0013

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Kathleen Clarke
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

March 26, 1999

TO: Pamela Grubaugh-Littig, Permit Supervisor

THRU: Joe Helfrich, Permit Supervisor

FROM: Robert Davidson, Soils Reclamation Specialist RAD

RE: EARTHCO - Bond Release and New Proposed Topsoil Borrow Area, Nevada Electric Investment Company, Wellington Preparation Plant, ACT/007/012-97BR, Folder #2, Carbon County, Utah Task 665

SUMMARY:

The present submittal received on November 16, 1998, and subsequently on December 11, 1998, February 18, 1999, and March 5, 1999, requests a change of post-mining land use for Areas B, C and portions of H to industrial use and further identifies an excised portion of Area B to remain as Borrow Area J.

Since July of 1996, the Division has been working with NEICO to locate borrow material.

- The Division's July 25, 1996 Technical Analysis (TA) for the Wellington Mine Reclamation Plan (MRP) contained the following deficiency: ***R645-301-553.252,*** *supply the needed amount of borrow material to meet the minimum regulatory requirement of 4 feet of the best available, nontoxic and noncombustible material.*

- On December 23, 1996, soil Borrow Areas "A" and "B" were approved for soil borrow and were incorporated into the MRP.

- On June 20, 1997, NEICO's Midterm submittal requested that the application for using Soil Borrow Areas "A", "B", and "C" (Plate G9-3511) be withdrawn from the MRP based on the imminent sale and industrial site development by Earthco.

- On February 18, 1998 the Mid-Term submittal was approved, Borrow Areas "D", "E", "H", and "G" were approved as soil borrow and Areas A, B, and C were released as soil borrow.

- On January 15, 1999, the Division (Paul Baker and Robert Davidson) met on the Wellington site with the NEICO resident agent (Patrick Collins, Mt. Nebo Scientific) and Andelex personnel (Dave Shaver and Jean Semborski) to discuss and observe

proposed topsoil borrow areas affected by bond release and the post-mining land use change. The site visit concluded by Mr. Shaver's proposal to retain a portion of Area C within the permit area with agreement by Mr. Davidson and Mr. Baker.

- On January 28, 1999, the Division (Paul Baker, Robert Davidson, Sharon Falvey, Pam Grubaugh-Littig, and Wayne Western) met on the Wellington site with the NEICO resident agent (Patrick Collins, Mt. Nebo Scientific) and Andelex personnel (Dave Shaver) to observe, discuss and finalize issues regarding the bond release and the post-mining land use change. A northwest corner of Borrow Area B was selected for being retained within the permit area as soil borrow, rather than the previously agreed portion of Area C as determined after the January 15, 1999 field visit.

The background information presented above demonstrates that the reclamation plan for the Wellington Preparation Plant has varied according to the NEICO business plan and that the Division has attempted to accommodate NEICO in all their propositions.

This latest submittal requests that soil borrow Areas B, C and portions of H be released from bond with the intention of selling the land for industrial use. In this transaction, the topsoil resources from Areas B and C would not be available for soil borrow. The Division will base it's decision on soil borrow approval on the following:

1. Best available material within the permit area to support vegetation in terms of soil quality;

2. Minimize surface disturbance by disturbing the smallest practicable area in relation to borrow site access and proximity to the coarse refuse pile;

3. Demonstrate prompt vegetation establishment and maintenance for minimizing surface erosion; and

The other issue raised by this submittal is the disposition of the coal refuse material on the surface in the main plant area.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.21, 817.200(c); R645-301-220, -301-411.

Analysis:

Section 2.22 provides a detailed history of soil sampling in the topsoil borrow areas D, E, F, G, H, and I with soil survey studies presented in 9 different sampling periods. The 10th sample period is for the coal waste and affected soils within the preparation plant area. These periods are presented with sample procedures, soil profile descriptions and laboratory analyses.

Substitute Topsoil Borrow Area I (9th Sampling Period)

Section 2.41 contains a detailed account for soil resources available as soil borrow for reclaiming the Wellington site. The following additional environmental resource information is provided with this current submittal:

- A soil survey was performed for Area I. A "Soil Investigation Report" is provided in Section 2.41 for Area I, approximately 7.55 acres located in the SW corner of the permit area. Map G9-3511 shows the location of Area I and the location for each soil pit.

The Area I soils are described as Stormitt series, a loamy-skeletal, carbonatic, mesic Ustic Haplocalcid. The A horizon and Bw horizon is about 9 inches thick (17% rock fragments, primarily gravels) Underlying this is the calcic Bk horizon, about 17 inches thick (36% rock fragments, gravels and cobbles). The C horizon averages 7 feet in depth (59% rock fragments, gravels and cobbles), with a texture variously described as sandy loam, sandy clay loam, and clay loam. Rooting depth was found to be limited to the upper 30 inches of soil (i.e. the A, Bw and Bk horizons).

Stormitt series is in the Semidesert Gravelly Loam range site. The average annual precipitation is 8 to 10 inches. The hazard of water erosion is medium. There was 23% plant cover noted at the sites of excavation. Plants such as Sagebrush, Galleta grass, Shadscale, Prickly Pear cactus, Indian Ricegrass, and Rabbitbrush were noted. The suitability of Stormitt series for rangeland seeding is poor. The main limitations are the stoniness of the soil and the low annual precipitation (Jensen and Borchert, 1988).

Nine sites were excavated and described for Area I. Three sites were sampled by horizon: W3, W5 and W7; and, the remaining six sites were sampled by combining the subsurface horizons. Sites W3, W5, and W7 illustrate the quality of the soil which naturally occurs in the

germination and growth medium. In the top 8 -10 inches the pH is 7.8 to 8.2; the EC is 0.63 to 1.09 mmhos/cm; the SAR is 1.6 to 4.8; the texture was noted as CL, SL, and SCL; percent organic matter is 0.8%; nitrogen varies from 1.2 to 3.0 mg/L; and water holding capacity is 0.1 in/in. In the lower horizons, the SAR jumps to levels of 5.8 to 13; the available water holding capacity is reduced to poor levels below 0.05 in/in; and the EC rises to the fair to poor range with values from 4.11 to 11.0.

The submittal concludes that with the exception of site W7, all soils will be suitable according to the Division's guidelines, after mixing has occurred. The Guidelines for Topsoil and Overburden[1] provide an evaluation of soil for vegetative root establishment. When the survey results are compared to this table, the Division must take exception to the conclusion reached by the Permittee as follows:

- Even after mixing the samples, high conductivity values were noted for W1 (7 - 60") and W2 (15 - 48"), with W4, W6, W7 and W8 composite samples approaching the poor value of 8.0 mmhos/cm.

- Poor to Fair SAR values were noted in the composite samples of W1 (7 - 60" and 60 - 123"), W2 (15 - 48" and 48 - 84"), W4 (9 - 72" and 72-120"), W6 (24 - 60" and 60 - 114"), W8 (48 - 84"), W 9 (48 -114").

- Composite samples which rated poorly for available water holding capacity (based upon the assumptions listed on page 279 of sec. 2.22 of the MRP) were sites W1 (60 - 123"), W2 (48 - 84"), W3(72 - 108"), W4 (72-120), W6 (60 - 114"), W8 (48 - 84"), and W9 (48 - 114"). The lower organic matter in the subsurface horizons would impact the available water capacity in a negative fashion as well.

The Stormitt soil is a soil that is saline just below the surface horizons and sodic at its depths. The deeper materials would be used to reclaim the disturbed area and the surface horizons would be returned to the borrow site for reclamation. This presents several **problems**.

- **First**, the reclamation of the borrow site would not be easily accomplished, given the amount of rain and the potential for erosion during storm events prior to adequate vegetation reestablishment.

- **Second**, within low rainfall areas, salt redistribution and contamination from underlying, exposed deeper, salt-affected soils to the soil surface is a significant problem after topsoil replacement and surface reclamation.

- **Third**, the Stormitt soil material is not the best available for reclamation of the

[1]Leatherwood, J., and Duce, D., 1988. Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining. State of Utah Department of Natural Resources, Division of Oil, Gas and Mining.

disturbed area when compared to Greybull soil series.

Soil from the Greybull series is currently approved within the Wellington MRP as the best available material within the permit area. In fact, the Greybull series is a source of quality substitute topsoil material that presents little problem for reclamation of the disturbed area (see NEICO-5, NEICO-6, C-1, and the SCS Soil Survey of the Carbon Area, Utah). As noted in section 2.22, page 97, 98, 108, and 122 of the MRP, the Greybull series (represented by the sample NEICO 6) is a fine-loamy, mixed, calcareous, mesic Typic Torriorthent. There are 10 to 15% gravels in this silty clay loam/ clay loam soil. The pH ranges from 7.9 to 8.1, the SAR values are 1.3 to 2.2; the EC ranges from 1.0 to 2.9 mmhos/cm.

The amendment has retained information on the "proposed" area I with the statement that the area is not proposed for use at this time for final reclamation, but is a viable option for additional available borrow material. However, before the proposed Borrow Area I can be considered as a "viable option" for soil borrow within the MRP, certain Division criteria must be met to show that Area I is an appropriate source for best available material (substitute topsoil) within the permit area. In order to achieve successful reclamation of lands affected by coal mining activities, use of the proposed soil borrow Area I needs to be in accordance with state regulations to ***minimize surface disturbance*** *and to* ***disturb the smallest practicable area*** *at any one time. Greenhouse studies or field trials, or equivalent methods are needed for the proposed soil borrow Area I to* ***demonstrate*** *that revegetation is feasible to minimize surface erosion. Borrow Area I is located in a sensitive environmental area for reestablishing prompt re-vegetation after disturbance which will adversely affect soil stabilization and result in maximum surface erosion.*

Preparation Plant Surface Coal Waste Material (10th Sampling Period)

On February 1, 1999, samples were taken from the coal waste material within the Wellington Preparation Plant area for acid forming and toxic properties. Analyses were performed by Brigham Young University's soils lab and by Inter-Mountain Lab in Farmington, New Mexico. The sampling scheme is shown and explained in the section, with 25 samples taken that represent the coal waste within the Preparation Plant area and coal waste constructed berm. Analyses included EC, pH, acid-forming potential, boron, and selenium.

All samples taken from the coal waste exceeded DOGM's guidelines for boron toxicity. In addition, boron values within the coal waste exceed all background boron levels in native soils throughout the permit area as shown in Section 2.22.

The sampling depths for the coal waste material could not be located in the current submittal. The application stated that sampling depths were recorded at each sampling location. Sampling depths, acreage, or resulting volumes of coal waste within the Preparation Plant could not be located within the submittal.

Findings:

Information provided in the application is not considered adequate to meet the requirements of this section of the regulations. The applicant must provide the following in accordance with:

R645-301-553.252, R645-301-232.200 and R645-301-233, Remove all references concerning Area I as a soil borrow area since Area I is not approved by the Division as a source of suitable soil borrow. Area I cannot be listed as a "viable option" for additional topsoil borrow material until soil suitability has been **demonstrated** to the Division. The proposed Borrow Area I does not meet the Division's criteria as the source for **best available material** (substitute topsoil) **within the permit area.**

R645-301-330 (including 331 and 333), R645-301-341.300, Remove all references concerning Area I as a soil borrow area since Area I cannot be considered as a "viable" source of topsoil borrow, until State regulations have been met to **demonstrate** that revegetation is feasible to minimize surface erosion. In order to achieve successful reclamation of lands affected by coal mining activities, use of the proposed Area I needs to be in accordance with State regulations to **minimize surface disturbance** and to **disturb the smallest practicable area.**

R645-301-120, Provide depths and volume of the coal waste material within the Preparation Plant area. The Division is unable to verify coal waste volumes within the preparation plant area without depth and area measurements. The actual volume of the coal waste material on the ground is unknown to substantiate both AML fees or verify the 18,000 cy of material needed for use under the coal storage piles.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

Section 2.41 of the MRP has been amended with this submittal by updating information concerning Topsoil Borrow Areas G, H, I and a newly identified Area J, which is located within northwest corner of Area B.

Topsoil Borrow Area G

The current approved MRP shows Area G as containing 9550 cy of soil available for the worst-case reclamation scenario, with an estimated 3,000 cy distributed to the pump house site.

The amendment has changed the amount of soil available in Area G from the approved MRP value of 9550 cy to 9,770 cy. No justification, analysis or additional survey work have been provided to substantiate the increase of 220 cy of soil available.

Topsoil Borrow Area H

The current approved MRP shows Area H as providing 179,332 cy of soil, with approximately 43,300 cy for reclaiming the coarse refuse pile. The 43,300 cy of soil is available in the vicinity of test pits C-1 (Greybull soil), and pits EA-3, EA-4 and EA-5 (Stormitt soil). In addition, for the worst case scenario, the remainder 136,032 cy of soil will be placed on the Slurry Ponds.

The following comments relate to the amendment and changes for volumes of soil borrow available from Area H:

- *The amendment has not identified the amount of soil being released within the excised portion of Area H (C1, C2, & C3) as a result of the alternate postmining land use change. The current MRP Section 2.22, Area H, shows that C1, C2, and C3 areas contain 22,221 cy of borrow soil.*

- The volume of soil being released within the excised portion of Area H includes all of the Stormitt soil on top of all the northern knolls. Soil borrow from the northern knolls (12,136 cy) is delineated by the green hatches, and is identified by the test pits C-5 and C-6 with an average soil borrow thickness of 15 inches.

- *Within the approved MRP, the 43,300 cy of soil for reclaiming the coarse refuse pile is identified as being supplied from areas C-1(10,085 cy), and areas EA-3(15,165 cy), EA-4 (11,144 cy) and EA-5 (6,910 cy). Soil borrow from Area J is replacing soil borrow lost from the excised portions of Area H, which includes area C-1. Therefore, a portion of Area J borrow, specifically 10,085 cy, goes in part to reclaim the coarse refuse pile, and not just for use in the worst case scenario.*

- *The amendment lists 139,268 cy of soil borrow available from Area H for reclamation. This volume is in error. The approved MRP shows that Area H supplies 179,332 cy. With the 22,221 cy of soil borrow being lost in the excised portion of Area H, the amount of borrow left should be 157,111 cy, not 139,268 cy.*

- *Soil volume amounts as discussed within this section do not match with numbers as shown in Table 2.41-1.*

Topsoil Borrow Area I

As mentioned in the Soil Resource Analysis section, Area I does not meet the regulatory requirements for an approved topsoil borrow area. At the present, it is not a viable option for

additional available borrow material.

Topsoil Borrow Area J

The amendment identifies a new borrow area (Area J) which is an excised portion of Area B and will remain as a disjunct portion of the permit area. The acreage is identified as 6.73 acres and is located approximately 1,400 ft from the remaining permit area as shown on drawing G9-3511.

The amendment identifies 13,019 cy of soil borrow material available from Area J. This amount of soil borrow is 9,202 cy short of replacing the 22,221 cy of soil borrow lost from the excised portion Area H.

The amendment states that Andelex may substitute soil salvaged from the "released area" (Area B) once construction commences. This substitute borrow source would be stockpiled within the permit area. If the material from the released area is used, the salvage operations will be supervised by a professional soil specialist. Once the appropriate volumes have been stockpiled to replace the borrow lost in the excised portion of Area H, Area J could then be released from the permit area.

Reclamation Summary Table 2.41-1 and Table 2.41-2

Information within Tables 2.41-1 and -2 has been altered to account for changes within section 2.41. However, there are inconsistencies with changes made within section 2.41 and alterations as shown in both tables as follows:

- *Table 2.41-1, Slurry Ponds, Area G - The approved MRP lists 9550 cy, the amendment section 2.41 lists 9770 cy, and Table 2.41-1 shows 9570 cy.*

- *Table 2.41-1, Slurry Ponds, Area H - The approved MRP lists 136,050, the amendment section 2.41 lists 95,968 cy, and the Table shows 113,811 cy. The approved MRP shows that Area H supplies 179,332 cy. With the 22,221 cy of soil borrow being lost in the excised portion of Area H, the amount of borrow left should be 157,111 cy.*

- *Table 2.41-2, River Pump house - The approved MRP shows the 3,000 cy borrow source as the Lower Refuse Dike. The amendment needs to show the borrow source as the Lower Refuse Dike, not Area G.*

- *Tables 2.41-1 and -2, Coarse Refuse Pile - The current approved plan shows Area H supplying the 43,300 cy which was supplied by C-1, EA-3, EA-4 and EA-5. The amendment shows only Area H supplying the 43,300 cy from EA-3, EA-4 and EA-5. The amendment needs to identify the soil volume lost from C-1 (10,085 cy) as being replaced from Area J.*

- *Tables 2.41-1 and -2, Coarse Slurry Pile - The approved MRP shows that the Coarse Slurry Pile will be redistributed to the slurry pond in both the worst and best case scenarios. This information has been lost in the amendment which has removed this information from the plan. The amendment needs to restore this vital information that the Coarse Slurry Pile will be redistributed to the slurry pond for both the worst and best case scenarios.*

Section 5.4, #4, Area West of Price River, Soil Borrow Areas

The amendment states that during soil removal from the borrow areas (see G9-3511) the soil borrow areas will be graded as shown on Map E9-3342. Map E9-3342 does not show any alterations to the original contour lines to account for soil removal and grading.

Findings:

Information provided in the application is not considered adequate to meet the requirements of this section of the regulations. The applicant must provide the following in accordance with:

R645-301-120, R645-301-230 and R645-301-240, The following relate to the amendment and changes made for volumes of soil borrow within Section 2.41.

- The amendment has not identified the amount of soil being released within the excised portion of Area H (C1, C2, & C3) as a result of the alternate postmining land use change. The current MRP Section 2.22, Area H, shows that C1, C2, and C3 areas contain 22,221 cy of borrow soil.

- Within the approved MRP, the 43,300 cy of soil for reclaiming the coarse refuse pile is identified as being supplied from areas C-1(10,085 cy), and areas EA-3(15,165 cy), EA-4 (11,144 cy) and EA-5 (6,910 cy). Soil borrow from Area J is replacing soil borrow lost from the excised portions of Area H, which includes area C-1. Therefore, a portion of Area J borrow, specifically 10,085 cy, goes in part to reclaim the coarse refuse pile, and not just for use in the worst case scenario.

- The amendment lists 139,268 cy of soil borrow available from Area H for reclamation. This volume is in error. The approved MRP shows that Area H supplies 179,332 cy. With the 22,221 cy of soil borrow being lost in the excised portion of Area H, the amount of borrow left should be 157,111 cy, not 139,268 cy.

- Soil volume amounts as discussed within this section do not match with numbers as shown in Table 2.41-1.

R645-301-120, R645-301-230 and R645-301-240, There are inconsistencies with

changes made within section 2.41 and alterations both tables 2.41-1 and -2 as follows:

- Table 2.41-1, Slurry Ponds, Area G - The approved MRP lists 9550 cy, the amendment section 2.41 lists 9770 cy, and Table 2.41-1 shows 9570 cy.

- Table 2.41-1, Slurry Ponds, Area H - The approved MRP lists 136,050, the amendment section 2.41 lists 95,968 cy, and the Table shows 113,811 cy. The approved MRP shows that Area H supplies 179,332 cy. With the 22,221 cy of soil borrow being lost in the excised portion of Area H, the amount of borrow left should be 157,111 cy.

- Table 2.41-2, River Pump house - The approved MRP shows the 3,000 cy borrow source as the Lower Refuse Dike. The amendment needs to show the borrow source as the Lower Refuse Dike, not Area G.

- Tables 2.41-1 and -2, Coarse Refuse Pile - The current approved plan shows Area H supplying the 43,300 cy which was supplied by C-1, EA-3, EA-4 and EA-5. The amendment shows only Area H supplying the 43,300 cy from EA-3, EA-4 and EA-5. The amendment needs to identify the soil volume lost from C-1 (10,085 cy) as being replaced from Area J.

- Tables 2.41-1 and -2, Coarse Slurry Pile - The approved MRP shows that the Coarse Slurry Pile will be redistributed to the slurry pond in both the worst and best case scenarios. This information has been lost in the amendment which has removed this information from the plan. The amendment needs to restore this vital information that the Coarse Slurry Pile will be redistributed to the slurry pond for both the worst and best case scenarios.

R645-301-553.252, R645-301-232.200, R645-301-233, R645-301-330 (including 331 and 333), R645-301-341.300, As mentioned in the Soil Resource Analysis section, Area I does not meet the regulatory requirements for an approved topsoil borrow area. At the present, it is not a viable option for additional available borrow material.

R645-301-542.310, The amendment states that during soil removal from the borrow areas (see G9-3511) the soil borrow areas will be graded as shown on Map E9-3342. Map E9-3342 does not show any alterations to the original contour lines to account for soil removal and grading.

DISPOSAL OF COAL MINE WASTES

Regulatory Reference: R645-301-542.730, R645-301-553.250.

Analysis:

Section 2.41, page 1, of the existing approved MRP states that piles of coal waste in the main plant area will be removed and deposited on the coarse refuse pile.

Regulatory Perspective

The amendment needs to address the toxic boron levels with the ultimate disposal and fate of the coal waste in accordance with the R645 regulations. The regulations clearly state that toxic materials and coal mine waste must be disposed of properly and covered to protect the surface and underground water resource as follows:

- R645-100 Definitions:

  "Coal" means combustible carbonaceous rock, classified as anthracite, bituminous, subbituminous, or lignite by ASTM Standard D388-95.

  "Coal Mine Waste" means coal processing waste and underground development waste.

  "Coal Processing Waste" means earth materials which are separated from the product coal during cleaning, concentrating, or the processing or preparation of coal.

  "Coal Preparation or Coal Processing" means the chemical and physical processing and the cleaning, concentrating, or other processing or preparation of coal.

  "Underground Development Waste" means waste-rock mixtures of coal, shale, claystone, siltstone, sandstone, limestone, or related materials that are excavated, moved and disposed of from underground workings in connection with Underground coal mining and reclamation activities.

  "Toxic-Forming Materials" means earth materials or wastes which, if acted upon by air, water, weathering, or microbiological processes are likely to produce chemical or physical conditions in soils or water that are detrimental to biota or uses of water.

- 413.300. Criteria for Alternative Postmining Land Uses. Higher or better uses may be approved by the Division as alternative postmining land uses after consultation with the landowner or the land management agency having jurisdiction over the lands, if the proposed uses meet the following criteria:

  413.330. The use will not:

  413.334. Cause or contribute to violation of federal, Utah, or local law.

- 536. Coal Mine Waste. The permit application will include designs for placement of coal mine waste in new or existing disposal areas within approved portions of the permit area. Coal mine waste will be placed in a controlled manner and have a design certification as described under R645-301-512.

- 536.300. Coal mine waste may be disposed of in excess spoil fills if approved by the Division and, if such waste is:

  536.320. Nontoxic and nonacid forming; and

- 542.730. Disposal of Coal Mine Waste. Coal mine waste will be placed in a controlled manner to ensure that the final disposal facility will be suitable for reclamation and revegetation compatible with the natural surroundings and the approved

postmining land use.

- 553.300 Exposed coal seams, acid- and toxic-forming materials, and combustible materials exposed, used, or produced during mining will be adequately covered with nontoxic and noncombustible materials, or treated, to control the impact on surface and ground water in accordance with R645-301-731.100 through R645-301-731.522 and R645-301-731.800, to prevent sustained combustion, and to minimize adverse effects on plant growth and on the approved postmining land use.

Coal Mine Waste Final Disposition

As required by R645 Regulations, the following are concluded:

(1) The coal material on the ground within the Preparation Plant area has not been classified as coal using ASTM standards. The coal material is left behind from a coal preparation plant. Coal mine waste includes coal processing waste, which includes waste coal material from both the chemical and physical processing or preparation of coal. Therefore, any material not used as coal product, must be defined and identified as coal mine waste. This includes both the coal material and mixtures of soil and coal waste.

(2) Toxic forming materials are earth materials or wastes which, if acted upon by air, water, weathering, or microbiological processes are likely to produce chemical or physical conditions in soils or water that are detrimental to biota or uses of water.

(2) The coal waste material has been shown to contain toxic levels of boron. Therefore, the coal mine waste may not be disposed in excess spoil fills since the waste is toxic.

(3) The alternative postmining land use change cannot "Cause or contribute to violation of federal, Utah, or local law."

(4) Utah law requires disposal of coal mine waste as follows:

- "... disposal placement of coal mine waste in new or existing disposal areas within approved portions of the permit area."
- "Coal mine waste will be placed in a controlled manner to ensure that the final disposal facility will be suitable for reclamation and revegetation compatible with the natural surroundings and the approved postmining land use."
- Exposed coal and toxic materials used, or produced during mining will be adequately covered with nontoxic and noncombustible materials, or treated, to control the impact on surface and ground water, and to minimize adverse effects on plant growth and on the approved postmining land use.

The present amendment contains the following proposals which are in direct conflict with the above analysis of:

(1) The amendment states that the Wellington Preparation Plant site has been reclaimed within the coal storage area. Furthermore, the amendment would allow toxic forming coal waste and mixtures of toxic forming coal waste and soil to remain in the main plant area without proper disposal or without being adequately covered by nontoxic and noncombustible materials. This is in direct conflict with R645-301-536.300, R645-301-542.730 and R645-301-553.300.

(2) In addition to the coal mine waste being used by the owner of the industrial site for grading to create a "more aesthetically pleasing appearance," approximately 18,000 cy of the coal waste would be used as pad fill material under the new coal storage piles. However, the amendment does not address the following:

- *The actual volume of the coal waste material on the ground is unknown. This is needed to substantiate both AML fees and to verify the projected 18,000 cy of material needed for use under the coal storage piles.*

The coal waste volume discussion, use and final disposition, needs to address:

- *the volume of suitable, non-soil contaminated coal waste available for use with the coal storage piles,*
- *the volume of soil contaminated coal waste not suitable for use with the coal storage piles, and*
- *final disposal of any excess coal waste and non-suitable coal waste and coal waste/soil mixtures in accordance with the R645 regulations.*

Earthen Berm Constructed from Coal Waste

During grading of the main plant area, NEICO created an earthen berm which lies north west of the Plant Refuse Pile. Construction of the berm was an illegal activity that resulted in a notice of violation (N98-41-5-1). The berm is constructed from coal waste and mixed soil and coal waste from the main plant area, was sampled, and was found to be toxic with high levels of boron. The berm lies within the permit boundaries and outside the area to be released. The regulations clearly state that toxic coal mine waste and refuse must be disposed of within the permit area and properly covered to protect the surface and underground water resource. Therefore, the toxic coal mine waste used in the berm needs to be removed and disposed of in an approved refuse pile.

Findings:

Information provided in the application is not considered adequate to meet the requirements of this section of the regulations. The applicant must provide the following in accordance with:

R645-301-413.300, R645-301-536, R645-301-542.730, and R645-301-553.300, The amendment discussion concerning the handling and disposal the toxic coal Mine waste located at the Main Plant area needs to include:

- Identify the volume of suitable, non-soil contaminated coal material that will be used under the coal storage piles. This coal material needs to be segregated out from any excess coal waste and any unsuitable coal waste/soil material.

- Identify the volume of coal waste and soil contaminated coal waste that will not be used under the the coal storage piles.

- The amendment must state clearly that any excess coal waste and any unsuitable coal waste/soil material that will not be used under the coal loadout piles, will be properly disposed of by either (1) adequately covered with nontoxic and noncombustible materials to control the impact on surface and ground water, and to minimize adverse effects on plant growth and on the approved postmining land use, or (2) placed in an approved refuse pile and buried beneath four feet of non-toxic fill and soils.

R645-301-536, R645-301-542.730 and R645-301-553.250, The toxic coal waste berm needs to be removed and disposed of in an approved refuse pile and buried beneath four feet of non-toxic fill and soils.