**MT NEBO SCIENTIFIC, INC.**
*research & consulting*

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

## Deficiency Response

March 31, 2008

Submitted to the State of Utah, Division of Oil, Gas & Mining

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**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.

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**B.**

**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. When approved, Appendix M should be added to MRP, Appendices, Volume III-C.

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**C.**

**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

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**D.**

**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. Subsequent pages have also been included in this submittal – some of which were changed for the following deficiencies.

**MRP Insertion Instructions**:

Sec. 5.30, p. 2-13, 03/31/08, of this submittal replaces
Sec. 5.30, p. 2-13, 10/20/06, unapproved submittal to DOGM.

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**E.**

**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

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**F.**

**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.

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**G.**

**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.

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**H.**

**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; it replaced Sec. 5.30, pp. 2-13, 10/20/06 of the unapproved submittal to DOGM.

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**I.**

**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

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**J.**

**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; it replaced Sec. 5.30, pp. 2-13, 10/20/06 of the unapproved submittal to DOGM.

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**K.**

**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.

**MRP Insertion Instructions**:

Drawing E9-3341 stamped 03/26/08 of this submittal replaces
Drawing E9-3341 stamped 10/19/06 of the previous 10/20/06 unapproved submittal to DOGM.

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**L.**

**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.

**M.**

**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 aleady 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

**N.**

**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.

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**O.**

**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.

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**P.**
**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.

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**Q.**
**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

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**R.**

**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.

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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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**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.

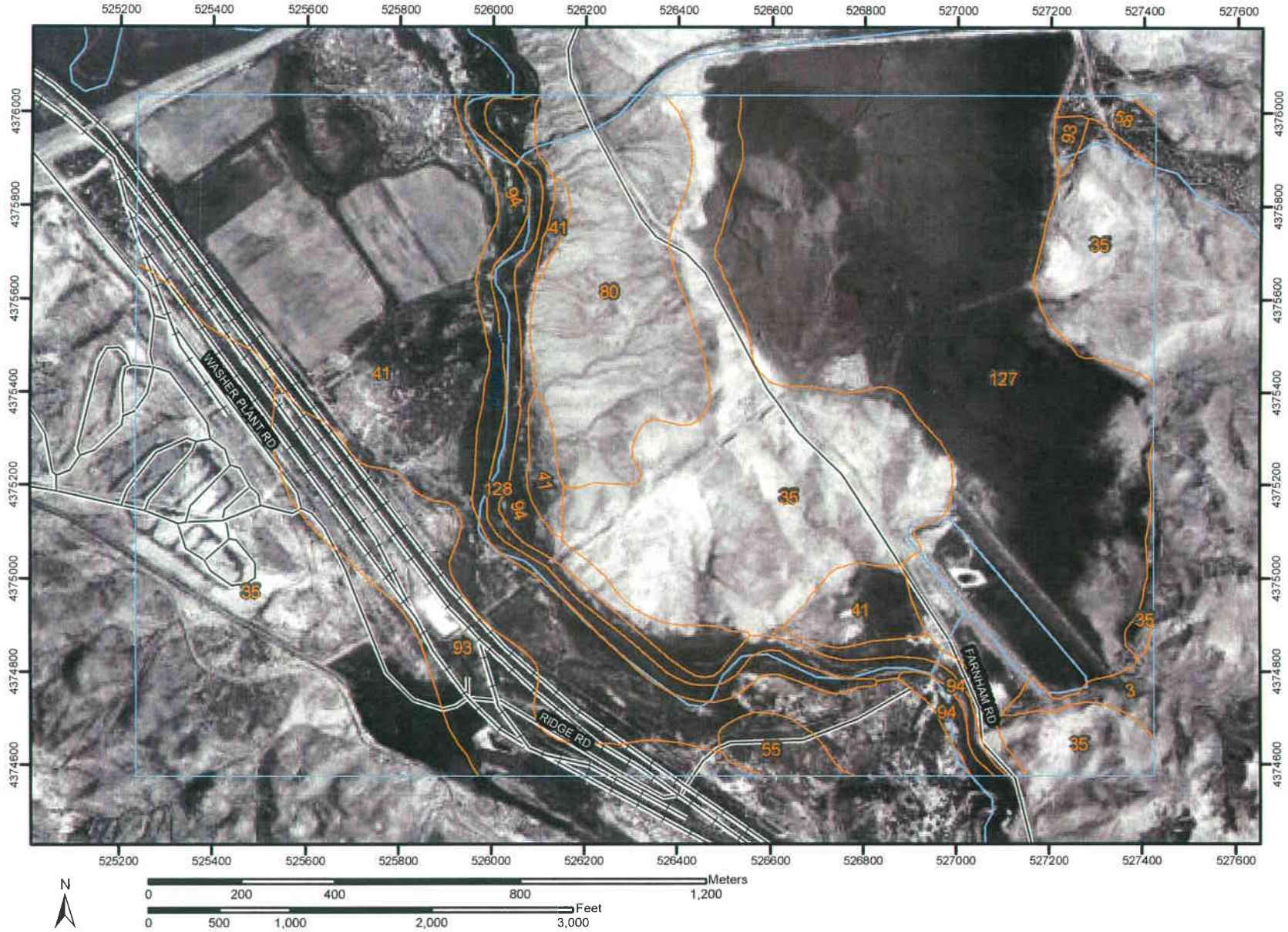
S) Requested Information

*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