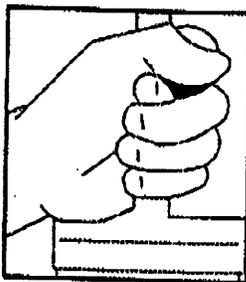


0011



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FAX TRANSMISSION

TO: Pam Grubaugh-Hittig

FROM: Patrick Collins

DATE: 3/24/99

SUBJECT: Draft comments about Wellington soils

NO. OF PAGES (including this pg.): 13

ACT/007/012 # 2



MT NEBO SCIENTIFIC, INC.
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MEMORANDUM

Pg 1

TO: Pamela Grubaugh-Littig

FROM: Patrick Collins

DATE: March 23, 1999

SUBJECT: Draft Deficiencies at Wellington

TOTAL NO. OF PAGES:

ATTACHMENTS: (numbered by hand 3-12)

Thank you for sending me the "Draft" deficiencies. I have included the "Findings" pages of this draft and some comments about them along with some changes that could be made in the MRP to address them. Please let me know what you think.

- [A] A commitment in the MRP will be made.
- [B] We need to discuss this further with you.
- [C] A statement will be made in the MRP that the berm will be disposed on the approved Coarse Refuse Pile located on-site at the time of final reclamation.
- [D] The 9770 cy in Table 2.41-1 (attached) was changed back to the approved 9550. So the 220 cy figure is no longer an issue.
- [E] These amounts are located within the soil surveys in the MRP and will remain there as "Soil Study Areas", but are no longer relevant in the volume information because they are not included in the current borrow areas.
- [F] The soils Area H shown around test pits C-5 and C-6 are no longer proposed as borrow areas so volume calculations should not be necessary at this time. All soils within Area H that will be used as borrow material has been included with the submittal.
- [G] The 43,300 cy will indeed be used to cover the Coarse Refuse Pile at final reclamation (and not just for the "worse case scenario"). However, this material will be taken from Area H in the vicinities of EA-1, EA-3, EA-4, EA-5, EA-7, EA-8, EA-9, EA-10, EA-11, and EA-12 (see attached sec. 2.41, p. 5) and *not* C-1.

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Memo: P. Grubaugh-Littig
March 23, 1999

A-2

Area J was used to replace part of the soils that will no longer be used in the north portions of Area H, but not the entire amounts. Additional material will be taken from the south portion of Area H to compensate.

- [H] The 139,268 cy was an old number and will be replaced with 157,111 cy (see attached sec. 2.41, p. 5 and spreadsheet showing "Area H Soil Volumes). Then refer to the attached Table 2.41-1 to check total volumes.
- [I] These inconsistencies have be rectified (see attached pages).
- [J] These inconsistencies have be rectified (see attached pages).
- [K] The table is correct. The text (attached Sec. 2.41, p 5.) will be changed as shown.
- [L] True. This will be changes as shown on attached Table 2.41-2.
- [M] This should now be clear from the changes mentioned above and the text and tables attached. Remember Area J only provides additional soils for the whole project (it does convert directly from any area being replaced).
- [N] This information will be restored as shown on the attached tables.
- [O] Area I *is* an acceptable area for borrow as specified by DOGM guidelines but it is *not* proposed as such at this time.
- [P] This map will be changed to reflect this information.
- [Q] A statement will be made in the MRP that the berm will be disposed on the approved Coarse Refuse Pile located on-site at the time of final reclamation. Other coal *product* (not waste) will be used in the post-mining land use as a base of the new coal material being brought from the new industrial coal loading operations. As explained in the amendment, any coal material that cannot be used for the new pile will be used to create impoundment structure for the new sediment pond proposed by the industrial land owner.
- [R] (see Q above)
- [S] Not sure what you mean here. Haven't we done that?

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012-BR97

Mar 21, 1998

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background boron levels. The Division believes that leachate from the coal mine waste will have boron levels similar to background levels. Therefore, allowing the coal mine waste to remain on site will not cause environmental harm. See the hydrologic section of this TA for additional information.

The Permittee constructed a berm northwest of the plant refuse pile with coal mine waste material. The berm is shown on Drawing No. E9-3342. The construction of the berm was illegal and resulted in a notice of violation (N98-41-5-1) being issued for several reasons including but not limited to:

- Coal mine waste can only be stored in approved storage sites (R645-301-521.165). The berm is not an authorized storage site.
- Coal mine waste can only be disposed of in permitted sites (R645-301-536). The area is not an approved disposal site.
- Coal mine waste can only be used to construct structures that have certified designs (R645-301-536.400). The berm design has not been approved by the Division and certified by a professional engineer.

The Permittee proposed to reclaim the berm grading it into the surrounding area. R645-301-536 requires that all coal mine waste be disposed of in an approved facility. Since the area in and around the berm is not an approved facility the Permittee must state where that material will be disposed. One way to dispose of the material is to move it back to the plant refuse pile.

Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the Permittee must provide the following in accordance with:

- [A] R645-300-147, The Permittee will pay all reclamation fees required by 30 CFR Part 870 for coal produced under the permit for sale, transfer or use if the coal material is classified as a product. Specifically the Permittee must either pay AML fees on the coal material that is within the 333 acres or show that the AML fee has already been paid.
- [B] R645-301-521.165 and R645-301-536, The Permittee will remove the coal mine waste material in the berm sited in the notice of violation N98-41-5-1 and place the material either in an approved storage site or in a permitted disposal facility.
- [C] R645-301-536, The Permittee submit plans showing how and where the coal mine waste material used to construct the berm will be disposed.

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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. Area J supplies 13,019 cy to make up the difference, but this value does not make up the difference in either case.
- 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 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.

- [0] • The amendment needs to substantiate the increase of 220 cy of borrow soil within

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Area G by providing analysis and additional survey work justifying the increase from the approved MRP value of 9550 cy to proposed 9770 cy.

- [E] • The amendment needs to identify the amount of soil being released within the excised portion of Area H as a result of the alternate postmining land use change.
 - [F] • The volume of soil being released within the excised portion of Area H needs to include all of the Stormitt soil on top of all the knolls as identified with the hatched green lines, not just the soil on top of the knolls identified with soil test pits C-5 and C-6. Soil borrow from the northern knolls are shown by the green hatches, and are delineated by the test pits C-5 and C-6 with an average soil borrow thickness of 15 inches. Just because pits were not dug on all the knolls, does not lead to the conclusion that no soil is available for salvage. Soil volumes are calculated from areas within the green hatched lines throughout Areas D, E, G, and H, with each area delineated by a soil test pit and identified soil borrow thickness. Likewise, soil borrow from the northern knolls are shown by the green hatches, and are delineated by the test pits C-5 and C-6.
 - [G] • The 43,300 cy of soil for reclaiming the coarse refuse pile was identified as being supplied within the areas C-1, and areas EA-3, EA-4 and EA-5. Therefore, the amendment needs to show that Area J supplies lost soil volumes in part from C-1 for reclamation in both the worse and best case scenarios, not just the worse case scenario as explained.
 - [H] • The amendment lists 139,268 cy of soil borrow available from Area H for reclamation. This volume is 40,064 cy short of the current approved MRP listing 179,332 cy from Area H. The amendment identifies 13,019 Cy of soil borrow material available from area J. The amendment needs to identify where the additional 27,045 cy of soil borrow will come from.
 - [I] • Soil volume amounts as discussed within section 2.41 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:
- [J] • 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.
 - [K] • 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. Area J supplies 13,019 cy to make up the difference.

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- [L] • 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.
- [M] • Tables 2.41-1 and -2, Coarse Refuse Pile - The current approved plan shows Area H supplying the 43,300 cy as 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 lost soil volume from C-1 as being replaced from Area J.
- [N] • 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.
- [O] 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.
- [P] 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.

The present amendment proposal would allow the coal waste to remain in the main plant area. The amendment states that the Wellington Preparation Plant site has been reclaimed within the coal storage area. In addition to 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 coal waste material has been shown to contain toxic levels of boron. The amendment needs to address the toxic boron levels with the ultimate disposal and fate of the toxic coal waste in accordance with the R645 regulations. The regulations clearly state that toxic coal mine waste

Needs more information

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and refuse must be disposed of within the permit area and properly covered to protect the surface and underground water resource.

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 waste 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:

R645-301-414, R645-301-536 and R645-301-542.730, The ultimate disposal and handling of the toxic coal waste located at the Main Plant area must be addressed as follows:

- [Q] • Take into account the toxic coal waste and mixtures of soil and toxic coal waste.
- [R] • Disposal, handling and ultimate fate of the toxic coal waste material.
- [S] • The original permit application, however, must demonstrate that the land will be returned to its premining land-use capability.

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.

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The groundwater table fluctuates between 84 to 180 inches so the depth over the high groundwater level would be at least 6 inches. The only material in contact with the groundwater would be deemed suitable material and be low in salts and metals. The natural occurrence of high salts in the soil profiles indicates that salty groundwater is depositing salts in the subsoils and upper substrates during high water tables. See Soil Borrow Investigation - Area E (Section 2.22).

Topsoil Borrow Area F

The very shallow soils over the Mancos Shale are unsuitable for borrow.

Topsoil Borrow Area G

The estimated volume of Gerst soil materials in this 119 acre area is 12,570 cy based on 17 inches of available topsoil after leaving 18 inches in-situ for revegetation. For the worst-case scenario, the topsoil borrow would be redistributed as the upper two feet of the cover on the slurry ponds (9,770 cy). An estimated 3,000 cy would be distributed to the pumphouse site. The only suitable soils for borrow area the Stormitt soils on crests of the hills and ridges (Soil Report G - Section 2.22).

4550

In the best-case scenario, no disturbance of this area would be necessary.

Topsoil Borrow Area H

Area H is composed of 13 acres of the old Area C and lands adjoining the Area C on the south and southeast. A recent soils investigation established that 179,332 cy of Stormitt series topsoil material was available on the tops of the knolls and ridges (Section 2.22, 8th Sample Period). This coarse-grained topsoil material is suitable for redistribution and will be used in the reclaimed areas. The total amount to be used for reclamation from Area H is 139,268 cy. This quantity of material is available in the vicinity of test pits EA-3, EA-4, EA-5, EA-7, EA-8, EA-9, EA-10, EA-11 and EA-12 (see Dwg. G9-3511).

157,111

139,268

EA-1

Approximately 43,300 cy of soil material would be used to cover the coarse refuse pile on the west side of the river for both scenarios. For the worst-case scenario, the remaining material to be used (95,968 cy) would be placed on the Slurry Pond(s) on the east side of the Price River.

Topsoil Borrow Area I

113,811

A detailed soil survey was also conducted in Area I (see Section 2.22, 9th Sample Period). Soil salvage could occur between approximately 9 inch surface layer and approximately 1.0 foot above the Mancos shale contact at depth.

Based on the site-specific data, this would result in the availability of approximately 7.7 feet of soil material. Excluding the area around site W7 (see Dwg. G9-3511) which has many poor rated values, and is close to the outer edge of the southeastern lobe, and assuming the W7 accounts for 0.9 acre, then the area to be salvaged would be approximately 6.65 acres. This would result in

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Table 2.41-1: Summary of reclamation sites and sources of topsoil for the worst-case scenario at Wellington.

Reclamation Site	Topsoil and Cover Required (cy)	Borrow Area Source	Amount To Be Used (cy)
River Pumphouse	3000	Area "G"	3,000
Coarse Refuse Pile	43300	Area "H"	43300
Slurry Ponds	985000	Area "D"	175400
		Area "G"	9570
		Area "E"	492500
		Area "H"	113811
		Area "J"	13019
		CW Dike	151000
		LR Dike	28700
Coarse Slurry Ate	0	-	0
Totals	1031300		1031300

Add del info from CS.

0 redist. to slurry pond

Table 2.41-2: Summary of reclamation sites and sources of topsoil for the best-case scenario at Wellington.

Reclamation Site	Topsoil and Cover Required (cy)	Borrow Area Source	Amount To Be Used (cy)
River Pumphouse	3000	Area "G"	3,000
Coarse Refuse Pile	43300	Area "H"	43300
Upper Slurry Pond	493000	CW Dike	151000
		LR Dike	107400
		Impacted soils: LR basin & Coarse Slurry Pile	246500
		-	0
Coarse slurry Ate	0	-	0
Totals	539300		551200

here too

0 redist. to slurry pond

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Table 2.41-1
(3/23/99 notes)

Reclamation Site	Topsoil and Cover Borrow Area Source	Amount To Be Used (cy)
River Pumphouse	3000 Area "G"	3,000
Coarse Refuse Pile	43300 Area "H"	43300
Slurry Ponds	985000 Area "D"	175400
	Area "G"	9570
	Area "E"	492500
	Area "H"	113811
	Area "J"	13019
	CW Dike	151000
	LR Dike	29700
Totals	1031300	1031300

AREA H SOILS VOLUMES
(2/17/99 submittal)

P. VI

1 C1	10085
2 C5	4114
3 C6	8022
4 EA-1	17843
5 EA-2	0
6 EA-3	15165
7 EA-4	11144
8 EA-5	6910
9 EA-6	0
10 EA-7	17787
11 EA-8	2662
12 EA-9	17781
13 EA-10	19601
14 EA-11	16891
15 EA-12	31347

Grd.Tot.	179332
1-3	22221 (don't use)
4-15	157111
for CR	43300
Tot Aval	113811

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Table 2.41-1: Summary of reclamation sites and sources of topsoil for the worst-case scenario at Wellington.

Reclamation Site	Topsoil and Cover Required (cy)	Borrow Area Source	Amount To Be Used (cy)
River Pumphouse	3000	Area "G"	3,000
Coarse Refuse Pile	43300	Area "H"	43300
Slurry Ponds	985000	Area "D"	175400
		Area "G"	9570
		Area "E"	492500
		Area "H"	113811
		Area "J"	13019
		CW Dike LR Dike	151000 29700
Totals	1031300		1031300

9550

13039

Table 2.41-2: Summary of reclamation sites and sources of topsoil for the best-case scenario at Wellington.

Reclamation Site	Topsoil and Cover Required (cy)	Borrow Area Source	Amount To Be Used (cy)
River Pumphouse	3000	<i>Lower Refuse Area "G" Dike</i>	3,000
Coarse Refuse Pile	43300	Area "H"	43300
Upper Slurry Pond	493000	CW Dike	151000
		LR Dike	107400
		Impacted soils: LR basin & Coarse Slurry Pile	248500
Totals	549300		561200