



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Miles City Field Office
111 Garryowen Road
Miles City, Montana 59301
<http://www.mt.blm.gov/mcfo>



IN REPLY TO:
MTM-59033
2800

December 8, 2004

Surface Transportation Board
Office of the Secretary, Case Control Unit
Section of Environmental Analysis
Attention: Ken Blodgett
1925 K Street, NW
Washington, DC 20423-0001

Dear Mr. Blodgett:

This letter is in response to Surface Transportation Board's (STB) Finance Docket No. 30186 (Sub. No. 3) request for comments on the draft of the supplement to the final environmental impact statement for the *Tongue River Railroad Company (TRRC), Construction and Operation of the Western Alignment in Rosebud and Big Horn Counties, Montana*. Our comments are attached.

We would appreciate a response addressing each comment and showing that you have incorporated it. If you do not incorporate a comment, we would appreciate an explanation as to why it was not used.

We will require the submission of a construction, operation and maintenance plan by Tongue River Railroad Company, Inc. prior to the approval of all rights-of-way by the Bureau of Land Management.

Thanks for giving us the opportunity to comment on this document. If you have any other comments or questions, please contact Dalice Landers, Realty Specialist, at the above address or call (406) 233-2836.

Sincerely,

/s/ David McInay

David McInay
Field Manager

Enclosure:
Comments

COMMENT FORM – Draft SEIS

PG#	LINE#	RECOMMENDED CHANGE
		4.2.10 There are no mention of recreation on BLM or USFS lands.
5-26	20	“No new significant” is a subjective term. Loss of an opportunity to recreate is very significant to those losing the experience.
4-118	33-35	Paleontologic resources are not eligible for listing in the NRHP.
4-118 4-119	40-48 1-7	The PA (Appendix G) does not cover paleontological resources. Delete all references to paleo throughout this paragraph. The document, therefore, contains no mitigation measures discussion for paleo.
4-120	22-26	These two sentences are incorrect. Paleo resources are <u>not</u> surveyed during cultural survey efforts, nor is that allowed. Any surveys required for paleontological resources must be done by a qualified and permitted Paleontologist, not an Archaeologist. In the case of the TRR, however, the low potential for discovery of significant paleo resources negates the need for a formal field paleo survey.
4-125	24-26	Again, the PA does not address paleontological resources.
4-127	15	Although the title of this section mentions Paleontological Resources, there’s no discussion in the text. Basically, there would be no impacts on Paleontological Resources from Operation and Maintenance, unless new surface disturbance occurs.
		Suggestion: As appropriate within this Chapter, inclusion of our standard stipulation for paleontological resources may be useful. Although the text is variable, it basically says “If significant paleontological resources are discovered during surface disturbing activities, all work that potentially would damage the resource must cease, the area of concern must be protected, and the BLM notified as soon as possible. Appropriate mitigation measures would be developed by the BLM and implemented as soon as possible.”
2-6	Table 2-2	Row e, Number of locomotive engineers for Western Alignment is shown as two (2). However, many of the eastbound loaded coal trains passing through Miles City have three locomotives—wouldn’t the outbound, loaded trains on the Western Alignment also have three locomotives?
6-4	47	The subject Spring Creek Federal Coal Lease was issued in March of 1991 and mining has been underway in the new lease areas since the lease issued. The state leases have also issued.
6-1		The cumulative impacts to Miles City from increased rail traffic are not assessed in this document. The increased train traffic from Decker to Miles City is discussed in Chapter 2 which states that there will be 14 trains a day from Decker to Miles City. However, we never add that to the existing traffic passing through Miles City which would not come from the TRR and discuss these cumulative impacts to the community. There are several freight trains and coal trains (Colstrip and Absaloka Mines) that will not use the TRR but still pass through Miles City. This needs to be done to fully address cumulative impacts. One long coal train passing through town disrupts much of the vehicular cross town/tracks traffic access several times a day for several minutes each day. This affects emergency services as we have only one underpass. More train traffic means more disruptions to basic emergency services for a town of about 10,000 people We need a comprehensive analysis of the increased rail traffic impacts and safety impacts of additional train traffic going through Miles City and an updated discussion about the railyard operation and maintenance in Miles City. Have any physical changes occurred in Miles City since last analyzed?
4-7		Noxious weeds are not any more of a fire hazard than any other type of vegetation. Please remove that part of the sentence and adjust it to say, ‘Due to the soil disturbance from the proposed construction the possibility of noxious weed infestations sharply increases. The infestations would result in a loss of crop production along the Tongue River corridor and surrounding areas. Spotted knapweed, Houndstongue, Canada Thistle and Burdock are the four known weed species that are present along the Tongue River at this time. Other possible species are primarily Leafy Spurge and Salt Cedar, but any weed seeds could be brought in on equipment used within the construction area.’
4-13	5	According to our list, the Tiger Salamander is not a species of special concern. Paddlefish (<i>Polyodon spathula</i>), Sturgeon chub (<i>Macrhybopsis gelida</i>), and the Blue sucker (<i>Cykelptus elongates</i>) are all on the Montana Species of Concern List, and are located downstream of the proposed Western Alignment within the Tongue and/or Yellowstone River. Baseline habitat and population information was not provided and an effects analysis was not completed to these downstream fish species.
4-15	23	According to our list, the Tiger Salamander is not a species of special concern.
4-21	25	We were wondering where you received the over winter information. We believe that the rainbow population has very little natural reproduction and could have low over winter survival. However, electroshocking data from Montana Fish, Wildlife

		and Parks indicated in 2000, 2003, & 2004 that the mean length was 14.6, 13.5, and 9.96 inches, respectively. These relatively high mean lengths may indicate a larger amount of over winter survival. In addition, the Tongue River does not freeze for a considerable distance downstream of the dam, which may also increase survival rates.
4-21	25-28	Based on conversation with Montana Fish, Wildlife and Parks; brown trout were stocked periodically for many years, but have not been stocked recently. The 2000 “Evaluation of Salmonid Populations in Tongue River Reservoir’s Tailrace Following Re-construction of Tongue River Dam” report made the following recommendation: “ Stock brown trout over a five-year period to reestablish a natural recruiting population, as water temperatures are more conducive to browns than rainbows”.
4-78	39-42	The statement indicates that mitigation measures should “minimize placement of fill in streams”. How is this going to occur with the proposed Western Alignment?
4-81	35-39	There is no mention of sauger being on the MT NHP Species of Concern list.
4-82	36-41	There is no mention of the timing of fish surveys.
4-97	23	Does the number of 20 include the sauger?
4-114	4-7	With the amount of fill that will be deposited (associated with the proposed Western Alignment), we believe it is essential to have a culvert that will pass a 100 year event without static head and with anticipated below/debris. These culverts should be able to pass an unrestricted 100 year event. Using the head at entrance and allowing ponding will only increase the potential for failure in these stream crossings. Large releases of sediment can harm and kill aquatic life. In a high flow event, the large amount of fill material (associated with the proposed Western Alignment) could reach levels that could harm and kill aquatic life within the Tongue River.
4-114	33-38	We believe that the structures should pass a 100 year event to lesson effects to aquatic fish and other biota.
8-1	31-36	This comment is for this section and for the direct, indirect, and cumulative effects analysis throughout the document. The document seems to be trying to support an idea that the proposed Western Alignment is a better alternative for wildlife, aquatic biota and other resources, since it impacts less acres, etc. The amount of acres affected does not necessarily result in a determination that can be classified as a lessoned effect. In regard to aquatics, the proposed Western Alignment poses a much greater risk of harm to populations of fish (including the sauger), aquatic invertebrates, and amphibians due to the potential of a high flow event washing sediment down the much steeper draws of the proposed Western Alignment. This risk is elevated by not considering the construction of trusses/bridges (instead of fill) and the placement of culverts that can pass unrestricted 100 year event flows. The risk of a high flow event and the effects of sediment (deposited directly into the Tongue River) on aquatic biota is not analyzed in the document. This potential effect should at least be analyzed before selecting an action.
		Appendix E: The write-up refers to tables, but there are none. The tables need to be included in this appendix. Page 3: The former Powder River Resource Area is not now known as the Powder River Planning Unit. It is now known as the Miles City Field Office. However, if you are just referring to the area as the Powder River Planning Unit for the purpose of Appendix E, it is okay. Page 6, Footnote 1 – the wording “estimated AUM loss.” is out of place or needs different capitalization or punctuation to fit into the sentence.
4-74 7-15	33-39 14-20	On BLM tracts, all seeds shall be from native species. Species to be used for revegetation may include, but are not limited to: <i>Western wheatgrass (Pascopyrum smithii)</i> <i>Bluebunch wheatgrass (Pseudoroegneria spicata)</i> <i>Green needlegrass (Nassella viridula)</i> <i>Slender wheatgrass (Elymus trachycaulus)</i> <i>Little bluestem (Schizachrium Scoparium)</i> <i>Blue flax (Linum perenne - forb)</i> <i>Purple prairie clover (Dalea lasiathera – forb).</i> Thickspike wheatgrass may be substituted <u>only</u> when western wheatgrass is unavailable.
4-74 7-15	47-48 29-29	If straw or any other kind of bale is used for mulch, the twine should be composed of biodegradable material instead of plastic. (Usually the bale is loaded into the mulching machine with the twine on it so it holds together. It is time-consuming to cut the twine off after the bale is loaded so the twine is usually mulched along with the straw. If the twine is biodegradable, it will decompose over time. If the twine is plastic, it will not decompose and can cause damage to livestock. Plus plastic twine shredded all over the ROW looks unsightly.)
4-47		4.2.9 Socioeconomics: The report needs to include the Amish community that has settled north of Ashland. We expect that they will be impacted disproportionately and may be covered by Environmental Justice. They drive buggies and ride horses to Ashland so it is expected that the construction traffic would be extremely annoying and probably very dangerous for them.

		They also may have moved to that ranch because of the isolated lifestyle which may change due to the TRR.
4-160		4.3.9 Environmental Consequences – Socioeconomics: The effects to ranches from changes in livestock grazing should be addressed.
4-174		4.3.9.4 Environmental Justice: There is little discussion of the Northern Cheyenne Reservation. The only thing discussed in the EJ section is employment. As the reservation is located just west of Ashland, other effects to the reservation must be discussed, especially the possibility of increased traffic across the reservation and the potential impact to emergency services and policing increased traffic, social effects from the increase in numbers of people in the area. There may not be any effects and if so, this should be stated in the document. This analysis was prepared in response to comments from the Northern Cheyenne (see paragraph 5 on page 3-8 of the same document) and was supposed to focus on effects to Native Americans but I do not think this is done adequately. The Northern Cheyenne were very concerned about graves in the Birney area being disturbed. This needs to be discussed somewhere.
4-161 to 4-173		This analysis does not address social effects at all. What about effects (other than from services) from increased numbers of people in the area, changes in local communities. If there would not be changes, this should be stated.
4-31	2-3	Drop sentence beginning “Fossil resources are part...” It creates confusion.
4-25 4-35	40-41 15-16	On page 4-25, lines 40-41, the Fort Union is listed as a formation, with the Tongue River as a Member. On page 4-35, lines 15-16, it is listed as a Group with the Tongue River as a Formation. Need to verify most current designation and correct one or the other listing.
		The SEIS states that coal is the only product that will be hauled on the trains and it only analyzes for spills of coal, etc. Will that be TRRC's policy that only coal will be hauled? If coal-fired facilities are built, there could be a possibility of hauling Hog Fuel/wood chips as a result of Biomass harvest on Federal, state, and private lands in Eastern Montana. If that occurs, there would also be a possibility of hauling logs or finished lumber products to and from facilities in Ashland (Northern Cheyenne mill) or Miles City/Sheridan. If the policy is coal only, then they would not need to analyze for accidents, etc. while hauling other substances or products.
4-2	Table 4-8	Are these mean water quality values or what? Water quality information without associated flows or appropriate statistical information has no meaning due to the high variability of water quality and flow in this area.
4-10	24	There are 4-5 active bald eagle nests within the project area and one inactive nesting territory (2004 data). However, only two active nests are discussed.
4-97 4-98		There needs to be more discussion on the importance of the hunted wildlife species (deer and pronghorn antelope). All hunted species of wildlife are of huge economic importance and should have a more thorough discussion.
4-98 4-99		With the increasing importance of sage grouse, more discussion on sage grouse is needed, including discussion on wintering areas and impacts of West Nile virus on sage grouse. Need to check statewide data base for more information on sage grouse strutting grounds which have been found in the past few years.
4-83	30-34	Sage grouse inventories need to be conducted at least two miles from any proposed disturbance.
4-83	41-42	Dates need go through mid July so as to protect important nesting, brood rearing habitat.
4-88	42-43	The comment on depressed grouse populations needs to be supported by documentation. For sage grouse this is most likely true. Sharptails may not have been depressed.
4-89	36-46	Some of the disturbance to raptors could be permanent. Not temporary as suggested.
4-96	19+	New nest sites need to be identified and discussed.
4-97	1+	Need to discuss the habitat that is indirectly affected, not just the acres directly affected. Indirect impacts will be substantial in terms of acres. This comment holds true for most species.
1-26		-DOI requires a minimum of 60 days from the date the Draft is transmitted to EPA -60-day Governor’s consistency review -30-day waiting period when final is issued before we can issue our ROD
Add		The other “Alternatives Considered but Dropped from Further Analysis” such as those suggested by the public or other agencies should be listed in Appendix E. BLM need this to make this document workable for our processes.
		A general rule of thumb for preparing documents for the BLM NEPA process is never to call an impact adverse/beneficial or significant/insignificant.
		There were several misspellings of Mile as Mike.
		The Cultural Resource Programmatic Agreement: The Programmatic Agreement (PA) employs faulty reasoning to assume that the PA can address ALL cultural resource issues.

Of primary concern is the lack of inclusion of known cultural resource information in the EIS concerning known sites within the proposed rail corridor and the lack of the document to address potential impacts to these known sites. Overall, the document does not include cultural resource information in the analysis and therefore the document contains a major flaw.

The draft EIS mentions other known historic sites in the Tongue River Canyon area that the EIS refers to as a result of the windshield survey. However, the draft EIS document does not include or mention or take into account in any of the analysis any of this supposedly known information that is loosely referred to in the document. Regardless of the PA, the **KNOWN** cultural data needs to be analyzed in the EIS. Not everything can be deferred by the PA. Even the windshield survey results are not analyzed and they need to be. Not to mention the “windshield” survey did a very poor job of identifying sites along the route, particularly, it missed identifying the Battle Butte Battlefield site. At the least, the “windshield” survey should be redone and the results included and analyzed in the EIS.

Some of the information gathering cannot be postponed to after the fact after the issuing of the Record of Decision and permit to proceed. What has resulted so far with the various documents, including this draft EIS and Programmatic Agreement in Appendix G, is to defer taking cultural resource considerations into account in the analysis of the EIS which results in not taking Cultural Resource considerations into account in the final decision.

Of concern is one site in particular, the Battle Butte Battlefield, a site that is now “**LISTED**” on the National Register of Historic Places. It has been pointed out to STB numerous times over the past several years and throughout the preparation of the various drafts of this document that the EIS analysis needs to address potential impacts to this site from the proposed rail line.

The lack of consideration of this site in the analysis results in foreclosing of the opportunity to take this site into account in the overall decision to permit the railroad. In Appendix G, page 6, Section III.b the statement is made that “TRR, Inc. shall develop specific procedures to preserve historic properties in-place. These procedures may include avoidance by re-routing the railroad alignment around the resources **where feasible...**” Since the railroad’s proposed alignment passes through the Battle Butte Battlefield site, this will be one of the major issues to be dealt with under the PA. Since the PA states that avoidance or in-place preservation is the preferred alternative to dealing with and mitigating sites, and since it is well known that the site will be impacted, the document needs to address this fact up front in the document. The potential exists that the railroad alignment may need to be re-rerouted around this site and, therefore, the impacts to this most significant site need to be disclosed the analysis and the alternatives for the rerouting around the site also need to be analyzed and addressed in the document. Postponing this analysis will cause the subsequent decision to be flawed and forecloses the opportunity to consider environmental alternatives to impacting this site within the analysis of the EIS.

In reference to the “...**where feasible...**” statement, some procedure needs to be fleshed out to address by whom and by what means the decision is made as to the feasibility of moving the line. The potential need to move of the proposed alignment and the pros and cons and difficulties of such a move also needs to be addressed in the document. Otherwise, the decision is left up to the discretion of the company and a cavalier decision to ignore avoidance could basically invalidate the PA.

Also, **NOT** taking this knowledge into account and consideration in the analysis will cause the EIS to be fatally flawed. The analysis needs address alternative routes around the Battle Butte site and/or potential mitigation options and what the impacts will be if the decision is made NOT to avoid the site.

Without this analysis the document is fatally flawed and incomplete. Also, without this analysis BLM will not be able to use the EIS to make a decision to grant a ROW on TRR I and II and sign an ROD without doing its own analysis to address these issues. Somewhere in the PA, it needs to address this fact.

A major concern is the statements made throughout the document that the preferred alignment alternative, the Western Alignment, is the environmentally preferred alignment. Beginning on page xix, paragraph 3, and occurring elsewhere throughout the document, the document makes the claim that both the Western Alignment and the Four Mile Creek Alternative are environmentally preferred because they both avoid the “sensitive” Tongue River Canyon. However, this analysis is flawed because the proposed location of the Western Alignment will side hill up through the Tongue River Canyon causing as much impacts to the canyon and the visual esthetic of the canyon as the originally proposed alignment that ran through the bottom of the canyon.

In addition, no analysis is given to address the fact that the proposed Western Alignment will cross several side canyons at their mouth where they enter the Tongue River Canyon. The result of placing the proposed Western Alignment in its proposed/current location will result in the filling in these canyon mouths with huge earthen embankments to form the

		roadbed. The impacts to the visual esthetics of the canyon and the impacts to the hydrology of the side canyons, the fact that huge long culverts will be needed to pass under these embankments and their effects on wildlife movement down these canyons to the river corridor and the damming affect and large impoundments of water that will be caused by the embankments when large precipitation events occur are simply and completely not addressed in the document. These issues need to be addressed and analyzed and potential mitigation measures proposed to offset the impacts of the large embankments crossing the side canyon mouths, such as the use of trestles to cross the side canyons, eliminating the embankments.
4-33	10	Many issues concerning the PA remain and apparently, have still not been addressed. At no time has TRRC or STB taken into account the true potential of cultural resource values in the EISs since no survey of the route has occurred yet. To date there still has been no cultural survey of the proposed line. What the PA will do is to preempt consultation and segments consultation by stating survey will occur only on portions of the line TRRC has access to immediately prior to construction. This is a violation of National Historic Preservation Act. Project consultation can not be segmented in this way. Cultural resources need to be considered within the body of THIS document, meaning that the route NEEDS to be inventoried PRIOR to completing the EIS and the findings disclosed and analyzed in the document.
4-33	10	The document state “SEA identified, through a Class I inventory potential impacts on cultural resources...” However, the analysis and use of this information concerning the impacts to cultural resources does not appear anywhere in the document. The flaw with the entire EIS cultural analysis is that the original Class I inventory was faulty and therefore of little use. Consequently, use of this information causes the analysis in the EIS to also be faulty.
4-118	31	Conclusions: This section falsely projects that there will be no significant impacts to cultural resources. The document can not make this statement as no on-the-ground survey of the proposed lines has occurred yet. This paragraph also assumes that development of a PA addresses the need to disclose potential impacts. The PA is not designed to do this. This must be done in the EIS document. Some wording concerning an analysis of potential and known impacts to cultural resources. Development of a PA is a mitigation measure deriving from disclosure of impacts. There will likely be SIGNIFANCT impacts to sites by line construction and these impacts and proposed mitigation measures to lessen these impacts need to be disclosed in this document.
4-119	32	The sentence starting here states “SEAs assessment of impacts...has been conducted in compliance with applicable Federal...policies...” This has not yet happened and the implementation of the PA, as written, does not protect, at this point impact to significant sites, such as to the Battle Butte Battlefield site, particularly since the first option for mitigation in the PA sates that line re-location would be the first mitigation measure considered. Should the line need to be re-routed, then these re-routes should be and need to be discussed in the document, not handled after the fact under the PA.
xxi	8	This paragraph correctly identifies the cut and fill and grading actions of line construction as being the most potentially impacting of the entire project. Yet, the document offers no forms of mitigation to offset these impacts. The only forms of impacts identified with cut and fills is erosion. No mention is made that the Western Alignment will cross numerous drainages at the point where they empty into the Tongue River. The proposal calls for using earth fill crossings creating a “dam” across the mouths of these drainages, effectively stopping them up and causing an unacceptable level of cuts and fills and not to mention the Visual intrusion (VRM) to the scenic Tongue River canyon. None of these impacts are identified or mitigation measures offered to reduce the impacts. These impacts are considered SIGNIFICANT and need to be disclosed and reduced. The document fails to identify and analyze these impacts.
3-4	26	Comments made by BLM have not yet been addressed in the PA. Many issues concerning the PA remain and apparently, have still not been addressed. The document incorrectly states that the PA “sets forth requirements...that may be encountered during construction.” At no time has TRRC or STB taken into account the true potential of cultural resource values in the EISs since no survey of the route has occurred yet. To date there still has been no cultural survey of the proposed line. What the PA will do is to preempt consultation and segments consultation by stating survey will occur only on portions of the line TRRC has access to immediately prior to construction. This is a violation of National Historic Preservation Act. Project consultation can not be segmented in this way. Cultural resources need to be considered within the body of THIS document, meaning that the route NEEDS to be inventoried PRIOR to completing the EIS and the findings disclosed and analyzed in the document.
3-6	35	Section 3.3.1: This section talks about re-analysis of the realignment from the original Tongue River I to the revised route for Tongue River I. This should be considered a significant change and should be disclosed in the document and what this change will mean.
4-32	13	Section 4.2.5.3: The opening sentence of this paragraph states that the PA will by applied at the construction phase. This is illegal. Cultural resources need to be identified and analyzed and taken into account during the decision process this document is meant to disclose, not after it, at the construction phase. It will be too late then. Cultural resources need to be taken into account IN THIS document, not after, at the construction phase.
4-100	23	Section 4.3.3: This section again fails to identify one of the most significant impacts of line construction, that being the filling

		in of the mouths of all the drainages the line will cross in the Western Alignment leg.
4-108	15	Section 4.3.4: This section fails to identify and address one of the most significant impacts of line construction and operation that being the damming of the mouths of all the drainages the line will cross in the Western Alignment leg especially during a large runoff event. This “damming” will create large lakes behind the earth fill drainage crossings causing seepage and possible slope failure, not to mention flooding of the riparian zone and other related impacts. The foot print of these crossings at the elevation the line proposes to cross the drainages will be in the order of some 500 feet or more with culverts of corresponding length. There is also the visual intrusion of these major large land fills will have on the scenic Tongue River canyon and side draws. These large land fills will also block the movement of wildlife and cattle up and down the drainages and will block access to the Tongue River as a source of water.
4-118	31	Conclusions: This section falsely projects that there will be no significant impacts to cultural resources. The document can not make this statement as no on-the-ground survey of the proposed lines has occurred yet. There will likely be SIGNIFANCT impacts to sites by line construction and these impacts and proposed mitigation measures to lessen these impacts need to be disclosed in this document.
4-118	40	This paragraph states that the PA will set forth requirements of how impacts will be appropriately addressed. No where in the document does it address any of these impacts or potential impacts. Many of them can’t and shouldn’t be dealt with in the PA. They need to be disclosed and analyzed in the EIS. Class III survey of the line needs to occur prior to finalizing the EIA and the findings analyzed in the document since known potential impacts will be SIGNIFICANT .
6-15	22-24	Does the statement beginning in Line 22 with “simultaneous” take into consideration that the CBM rights-of-way that will be reseeded, may not be revegetated and able to prevent soil loss for several years depending on soil moisture, timing of seeding, and other natural factors?
6-17 6-17	3-5 22-25	On page 6-17, beginning at line 3, it states "No reasonable foreseeable projects were identified within the area of impact that would contribute to the degradation or loss of these (CR) resources." The SEIS states it again on page 6-17 at line 22. These statements are incorrect considering the proposed Western Alignment will pass through the Powder River Gas - Coal Creek CBM project area just northwest of the Tongue River Dam.
4-28		4.2.3 Affected Environment – Soils and Geology: Soils are not addressed in this section - discuss affected soils under this heading. Alluvial units and alluvial terrace deposits are geological units. Take discussion to series level and describe the physical and chemical characteristics of the soils and their position on the landscape. Is there any potentially prime farmland disturbed by construction activities? Soils in this area are considered prime farmland only if they are irrigated.
4-44		Scoria is a local term for clinker. Scoria is generally considered to be of volcanic origin. The term is used interchangeably with clinker but does create confusion. It is generally best to use the term clinker.
4-108		4.3.3.1 Summary – Environmental Consequences – Soil and Geology: Soil erosion by wind and water during construction is a main concern and must be included. These are different impacts than soil slumping and saline and sodic soils. Soils in this area have a large component of coarse silt and very fine sand and are highly susceptible wind erosion once disturbed. Another characteristic of soils in this area that should be addressed is their low strength when moist. Low soil strength will impact construction and post construction management.
4-111		County Natural Resource Conservation Service is probably meant to be the: Natural Resource Conservation Service in the appropriate county. NRCS is a federal agency. Also modify 7-25
4-114		Slumping commonly occurs in this area when coal seams provide additional moisture to the surface soils. A greater concern should be placed on mapping coal outcrops and near surface exposures as this is where slumping will occur. Construction on or removal of toe slopes will generate potential for slumping and pre-mapping of these areas should provide areas where mitigation measures may be needed.
4-161		Vibration during construction and train use may also result in slumping on adjacent slopes. It will be difficult to determine if the slumping is the result of construction or train use, but vibration could induce slope failure.