

Table 2-3 Impacts comparison for alternatives E and H

issue	concern	status
Number of wells		Same
Air quality	Local/max concentrations	Same; except some smoothing of peaks
Air quality	cumulative	same
Cultural resources	Site identification	Same; except for unexplained 2200-3600 in H
Cultural resources	Cumulative; TCP	Same
Environmental Justice		Screens added
Geology & minerals	federal	Screen effect and protocol difference
Geology & minerals	State; cumulative	Same
hydrology	Surface; groundwater; reuse	Same
hydrology	cumulative	Screen effect 10% <u>7Q10</u>
Indian Trust & Native American Concerns	federal	Screen language
Indian Trust & Native American Concerns	State	Same
Indian Trust & Native American Concerns	cumulative	NO2 difference; but may not be true
Lands & Realty	Federal	Large unaccounted acreage differences 74/44 vs 25/15
Lands & Realty	State	Not compared
Lands & Realty	cumulative	~ 5% difference in acreage
Livestock Grazing		Minor differences due to use of screens
Paleontological		Similar, but minor differences due to corridor effects
Recreation		Similar except for reduced access and less visual impacts
Socio-economic		Significant differences but poorly described due to pace of development
Soils		Similar, but different acreages cited
Solid & Hazardous Wastes		Different descriptions but may turnout to be the same
vegetation		Similar: but H uses watershed evaluations and screens
Visual resource	Federal/State	same

lowest flow 7 day last 100%

Management		
Wilderness Study Areas		Same
Wildlife	Terrestrial	Major differences due to screens, adaptive management, BMPs, and thresholds
Wildlife	Aquatic	Similar, but differences in # wells and screen effects

Table 2-2 ALTERNATIVE MANAGEMENT FOR CBNG

Issue /Topic	Management action	Alternative E	Alternative H	Alternative E modification
Air	Air screen	No air screen	Use air screen	Incorporate Federal/State consultation process; incorporate MDEQ modeling
Bonding		same	same	
Coal mines		Same	same	
Coal bed natural gas	production limits	no	Yes- based on 4 screens	Remove screens; discuss phasing versus "pace" of development; add phasing is natural consequence of development
Coal bed natural gas	directional drilling required	Yes, unless exempted	no	Alt E is more appropriate since DD is considered and exempted rather than left out.
Hydrology	production water disposal	Various methods WMP required	Water screen (10% of 7Q10) WMP required	Replace water screen with monitoring and MDEQ consultation as appropriate; discharges based on compliance, natural and seasonal flows and need for monitoring
Realty	corridors required	No, with surface owner consultation	yes	Include surface owner; use corridors only where make sense (less impact); provide rationale for surface infrastructure based on corridor use where practical consultation with other parties and surface owner concurrence
Realty	powerline placement	Above ground or buried	Low voltage buried; high volt above ground by application	Require plan to demonstrate minimization and mitigation of environmental/wildlife impacts. Choice of buried lines is a consequence of impact mitigation analyses not "a priori" regulation
Realty	road use enforcement BLM	no	yes	Actually both appear to be the same
Realty	Long-term stakeholder planning	no	yes	Add same language into Alt E for roads

Indian Trust and Native American Concerns	Air quality mitigation measures	yes	Yes, based on air screen	Replace air screen and 5 mi buffer with federal/state consultation. MDEQ modeling, and positive demonstration of no impact or mitigation to minimize or eliminate impacts.
Indian Trust and Native American Concerns	Buffer zone (5 mi)	no	Yes; consultation required if impacts predicted within reservation	5 mi buffer is arbitrary and may not be adequate, or possibly too conservative for actual situations. Replace with positive affirmation of no impact or impact with rationale for all APDs
Indian Trust and Native American Concerns	Air quality monitoring for reservation	Yes, depending on negotiated mitigation measures	Yes, depending on development proximity to reservation	Alt H not protective of reservation in all cases; should negotiate whenever impacts are possible.
Vegetation		same	same	
Wildlife	20/20 screen crucial habitat	no	yes	Replace with Adaptive management monitoring program and measurable objective as part of WMPP
Wildlife	Sage grouse habitat area objectives -- connectivity and source populations	no	yes	Add adaptive management component to WMPP for sage grouse to cover connectivity and source populations. Connectivity data is currently lacking; best we can do is establish population trends.
Required Standard Operating Procedures	BMP's incorporated as appropriate	no	Yes, but not listed in original SEIS table 2-2	Add a section in APD addressing any BMPs voluntarily added by the operator to address or mitigate impacts. Reference whether they are from Gold book, BLM or other source. BLM input and BMP requirements should only come into play if operator failed to adequately address impacts.

Water Screen Replace this screen with "State/Federal consultation resolution process" to ensure that proposed development complies with State and Federal water laws, and that all issues and concerns are dealt with. The BLM backstops the State program. Document the resolution of issues and concerns, and the need for any monitoring requirements, resulting from the consultation process. Eliminate the 10% of the 7Q10 since this is more restrictive than State law and usurps State authority, besides being an arbitrary limit of questionable ecological value. Discharge limits should consider assimilative capacity, seasonal volumes of streamflow, and fluctuations in natural water quality when determining discharge limits. There should be upstream and downstream monitoring throughout the CBNG project if discharges occur. Outfall monitoring is a function of the MPDES permitting process. Use adaptive management approach when monitoring exceeds that required under MPDES permit.

Native American Concerns Screen This screen requires site specific groundwater and air analyses as part of a POD/APD submission if it lies within 5 miles of a Reservation. This does not address whether there are in fact potential or actual impacts to the Reservation regardless of location of the POD/APD. The screen does not achieve its goal of protecting Reservations from impact, while at the same time requiring additional monitoring and analyses that may not be necessary. Distance from a reservation boundary has little to do with whether there are potential impacts to the Reservation resources of concern. Topography, geology, and watersheds are more important than simple distance from a governmental boundary. This screen should be replaced with an assessment of whether there is the potential for impacts to the Reservation groundwater or air quality. This should be a positive assessment to demonstrate both why there may be and why there will not be potential impacts, regardless of project location. If there is a potential for impacts then consultations should take place between the BLM, the Northern Cheyenne and Crow Indian Reservations and the operator to resolve the impacts and determine the need for monitoring, testing or modeling. In addition, for the purposes of air quality, the MDEQ modeling results should be used for this determination. In all cases of potential impact and need for additional data, monitoring or modeling, the MDEQ should be determining what is needed to demonstrate compliance with the State program.

Air Quality Impact Screen This screen should be replaced with a "State/Federal consultation resolution process" to ensure that proposed development complies with State and federal air quality laws and regulations; and that all issues and concerns are dealt with. The BLM should be a backstop to the State program. The resolution of issues and concerns should be documented, as well as the need for any monitoring requirements resulting from the consultation process.

Wildlife Screen Replace the wildlife screen with a fully developed Adaptive Management program focusing on critical issues that are unresolved, i.e., where there is doubt or uncertainty about the effects of project components on wildlife. Need to develop legitimate measurable objectives with properly designed controls, appropriate research scales and timelines; and periodic reviews and feedback (iterative process). Based on the SEIS elements to focus on include:

1. Definition of critical habitat by species (indicator, T&E, Sensitive, etc.)
 - a. Riparian woodland
 - b. Wetlands
 - c. Brushy draws
 - d. Critical wintering habitat
 - e. Agricultural /mitigation lands
2. Mule Deer
3. Neotropical songbirds
4. Sage Grouse
 - a. Leks
 - b. Rearing
 - c. Wintering
5. Disturbance effects related to development
 - a. Roads
 - b. Infrastructure
 - c. buffers
6. Other wildlife concerns?
 - a. Water applications
 - b. Water quality
 - c. Water quantity/seasonality
 - d. Grazing
 - e. Mitigation/reclamation