Finding Water for Mohave

Water for Energy in the Southwest
May 2006

Stanley M. Pollack
Navajo Nation Department of Justice
Black Mesa Coal Slurry Preparation Plant
Mohave Generating Station
Operated by Southern California Edison
“Lessee has the right and license, in connection with the operation of coal mining on the leased lands: to . . . develop and utilize water for use in its mining operations.”
Peabody Black Mesa Mine

Jobs: 300
Royalties/Taxes: $20 – 25 M/yr
Water: 4,000 afy

Photo: Enei Begaye
All technical studies conclude that Peabody’s use of N Aquifer water has minor & temporary impacts.
However, the use of N aquifer water for the slurry continues to be controversial.
Department of the Interior
Alternative Transportation Study
1992 - 93
Transportation by Railroad

Department of the Interior

Alternative Transportation Study, 1993

• Construction Cost: $413 Million
  ▪ 1993 Dollars
  ▪ Not include retrofit costs at powerplant
  ▪ Not include rights-of-way costs

• Operating Cost: $43 Million/year

• Incremental Transportation Cost: $21/ton
Transportation by Railroad

Department of the Interior
Alternative Transportation Study, 1993

- Alternative requires continued use of 600 acre-feet of water per year.
- ATS Study did not consider environmental impacts associated with railroad.
- Railroad to Mohave Generating Station could make Black Mesa Coal obsolete.
- Requires additional Colorado River water.
- Would take at least six (6) years to construct.
The ATS Study concluded that because the “incremental cost per ton of rail transport dwarfs the incremental costs of the four water alternatives . . . the rail transportation alternative should be rejected.”
Colorado River Option
Lake Powell Pipeline

- Preferred option in LCR settlement
- Requires Colorado River allocation
- Upper-to-Lower Basin transfer
- Arizona consent requires Colorado River settlement
- Not feasible within time-constraints
The Navajo Nation is located in between the Upper and Lower Basins of the Colorado River.
Lake Powell in the Upper Basin
Black Mesa Mine in the Lower Basin
Possible Colorado River intakes
Jackass Canyon Diversion
Below Lee Ferry
Grand Canyon Diversion is Challenging

- No Upper-to-Lower Basin transfer, but
- Requires Colorado River allocation
- Opposition from Central Arizona
- Environmental opposition
Jackass Canyon below Lee Ferry
Navajo Mainstem Colorado River Claim

- Threatens central Arizona water supply

- *Navajo Nation v. Department of the Interior*
  Breach of trust claim against the United States for failing to consider the Navajo Nation’s claims to the waters of the Colorado River in various river management decisions by the Secretary.
Other Options Evaluated

• Non-water alternatives; methane, trucking
• “Brackish Water” & effluent
• “Reverse pipeline” from Kingman to carry Colorado River water
• Moving the slurry plant to the Upper Basin (Limited Upper Basin apportionment)
• Etc., etc.
C Aquifer

- Areal extent: 27,000 mi²
- Storage estimated 600 to 900 million AF
- Discharge: 174,000 af/yr
- Current uses: 90,000 af/yr
- Current tribal uses: 1,000 af/yr
- Home to Little Colorado River spinedace
Year 2010 C-Aquifer Withdrawals For Existing Major Industrial Water Uses

C-Aquifer Study Area (proposed 6000 af/yr industrial Use)

Total Non-Tribal: 58,500 af/yr

Source: Hopi – Western Navajo Water Supply Study, 2004

Navajo Nation Department of Water Resources – Water Management Branch, Nov 17, 2005
Investigations indicate that the C Aquifer is a viable alternative.
C Aquifer Project Requirements

- Settlement of outstanding litigation between tribes and the companies.
- New fuel supply agreement between Peabody and Southern California Edison.
- New water agreement concerning C Aquifer.
- Municipal water development for tribes.
- Retrofit of MGS with pollution control equipment.
Opposition to the use of water for coal operations persists.
Navajo Water Settlement Act
Public Education and Awareness
Dilkon Chapter
Monday, May 01, 2006
4:00 p.m. - 9:00 p.m. (DST)

Navajo Nation is

giving up your water
Are you going to let one person
give up our water?

Potluck Dinner Following