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The State of California has waived its preference right of application for highway rights-of-way or material sites afforded it by section 24 of said Act.

Inquiries concerning the land should be addressed to the California State Office, Bureau of Land Management, Sacramento, Cal.


May 29, 1964

Pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969, the Department of the Interior has prepared a final environmental statement for the Navajo Project, located principally in Arizona.

The environmental statement pertains to the coal-fired electrical power project which is presently under construction. The major feature of the project, the Navajo Generating Station, is located near Page, Ariz. Other features of the project include the Black Mesa and Lake Powell Railroad, the Black Mesa Coal Mining Operation, the Southern Transmission System, and the Western Transmission System. The project will supply electrical energy to portions of Arizona, California, and Nevada, as well as the authorized Central Arizona Project.

Copies of the statement are available for inspection at the following locations:

Office of Communications, Room 7220, Department of the Interior, Washington, D.C. 20240, telephone (202) 343-0247.


Division of Engineering Support, E&R Center, Technical Services Branch, Building 67, Denver Federal Center, Denver, Colo. 80225, telephone (303) 294-9007.

Office of the Regional Director, Bureau of Reclamation, Post Office Box 427, Boulder City, Nev. 89005, telephone (702) 293-8550.

Single copies of the final environmental statement may be obtained on request to the Commissioner of Reclamation or the Regional Director. In addition, copies may be purchased from the National Technical Information Service, Department of Commerce, Springfield, Va. 22151. Please refer to the statement number above.


John W. Larson, Assistant Secretary of the Interior.

NOTICES
Office of the Secretary

[FR Doc. 72-2072 Filed 2-10-72; 8:48 am]

NAVAGO PROJECT

Notice of Availability of Final Environmental Statement

[FR Doc. 72-2078 Filed 2-10-72; 8:48 am]

IDAH0

Notice of Termination of Proposed Withdrawal and Reservation of Lands

February 4, 1972.

Notice of an application Serial No. I-0678 for withdrawal and reservation of lands was published as Federal Register Document No. 57-8740 of the issue for October 24, 1957 (22 F.R. 207). The applicant agency has cancelled its application insofar as it involved the lands described below. Therefore, pursuant to Document No. 1.7 and section 3.7 of the Act of December 15, 1971 (35 U.S.C. 131-134), the segregative effect of the above-mentioned application terminated are:

The lands involved in this notice of termination are:

Boise Meridian
T. 8 S., R. 3 E.
Sec. 9, 1/4 of lot 1.
The area described aggregates about 20 acres in Elmore County, Idaho.

Richard H. Petrie, Chief, Division of Technical Services.

[FR Doc. 72-2077 Filed 2-10-72; 8:48 am]

[Serial No. Idaho--0678]

LANDS AND RESOURCES

Redelegation of Authorities

February 7, 1972.

Bureau Order No. 701 dated July 23, 1964 (29 F.R. 10526), is further amended as follows:

A new paragraph (f) is added to section 1.7 and section 3.7 as follows:

Section 1.7 Range Management.

(f) Protection of wild free-roaming horses and burros. Take all actions under the Act of December 15, 1971 (35 Stat. 649; 16 U.S.C. 1311-1340), except those provided in section 8(b) thereof.

Sec. 3.7 Range Management.

(f) Protection of wild free-roaming horses and burros.

George L. Turcott, Associate Director.

[FR Doc. 72-2076 Filed 2-10-72; 8:48 am]

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Service

SPECIFIC APPROVAL OF STOCKYARDS AND SLAUGHTERING ESTABLISHMENTS

Pursuant to §§ 78.14(b), 78.15(b), and 78.16(b) of the regulations in Part 78, as amended, Title 9, Code of Federal Regulations, containing restrictions on the movement of certain animals because of brucellosis, under the Acts of May 29, 1864, as amended, February 2, 1903, as amended, and March 3, 1905, as amended (21 U.S.C. 111-113, 114a-1, 115, 117, 125, 127, 128), notice is hereby given that the following stockyards and slaughtering establishments are specifically approved under said regulations as indicated below:

SPECIFICALLY APPROVED STOCKYARDS

The following stockyards preceded by an asterisk are specifically approved for the purposes of § 78.5, Title 9, Code of Federal Regulations, concerning brucellosis reactors and of paragraphs (b) and (c) of § 78.12 of said Title 9, concerning cattle not known to be affected with brucellosis. The following stockyards not preceded by an asterisk are specifically approved for the purposes of paragraphs (b) and (c) of § 78.12 only:

Stockyards

ALABAMA

*Adam's & Eagle, Inc., Marion.

Arab Stockyard, Arab.

Amire Truckers Association, Inc., Atmore.

Cherokee County Stockyard, Centre.

Covington Livestock Auction, Inc., Andalusia.

Dadeville Stockyards, Inc., Dadeville.

Enterprise Livestock Co., Enterprise.

Escambia County Cooperative, Inc., Brewton.

Farmers Cooperative Market, Inc., Frisco City.


Fayette Stockyards, Fayette.

Florence Trading Post, Florence.

Fort Payne Livestock Commission, Fort Payne.


Hartford Livestock Commission, Hartford.

Headland Stockyard, Headland.

Henry County Livestock Association, Inc., Abbeville.

Hodges-Capital Stockyards, Montgomery.

Hodges-Selma Stockyards, Selma.

Hooper Auction Co., Inc., Montgomery.

Jackson County Livestock Co., Scottsboro.

Kennesaw Livestock Co., Inc., Guntersville.


Limestone County Stockyard, Athens.

Linden Stockyard, Linden.

Livingston Stockyard, Livingston.

Madison County Livestock Market, Huntsville.

Pickens County Livestock Commission, Aliceville.

Ramsay & Sons, Inc., Dothan.

Roanoke Stockyards, Inc., Roanoke.

Robertsdale Livestock Auction, Inc., Robertsdale.


Tri-County Livestock Auction, Inc. (formerly Hodges-Huntsboro Stockyards), Huntsboro.

Triple S Stockyards, Inc., Montgomery.

Valley Stockyard, Decatur.

West Alabama Stockyards, Inc., Eutaw.

White Livestock Commission Co., Inc., Harris.

Winfield Livestock Commission Co., Winfield.

ARIZONA

Arizona Livestock Auction, Phoenix.

Nelson Livestock Auction, Wilcox.

Phoenix Livestock Auction, Phoenix.

Wentz Bros. Livestock Auction, Tucson.

ARKANSAS

Ash Flat Livestock Auction, Ash Flat.

Bentonville Auction, Inc., Beebe.

Bentonville Commission Sales, Bentonville.

Carroll County L. S. Auction, Berryville.

Central Arkansas Auction, Little Rock.

Clark County L. S. Auction, Arkadelphia.

Corning Livestock Auction, Corning.

County Line Sale, Batesville.

Davis Livestock Auction, Batesville.
Arizona Coal

J.D. Nations, R.L. Swift and H.H. Haven
Northern Arizona University

New Information. The writers are completing a study of the distribution and thickness of coal beds beneath Black Mesa, which covers 3,200 square miles within the Navajo and Hopi Reservations in northeastern Arizona (Figure 1). They produced a database of information from more than 230 subsurface and surface locations and constructed maps that show coal thickness trends. These maps can be used to locate areas that are favorable for exploration and development. The database and maps may also be used to evaluate the potential for coalbed methane. Results of the study will be released as Arizona Geological Survey and U.S. Geological Survey open-file reports, the availability of which will be announced in a future issue of Arizona Geology.

Production History. Black Mesa coal was mined for pottery firing as early as 900 A.D. More than 100,000 tons were mined between 1300 and 1600. Prior to the introduction of natural gas, local reservation schools used coal for heating, probably fewer than 10,000 tons per year. Between 1960 and 1970, Arizona mines produced fewer than 1,000 tons of coal annually. Peabody Western Coal Company, which began mining on Black Mesa in 1970, produced 13,192,000 short tons, with an estimated value of $300 million, in 1996. From 1970-1996 Peabody leases produced 265 million tons of coal.

Operating Mines. Two coal mines, the Black Mesa and the Kayenta, generate approximately $40 million in royalties annually to the Navajo Nation and the Hopi Tribe. Nearly 700 tribal members work at the mines and support facilities. Coal for residential use is supplied to tribal governments for distribution to Navajo and Hopi people.

The Black Mesa Mine, which opened in 1970, produces nearly 5 million tons of steam coal annually.

Figure 1. Black Mesa and Kayenta mines.
The coal is crushed and transported 273 miles through an 18-inch-diameter slurry pipeline to Southern California Edison's Mohave Generating Station near Laughlin, Nevada (Figure 2). The adjacent Kayenta Mine, which began operating in 1973, produces almost 8 million tons of steam coal annually. The coal is crushed at the mine and carried 17 miles by a conveyer belt to storage silos. From there it is transported 78 miles on the Black Mesa & Lake Powell Railroad, a dedicated, electrified coal-haul railway, to the Navajo Generating Plant near Page, Arizona.

Occurrence and Quality. Black Mesa is underlain by rocks of Late Cretaceous age, including the Yale Point, Wepo, Toreva, and Dakota formations and the Mancos Shale. Coal seams are present in the Dakota, Toreva, and Wepo. The Wepo contains the highest rank and quality of coal on Black Mesa as well as the largest mineable reserves. Although its coal seams average 4-8 feet in thickness, some are as many as 20 feet thick. Peabody reported eight coal zones, some of which contain multiple beds that range in cumulative thickness from 24-91 feet. The thickest bed indicated is 18.6 feet. The average net thickness of Wepo coal within the Peabody lease is 40 feet. The coal is subbituminous, with an average ash content of 7.3 percent, Btu per pound (dry) of 12,382, and sulfur content of 0.58 percent.

The thickest and most extensive coal in the Toreva Formation is in the southeastern part of Black Mesa, where the average of 21 measurements is 12 feet. The rank and quality of this coal, known from only a few sample analyses, averages 13.8 percent ash, 12,338 Btu per pound (dry), and 1.09 percent sulfur.

Coal beds in the Dakota Formation average 2 feet in thickness, except in Coalmine Canyon and near Steamboat, where they are 7-9 feet thick. Rank and quality of coal in the Dakota, also known from only a few samples, averages 11.9 percent ash, 11,125 Btu per pound (dry), and 1.6 percent sulfur.

Reclamation. Reclamation is designed to preserve a traditional American Indian lifestyle by restoring mined land to hardy rangeland with up to 10 times more forage for grazing than native range. Mining and reclamation proceed at the same rate, about 500 acres annually. Topsoil, removed before an area is mined, is returned after mining is completed and the surface has been contoured. The reclaimed land is also used for wildlife habitat and native plants. Peabody Western has received a number of awards for mining and reclamation, including an Excellence in Surface Mining Award from the U.S. Department of Interior's Office of Surface Mining in 1996.

Acknowledgments. Our Black Mesa studies have been supported by four grants from the National Science Foundation and one from the Mobil Corporation. Continuation of the project and preparation of this report were supported by Cooperative Agreement No. 143i-HQ-97-AG-01897 between the Office of the Secretary, the Arizona Geological Survey, and the U.S. Geological Survey, with funding from the National Coal Resources Data System Program.
State Coal Profile: Arizona

Coal ranks a distant second in value to copper among the mineral commodities produced in Arizona. However, Arizona is notable as a source of coal because all production is from leases on Indian lands, and because the State has the only long-distance coal-slurry pipeline in the country. Indian royalties from coal sales in 1992 were $33 million.

All of Arizona's coal production, which totaled about 13 million short tons in 1992, is from the Black Mesa field in the northeastern part of the State, in Navajo County. This is a plateau area covering more than 3,000 square miles of Indian land. Black Mesa coal is generally classified as bituminous coal.

Black Mesa coal is historically noteworthy because archeological evidence shows that prehistoric Indians used it for firing pottery at least as far back as 1300 A.D. Although the first official record of coal production in Arizona was in 1926, small amounts of coal were mined by settlers for local use in earlier years. Between 1926 and 1970, coal production was intermittent and usually amounted to less than 10,000 short tons per year, reflecting the remoteness of the coal deposits, a small population, and a lack of coal-based industries. Most of the coal was produced for heating schools on the Navajo Indian Reservation.

After 1970 the output of coal in Arizona increased markedly. This was due to the opening of two large surface mines in Black Mesa field—Black Mesa and Kayenta—to produce coal for two large power plants built to help meet the growing demand for electricity in southern California and the Southwest. Peabody Coal Company developed and continues to operate both mines, located about 16 miles apart, on about 65,000 acres of land leased from the Navajo and Hopi Indian tribes. Production is from four to five coalbeds that range from 3 to 10 feet in thickness. Both mines rank among the largest U.S. coal mines.

Black Mesa supplies coal to the 1,580-megawatt Mohave power plant of Southern California Edison Company, in southeastern Nevada. The transportation link between the mine and power plant is unique: coal is delivered as a slurry through a 273-mile long, 18-inch pipeline. The coal slurry (a mixture of half finely ground coal and half water, by weight) is pumped at a rate of about 3.5 miles per hour. Kayenta produces coal for the 2,250-megawatt Navajo power plant, located near Page, in Coconino County, and operated by the Salt River Project Agricultural Improvement and Power District. Coal from the mine is hauled to the power plant on an 83-mile-long private railroad. A 17-mile long conveyor connects the mine with the railroad.

Less than half of the 18 million short tons of coal consumed in Arizona in 1992 was produced in the State. Electric utilities were the principal consumers. Except for the Navajo power plant, the utilities consumed coal received primarily from New Mexico. Other coal consumers in Arizona were chiefly cement plants and a paperboard mill.
Coal Reserves (Million Short Tons)

<table>
<thead>
<tr>
<th>Type of Reserve</th>
<th>Underground</th>
<th>Surface</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Demonstrated Reserve Base:</td>
<td>102</td>
<td>135</td>
<td>236</td>
</tr>
<tr>
<td>Estimated Recoverable Reserves:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(January 1, 1992)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfur Content (pounds per million Btu)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 0.61 (low sulfur)</td>
<td>51</td>
<td>106</td>
<td>155</td>
</tr>
<tr>
<td>0.61-1.67 (medium sulfur)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&gt; 1.67 (high sulfur)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>51</td>
<td>106</td>
<td>155</td>
</tr>
<tr>
<td>Estimated Recoverable Reserves at Active Mines, Year-End 1992</td>
<td>0</td>
<td>W</td>
<td>W</td>
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Production

Salient Data by Mine Type

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<th></th>
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<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Underground</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mines (thousand short tons)</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Miners</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Productivity (short tons per miner per hour)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
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</tr>
<tr>
<td>Average Mine Price (dollars per short ton)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Surface</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mines (thousand short tons)</td>
<td>10,005</td>
<td>9,625</td>
<td>11,304</td>
<td>13,203</td>
<td>12,512</td>
</tr>
<tr>
<td>Miners</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Productivity (short tons per miner per hour)</td>
<td>5.29</td>
<td>6.33</td>
<td>5.93</td>
<td>6.64</td>
<td>6.29</td>
</tr>
<tr>
<td>Average Mine Price (dollars per short ton)</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mines (thousand short tons)</td>
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<td>9,625</td>
<td>11,304</td>
<td>13,203</td>
<td>12,512</td>
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<tr>
<td>Miners</td>
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<tr>
<td>Productivity (short tons per miner per hour)</td>
<td>5.29</td>
<td>6.33</td>
<td>5.93</td>
<td>6.64</td>
<td>6.29</td>
</tr>
<tr>
<td>Average Mine Price (dollars per short ton)</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
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</table>
## Arizona

### Number of Mines by Production Range and Percent of Production, 1992

<table>
<thead>
<tr>
<th>Mine Type</th>
<th>Production Range (thousand short tons)</th>
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<tbody>
<tr>
<td></td>
<td>1,000 and over</td>
<td>500 to 999</td>
<td>100 to 499</td>
<td>&lt; 100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>Underground</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Surface</td>
<td>2</td>
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<td>0</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>All Mines</td>
<td>2</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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### Coal Demand

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</thead>
<tbody>
<tr>
<td>Consumption (thousand short tons)</td>
<td>10,915</td>
<td>14,448</td>
<td>15,758</td>
<td>16,116</td>
<td>17,227</td>
</tr>
<tr>
<td>Coke Plants</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Other Industrial</td>
<td>W</td>
<td>W</td>
<td>660</td>
<td>669</td>
<td>632</td>
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<tr>
<td>Residential and Commercial</td>
<td>W</td>
<td>W</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>11,558</td>
<td>16,364</td>
<td>16,419</td>
<td>18,805</td>
<td>17,862</td>
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<tr>
<td>Year-End Utility Stocks (thousand short tons)</td>
<td>5,541</td>
<td>3,163</td>
<td>3,090</td>
<td>4,177</td>
<td>3,543</td>
</tr>
</tbody>
</table>

### Electricity Generation

<table>
<thead>
<tr>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Total (million kilowatthours)</td>
<td>36,876</td>
<td>48,227</td>
<td>62,289</td>
<td>68,767</td>
<td>70,109</td>
</tr>
<tr>
<td>Coal (percent)</td>
<td>59</td>
<td>60</td>
<td>51</td>
<td>48</td>
<td>49</td>
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<tr>
<td>Nuclear (percent)</td>
<td>0</td>
<td>2</td>
<td>33</td>
<td>38</td>
<td>37</td>
</tr>
<tr>
<td>Other (percent)</td>
<td>41</td>
<td>38</td>
<td>16</td>
<td>14</td>
<td>14</td>
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</tbody>
</table>

### Utility Coal Data, 1992

<table>
<thead>
<tr>
<th>Average Quality and Average Delivered Cost</th>
<th>Produced in State</th>
<th>Receipts, All Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Content (million Btu per short ton)</td>
<td>22.00</td>
<td>20.61</td>
</tr>
<tr>
<td>Sulfur Content (percent by weight)</td>
<td>.52</td>
<td>.51</td>
</tr>
<tr>
<td>Ash Content (percent by weight)</td>
<td>9.50</td>
<td>12.19</td>
</tr>
<tr>
<td>Pounds of Sulfur per million Btu</td>
<td>.47</td>
<td>.50</td>
</tr>
<tr>
<td>Dollars per million Btu</td>
<td>1.10</td>
<td>1.37</td>
</tr>
<tr>
<td>Dollars per short ton</td>
<td>24.28</td>
<td>28.31</td>
</tr>
</tbody>
</table>

Estimated Total State Energy Consumption, 1991: 924 trillion Btu (coal, 348; natural gas, 128; petroleum, 353; nuclear electric power, 270; hydroelectric power, 75; other, 0; net interstate flow of electricity and associated losses, -250).

W = Withheld to avoid disclosure of individual company data.

Notes: Totals may not equal sum of components because of independent rounding. Data coverage—Production: all mines. Number of mines: 1980, mines that produced 10,000 short tons or more; other years, all mines. Number of miners and productivity: mines that produced 10,000 or more short tons and preparation plants that had 5,000 or more employee hours. Average mine price: mines that produced 10,000 or more short tons. Average quality and average delivered cost of utility coal: power plants with a generator nameplate capacity of 50 megawatts or more. Extent of coal-bearing areas and locations of coal-consuming plants shown on map are approximate; small coal deposits are not shown. Coal-producing counties shown on map exclude any county where all 1992 output was from mines producing less than 10,000 short tons.


Energy Information Administration/State Coal Profiles
Destination of Coal Produced in Arizona, 1992
(Million Short Tons)

Transportation modes, domestic markets (percent): rail, 60; tramway/conveyor/slurry pipeline, 40.

Note: Total may not equal sum of components because of independent rounding.
Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

Origin of Coal Received in Arizona, 1992
(Million Short Tons)

Note: Total may not equal sum of components because of independent rounding.
Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."
Below is an index to the February 12, 2004 Life of Mine Permit Revision application, submitted by Peabody Western Coal Company to the Office of Surface Mining on February 17, 2004. This application contains text, maps, and photos, all of which are indexed below and available for viewing or downloading. The text is available in Acrobat PDF format and the maps in JPEG, and DWF format in file sizes range from 25KB to 9MB. To view the DWF drawings, first install the Autodesk Viewer (Download AutodeskViewer.zip from this website, unzip, and execute "Open") ExpressViewerSetup.exe).

The U.S. Office of Surface Mining (OSM) is reviewing this application for a significant revision of the mining and reclamation plan for Peabody Western Coal Company's Black Mesa-Kayenta Mines. The Black Mesa-Kayenta Mines are located on the Navajo and Hopi Reservations in northeastern Arizona near the northern edge of Black Mesa, about 25 miles southwest of Kayenta, Arizona.

The revision application proposes: -- the addition of about 20,157 acres to the currently approved permit area for the Kayenta Mine (about 42,773 acres) to incorporate the Black Mesa Mine into the permit (i.e., the administrative delay for permitting the Black Mesa Mine would be terminated and the Black Mesa Mine would be permitted under the permanent Indian Lands Program) -- the addition of about 90 to 130 acres to the permit area for a coal transportation corridor from the J23 coal resource area to the Black Mesa preparation facilities, which will require a new surface right-of-way -- new mine plans extending operations at both mines for at least 20 years beyond 2005 -- an increase in the rate of coal production at the Black Mesa Mine, and a resultant increase in water use for coal slurry transportation, to accommodate anticipated increased coal demand at the Mohave -- a coal washing facility for the Black Mesa Mine to meet the anticipated future coal quality requirements of MGS after 2007 -- new environmental baseline information for future coal resource areas to augment the existing environmental baseline studies and ongoing environmental monitoring results -- an analysis of the probable hydrologic consequences of using a water supply other than the Navajo aquifer for coal slurry transportation, as well as a significant part of the mines' operational needs.

You may send written comments or objections about the proposed revision to the Office of Surface Mining or request that the Office of Surface Mining hold an informal conference on the application. Your request for an informal conference must be in writing and must include: your name and mailing address; a brief summary of the issues to be raised by you; and whether you desire to have the informal conference conducted near the Black Mesa-Kayenta Mines. Your comments, objections, or request for an informal conference must be sent by September 15, 2004 to:
Jerry D. Gavette, Black Mesa-Kayenta Mines Team Leader
Office of Surface Mining
P.O. Box 46667
Denver, Colorado 80201-6667
Telephone number in Denver 303-844-1400 x1496.

You may also call the Office of Surface Mining, toll-free, at 1-877-274-4025 or e-mail comments, objections or request for an informal conference to Blackmesa-comments@osmre.gov.

You may review a complete copy of the revision application below, or at:
1. Navajo Nation Minerals Department-Office of Surface Mining
Window Rock Boulevard
Window Rock, AZ 86515.

2. The Hopi Tribe Office of Mining and Mineral Resources
located on Highway 264, about 1 mile east of Kykotsmovi, Arizona.

3. The Forest Lake Chapter House
located on Navajo Route 41 in Pinon, Arizona.

4. The Office of Surface Mining Albuquerque Field Office
505 Marquette NW, Suite 1200
Albuquerque, New Mexico.

5. The Office of Surface Mining Western Regional Coordinating Center
1999 Broadway, Suite 3320

The applicant for the revision is Peabody Western Coal Company, P.O. Box 650, Navajo Route 41, Kayenta, Arizona 86033.

Text

- Transmittal Letter
- Index and Chapter 2 General Description
- Chapter 3 Legal
- Chapter 4 Geology
- Chapter 5 Coal Recovery
- Chapter 6 Facilities
- Chapter 8 Soil and Overburden
- Chapter 9 Vegetation
  - Appendix 1
  - Appendix 2
  - Appendix 3
  - Appendix 4
- Chapter 10 Wildlife
  - Attachment 4
    - Photos
- Chapter 15 Hydrology
- Chapter 16 Monitoring and Chapter 17 Hydro Balance Protection
- Chapter 18 Probable Hydro Consequences
  - Attachment 3 Wash Plant
- Chapter 19 Hydro Reclamation Plan
- Chapter 20 Reclamation Schedule
- Chapter 22 Soil Reconstruction
- Chapter 23 Revegetation and Chapter 25 Maps and Plans

Appendix A-1
Appendix B J-28 Mining Area- Deep Cores

Maps

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- 85210-SE Mine Plan.jpg
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Last Updated: 11/02/2004 05:19:16

Office of Surface Mining
1951 Constitution Ave. N.W.
Washington, D.C. 20240
202-208-2719
getinfo@osmre.gov
The Navajo Power Project and Environmental Protection Plans

GENERAL
The Navajo Generating Station will be Arizona's largest electric generating plant. Its design includes comprehensive plans for environmental protection. These plans for preserving environmental quality are described in a special report on Page Four.

Energy generated at the plant will supply the growing power demand of electrical consumers of Salt River Project, Los Angeles Department of Water and Power, Arizona Public Service Company, Nevada Power Company, and Tucson Gas and Electric Company, and will be used by the U. S. Bureau of Reclamation for pumping Colorado River water for the Central Arizona Project. Salt River Project, as project manager, will construct and operate the generating station.

CONCEPT
The Navajo Generating Station will be the third power generating plant to be built under the Western Energy Supply and Transmission (WEST) Associates concept, in which participating utilities cooperate in extensive regional planning of generation and transmission facilities, and coordinate their investment in such facilities. Generating plants, much larger than any single utility would need, are constructed and operated by groups of utilities, achieving economies that the participants could not otherwise enjoy; this practice helps to keep consumers' power costs low.

CAPACITY
The plant will consist of three generating units (Units No. 1, No. 2, No. 3) each with an estimated net output of 770,000 kilowatts. The plant will have a total net capacity of 2,310,000 kilowatts.

CONSTRUCTION SCHEDULE
Groundbreaking for the plant is planned for April, 1970. The first unit is scheduled to begin commercial operation during June, 1974. The second is expected to go on line in June, 1975. And the third unit will begin operation by June, 1976.

COSTS
Investment in the three-unit plant will be approximately $328 million. Transmission facilities will cost about $172 million. The railroad which will carry fuel to the plant will require an investment in excess of $20 million. Capital investments and operating expenses will be paid by participating utilities in proportion to their percentage participation.

PARTICIPATION

<table>
<thead>
<tr>
<th>Percentage of Participation</th>
<th>Kilowatts to be Received (approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt River Project</td>
<td>21.7%</td>
</tr>
<tr>
<td>Los Angeles Dept. of Water and Power</td>
<td>21.2%</td>
</tr>
<tr>
<td>Arizona Public Service Co.</td>
<td>14.0%</td>
</tr>
<tr>
<td>Nevada Power Co.</td>
<td>11.3%</td>
</tr>
<tr>
<td>Tucson Gas and Electric Co.</td>
<td>7.5%</td>
</tr>
<tr>
<td>U. S. Bureau of Reclamation</td>
<td>24.3%</td>
</tr>
</tbody>
</table>
LOCATION
The plant will be on 1,021 acres of land leased from the Navajo Indian Tribe, at Antelope Creek approximately four miles east of Page. Another 765-acre parcel, two miles farther east, has been leased from the Tribe for an ash disposal area.

The site was chosen for the generating station to meet five requirements: availability of competitively priced fuel; an adequate, reliable supply of cooling water; a nearby community large enough to support the facility during construction and operation; proximity to major power load centers, enabling economic power transmission; and, ability to protect the environment.

TRANSMISSION LINES
Some 800 miles of 500 kilovolt transmission lines, costing approximately $172 million, will be constructed to carry power from the generating station to the participants' delivery points. The transmission lines from the generating station to the Phoenix area will be constructed, operated and maintained by Arizona Public Service Company. The lines to the Las Vegas area will be built by the Los Angeles Department of Water and Power and operated and maintained by Nevada Power Company.

ENGINEER-CONTRACTOR
Bechtel Corporation was selected as the engineer-contractor for the generating station. This company is the world's largest and most experienced engineer-contractor of electric generating stations.
It is the intent of the Navajo Generating Station participants to make this installation an economic and environmental asset to the community of Page and to the state of Arizona. In constructing and operating the plant, the Salt River Project as project manager will adhere to the following policy.

Environmental Policy

The policy of the Salt River Project is to take whatever steps are technologically and economically feasible to protect the environment, while fulfilling our primary responsibility of providing adequate low-cost water and power. We will:

1. Conduct those studies necessary to obtain a complete understanding of how any new facility or activity may affect the environment, and take appropriate action to provide that protection.
2. Install the necessary equipment at our facilities to protect against excessive emission of particulate matter into the atmosphere.
3. Prevent any emissions of oxides of sulphur and nitrogen from exceeding established limits.
4. Construct generating plants in a manner which assures that stack effluents will be adequately dispersed.
5. Cool water used in generating plants when needed to meet acceptable temperatures before returning the water to lakes, rivers or streams, thereby protecting the ecology of the body of water.
6. Avoid the return of water to lakes, rivers or streams which has dissolved solids or other material which would be detrimental to the ecology of the area as determined by ecologists, biologists and controlling agencies.
7. Avoid dispersion of fuel particles and dust.
8. Build into all plants the appropriate facilities for noise abatement.
9. Design and landscape all new facilities so that they will blend pleasingly with the surrounding area.
10. Inspect and survey all new facility sites so that any historic or archaeological materials can be saved for posterity.
11. Work harmoniously with all federal, state, and local agencies and groups responsible for or interested in the protection of our environment.
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Williams - 21% concentrated? Merge tallormins? - mention reduced. Garth - 4% in 18.25 microseconds worst reduced to 15%

Storage for power supply well be evaluated next. Morris - Harlow - Rose

AGENDA

Navajo Generating Station Environmental Protection Presentation
to Arizona State Agencies

State Highway Department Auditorium - March 5, 1970
9:00 a.m. - 12:30 p.m.

9:00 a.m. Opening remarks by Governor's representative, Stanley Womer, Staff Administrator.

9:05 a.m. Introduction of participants and representatives of engineer-contractor by Stanley Hancock, Director of Community Relations, Salt River Project.

9:20 a.m. "Environmental Protection Plans at Navajo Generating Station" by L. M. Alexander, Associate General Manager, Power, Salt River Project.

9:45 a.m. Meteorological Studies Relative to Navajo Station -- Pete Courtney, Sr. Meteorologist, Dames & Moore.

10:00 a.m. Water Pollution Control Studies -- Herbert S. Reisbol, Engineering Manager, Hydrology, Bechtel Corp.

10:12 a.m. Black Mesa Mine -- Edwin R. Phelps, Sr. Vice-President of Operations, Peabody Coal Company.

10:22 a.m. Transmission Line Construction -- Russ Hulse, Manager, Power Resources Projects, Arizona Public Service Company; and Howard R. King, Engineer of System Development, Los Angeles Department of Water & Power.

10:35 a.m. Break.

10:45 a.m. Air Pollution Control Studies -- Irwin A. Raben, Bechtel Corp.; N. Van De Verg, Chemical Engineer, Bechtel Corporation; and Dr. T. K. Sherwood, Professor of Chemical Engineering, University of California, Berkeley.


11:35 a.m. Questions & Answers
L. M. Alexander, Salt River Project, will act as moderator.
Lee Hospital. To get permission, you must have approval of Lee Bute. We can get paid by 10% because you can't publish our copyrighted material.

Continued

Sent toActivity to 10:00. Paul then continued

10:30-11:15. enumerated, 100, 335, 253, 623.

Monday

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Kemp LA: 2-50kV line to P.S. Start could later 71

Harvey LA to L.A. line to LA. Person to L.A. Person to LA.

Before

CD. Total

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Adjustment, 30% removal of 240.

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Out of two electrodes 10 ppm. Reserve and 9/15.


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10 hours 5 production. Repairs extend removal of feet.

2. 35 percent plant. General 50 percent.

3. Production on 90 percent of the plant.
BENEFITS TO AREA

Employment during construction of the generating and transmission facilities will peak at 1,500. Following construction, the plant will result in some 650 jobs: approximately 175 of these will operate the plant, another 225 will be at the coal mine, and the remainder will work in nearby businesses. Indians will be hired for the jobs whenever possible.

These 650 jobs will have an estimated annual payroll of $5.9 million.

Participants in the generating station are providing financial assistance to the Navajo Community Junior College.

Coal royalties, lease payments and other contributions to the Navajo and Hopi Indian tribes will exceed $1.8 million annually.

Arizona Public Service Company will make available to the Navajos, for their future development, 55,000 kilowatts of power generated at the plant.

Local schools, other area taxing entities and the state of Arizona will receive an estimated $6.4 million annually in property taxes, based on the expected assessed valuation of the generating station, related transmission lines, coal mine and railroad.

FUEL

Fuel for the plant will be coal from deposits at Black Mesa on reservations of the Navajo and Hopi Indian tribes. The coal will be mined by Peabody Coal Company. It will be carried the 80 miles from the mine to the plant by a unit train, construction of which will cost in excess of $20 million. When the plant is in full operation, its three units will consume approximately 23,000 tons of coal each day.

BOILERS

Each of the three generating units will have a separate boiler supplied by Combustion Engineering, Inc. Each boiler will have a heat output of 6,186,000,000 BTU per hour, enough to heat more than 155,000 homes, and a steam capacity of 5,535,000 pounds per hour.

TURBINES

The turbines for all three units are the type known as tandem compound, four flow, 33%. They will have a steam temperature of 1,000 degrees F. and a reheat temperature of 1,000 degrees F. also. The steam pressure is 3,500 psig at the inlet of the high pressure turbines.

GENERATORS

Each of the three General Electric Company generators will operate at 24,000 volts, at a speed of 3,600 rpm. The stator will be water cooled while the rotor will be cooled by hydrogen at 75 psig. Each unit will weigh 446 tons.

The assembled turbine-generators will be single shaft units 167 feet long.

COOLING TOWERS

The plant probably will have nine cooling towers—three towers for each generating unit. The towers are expected to be of the cross flow, induced draft type, with five cells each. If preliminary concepts are effected, the towers will be 65 feet high, 70 feet wide, 220 feet long, and will have a water flow of 270,000 gallons per minute.

WATER SUPPLY

Water will be pumped approximately 3 miles to the plant from Lake Powell. The plant will require approximately 34,000 acre-feet annually. Although the contract permits maximum return to Lake Powell of 5,900 acre-feet per year, it is expected that the return will be between 4,500 and 4,800 acre-feet and never more than 5,200 acre-feet.
Environmental Quality

The Navajo Generating Station participants are committed to protect the environment while fulfilling their primary and traditional responsibilities of providing low-cost power to consumers. It is their desire to make this a model facility which will be an economic and environmental asset to the community of Page and to the state of Arizona, and a credit to the electric utility industry.

Environmental factors have received great emphasis in the development of the Navajo Generating Station, and will continue to be a major concern.

Studies by ecologists, biologists and representatives from controlling agencies will be utilized fully to design into the plant those features which will protect the environment.

AIR POLLUTION CONTROL

Various types of emission control devices are being studied. Included in the design will be the most effective commercially-proven control equipment available at the time of design. The design efficiency for fly ash removal will be 99.5 percent.

The coal will be of relatively high quality. Its average ash content is considerably less than other Western coal deposits.

The coal’s sulphur content averages 0.51 percent, only a fraction of that of Eastern coal which ranges from 2 to 5 percent. Stack height has not yet been determined, but preliminary studies indicate a height of 700 to 800 feet may be needed to adequately disperse the minute quantities of the oxides of sulphur and nitrogen which are emitted. The most stringent control standards will be met.

Emission of nitrogen oxide is not a potential problem at this plant site because it is not harmful unless it reacts with unburned hydrocarbons in a quantity occurring in vehicular exhaust in a large metropolitan area.

DUST CONTROL, ASH DISPOSAL

Dust control equipment will be installed to protect against dispersion of fuel or ash particles during transportation, storage and disposal. The ash will be mixed with water for transportation to the ash disposal area where it will be covered with earth fill.

WATER QUALITY, TEMPERATURE

Water being returned to Lake Powell will also meet strict standards. Precautions will be taken to insure that the returned water does not contain dissolved solids or other material which would be detrimental to the ecology of the area. Further, the temperature of the returned water will be controlled so that there will be no adverse effects upon the ecology of the lake.

OTHER POLLUTION CONSIDERATIONS

The design of the plant will insure adequate noise suppression. Special architectural consideration is being given to the plant’s appearance so that it will be aesthetically pleasing. Before any site work commences, archeological studies will be completed, preserving any historic objects and areas.

For further information, contact the Community Relations Department, Salt River Project, P.O. Box 1980, Phoenix, Arizona 85001, Telephone 602-273-5900.