Mexico Environment Department (NMED) recently conducted a UAA of receiving streams Inditos Draw and Kim-me-ni-oli Tributary that showed there were no fish and no macroinvertebrates present and applied the designated use of limited aquatic life (NMED 2012). Requiring WET testing on discharges to these streams is yet another requirement that is extremely costly and with little environmental benefit. WET testing was designed to measure toxicity to aquatic life but, as shown in the NMED study, there is no aquatic life present in receiving streams.

Moreover, the ability to simulate field conditions in the laboratory can give a misleading picture of actual conditions. The WET testing method that is required, 48-hour acute NOEC freshwater, is not representative of environmental conditions in the receiving streams. The sediment basins onsite are designed for the 100-year 6-hour precipitation event. This event would essentially result in flash flooding of the streams within minutes, followed quickly by the receding limb and returning to no-flow conditions typically less than eight hours after the peak discharge. These intense events would not expose aquatic life (if any exist) to effluent waters for full 48-hours. In fact, exposure in receiving streams would occur for only a fraction of the times being tested in the laboratory.

Lastly, selection of representative test species may give the wrong impression about actual effluent toxicity. The receiving streams will have high velocities and suspended

sediment loads during these events. Typically, Daphnia species do not inhabit flowing waters and it is extremely unlikely that Daphnia pulex would be found in the receiving ephemeral stream. Furthermore, the high suspended sediment load would be a far greater danger to any Daphnia individuals than any potential pollutants found in the effluent waters. Suspended sediment concentrations measured in the ephemeral washes within the El Segundo Mine permit area prior to mining were typically several thousand mg/l, and ranged as high as 35,100 mg/l (MMD, 2005a.) Using WET test methods on a species that is not typically found in the environment under question is unfounded and unwarranted. For these reasons, WET testing should not be required at these discharges, since it is not representative of actual aquatic life conditions in the receiving streams, which is basically non-existent.

7. Page 9, Part VII: "Environmental Review": LRCC questions the USEPA's decision to not issue a new FNSI based on the updated EA document LRCC submitted in mid-April 2014. And, LRCC believes more written justification above and beyond citing regulations is warranted from the USEPA to characterize the El Segundo Permit as being a new source, especially because the permit will be entering the second five-year term of its existence, and no significant changes to the mining operation have occurred that have not been clearly reviewed and approved by the New Mexico Mining and Minerals Department. Will this permit and the El Segundo Mine continue to be considered a new source by USEPA and subject to the requirement of submitting an updated EA during subsequent NPDES permit renewal actions? LRCC believes requiring updates to an EA every five years in order to renew an NPDES permit with no significant changes to the operation to be a burdensome task with little environmental benefit.

Draft Permit

Part 1- Requirements for NPDES Permits

Page 6, Section A.6: The requirements for WACM operations should be re-written as recommended in the comments provided above under Page 6, Part V, Section B.2 of the Fact Sheet.

Part II – Other Conditions

Page 1, Section B: This section of the draft permit contains a requirement to orally report any violation of the daily maximum limit for Total Iron to the USEPA and NMED within 24-hours from the time El Segundo becomes aware of the violation followed by a written report in five days. This requirement is arbitrary and no basis for requiring this is provided in the Fact Sheet. LRCC points out that Total Iron is a technology-based effluent limitation, and is not included as a stream standard in any of the designated uses for the receiving streams Inditos Draw or Kim-me-ni-oli Tributary as established by the

NMED. Accordingly, any excursion of the Total Iron effluent limitation will have no reasonable potential for violating applicable receiving stream water quality standards or causing environmental harm. LRCC asks USEPA to remove this permit condition, or provide clear and reasonable explanation why such a strict reporting requirement is being imposed with no obvious potential for violating downstream water quality standards.

Appendix A of Part II

LRCC asks USEPA to add in a footnote to each of the lists of outfalls provided as Attachments A, B, and C that states:

"Locations may be revised by the permittee if it becomes necessary to eliminate or establish new holding ponds. For any revision, the permittee shall submit appropriate maps showing the holding pond locations."

This language is identical to language the USEPA added to the list of sampling locations in LRCC's NPDES Permit for the Lee Ranch Mine (No. NM0029581) found on Page 5 of Part I. With this language added as requested, the El Segundo Mine would be allowed to make a change to the lists of outfalls as a minor modification to the NPDES Permit going forward.

I've attached a short list of document references that were cited in the preceding comment sections. If you have any questions or require additional information, please do not hesitate to contact me at (928) 913-9221 or Brian Dunfee, Director Environmental Services SW/CO at (928) 913-9222.

Sincerely,

Jimmy Boswell
Manager Environmental Compliance
Peabody Investments Corporation

cc: Mark Rochlitz, Senior Engineering Manager (El Segundo Mine)
John Cochran, Manager Environmental Hydrology (Peabody Investments Corp.)
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Document References

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Lee Ranch Coal Company, 2008. Environmental Assessment for New Source NPDES Permit. Updated April, 2014.

Minerals and Mining Division, 2005a. Cumulative Hydrologic Impact Assessment for El Segundo Mine, 70 p.

New Mexico Environment Department, 2012. Use Attainability Analysis for Unclassified Non-Perennial Watercourses with NPDES Permitted Facilities, 181 p.

Peabody Western Coal Company, 2014. "Chapter 18, Probable Hydrologic Consequences" Kayenta Complex Life of Mine Permit Application Package