WELLINGTON PREPARATION PLANT

C/007/012

INSERTABLE INFORMATION FOR THE MINING & RECLAMATION PLAN

FOR
NO6-37-1-1

July 13, 2008

INCLUDES:
FINALIZED ABATEMENT INFORMATION
TASK ID #2952

PERMITTEE:

NEICO
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Comments & Instructions for Insertions to the Mining & Reclamation Plan of the Wellington Preparation Plant C/007/012

July 13, 2008

Submitted to the State of Utah, Division of Oil, Gas & Mining
N06-37-1-1: Final Abatement Information for MRP

A.

DOGM Deficiency:

***R645-301-121.200**, Reference the revised Dwg E9-3341 on page 1 of Section 5.30 Operational Design Criteria and Plans, since the location of the buried pipeline is pertinent to the operation and reclamation narrative.*

NEICO Comment:

Reference to Dwg. E9-3341 and the Clear Water Pipeline have been made in Sec. 5.30.

MRP Insertion Instructions:

Sec. 5.30, p. 1, 03/31/08, of this submittal replaces
Sec. 5.30, p. 1, 09/10/97, of the current MRP

B.

DOGM Deficiency:

Correct p. 2 of Section 5.30 to state that water enters the Dryer Pond in an uncontrolled manner through a subsurface pipe that originates at the Price River pumphouse.

NEICO Comment:

Page 2 of Section 5.30 has been modified to indicate that, in addition to runoff, groundwater also currently enters the Dryer Pond.

Updates to Sec. 5.30 of the MRP have been made to be consistent with information requested by DOGM. The following information was submitted previously to DOGM on October 20, 2006 and then updated to address the above deficiency March 31, 2008.

MRP Insertion Instructions:

Section 5.30, pages 2-13, dated 03/31/08 of this submittal replaces
Section 5.30, pages 2-13, dated 9/1/91 of the current MRP.

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C.

NEICO Comment:

Updates to Sec. 7.42 of the MRP have been made to be consistent with information requested by DOGM. The following information was also submitted previously to DOGM on October 20, 2006).

Section 7.42, pages 1b and 1c, dated 10/20/06 of this submittal replaces Section 7.42, page 1b, dated 4/30/98 of the current MRP.

D.

NEICO Comment:

DOGM issued an NOV to NEICO on July 7, 2006. *DOGM vacated the NOV on November 30, 2006*. However, before it was vacated, the NOV document listed several abatements required by NEICO as a result of the action. The attached Appendix M described the abatement information along with NEICOs response to them.

Appendix M, pages 1-17, dated 10/20/06 of this submittal should be added to Appendix Volume III-C of the current MRP.

E.

DOGM Deficiency:

As noted in See 5.30, p. 2, please provide in Appendix M the details of the functioning water system, such as how flow is controlled and how backflow is prevented.

NEICO Comment:

A response to the deficiency has been made and will be added to Appendix M in a section called: SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008).

MRP Insertion Instructions:

SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (03/31/08) pp. 20 - 29, of this submittal should be added to Appendix M dated 10/20/06 (also included in this submittal). As stated in D above, Appendix M should be added to MRP, Appendices, Volume III-C.

F.

DOGM Deficiency:

Verify the statements made concerning the connection, function. and sequence of the three ponds (p. 2, Sec. 5.30; pp. 1b and 1c, Sec 7.42).

NEICO Comment:

In a meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, this deficiency was resolved. As a result, no further information was necessary to be included with this submittal.

MRP Insertion Instructions: n/a

G.

DOGM Deficiency:

Do not omit the Dike description on p. 13, Section 5.30.

NEICO Comment:

In a meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, this deficiency was resolved. As a result, no further information was necessary to be included with this submittal.

MRP Insertion Instructions: n/a

H.

DOGM Deficiency:

Follow up the statement at the 5th bullet on p. 19, Appendix M to indicate what other sources of water might be entering the buried culvert and exiting into the Dryer Pond.

NEICO Comment:

A response to the deficiency has been made and will be added to Appendix M in a section called: SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008).

MRP Insertion Instructions:

SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008), pp. 20 - 29 provided in this submittal includes the response to this deficiency. Instructions to add these pages have been already been provided in a previous deficiency above.

I.

DOGM Deficiency:

Information regarding the beneficial use of the water right, provided on pp. 4 and 19, is contradictory.

NEICO Comment:

A response to the deficiency has been made and will be added to Appendix M in a section called: SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008).

MRP Insertion Instructions:

SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008). pp. 20 - 29, provided in this submittal includes the response to this deficiency. Instructions to add these pages have been already been provided in a previous deficiency above.

J.

DOGM Deficiency:

***R645-301-121.200**, The Permittee needs to remove the reference to Dwg. A9-1464 in the Dryer Pond discussion on page 5 in Section 5.30 of the submittal. In 2006, Dwg. A9-1464 was removed from the MRP and replaced by Dwg. 712e.*

NEICO Comment:

Reference to Dwg. A9-1464 in Sec. 5.30 has been removed.

MRP Insertion Instructions:

Instructions to add Sec. 5.30, p. 2- 13, 03/31/08, of this submittal have already been described in a deficiency above.

Dwg. 712E stamped 10/19/08 of this submittal replaces
Dwg. 712E of the current MRP.

K.

DOGM Deficiency:

R645-301-121.200, -742.300, *The Permittee needs to resolve discrepancies between the current and new versions of Table 742, and between Table 742 and Dwg. T1- 9597. In Table 742.0c in the current MRP, CVL-C2 is sourced by ditches CVL- D2 and D3, and CVL-C3 [with a printed 2 crossed-out and replaced with a hand-written 3 in the Division's copy] receives flow from CVL-D5; these are in accord with Dwg. T1-9597. In the proposed amendment, culvert CVL-C3 is not listed. Watershed CVL-7F is given as the contributing source to CVL-C2, but Dwg. T1- 9597 shows CVL-7F is at the outlet end of culvert CVL-C3 and is not associated with CVL-C2.*

NEICO Comment:

As a follow-up to the meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, this deficiency was resolved. Specifically, in an email from J. Smith dated February 15, 2008, this deficiency was resolved. As a result, no further information was necessary to be included with this submittal.

MRP Insertion Instructions: n/a

L.

DOGM Deficiency:

R645-301-121.200, *The Permittee needs to clearly identify the correct location of the runoff and pond-sizing calculations referred to on pp. 6, 7, and 9 in Section 5.30 of the submittal: there are no such calculations in Appendix B. There are runoff and pond-sizing calculations in the Hydrology Appendix in Volume II, but it is not clear if this appendix contains the referenced calculations and, if it does, it is not clear where in this large appendix the respective calculations are located.*

NEICO Comment:

The references have been changed.

MRP Insertion Instructions:

Instructions to add Sec. 5.30, p. 2- 13, 03/31/08, of this submittal have already been described in a deficiency above.

M.

DOGM Deficiency:

***R645-301-121.200**, The Explanation on Dwg. E9-3341 lists "YY. COVOL MODULAR COAL FINES WASH PLANT" and "H. RIVER PUMPHOUSE" under the heading "FACILITIES REMOVED DURING RECLAMATION - NO LONGER SHOWN ON MAP", but both facilities are still shown on the map. The Permittee needs to rectify this discrepancy.*

NEICO Comment:

The structures and references to them have been removed from Dwg. E9-3341. NOTE: This map was completely revised as a result of the above-mentioned NOV and subsequent abatement requests.

MRP Insertion Instructions:

Drawing E9-3341 stamped 03/26/08 of this submittal replaces Drawing E9-3341 of the current approved MRP.

N.

DOGM Deficiency:

***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 locations on a map and provide acreage figures for the extent of the proposed disturbances required to seal the underground pipe.*

NEICO Comment:

This information has been added to the existing Appendix M (10/20/06) in a new section called: "SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008).

MRP Insertion Instructions:

SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008), pp. 20 - 29, provided in this submittal includes the response to this deficiency. Instructions to add these pages have been already been provided in a previous deficiency above.

Soil Map–Carbon Area, Utah, Parts of Carbon and Emery Counties (Wellington Prep Plant Area), pp. 1-3, should be added at the end of the Supplemental Information for Appendix M.

O.

DOGM Deficiency:

***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 buried pipe "inlet" as well as the location of the Dryer Pond outlet.*

NEICO Comment:

In a meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, this deficiency was resolved – a map had already been provided (see Dwg. E9-3341). As a result, no further information was necessary to be included with this submittal.

MRP Insertion Instructions: n/a

P.

DOGM Deficiency:

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

NEICO Comment:

In a meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, it was determined that a 8.5"x11" figure with these sample locations would be provided.

MRP Insertion Instructions:

Insert the figure called "Soil Sample Locations, Wellington Prep Plant, Pump House Area, 2006" at the end of SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008) of this submittal.

Q.

DOGM Deficiency:

R645-301-526.220, R645-301-730, and R645-301-742.221.35, *The 6th bullet on p. 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 Comment:

An explanation regarding backflow prevention was also requested by DOGM under **R645-301-121.200** above. Please see the response under that heading.

MRP Insertion Instructions:

SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008), pp. 20 - 29, provided in this submittal includes the response to this deficiency. Instructions to add these pages have been already been provided in a previous deficiency above.

R.

DOGM Deficiency:

Describe the current operation of the water well, that NEICO desires to retain (App M, p. 18).

NEICO Comment:

This information has been added to the existing Appendix M (10/20/06) in a new section called: "SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008).

MRP Insertion Instructions:

SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008), pp. 20 - 29, provided in this submittal includes the response to this deficiency. Instructions to add these pages have been already been provided in a previous deficiency above.

S.

DOGM Deficiency:

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.

NEICO Comment:

It is not possible to provide design drawings and cross sections that demonstrate the interaction of the well and the flow in buried pipeline. As discussed in a meeting with Jim Smith on February 12, 2008, additional response to this line item is not required.

MRP Insertion Instructions: n/a

T.

DOGM Deficiency:

***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 (5th bullet on p. 19, Appendix M)?*

NEICO Comment:

This information has been added to the existing Appendix M (10/20/06) in a new section called: "SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008).

MRP Insertion Instructions:

SUPPLEMENTAL INFORMATION FOR APPENDIX M AS REQUESTED BY THE STATE OF UTAH, DIVISION OF OIL, GAS & MINING (March 31, 2008), pp. 20 - 29, provided in this submittal includes the response to this deficiency. Instructions to add these pages have been already been provided in a previous deficiency above.

INSERTIONS FOR THE MINING & RECLAMATION PLAN

(see "Comments & Instructions" above)

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5.30 OPERATIONAL DESIGN CRITERIA AND PLANS (R614-301-530)

5.31 General

Currently there are 6 sediment ponds/containment basins, 2 coal slurry impounding cells, and 2 refuse piles constructed on site, many - associated with the previous coal washing activities of the Wellington site. A description of these facilities follows. There are no plans to construct additional ponds, or impoundments of coal processing waste in the future. Since no underground mining has occurred, none of those structures will be subjected to subsidence.

Ponds and appurtenant features are shown on the following drawings:

Auxiliary Pond	Dwg. C9-1285
Road Pond	Dwg. E9-3453
Heater Dryer Pond	Dwgs. E9-3453, A9-1464
Plant No.1 Pond	Dwg. 4067-6-21
Slurry Containment Basin	Dwg. D5-0163
Clearwater Sediment Basin	Dwg. E9-3460
Clear Water Pipeline	Dwg. E9-3341

Sediment Ponds

This section provides some historical as well as current information about the ponds at Wellington. The historical information has been maintained in the MRP because it continues to have some relevance and also provides information that could be useful for future operations. For more information on the ponds such as the most recent design details, refer to Section 7.42 and the Hydrology Appendix (Volume II) of this MRP.

In the past, the Auxiliary, Road, and Dryer Ponds were designed to contain discharge water from the plant when it was operational. These three pond are now connected in a sequence and function in a series. In 1994, the Dryer Pond was enlarged to contain more runoff from precipitation events (see Section 7.42 and the Hydrology Appendix, Volume II). Historically, the Auxiliary Pond received water from a underground pipeline designed previously to transfer water from the pumphouse area on the east side to the west side of the Price River. This system continues to be functional to transfer water; the Dryer Pond receives groundwater via a subsurface pipe that is believed to originate near the Price River pumphouse, as described in more detail in MRP, Volume III-C, Appendix M.

All three ponds are incised structures. The Auxiliary Pond was constructed with near vertical slopes. The banks are stable with no indication of instability. There was not enough area to bring these slopes to 2h:1v. The Road and Heat Dryer Ponds were constructed with 2h:1v side slopes. There are no embankments for either pond.

Auxiliary / Road Ponds

In past operations, the Auxiliary Pond provided water storage capacity to support plant operations. Water was maintained in the pond for use in plant operations. More recently, pond capacity has been maintained to receive runoff volumes.

The Road Pond is an extension and enlargement of the Auxiliary Pond. The culvert, shown on Dwg. No. E9-3453, connects the ponds to combine their capacities.

Volume Requirements - Volume requirements for the Auxiliary Pond, Road Pond, and Dryer ponds were calculated and have been included in Section 7.42 and the Hydrology Appendix (Volume II). In past coal washing operations, there were four main sources of water inflow into the ponds:

1. Clear water from the Clear Water Pond
2. Plant discharge water
3. Runoff from precipitation events
4. Dryer Pond discharge water.

Dryer Pond

The Heat Dryer Pond once provided water storage capacity for dryer affluent and runoff from precipitation events. The pond was expanded in 1994 (see Dwg. 712e).

Historically, the operator had the capability of filling the Auxiliary Pond (located near the Dryer Pond) on the west side of the property with water directly from the incoming fresh water line from the Clear Water Pond beginning on the east side of the property. Prior to plant start-up, the pond was filled with an adequate volume of water for plant operation.

More recently, water has again been transferred to the west side via the Clear Water Pipeline (refer to MRP, Volume III-C, Appendix M, for more details).

Plant Pond

A new pond was constructed in 1989 to support loading activities at the south plant site. This pond is partially incised and contains principle and emergency spillways.

This is a sediment pond with 2 acres in maximum size and only 5 ft. deep. The pond presently collects run-off from 20.52 acres, including a new coal loading pad, an existing coal refuse pile and the sediment pond itself. For hydrologic computations, refer to Wellington Prep Plant MRP, Volume II, Hydrology Appendix, Watershed No. 5.

As shown on the Stage Volume Curve, the pond has about 30,200 cu. ft. of sediment capacity compared to the anticipated 5-year load of 29,400 cu. ft. The pond will be cleaned out when the sediment load reaches 18,120 cu. ft or 60% of design capacity. If sediment were completely even in the bottom of the pond, the clean-out elevation would be 5,335 ft. 8 in. Two sediment markers are placed, one near the pond inlet, the other near the outlet, as shown in Dwg. 4067-6-8A, MRP, Drawings Appendix, Volume III-B.

When the average sediment level at these markers reaches 5,335 ft 8 in, the pond will be cleaned out. There is 32,560 cu. ft. of storage between the maximum sediment level and the decant. Between the decant and the principle spillway is 48,830 cu. ft. of storage. Since a 10-yr storm produced only 48,841 cu. ft. of run-off, there would be little discharge from a 10-yr storm until the decant is opened, even if the pond was full to the decant at the time of the storm. If a storm or series of storms should fill the pond above the principle spillway, the spillway is sized to pass a 25-yr storm without discharge over the emergency spillway. There is 1 ft. between the pond crest and the emergency spillway, but since the emergency spillway is not needed for a 25-yr flood, the free board requirements are assured.

To insure that pond effluent meets water quality standards, the decant is placed 1 ft. above the maximum sediment line, and the principle spillway and decant are equipped with oil skimmers. The emergency spillway, which is a rip-rapped channel would never discharge in a flood of even a 25-yr recurrence interval. To insure the integrity of the pond, there will be quarterly general inspections.

The pond is partially incised and drains through a ditch that is incised (DD-4). The slope of the pond bank is 3h:1v. Plan and section views of the sediment pond are included in Dwg. 4067-6-21, MRP, Drawings Appendix, Volume III-B.

Slurry Containment Basin

The Slurry Containment Basin was built to prevent refuse material spilled during slurry pipeline breaks from entering the Price River. The pond is partially incised. The basin was built to contain a 25 yr, 24 hr storm. No discharge is anticipated, however a rip-rapped emergency spillway is provided to protect the integrity of the structure (see hydrologic computations in Wellington Prep Plant's MRP, Volume II, Hydrology Appendix, Watershed No. 7).

Clearwater Sediment Basin

The Clearwater Pond once provided storage for clarified water that was used in coal processing. Storm run-off calculations are contained in the Hydrology Appendix, Volume II.

Impoundments

Upper and Lower Refuse Ponds

The upper and lower refuse ponds received water carrying the slurry waste material from early coal cleaning process. Initial settlement of waste material occurred here. The upper and lower refuse dikes impound this waste cell. Partially clarified water was decanted to the lower refuse pond, where water clarification was completed. This cell is bounded by the North Dike and Lower Refuse Dike. Clarified water was decanted into the Clearwater Sediment Basin, where it is impounded by the Clear Water Dike. Storm runoff calculations are contained in the Hydrology Appendix, Volume II. These impoundments meet the criteria of MSHA regulations and have been approved by MSHA.

Dikes

Appendix C describes the construction of the Upper and Lower Dikes, the Clear Water Dike, and the North Dike. The Upper and Lower Refuse Dikes, and the North Dike were proposed to be raised in three phases (see Appendix D & E). Phase I, increasing the height of the lower refuse dike, was completed in 1985. Dwg. E9-3460 shows the lower refuse dike, as constructed. Phases II and III, to raise the upper refuse and north dikes, have not been implemented. Since no fine refuse is being produced at this time, there are no current plans to raise the dikes.

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Table 742.0c. Culvert Design Summary

Culvert ID	Contributing Ditch	Design Peak Flow (cfs)	Minimum Allowable CMP Culvert Diameter (inches)
CVL-C1	CVL-D1	4.4	15
CVL-C2	Area CVL-7F	4.3*	12

742.220 through 742.221 Sedimentation Ponds

Six existing ponds are included in the sediment control plan. These ponds include the Plant Sediment Pond, Refuse Basin Sediment Pond, Slurry Pipeline Sediment Pond, Road Pond, Auxiliary Pond and the Dryer Sediment Pond. The Road Pond, Auxiliary Pond and the Dryer Sediment Pond are used in series. The Plant Sediment Pond, Slurry Pond, and the Refuse Basin Sediment Pond are used independently with respect to each other. The sediment ponds are located near the disturbed area, and will be maintained to provide adequate sediment storage volume as described below.

The Road Pond, Auxiliary Pond and Dryer Sediment Pond are connected in series. The Dryer Pond was enlarged in 1994, and will contain the entire runoff from the 10-year 24-hour precipitation event, plus all water that enters through an existing water pipeline that runs from the pumphouse area on the east side of the Price River (for more details, refer to Appendix M). The computed 10-year 24-hour runoff to the series of ponds is presented in Table 742-1 along with available storage between proposed decant elevations and spillway elevations. Stage capacity curves are presented in the Hydrologic Appendix (Volume II). The peak 25-year 6-hour storm event discharge from the pond was computed assuming the pond full to the spillway elevation prior to start of storm.

The Dryer Sediment Pond serves as the final treatment facility for Watershed No. 4. The Dryer Sediment Pond, as constructed, will provide dead storage (i.e. storage below the decant level) for nearly 10 times the computed 3-year sediment volume (see computations in Hydrology Appendix, Volume II).

APPENDIX M

INFORMATION RELATED TO:

THE DRYER POND, WEST OF THE PRICE RIVER & THE PUMPHOUSE AREA, EAST OF THE PRICE RIVER

October 20, 2006

INTRODUCTION

From 1997 to 2003 Covol Technologies leased from NEICO a portion of the Wellington Prep Plant to operate a wash plant to process the fines in the adjacent slurry ponds. In 2004 Covol dismantled and removed the wash plant, followed by regrading work on the site to blend the contours with the natural surrounding landscape. Following this work NEICO had the area "gouged", fertilized, and reseeded with the final approved seed mixture. Depending on proposed new in-house plans and developments, the reclamation could ultimately be considered *interim* or *final*.

A pumphouse area was used in association with Covol's wash plant operations. After the Covol Wash Plant was removed in 2004, the pumphouse located in this area was removed by a Covol subcontractor without permission of the permittee (NEICO) or the operator (Covol). Absence of the pumphouse building structure created a potential public safety hazard due to below-grade support facilities. Covol then agreed to reclaim the remaining pumphouse structure to eliminate the safety problems. This work was accomplished in October 2004.

During the winter of 2005, water was observed entering the Dryer Pond located on the west side of the Price River near the old facilities area of the Wellington Prep Plant. An assumption was made that this water could be entering the Clear Water Pipeline used in association with the first owner of the property, U.S. Steel Corporation, dating back to the operations beginning in 1957-58.

Because of the water entering the Dryer Pond on the west side of the Price River, the State of Utah, Division of Oil, Gas & Mining (DOGM) requested information related to both the Pumphouse area and the Dryer Pond for insertion the Wellington Mining & Reclamation Plan (MRP). The following information was submitted earlier to DOGM on August 7, 2006 (numbers 1-3) and October 2, 2006 (numbers 4-8). The same information has been reformatted and submitted herein so it may be easily "insertable" to the MRP. Some of this information has also been provided in other sections of the MRP followed by a reference to this appendix. Below is the requested information made by DOGM and our responses to them.

1) Requested Information

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.

Response

Elevations in appropriate areas were surveyed to determine potential sources of water in what the Division referred to as a "bog" and water entering the Dryer Pond (see attached survey information from Blackhawk Engineering, July 25, 2006).

Survey and groundwater elevations were used in a hydrologic study of the area to determine the water sources. In addition, water quality data were collected for this study (see attached JBR Environmental study, August 3, 2006).

Based on the surveyed elevation information and professional judgement, Blackhawk Engineering concluded that the source of the water of the "bog", the River Pumphouse area, and the nearby collection well all correlate to the water levels of the Price River and the alluvium associated with it.

The separate hydrologic study by JBR also found that the source of the water in the "bog" is simply part of the larger wetland/floodplain area associated with the Price River. Its water source is likely the same alluvial groundwater found along the Price River in this area where there are numerous wetland or "bog" areas.

The JBR and Blackhawk studies also concluded that the water flowing into the Dryer pond also appears to originate from the shallow groundwater associated with the alluvium along the Price River by entering a buried pipeline that has been used for previous operational activities at the site.

2) Requested Information

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.

Response

Based on their investigations, the JBR study states that the flow rate of the "bog" is negligible, but not possible to determine quantitatively because the "bog" is part of the larger groundwater system and its flow cannot be isolated from the system as a whole. According to the MRP, overall velocity of the alluvial groundwater at the site is estimated

to range from 10 to 2,100 feet per year based upon estimated hydraulic conductivities and gradients.

Based on two flow measurements (February 2006 and July 2006), JBR found the groundwater appears to be entering the Dryer pond at an average rate of 2 gallons per minute (gpm) or 3.2 acre-feet/year (afy).

3) Requested Information

Based on item 1 & 2 above, establish the current usage of ground water and/or surface water and connect this usage to a water right.

Response

The site has valid water rights to collect water from the Price River and its associated alluvium. A certified water right is connected to a Price River alluvial collection well (Water Right No. 91-255). Additionally, supplemental water rights are appurtenant to this well site (Water Right Nos. 91-215, 216, 254, 255, 371). These water rights also permit water to be collected directly from the alluvial material in the pumphouse area.

Current usage of the water rights from the Price River and associated alluvium in the study area are held for future planned industrial and reclamation activities, dust control (when needed), and wildlife habitat. The water rights are a valuable asset to the property and are currently being used to market proposed future industrial activities at the site.

To reiterate the value of these water rights, a history of use of the water associated with the Price River and its associated alluvial material in the area was provided to the Division on July 5, 2006. For easy reference, this information has also been included with this document (History & Management of the Water Collection Well at the Wellington Prep Plant, July 5, 2006).

4) Requested Information

a) *Describe the management of the water flow of the Price River and to the Dryer pond including Table 7-24-1 of the MRP as 97-371, 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.*

Response

a) Water Rights

The NOV notes five water rights 91-371 (*91-371 = Typographical error?; the Division calls this Water Right No. 97-371; we are not sure if this is a Division typo or MRP typo; we will use the correct numbers here*), 91-216, 91-215, 91-254, and 91-255 for which protection should be demonstrated. All of these water rights are owned by NEICO. All of these water rights list industrial use as one of the valid beneficial uses to which the water right applies. All of these water rights except 91-254 list points of diversion and water sources as being the Price River and/or adjacent groundwater at the locations associated with the collection well and the pump house (91-254 has a point of diversion located near the track hopper, and the water source is shallow groundwater). Last, all of these rights allow the water to be used in Section 16 of T 15 S, R 11 E, which encompasses the locations near the so-called 'bog' and near the Dryer Pond. As such, the water in question is being used under valid water rights, and with allowable sources, points of diversion, beneficial uses, and places of use.

Further, the amount of water associated with the so-called 'bog' and the Dryer Pond inflow is well under that allowed under these rights. In response to NOV remedial action item 2, flow was estimated at 2 gallons per minute or 3.2 acre-feet per year. NEICO's water rights allow for diversion of more than 20 cfs, with an annual allowable volume of almost than 3,900 acre-feet diverted for industrial uses. The two areas in question, therefore, are using less than 0.1 percent of the amount allocated to the water rights.

In summary, water at the 'bog' and at the Dryer Pond is being used appropriately under valid water rights. Neither these rights, nor any other water rights held by others, are being compromised by these uses. Thus, water rights remain fully protected.

b) Pump House Soils

Soils in the vicinity of the reclaimed pump house were reseeded in 2005, as part of the area's temporary (or interim) reclamation work. Hummocks and gouges were created to maximize precipitation infiltration and minimize runoff and erosion. Observations in 2006 indicate that these reclamation techniques are working as planned, though plant establishment is still underway.

As with the other floodplain soils along the Price River, these soils are influenced

by shallow groundwater, at least seasonally. Further, they may be saline, due to their Mancos Shale Formation origins and/or interactions with high-TDS water. Observations along the Price River show that the alluvial soils support numerous different plant communities, ranging from wetland to upland species, with varying degrees of salt tolerance. Therefore, soils in the vicinity of the pump house are

expected to remain viable for plant growth, regardless of whether or not groundwater is discharging to the 'bog' area or being conveyed to the Dryer Pond.

As demonstrated, pump house vicinity soils remain fully protected. However, as requested by the Division, soil samples were collected from this area in September 2006 and was processed for laboratory analyses at Brigham Young University. Results from the sampling are provide below.

Sample Area	Sample Depth (in)	EC (dS/M)	SAR	pH
West Side Reclamation ("Bog")	0-6	12.00	17.82	7.51
West Side Reclamation ("Bog")	6-12	6.80	8.29	7.70
East Side Reclamation (Wetland)	0-6	10.00	11.32	8.02
East Side Reclamation (Wetland)	6-12	8.50	14.14	7.89

c) Price River

As discussed above, there is no impact to the Price River resulting from either the 'bog' or the Dryer Pond conveyance. Water is not being directly discharged from, or to, the river. Water from these areas is naturally commingling with, and part of, the Price River and its associated alluvial aquifer, and this will continue. NEICO has valid water rights to remove Price River water and groundwater from this area. Therefore, the Price River remains fully protected.

5) Requested Information

Describe the use of the water in the Dryer Pond during operations.

Response

Water in the Dryer Pond currently comes from three sources: 1) groundwater conveyed by pipe from vicinity of the pump house on the east side of the Price River; 2) storm water runoff; and 3) precipitation falling directly to the pond.

When the water entering the Dryer Pond from the Clearwater Pipeline reaches the inlet culvert level, equilibrium is apparently achieved because the inflow stops. *In other words, water does not continue to rise to a level where water overflows the principal spillway of the pond.* Moreover, engineering calculations show that the volume of pipeline water entering the pond - *even at its maximum depth* - is less than the pond's design capacity.

Visual observations indicate that water levels remain fairly constant even with constant Dryer Pond inflow: evaporation and infiltration account for this balance. Thus, the Dryer Pond is serving as a reliable source of good quality water available to NEICO to be used as needed for industrial purposes as allowed by the Utah Division of Water Rights. This water is not currently used continuously, but it is available when needed for dust control and reclamation activities, both of which are legitimate industrial uses. In the future, as operations on this property evolve, uses may change. In all cases, however, uses will remain consistent with applicable beneficial uses allowed under the water rights, or the appropriate Change Applications will be filed with the Division of Water Rights.

6) Requested Information

Describe the reclamation of the Dryer Pond and stem (Division typographical error?; should it say "stop"?) the flow of the water into the pond or describe the indefinite and continued use of the diverted flows during reclamation and for a post mining land use.

Response

Detailed plans to eventually reclaim the Wellington Prep Plant, including the Dryer Pond, are included in NEICO's MRP. These details, which describe such items as regrading, soil preparation, and reseeding, remain correct as written. However, prior to those activities taking place at or near the Dryer Pond, inflows to the pond would be stopped and the pond would be drained, and allowed to dry. The Dryer Pond embankments, pond bottom, and adjacent soils would not be subject to heavy equipment or earthwork while saturated.

Dryer Pond inflow that is conveyed via a pipe from the shallow groundwater east of the Price River would be stopped somewhere near its origin. Because there are no detailed engineering drawings available to discern exactly where water is entering the pipe, it is not possible to provide a detailed, engineered sealing plan. However, a registered Professional Engineer hired by NEICO, would supervise the sealing. The Division would also be contacted and given the opportunity to have one of their on-staff engineers present.

NEICO's engineer would supervise soils excavation near the Price River. This could

occur either on the pump house side of the river, or on the other side of the river immediately across from the pump house, based upon the engineer's judgement at the time. Work would not occur in the river itself or any adjacent wetlands, nor would equipment be placed in these locations. Groundwater would be intercepted within less than 10 feet of the ground surface; the pipe cannot be much deeper than that, based upon the elevation of its outlet at the Dryer Pond. Encountered water would be pumped from the excavation as needed, and properly managed to prevent erosion and subsequent sedimentation. The working area would be protected with a coffer dam if neededand feasible.

Depending upon the condition of the pipe and the mechanism by which water enters it, an appropriate closure would be done, again in consultation with the registered Professional Engineer. Because the existing condition is not known, the exact means of closure cannot be determined. However, it could consist of a steel cap, a concrete plug, or any number of possible solutions. The chosen solution would be intended to be permanent, effective, and innocuous.

Once the pipe has been closed, it would be monitored for several weeks, both at the closure location and at the Dryer Pond outlet, to verify that the flow has stopped. The excavation would then be filled with the removed material and prepared for revegetation according to the MRP. The Dryer Pond would continue to be observed for several more weeks, prior to it being filled and regarded.

7) Requested Information

Update Map E0-3341 (Division typographical error?; it probably means E9-3341?) to show the location of all existing structures such as the buried Clearwater pipeline.

Response

The location of the buried Clearwater Pipeline has been added to the map. It was based on an old U.S. Steel drawing stamped on 06/28/84. This map has been updated in other areas also.

8) Requested Information

Update Map 712e to show the location of the buried culvert.

Response

The location of the buried culvert inlet at the Dryer Pond has been surveyed. The location of the inlet flowline has been inserted to Map 712e.

To: Patrick Collins
From: Dan Guy
Subject: NEICO Dryer Pond Survey
Date: July 25, 2006

Per your request, I have completed a survey and examined the NEICO Dryer Pond and Pumphouse/River Well Area.

1. Survey Data

a. Elevations are tied to Monitoring Well GW-6 below the pumphouse area.

Point	**Elevation**
Pumphouse Area	
Mon. Well GW-6 (Ground)	5334.30
Mon. Well GW-6 (Collar)	5336.54
GW-6 Water Level	5330.04
Bog Area	5331.19
River Level @ Diversion	5329.54
Well Water Level	5332.88
Pump Water Level	5332.66
Dryer Pond Area	
Culvert Flowline	5332.04
Water Level - Pond	5331.71
Top of Fire Hydrant	5344.59
Clear Water Pond	
Top Clear Water Dam	5369.03

b. Conclusion

Water levels at the river pump and well are 0.62' and 0.84' higher, respectively, than the flowline of the culvert where water is flowing into the Dryer Pond; therefore, water could flow from the pump and/or well to the Dryer Pond if a pipe does connect the 2 sites.

c. Observation

Based on my survey and observation of the river pump and well area, the water levels in each appear to correlate with the water level of the Price River at this location. Since this is an alluvial well, it is likely the water source and level are from the river. This is also likely the source of the water in the "bog" area.

jbr environmental consultants, inc.
www.jbrenv.com
8160 South Highland Drive • Sandy, Utah 84093 [P] 801.943.4144 [F] 801.942.1852

August 3, 2006

Patrick D. Collins, Ph.D.
Mt. Nebo Scientific, Inc.
P.O. Box 337
Springville, Utah 84663

RE: Investigation to support remedial action for NOV N37-06-1-1 at the Wellington Prep Plant

Dear Patrick:

As requested, JBR Environmental Consultants, Inc. (JBR) has collected and reviewed information relevant to a Notice of Violation (NOV) that was recently issued by the Utah Division of Oil, Gas and Mining (UDOGM) to NEICO's Wellington Prep Plant. The NOV focused on two items: (1) water that has recently been flowing into the Dryer pond, and (2) water supporting "a bog at the reclaimed Price River pumphouse site". To support remedial actions required under the NOV, JBR has attempted to determine the sources and flow rates of water at those two locations, as required by UDOGM.

Dryer Pond

Water flowing into the southeast side of the Dryer pond appears to originate from shallow groundwater associated with alluvium alongside the Price River. Specifically, groundwater from the vicinity of the reclaimed Price River pump house site is likely entering an old buried pipeline that remains in place from former U.S. Steel operations. The pipeline apparently then conveys the intercepted groundwater underneath the Price River, continues underground to the Dryer pond, and discharges into the pond at the location where the pipeline daylights in the pond embankment. No surface expression of this pipeline has been identified, and no detailed as-built drawings have been located. However, various sources (including water rights records on file with the State Engineers office and old U.S. Steel files) confirm that groundwater from the pump house area was historically conveyed to the coal wash plant near the existing Dryer pond, via some semblance of piping and pumps that interconnected the pump house sump, the Price River collection well, and the Clearwater pond. This water was used under valid water rights for various industrial activities.

Two additional types of information have been used to support the above-described supposition: elevation data and water quality data. These are discussed separately below.

Blackhawk Engineering recently surveyed elevations at several relevant locations in the vicinities of the Dryer pond and the pump house site. NEICO's MRP reports collar and ground elevations associated with monitoring wells in these vicinities. JBR measures depth-to-water (DTW) at the monitoring wells on a quarterly basis, and most recently did so on July 25, 2006.

The monitoring well DTW measurements can be converted to groundwater elevation using the collar elevations contained in the MRP. Relevant information from these three data sources is provided in the following table.

Elevation Information

Blackhawk Engineering Data			
Location	Elevation (ft)	Description	
Dryer pond inflow	5332.04	Culvert flow line	
Price River collection well	5332.88	Groundwater elevation	
Secondary well water level	5332.66	Elevation of water in annulus	
Price River at diversion	5329.54	Water surface	
"Bog" area	5331.19	At flagging near center of sedge area	
MRP and JBR Data			
Location	Collar Elevation (ft)	Depth-to-Water (ft)	Groundwater Elevation (ft)
GW-10	5340.1	12.38	5327.72
GW-16	5386.0	43.02	5342.98
GW-4	5343.1	7.79	5335.31
GW-6	5336.6	6.26	5330.34

Currently, the Price River collection well has water standing at an elevation that is higher than the actual 16-inch-diameter inner well pipe, so the entire diameter of the outer casing contains water. This obscures the inner well piping, so its condition is not known, nor is it known exactly how the water is currently entering the casing. The secondary well is located near the main Price River collection well, and a valve and piping extend from it above the ground surface. A hole in the top of the casing shows that the inner well pipe appears intact. The surveyed water level at this location is of water standing in the annulus between the casing and the inner well pipe. GW-16 is a monitoring well located on the dike of the Clearwater pond, so although its DTW is significantly greater than the nearby GW-6 and GW-4, its water elevation and completion details indicates that it is hydrologically connected to the nearby wells.

As can be seen from the table, groundwater in the vicinity of the pump house site is less than 10 feet below ground surface, and slightly higher than the current water surface elevation of the Price River at the diversion. These data show a potentiometric gradient that slopes generally southwest toward the river. Monitoring records from recent years indicate that this gradient is typical, although groundwater and river elevations show some seasonal fluctuation. The MRP indicates that the Price River through this area is a gaining stream, receiving water from the surrounding shallow groundwater aquifer. It further notes a gentle gradient towards the river, with a sharper drop immediately adjacent to the river in the vicinity of refuse ponds. Locally, when stream flows are high for prolonged periods, the direction may be reversed adjacent to the river (i.e. the river raises water level in the alluvium adjacent to it). When in operation, as described in

the MRP, water levels in GW-16, GW-6, and GW-4 can also be affected by groundwater seepage mounds associated with the refuse ponds.

According to the MRP, these monitoring wells are all completed in the alluvium associated with the Price River floodplain, as is the Price River water collection well. None of the wells discussed herein are completed in the Blue Gate Shale that underlies, or is adjacent to, the alluvium. The Ferron Sandstone is a water bearing zone located below the Blue Gate, at about 400 to 450 feet below the ground surface in this area; no nearby wells penetrate this aquifer.

Across the river, at GW-10 near the Dryer pond, groundwater was measured at 12.4 feet below ground surface. This groundwater elevation, as well as groundwater elevations from other nearby monitoring wells (not shown in the above table), all also completed in the alluvium, shows an overall gradient to the southeast, again toward the Price River. Water enters the Dryer pond at a higher elevation than the surrounding groundwater, but at a lower elevation than the groundwater near the pump house site. This supports the supposition that the source of Dryer pond inflow is shallow groundwater from the pump house site vicinity.

An examination of water quality also supports this conclusion. In February 2006, routine 1st quarter surface and groundwater monitoring was supplemented by collecting a sample from the Dryer pond. (A Dryer pond sample was also collected during the 3rd quarter monitoring but results have not yet been reported.) Stiff diagrams were prepared for relevant sites, and are attached. These drawings show the ionic composition of the waters; those with similar shapes and sizes indicate water with a similar makeup and ionic strength. As shown, water entering the Dryer pond is almost identical to water sampled from GW-6 and GW-4, the monitoring wells closest to the Price River pump house site. Water obtained from the Price River is dissimilar both in make-up and strength. Water from GW-10 near the Dryer Pond has a similar ionic make-up but is much more concentrated. As with the elevation data, the water quality data suggest that the source of the Dryer pond is the alluvial groundwater near the pump house site.

It has not been possible to determine the mechanism by which groundwater is entering the pipeline in the vicinity of the pump house site, but it is most likely due to alterations that occurred during the recent reclamation activities at this location. Regardless of the specific mechanism of entry, our assessment of available operational records, elevation data, and water quality comparisons supports the conclusion that this groundwater is the source. Based upon two flow measurements (February 2006 and July 2006), the groundwater appears to be discharging into the Dryer pond at an average of about 2 gallons per minute (gpm) or 3.2 acre-feet/year (afy). Some of this water may infiltrate into the alluvium at the Dryer pond; if so, it would dilute the similar – but more saline – shallow groundwater already present in the vicinity of the Dryer pond, as characterized by GW-10.

Bog Area

The area that UDOGM refers to as "a bog" appears to simply be part of the larger wetland/floodplain area associated with the Price River. Its water source is likely the same alluvial groundwater found along the

Price River in this area, described above. Seasonally, standing water and/or saturated soils are common in the floodplain soils in this immediate area, and these conditions have been observed historically between the pump house site and the river, and between the pump house site and GW-6. Extensive wetlands are also found along both sides of the river up- and downstream of the "bog". Recent reclamation activities may have minimally altered the topography in this area, but there appears to be no mechanism by which those activities could have significantly altered groundwater gradient or elevations.

During recent visits to the area, there was minimal standing water in two or three isolated depressions within the overall depression associated with the "bog". Each of these had a water depth of no more than a few inches, and a surface area of no more than 2 square feet. There was no evidence of moving water in these depressions. As shown in the above table, elevation at this location matches well with surrounding groundwater levels and potentiometric surface.

Electrical conductivity measurements of standing water in the "bog" and at nearby locations were compared to provide additional information on the presumed source water. These measurements are given in the following table, and show that the conductivity of water in the "bog" is similar to that of the surrounding groundwater.

Electrical Conductivity Information

Location	Electrical Conductivity (µS)
"Bog"	4,650
GW-6	4,400
GW-4	4,560
Price River	1,717
Dryer Pond	4,370

Flow rate at the "bog" is negligible, but not possible to determine quantitatively because the "bog" is part of a larger groundwater system and its flow cannot be isolated from the system as a whole. According to the MRP, overall velocity of alluvial groundwater at the site is estimated to range from 10 to 2,100 feet per year based upon estimated hydraulic conductivities and gradients.

Summary

The information collected and reviewed to date indicates that the source of water entering the Dryer pond and associated with the "bog" is groundwater contained in the floodplain in the immediate vicinity of the pump house site. Flow rate of water entering the Dryer pond is approximately 2 gpm (3.2 afy); the "bog" flow rate is negligible and impractical to quantify. A review of water rights currently held by NEICO shows that water from this alluvial source is allowed to be withdrawn from this location and conveyed to the area where the Dryer pond is located, and used for activities related to NEICO's operations.

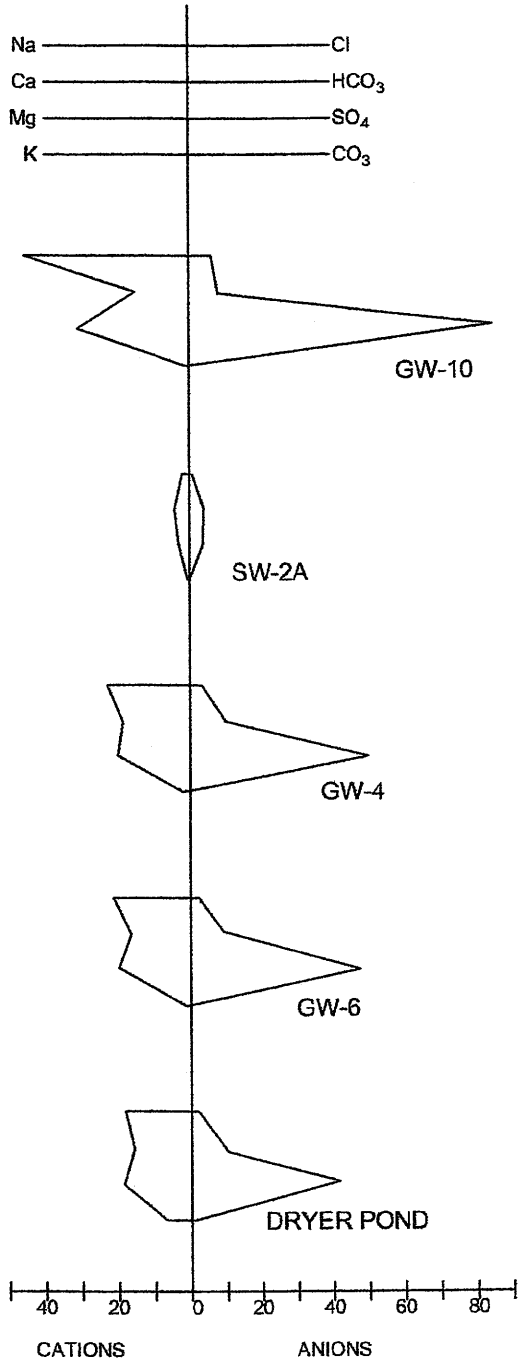
We feel that the information presented above addresses the first two remedial actions required by the NOV. Further, our review of the water rights records on file with the State Engineers office indicates that NEICO has valid rights to use the alluvial groundwater at this location. However, should you need any additional information on this issue, please feel free to contact us.

Sincerely,

<<transmitted via email>>

Karla Knoop
Hydrologist

Attachment (Stiff Diagram)



drawings\Mt Nebo02\StiffDiagrams.dwg

WELLINGTON PREP PLANT

STIFF DIAGRAMS OF SELECTED WATER SAMPLES COLLECTED FEBRUARY 2006

jbr environmental consultants, inc.

DESIGN BY KK | DRAWN BY CP | DATE DRAWN 8/03/06 | REVISION

HISTORY & MANAGEMENT OF THE WATER COLLECTION WELL AT THE WELLINGTON PREP PLANT

(July 5, 2006)

INTRODUCTION

The Wellington Prep Plant (C/007/012) is owned and operated by NEICO. The site has a water collection well located on the east side of the Price River. More specifically, the well is located in the SE¼, NE¼, Section 16, T15S, R11E. A certified water right is associated with this well site (Water Right No. 91-255). Additionally, supplemental water rights are appurtenant to this well site (Water Right Nos. 91-215, 216, 254, 255, 371). Although a pumphouse that was located near the well has recently been dismantled and removed, NEICO's intention is to retain the well and its associated water rights for future use.

HISTORY

- The Wellington Prep Plant has had water rights for this well site since 1958.
- The original owners of the site prepared and washed coal to be used for making steel at the Geneva Plant in Utah County, Utah.
- In the coal washing process, water was collected by: 1) pumping recycled water from the Clearwater Pond, 2) pumping it from the Price River, and 3) pumping it from the well mentioned above.
- The wash plant was in continuous operation from 1958 until 1985, when Kaiser Coal bought and operated the site.
- In 1985, revegetation research plots were irrigated with the well water. This practice was soon discontinued by Kaiser Coal.

- The Wellington Prep Plant site was purchased by NEICO and IPA in 1989. The site was operated by Castle Valley Resources as a coal loadout for the Genwal Mine.

- NEICO became sole owner of the site in 1995.

- In 1997, Earthco leased the property from NEICO and began to demolish and reclaim some areas of the site. It is believed that Earthco also utilized the water from the well at that time for these activities.

- From 1997 to 2003, Covol Techologies utilized the well water along with water from the Price River to fill the Clearwater Pond and North Slurry Pond. The water was necessary to transport and process the fines in the area as part of the operations at their onsite wash plant.

- More recently (2004-05), the well water has been used for a variety of activities including dust suppression and control.

- *Note*: When water was not being pumped from the pumphouse, well, or Price River, a small amount of water (estimated at approximately 1 gal/min) could usually be observed draining through the concrete ditch that was constructed to deliver water from the Price River to the pumphouse. Notably, this water drained *toward* the Price River instead of *away* from it as it did when water was delivered to the pumphouse for operational procedures. It was assumed that these flows were coming from either groundwater of the immediate area or from the pipeline coming from the aforementioned well in the area.

  Furthermore, there is often a "wet area" near the pumphouse, a potential consequence of the groundwater or well water of the area.

- After the Covol Wash Plant was removed in 2004, the pumphouse located in the vicinity of the well was removed by a Covol subcontractor without permission of the permittee (NEICO) or the operator (Covol).

- Absence of the pumphouse building structure created a potential public safety hazard due to below-grade support facilities. Covol then agreed to reclaim the remaining pumphouse structure to eliminate the safety problems. This work was accomplished in October 2004.

- During the winter of 2005, water was observed entering the Dryer Pond located on the west side of the Price River near the old facilities area of the Wellington Prep Plant.

- Water samples were taken and analyzed from the flows into the Dryer Pond by a NEICO representative. The water was found to be nontoxic or hazardous and met current water quality standards.

- A review of the as-built drawings of the Dryer Pond did not show the inlet where this water was entering the pond. Prior to the unexplained flow to the pond, the inlet was not visible.

- Consultation with the engineer that designed expansion of the Dryer Pond revealed that the inlet to the pond where water has been entering was unknown to him.

- In 2006, a Division inspector for the Wellington site reviewed archived early drawings and found that there was a water pipeline that historically conveyed water from the pumphouse area to the Dryer Pond area. It was postulated at that time that flows in the Dryer Pond could originate from the pumphouse area and be a consequence of changes made by reclamation activities of the pumphouse. Although the possibility does exist that this is the source of the water in the Dryer Pond, it is not a certainty.

MANAGEMENT

The water well and associated water rights to it are a valuable asset to NEICO for future operations by NEICO or potential future owners of the site. The well has been in use on the site since 1958. Recent meetings with potential buyers to the site have expressed a strong desire to retain the well and its water rights.

Suggestions have been made by the Division to permanently seal the water collection well described above as part of reclamation of the pumphouse. Because there is the strong likelihood that if the well was abandoned and sealed at this time that NEICO would loose the water rights associated with it, so NEICO has no plans to seal the well. NEICO therefore intends to manage the well "*in a manner approved by the Division*". The applicable state regulation for this well states the following:

R645.301.748 Casing and Sealing of Wells. Each water well will be cased, sealed, or otherwise managed, as approved by the Division, to prevent acid or other toxic drainage from entering ground or surface water, to minimize disturbance to the hydrologic balance, and to ensure the safety of people, livestock, fish and wildlife, and machinery in the permit and adjacent area. If a water well is **exposed** by coal mining and reclamation operations, it will be permanently closed unless otherwise managed in a manner approved by the Division. Use of a drilled hole or borehole or monitoring well as a water well must comply with the provision of R645-301-731.100 through R645-301-731.522 and R645-301-731.800.

Management procedures, comments, and advantages for retaining the well and its water rights are listed below.

- If, in fact, the water entering the Dryer Pond on the west side of the Price River originates from the pumphouse area, it is assumed that this discharge is the same as described in the *"Note"* in the HISTORY section above.

- The well is located in an area where there is no toxic or hazardous materials near it. The well is covered and generally unnoticeable to the public, so it should not be subject to unwanted material entering the ground or surface waters.

- With the pipeline system in place, water can be delivered from the well to either the east or west side of the river. This is a definite advantage to the operator(s) of the site. The water can currently be used for dust control or other purposes.

- The well water could be used for reclamation or industrial activities in the future.

- The well water currently provides wildlife habitat with its discharge into the Dryer Pond.

- When evaporation exceeds discharge to the Dryer Pond, the water level decreases. When discharge exceeds evaporation, the water level rises to the level of the input culvert and seems to reach a point of equilibrium and does not discharge from the Dryer Pond. If, however, water should release from the Dryer Pond, this pond is an approved UPDES point.

- The water entering the Dryer Pond is of good quality.

- Retention of the well and its water rights increases the market value of the Wellington property.

SUPPLEMENTAL INFORMATION
FOR APPENDIX M
AS REQUESTED BY THE
STATE OF UTAH, DIVISION OF OIL, GAS & MINING
(March 31, 2008)

The following information was requested by the State of Utah, Division of Oil, Gas & Mining (DOGM) in a deficiency letter dated December 12, 2007.

A) Requested Information

***R645-301-121.200**, Reference the revised Dwg E9-3341 on page 1 of Section 5.30 Operational Design Criteria and Plans, since the location of the buried pipeline is pertinent to the operation and reclamation narrative.*

Response

Reference to Dwg. E9-3341 and the Clear Water Pipeline have been made in the Mining and Reclamation Plan (MRP) Sec. 5.30.

B) Requested Information

As noted in Sec 5.30, p.2. please provide in Appendix M the details of the functioning water system, such as how flow is controlled and how backflow is prevented.

Response

As described in the introduction to Appendix M (dated October 20, 2006) and in the July 5, 2006 portion of Appendix M entitled *History & Management of the Water Collection Well at the Wellington Prep Plant*, the water system at the Wellington Prep Plant was altered in 2004 due to the theft of a pumphouse and well pump associated with the water system's primary groundwater source (known as the Price River water collection well). Because the Wellington Prep Plant is currently inactive, NEICO did not replace the pump and pumphouse. Instead, as described, the well was capped and the pumphouse was backfilled in order to protect the well casing and the groundwater, and to provide for public safety. When needed, the well can be made operable again, and NEICO is retaining its water right in anticipation of a future operational need for this groundwater source.

Meanwhile, a portion of this water system continues to function, albeit in a passive

manner. During previous operations, water was pumped towards the Dryer Pond located on the west side of the Price via a buried pipeline. Under the current system, groundwater is apparently entering the pipeline from the vicinity of the pumphouse and flowing by gravity to the Dryer Pond. NEICO does not control this flow of water; as noted throughout Appendix M, this flow is likely an inadvertent consequence of the 2004 activities. Without interference from NEICO, a fairly steady flow of approximately two gallons/minute enters the pipeline and discharges to the Dryer Pond. Once in the Dryer Pond, this water infiltrates, evaporates, or transpires, resulting in a fairly stable volume of impounded water. Further, water level limited by the elevation of the pipeline outlet to the Dryer Pond in relation to the elevation or head of water at the presumed source near the pumphouse. Through these passive means, water is transferred to the west side of NEICO's operations where it remains available for dust control or other industrial uses as needed. Should conditions at either the pumphouse or the Dryer Pond change in the future, resulting in the need for NEICO to take active control of this part of the water system, the Division and any other appropriate agencies would be notified.

Under this passive system, there appears to be little potential for backflow. The Dryer Pond has remained in equilibrium for several years. Only rarely could it receive a large enough influx of storm water to submerge the pipeline to a sufficient depth and for a long enough time to allow a reverse gradient to develop. As noted elsewhere in Appendix M, the Dryer Pond is substantially oversized, and before even receiving significant storm water inflow, the associated Auxiliary and Roadside Ponds would have to fill.

However, because the Dryer Pond's spillway elevation is higher than the presumed intake elevation near the pumphouse, the potential for a gradient reversal and subsequent backflow theoretically exists. In the very unlikely event that the Dryer Pond were to receive such an influx of water from an extreme runoff event, and fill the Pond to an elevation that is higher than the water table at the pipeline's source, flow reversal could be initiated due to that head differential. Given the unknowns in the system (friction losses in the pipeline, pipeline gradient, water table elevation/gradient at the pumphouse vicinity at the time of reversal, residence time for storm water inflow, etc.), it is not possible to define the exact circumstances under which backflow could occur to a great enough extent that it would result in water being moved all the way back to the pumphouse area.

In addition, for water in the pipeline to actually discharge back into the pumphouse area, it would also have to overcome the head and gradient associated with the alluvial groundwater into which the discharge would occur (the presumed pathway for water entering the pipeline is seepage through the alluvium, and not simply an open-pipe inlet wherein the water enters – or could exit -- freely). Under runoff circumstances large enough to result in sufficient quantities of water in the Dryer Pond, the Price River itself and the groundwater in the surrounding alluvium in the pumphouse vicinity would also likely be abnormally high, resulting in an even greater head than normal in the direction

back toward the Dryer Pond.

By its very nature, a runoff event that could produce these conditions in the Dryer Pond would be very infrequent and very short term. Therefore, if backflow does occur and results in water discharging in the pumphouse vicinity, it would be for a limited time and extent. Further, this water would consist of a combination of the same shallow alluvial groundwater as resides in the pumphouse vicinity and uncontaminated storm water. NEICO has an active UPDES Permit which allows discharge of water from several locations at the Wellington Prep Plant, including the Dryer Pond. Water quality from both of these sources would be good. Thus, there would be no impact to surface water or groundwater as a result of a temporary and rare backflow event. Should the Wellington Prep Plant become operational in the future, this issue would be reassessed as part of the permitting process, and water system modifications would be likely.

C) Requested Information

- *Verify the statements made concerning the connection, function. and sequence of the three ponds (p. 2, Sec. 5.30; pp. 1b and 1c, Sec 7.42).*

Response

In a meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, this deficiency was resolved. As a result, no further information was necessary to be included with this submittal.

D) Requested Information

- *Correct p. 2 of Section 5.30 to state that water enters the Dryer Pond in an uncontrolled manner through a subsurface pipe that originates at the Price River pumphouse.*

Response

Page 2 of Section 5.30 has been modified to indicate that, in addition to runoff, groundwater also currently enters the Dryer Pond. As a way to simplify the process, consecutive pages were again replaced.

E) Requested Information

- *Do not omit the Dike description on p. 13, Section 5.30.*

Response

In a meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, this deficiency was resolved. As a result, no further information was necessary to be included with this submittal.

F) Requested Information

Follow up the statement at the 5th bullet on p. 19, Appendix M to indicate what other sources of water might be entering the buried culvert and exiting into the Dryer Pond.

Response

The Division reference to page 19 appears to be an error; perhaps the 5th bullet on page 18 was the focus of the request to elaborate on other potential sources of water that could be entering the Dryer Pond. In any case, the referenced bullet is in the July 5, 2006 portion of Appendix M entitled *History & Management of the Water Collection Well at the Wellington Prep Plant*, which was originally provided to the Division before additional source investigations were completed. Subsequent to the July 5, 2006 "*History*", the presumed source was documented with greater certainty than conveyed in that original writeup.

As noted throughout Appendix M, including the JBR study dated August 3, 2006, investigations indicate that the most likely source of water entering the buried culvert is the shallow alluvial groundwater in the vicinity of the Price River water collection well. There does not appear to be any other likely sources, though it cannot be stated with total certainty that the presumed source is has been correctly identified. There is perhaps some remote possibility that groundwater from another location along the Price River, or the Price River itself, is the source. However, the JBR study determined that the available water quality data did not support this possibility. There is no justification for further speculation about these sources, and there does not appear to be any other likely source that can be identified.

G) Requested Information

Information regarding the beneficial use of the water right, provided on pp. 4 and 19, is contradictory.

Response

Appendix M, Page 4 (10/20/06) notes that the water right allows water from the collection well to be used for industrial purposes in locations that include the pumphouse area and the Dryer Pond area. Page 19 notes that the water can be used for dust control, reclamation, and industrial purposes, on either the west side of the Price River (where the Dryer Pond is located) or the east side of the Price River (where the pumphouse is located). As dust control and reclamation are both considered valid industrial uses, there does not appear to be a conflict between the statements on these two pages. Page 19 goes on to note that the Dryer Pond is currently providing wildlife habitat, which is true. This is a default use that occurs simply because of the good quality water and the diverse vegetation that the pond is currently providing; this use is not an official beneficial use. NEICO does not intend to imply that wildlife is a current official beneficial use of the groundwater, or that it will be formalized as an official beneficial use in the future.

H) Requested Information

***R645-301-121.200**, The Permittee needs to remove the reference to Dwg. A9-1464 in the Dryer Pond discussion on page 5 in Section 5.30 of the submittal. In 2006, Dwg. A9-1464 was removed from the MRP and replaced by Dwg. 712e.*

Response

Reference to Dwg. A9-1464 in Sec. 5.30 has been removed.

I) Requested Information

***R645-301-121.200, -742.300**, The Permittee needs to resolve discrepancies between the current and new versions of Table 742, and between Table 742 and Dwg. T1- 9597. In Table 742.0c in the current MRP, CVL-C2 is sourced by ditches CVL- D2 and D3, and CVL-C3 [with a printed 2 crossed-out and replaced with a hand-written 3 in the Division's copy] receives flow from CVL-D5; these are in accord with Dwg. T1-9597. In the proposed amendment, culvert CVL-C3 is not listed. Watershed CVL-7F is given as the contributing source to CVL-C2, but Dwg. T1- 9597 shows CVL-7F is at the outlet end of culvert CVL-C3 and is not associated with CVL-C2.*

Response

As a follow-up to the meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, this deficiency was resolved. Specifically, in an email from J. Smith dated February 15, 2008, this deficiency was resolved. As a result, no further information was necessary to be included with this submittal.

J) Requested Information

***R645-301-121.200**, The Permittee needs to clearly identify the correct location of the runoff and pond-sizing calculations referred to on pp. 6, 7, and 9 in Section 5.30 of the submittal: there are no such calculations in Appendix B. There are runoff and pond-sizing calculations in the Hydrology Appendix in Volume II, but it is not clear if this appendix contains the referenced calculations and, if it does, it is not clear where in this large appendix the respective calculations are located.*

Response

The references have been changed in MRP, Section 5.30..

K) Requested Information

***R645-301-121.200**, The Explanation on Dwg. E9-3341 lists "YY. COVOL MODULAR COAL FINES WASH PLANT" and "H. RIVER PUMPHOUSE" under the heading "FACILITIES REMOVED DURING RECLAMATION - NO LONGER SHOWN ON MAP", but both facilities are still shown on the map. The Permittee needs to rectify this discrepancy.*

Response

The structures and references to them have been removed from Dwg. E9-3341.

L) Requested Information

***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 locations on a map and provide acreage figures for the extent of the proposed disturbances required to seal the underground pipe.*

Response

Current measures for protection of the soils in the pump house area during reclamation activities were described earlier in this document (see Appendix M, "Requested Information", No. 3, pp. 3-5, 10/20/06).

The following was also stated in the same information provided earlier (see Appendix M, "Requested Information", No. 6, pp. 6-7, 10/20/06):

> *"NEICO's engineer would supervise soils excavation near the Price River. This could occur either on the pump house side of the river, or on the other side of the river immediately across from the pump house, based upon the engineer's judgement at the time. Work would not occur in the river itself or any adjacent wetlands, nor would equipment be placed in these locations. Groundwater would be intercepted within less than 10 feet of the ground surface; the pipe cannot be much deeper than that, based upon the elevation of its outlet at the Dryer Pond. Encountered water would be pumped from the excavation as needed, and properly managed to prevent erosion and subsequent sedimentation. The working area would be protected with a coffer dam if needed and feasible.*
>
> *Depending upon the condition of the pipe and the mechanism by which water enters it, an appropriate closure would be done, again in consultation with the registered Professional Engineer. Because the existing condition is not known, the exact means of closure cannot be determined. However, it could consist of a steel cap, a concrete plug, or any number of possible solutions. The chosen solution would be intended to be permanent, effective, and innocuous.*
>
> *Once the pipe has been closed, it would be monitored for several weeks, both at the closure location and at the Dryer Pond outlet, to verify that the flow has stopped. The excavation would then be filled with the removed material and prepared for revegetation according to the MRP. The Dryer Pond would continue to be observed for several more weeks, prior to it being filled and regarded."*

At the time of final reclamation, interception of groundwater is possible when the pipeline is exposed for sealing. The depth to groundwater and water level of the Price River varies depending on the season, but as suggested above (and previously in Appendix M), the groundwater depth would be less than 10 ft and, and when encountered, "*it would be pumped from the excavation as needed, and properly managed to prevent erosion and subsequent sedimentation. The working area would be protected with a coffer dam if needed and feasible*". Measures for riparian and wetland protection and revegetation have also been described in the Wellington Prep Plant's MRP, Sections 3.33 and 3.41, respectively.

Also described previously in Appendix M (10/20/06), because there are no detailed as-built drawings for the pipeline, there remains some the uncertainty of the *exact location* in which sealing it will occur once reclamation begins. Subsequently, a precise map location and exact square footage of disturbance will not be possible until that time. However, a

very close approximation of the location is shown on Dwg. E9-3341 where the Clearwater Pipeline crosses the Price River. Moreover, disturbance will be minimal, probably excavating soil with a small trackhoe followed by soils replacement in the same sequential order as they were removed – and as soon as possible once pipeline water flow has been conclusively terminated.

Also described above and previously in Appendix M, a Professional Engineer will be onsite to supervise the reclamation and sealing of the pipeline. All sediment control procedures previously outlined in Wellington Prep Plant's MRP will be followed to ensure protection and salvage of the native soils, excavated material and Price River water.

The soil types encountered for sealing reclamation of the pipeline will most likely be exclusively NRCS Map Unit 94–*Riverwash*, but it is possible (but unlikely) to also encounter Map Unit 93–*Ravola-Slickspots complex*. These soils have been described in Wellington Prep Plant's MRP, Section 2.22. Soil maps of the entire permit and adjacent areas have been provided in the MRP (Dwgs. G9-3510 and G9-3511). A recent soil map of the pumphouse area taken from the NRCS Soil Survey has been included in this document [see Soil Map–Carbon Area, Utah, Parts of Carbon and Emery Counties (Wellington Prep Plant Area)].

M) Requested Information

***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 buried pipe "inlet" as well as the location of the Dryer Pond outlet.*

Response

In a meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, this deficiency was resolved – a map had aleady been provide (see Dwg. E9-3341). As a result, no further information was necessary to be included with this submittal.

N) Requested Information

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

Response

In a meeting at *Mt. Nebo Scientific, Inc.* on February 12, 2008 that included J. Smith, K. Knoop and P. Collins, it was determined that a 8.5"x11" figure with these sample locations would be provided. This figure, called: *"Soil Sample Locations, Wellington Prep Plant, Pump House Area, 2006*" has been included with this information.

O) Requested Information

R645-301-526.220, r645-301-730, and R645-301-742.221.35, *The 6th bullet on p. 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.*

Response:

An explanation regarding backflow prevention was also requested by DOGM under **R645-301-121.200** above. Please see the response under that heading.

P) Requested Information

Describe the current operation of the water well, that NEICO desires to retain (App M, p. 18).

Response

Without the well pump (which as previously stated was stolen in 2004), NEICO does not have the means to physically "operate" the water well. However, the remaining well infrastructure is being maintained in a safe and secure manner until such time as there is a need to install a new pump and once again withdraw water as allowed by the valid water right associated with this well.

Q) Requested Information

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.

Response

It is not possible to provide design drawings and cross sections that demonstrate the interaction of the well and the flow in buried pipeline. As discussed in a meeting with Jim Smith on February 12, 2008, additional response to this line item is not required.

R) Requested Information

***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.*

Response

Reclamation of the area has been described in Response "E" above. In the description provided above regarding sealing of the pipeline it is stated that the exact location for these activities will only be known at that time. Consequently, certified as-built maps with the location of these activities will be provided at that time.

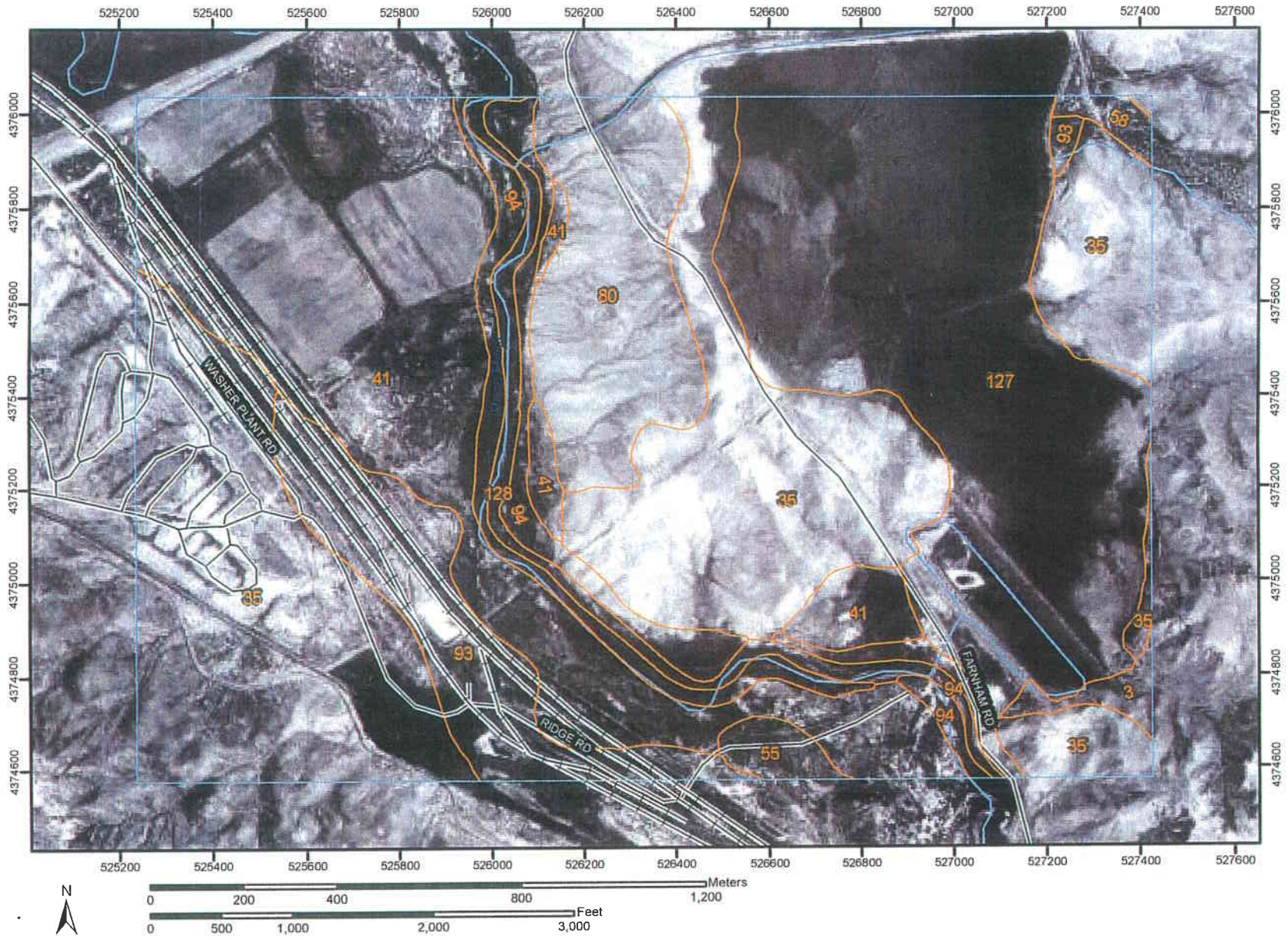
S) Requested Information

How will the uncertainty in the source of the water to the Dryer Pond affect the reclamation plan (5th bullet on p. 19, Appendix M)?

Response

With the procedures described in above (see Response "E"), there will be not be the uncertainty of the water source to the Dryer Pond.

Soil Map–Carbon Area, Utah, Parts of Carbon and Emery Counties
(Wellington Prep Plant Area)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 12N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Carbon Area, Utah, Parts of Carbon and Emery Counties
Survey Area Data: Version 3, Dec 14, 2006

Date(s) aerial images were photographed: 7/5/1997

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Carbon Area, Utah, Parts of Carbon and Emery Counties (UT616)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Badland-Rubbleland-Rock outcrop complex	5.2	0.7%
35	Gerst-Badland-Stormitt complex	246.0	31.0%
41	Green River-Juva variant complex	178.8	22.6%
55	Hunting loam, 1 to 3 percent slopes	6.4	0.8%
58	Juva variant fine sandy loam	3.8	0.5%
80	Persayo-Chipeta complex	59.8	7.5%
93	Ravola-Slickspots complex	49.3	6.2%
94	Riverwash	43.4	5.5%
127	Miscellaneous water	180.9	22.8%
128	Water	18.8	2.4%
Totals for Area of Interest (AOI)		792.4	100.0%


Soil Sample
West Side
"Bog"
Soil Sample
West Side
"Wetland"
SOIL SAMPLE LOCATIONS
WELLINGTON PREP PLANT
PUMP HOUSE AREA
2006
Mt. Nebo Scientific, Inc.
Springville, UT
March 28, 2008
©2007 Google
Pointer 39°31'21.00" N 110°41'07.04" W elev 5351 ft
Streaming 100%
Eye alt 8226 ft