

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

December 10, 2007 gk

TO: Internal File

THRU: James D. Smith, Environmental Scientist III, Team Lead *DS 12/12/07*

FROM: Priscilla Burton, CPSSc, Environmental Scientist III *PWB by an*

RE: NO6-37-1-1 Abatement Information for MRP, NEICO, Wellington Prep Plant, C/007/0012, Task ID #2818

SUMMARY:

Reclamation of the dryer pond and the Price River pump water lines (Appendix M) was received on October 26, 2006. The history behind the submittal is that of NOV-06-37-1-1. The NOV was vacated, but the requirements for abatement were upheld.

The abatement required the following:

- 1) Positively determine the source of the water creating a bog at the reclaimed Price River pumphouse site and the source of the water entering the Dryer pond.
- 2) Determine the flow rates in cubic feet per second and acre/ft/yr of the source of water creating the bog at the reclaimed Price River pumphouse site and the flow rate of the water entering the Dryer pond.
- 3) Based on items 1 & 2 above, establish the current usage of ground water and/or surface water and connect this usage to a water right.
- 4) Describe the management of the water flow to the Price River and to the Dryer pond including
 - a) protection of Price River groundwater well rights that are shown on Dwg G9-3507 and itemized in Table 7-24-1 of the MRP as 97-371[91-371], 91-216, 91-215, 91-254, 91-255.
 - b) protection of the soil in the vicinity of the pumphouse.
 - c) protection of the Price River.
- 5) Describe the use of water in the Dryer Pond during operations.

TECHNICAL MEMO

- 6) Describe the reclamation of the Dryer Pond and stem the flow of water into the pond or describe the indefinite and continued use of the diverted flows during reclamation and for a post mining land use.
- 7) Update Map EO-3341 [E9-3341] to show the location of all existing structures such as the buried Clearwater pipeline.
- 8) Update Map 712e to show the location of the buried culvert.

The information provided first confirms that the water entering the Dryer pond comes from the Price River pumphouse and is being transported through an existing buried culvert. Flow is reported to be at 2 gpm or 3.2 acre/ft/yr. The application later casts doubt upon that finding, by stating, "Although the possibility does exist that this is the source of the water in the Dryer Pond, it is not a certainty" (fifth bullet on page 18 App. M).

As noted in this memo, the information provided did not adequately respond to items 1, 4, 4 b, 4c, 5, and 6 listed above.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

The application includes revision of pages 2 through 13 in Sec. 5.30 Operational Design Criteria and Plans; revision of pages 1b and 1c in Sec 7.42; revised Dwg E9-3341 Permit Area Facilities Map; revised Dwg 712E Dryer Sediment Pond.

The revision includes the original MRP description and function of all the ponds, but omits the original description of the dike construction. For the same reason that the pond information is retained, the dike information should be retained.

Page 2 of Section 5.30 indicates that the underground pipeline was designed to transfer water from the pumphouse area on the east side to the Auxilliary pond on the west side of the Price River and that the system continues to be functional. This statement is misleading, since the subsurface water line has been severed in at least two places (both sides of the river) and no longer carries water from the Clear water pond to the auxiliary pond. It would be more accurate

TECHNICAL MEMO

to state that water enters the dryer pond from a leak in the subsurface pipe that originates at the Price River pumphouse.

A new Appendix M is referred to for details of the water system (Sec 5.30, pg 2 and pg. 5). The details on the functioning water system could not be found in Appendix M.

The statement, "These three ponds are now connected in a sequence and function in a series," on Pg. 2, Sec. 5.30, does not appear to be accurate. The dryer pond is isolated from the road and auxiliary ponds.

The information provided first confirms that the water entering the Dryer pond comes from the Price River pumphouse and is being transported through an existing buried culvert. Flow is reported to be at 2 gpm or 3.2 acre/ft/yr. The application later casts doubt upon that finding, by stating, "Although the possibility does exist that this is the source of the water in the Dryer Pond, it is not a certainty" (fifth bullet on pg. 18 and 1st bullet pg. 19, App. M). Indicate what other sources of water might be possible.

The Price River water well is currently providing wildlife habitat at the Dryer Pond on the west side of the Price River (pg. 19, App. M), which is not consistent with the industrial use of the water claimed on pg. 4 of App. M.

Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of the Permit Application Format and Contents section of the regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-121.200, Since the location of the clear water pipeline is pertinent to the discussion of the dryer pond operation/function, the Permittee should reference the revised Dwg E9-3341 on page 1 of Section 5.30 Operational Design Criteria and Plans. • As noted in Sec 5.30, pg 2, please provide in Appendix M, the details of the functioning water system such as how flow is controlled and how backflow is prevented. • Verify the statements made concerning the connection, function and sequence of the three ponds (pg 2, Sec.5.30;pg 1b and 1c, Sec 7.42). • Correct page 2 of Section 5.30 to state that water enters the dryer pond from a leak in the subsurface pipe that originates at the Price River pumphouse. • Do not omit the Dike description on page 13 Section 5.30. • Follow up the statement at the 5th bullet on page 19 Appendix M to indicate what other sources of water might be traveling through the buried culvert and exiting into the Dryer pond. • Information regarding the beneficial use of the water right, provided on pg 4 and pg 19 are contradictory.

TECHNICAL MEMO

REPORTING OF TECHNICAL DATA

Regulatory Reference: 30 CFR 777.13; R645-301-130.

Analysis:

Karla Knoop, hydrologist with JBR Consultants and Dan Guy, P.E. with Blackhawk Engineering conducted research for this amendment.

Findings:

Information provided meets the requirements of Reporting of Technical Data section of the Regulations.

OPERATION PLAN

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Monitoring and Sampling Location Maps

Appendix M should include a map on the scale of 1:12,000 showing the location of soil sampling at the Price River pump house site.

Surface and Subsurface Manmade Features Map

Appendix M must include a map clearly showing location of underground pipe conveying water from west to east on the scale of 1:12,000, such that a reclamation plan for the site can be developed. The map should indicate the location of the broken pipe "inlet" as well as the location of the Dryer pond outlet.

Soil sampling is reported in Appendix M, but the location of the sampling must be provided on a map.

Findings:

The information provided does not meet the requirement of Maps Plans and Cross-Sections of the Regulations.

R645-301-521.122 Appendix M must include a map clearly showing location of underground pipe conveying water from west to east on the scale of 1:12,000, such that a reclamation plan for the site can be developed. The map should indicate the location of the broken pipe "inlet" as well as the location of the Dryer pond outlet.

R645-301-521.190, Appendix M should include a map on the scale of 1:12000 showing the location of soil sampling at the Price River pumphouse west and east side.

SUPPORT FACILITIES AND UTILITY INSTALLATIONS

Regulatory Reference: 30 CFR Sec. 784.30, 817.180, 817.181; R645-301-526.

Analysis:

The following statement has been removed from the plan: "No water from these ponds [Road and Dryer ponds] will discharge into the Price River or its tributaries." However the requirements of R645-301- 730 to prevent offsite impacts remain valid. The 6th bullet on pg. 19 indicates that the water entering the Dryer pond reaches equilibrium. Explain how backflow from the Dryer pond to the Price River will be prevented.

NEICO desires to retain the water well (App M, pg. 18 and 19), but the operation of the well is not described. Delivery of water from the well to either the east or west side of the river is stated on page 19 Appendix M, but not supported by plans or drawings. Provide design drawings and cross-sections sufficient to demonstrate how the Price River well contributes to the flow in the buried pipeline and how both water well and pipeline will comply with performance standards.

Findings:

Information provided in the proposed amendment is not adequate to meet the support facilities requirements of the Regulations. Prior to approval, the following must be provided, in accordance with:

R645-301-526.220, R645-301-730, and R645-301-742.221.35, The 6th bullet on pg. 19 indicates that the water entering the Dryer pond reaches equilibrium. Explain how backflow from the Dryer pond to the Price River will be prevented. ●

TECHNICAL MEMO

Describe the current operation of the water well, which NEICO desires to retain (App M, pg. 18). •Provide design drawings and cross-sections sufficient to demonstrate how the Price River well contributes to the flow in the buried pipeline and how both water well and pipeline will comply with performance standards.

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

The information provided first confirms that the water entering the Dryer pond comes from the Price River pumphouse and is being transported through an existing buried culvert. Flow is reported to be at 2 gpm or 3.2 acre/ft/yr. The application later casts doubt upon that finding, by stating, "Although the possibility does exist that this is the source of the water in the Dryer Pond, it is not a certainty" (fifth bullet on page 18 App. M). How this will affect the reclamation plan is unknown.

The reclamation plan is described on page 6 of Appendix M. The plan does not include maps or drawings or other information to show how the Permittee will comply with environmental protection standards or a timetable for reclamation.

Findings:

R645-301-541.400 and R645-301-542, The reclamation must include (certified) maps or drawings or other information to show the location of the reclamation disturbance and how the Permittee will comply with environmental protection standards or a timetable for reclamation. •How will the uncertainty in the source of the water to the Dryer pond affect the reclamation plan?

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

The site was reclaimed in October 2004. Vegetation in 2007 was sparse. Many gouges in the vicinity of the former pumphouse are salt encrusted. Soil samples taken from the bog area indicate poor quality soils with SAR's in the surface six inches ranging from 8.29 to 17.82.

A previous request for the location of the soil sampling was made under R645-301-521.190, Maps and Plans.

The reclamation plan describes possible disturbance on the east and west sides of the river. Describe the soil types and expected topsoil salvage, as well as expected water level on each side of the River. Outline the location on a map and provide an acreage figure for the extent of the proposed disturbance required to seal the underground pipe.

Findings:

Information provided in the submittal does not meet the Reclamation Plan Topsoil and Subsoil requirements of the Regulations. Prior to approval, the following must be provided, in accordance with:

R645-301-240, The reclamation plan describes possible disturbance on the east and west sides of the river. Describe the soil types and expected topsoil salvage, as well as water level on each side of the River. Outline the location on a map and provide an acreage figure for the extent of the proposed disturbance required to seal the underground pipe.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

Surface gouging in the low lying wetlands along the Price River seems to compound the problem of salt accumulation in the surface soils, by collecting and holding water under saturated conditions for much of the year. Describe an alternate sediment control for the reclamation of the Price River pumphouse and buried culvert. No mulch was used in reclamation previously. Mulch should be incorporated into the soil as an amendment.

Findings:

Information provided in the proposed amendment is not adequate to meet the Reclamation Stabilization of Surface Areas. Prior to approval, the following must be provided, in accordance with:

TECHNICAL MEMO

R645-301-244, Surface gouging in the low lying wetlands along the Price River seems to compound the problem of salt accumulation in the surface soils, by collecting and holding water under saturated conditions for much of the year. Describe an alternate sediment control for the reclamation of the Price River pumphouse and buried culvert. ●No mulch was used in reclamation previously. Organic mulch should be incorporated into the soil as an amendment to the high SAR soils to increase infiltration and drainage.

RECOMMENDATIONS:

Approval is not recommended.

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