

NEIL SIMPSON UNIT #2  
80 MW COAL-FIRED POWER PLANT

WYOMING INDUSTRIAL SITING ADMINISTRATION  
REQUEST FOR WAIVER OF PERMIT APPLICATION

SUPPLEMENT

SUBMITTED BY  
BLACK HILLS CORPORATION  
A SOUTH DAKOTA CORPORATION  
DOING BUSINESS AS  
BLACK HILLS POWER AND LIGHT COMPANY

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DOCKET NO. WISA 92-1

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DECEMBER 1991

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In accordance with the request of the Director of the Office of Industrial Siting Administration, this Supplement is herewith submitted in response to the additional information requested regarding the Request for Waiver of Permit Application for Neil Simpson Unit #2, an 80 MW coal-fired power plant (hereafter "Power Plant"), filed on November 20, 1991. This Supplement is presented for the review of the Industrial Siting Council. Contained in this Supplement is the information and data requested by the Director, set out in a format designating each statutory provision to be supplemented followed with a response containing the required information and data. Additional data is contained in the Supplement Appendix, Exhibits S-1 through S-8, attached hereto and incorporated herein by reference.

STATUTORY REQUIREMENT, W.S. 35-12-107(b) (ii): A description of the nature and location of the facility;

SUPPLEMENTAL RESPONSE:

Enlarged copies of Exhibits 1 and 2, vicinity maps describing the location and features of the proposed Power Plant, are included as Exhibits S-1 and S-2.

STATUTORY REQUIREMENT, W.S. 35-12-107(b) (iii): Estimated time of commencement of construction and construction time;

SUPPLEMENTAL RESPONSE:

A replacement copy of Exhibit 3, various major construction activities, is included as Exhibit S-3A.

A decision as to whether construction will begin in August, 1994, or will begin approximately one year earlier in June or July, 1993 is expected to be made in July 1992. The determination of whether the construction schedule can be moved up one year from the scheduled commencement in August, 1994 to June or July, 1993 depends primarily on the procurement of air permits and monitoring data. Application has been made to authorize the use of existing meteorological data in evaluating Black Hills' permit application. If Black Hills is allowed to use existing data, a one-year site monitoring will not be necessary. Black Hills anticipates that by the end of December 1991, the Wyoming Department of Environmental Quality, Division of Air Quality, will make a decision in this regard. Please note that the Request for Waiver of Permit Application, filed on November 20, 1991, incorrectly identified the agency making this determination as the U.S. Environment Protection Agency. Following that decision, it is anticipated that a Prevention of Significant Deterioration (PSD) permit application will be submitted to the Department of Environmental Quality, Division of Air Quality, by March 1992, assuming no significant change in present engineering designs. The Wyoming Department of Environmental Quality, Division of Air Quality, is projected to act on Black Hills' permit application by July, 1992. Following a decision by the Department of Environmental Quality, Black Hills will be prepared to make its final determination as to the date construction of Neil Simpson Unit #2 will commence.

The determination of whether the construction schedule can be moved up one year will also depend on the ability of Black Hills to acquire the necessary financing commitments at an early date. Black Hills plans to retain the services of an investment banker to expedite this process. During December, 1991, Black Hills will seek financing commitments. It is expected that by July, 1992, project financing will be arranged and Black Hills will be adequately prepared to determine the schedule for commencing construction.

Assuming that construction will begin in June or July, 1993, it is estimated that the Power Plant will be completed by October, 1995, and on-line by January, 1996. There will be no acceleration in the construction schedule should the start date be moved up to June or July 1993, and construction will remain on the same 28-month schedule. During 1993, construction activities will consist of preliminary site work including clearing, leveling and grading land, excavation, substructures, and foundation work. In 1994, major construction contracts are scheduled to begin, such as the erection of buildings and structures, mechanical, electrical and substation construction including the steam generator, steam turbine, and major auxiliary equipment. During 1995, major activities will involve setting the steam turbine, setting and placing equipment and piping, completing termination of electrical systems, installation and checkout of control systems, and completion of the substation. In November and December 1995, initial plant start up and performance testing will be conducted prior to commercial operation scheduled for January, 1996. A revised construction schedule assuming construction to begin in 1993 which provides additional detail on various major construction activities is included as Exhibit S-3B.

STATUTORY REQUIREMENT, W.S. 35-12-107(b) (iv): Estimated number and job classifications by calendar quarter of employees of the applicant, or contractor or subcontractor of the applicant, during the construction phase and during the operating phase;

SUPPLEMENTAL RESPONSE:

In the event that Black Hills determines the date construction will commence to be in June or July, 1993, the construction will remain on the same 28-month schedule described in the Request for Waiver of Permit Application, Response to W.S. 35-12-107(b)(iv) and Exhibit 4, filed on November 20, 1991. There are no plans to accelerate the actual construction schedule itself or to alter the scheduled labor use. Included herein as Exhibit S-4 is a 28-month construction workforce schedule assuming construction to begin in July, 1993 and to be completed and the Power Plant operational by January, 1996.

Assuming that construction commences in July, 1993, the following supplemental labor force estimates can be

made. During the construction phase in 1993, the construction work force is estimated to reach a quarterly high of 64 workers from July through December with a quarterly average of 49 workers. During the 1994 construction phase from January through December, the construction work force is estimated to average 192 workers with a peak quarterly level of 319 workers. The construction workforce during 1995 is estimated to average 192 workers per month, with a peak monthly level of 324 construction workers. A further breakdown of estimated numbers of workers and job classifications by calendar quarter during construction is provided in Exhibit S-4.

STATUTORY REQUIREMENT, W.S. 35-12-107(b) (v): Estimated population increases attributable to the facility;

SUPPLEMENTAL RESPONSE:

**CONSTRUCTION PHASE POPULATION INCREASES**

Black Hills' best estimate regarding population increases during the construction phase of the Power Plant is based on the assumption that in general seventy-five percent (75%) of the craft labor will be unavailable in the local workforce. "Local" workforce is assumed to include qualified laborers living within a reasonable commuting distance of approximately 110 miles (a two hour drive by automobile) from the proposed construction site. As supplemental information, assuming a July, 1993 start date for construction, the following estimates can be made. Beginning with the initial quarter of construction, the monthly average of workers migrating to the area in the third quarter of 1993 will be 25 workers, gradually increasing to a peak monthly average of 248 workers during the fourth quarter of 1994, and then dropping to a monthly average of 40 workers during the fourth quarter of 1995 when construction is scheduled to be completed. Based on the population data contained in the 1990-91 Land Use Inventory, Volume 1: Housing and Demographic Estimates prepared by the City of Gillette, Department of Community Development, Planning Division, these figures represent an increase of 0.1% to 1.3% to the 1990 population of Gillette, assuming that each in-migrant locates within the City of Gillette. Contained in Exhibit S-5 are estimates of the monthly average of the local and non-local construction workforce by calendar quarter assuming a July, 1993 construction start date. For purposes of comparison, this Exhibit

also includes the monthly average of the local and non-local workforce assuming an August, 1994 start date. These construction worker in-migration figures are estimates of Black Hills based on information provided by Wyoming Department of Employment, Job Service of Wyoming, and the Campbell County Economic Development Corporation, in addition to data of Black Hills.

Of the construction workers who will migrate to the area, it is assumed, based on general construction laborer characteristics, that relatively few will move their household to the area. This assumption is based on the relatively short 28 month construction schedule which will not require a significant number of any one craft specialty for a continuous period of twelve to eighteen months or greater. The twelve to eighteen month period is generally assumed to be the point at which an in-migrating worker would consider moving his or her household and family, if any, to the area. Based on in-migration of approximately 75% and the distribution of the craft labor schedule, it is estimated that a maximum of 60 workers will move their household to the area. Based on demographic trends and construction labor force characteristics of workers at the North Antelope Coal Company and the Rochelle Coal Company as reported in monitoring data, it is assumed that 35% of the construction workforce in general, and those permanently moving their households to the area in particular, will be single individuals without children. Accordingly, it is calculated that 21 workers moving their household to the area will be single, and 39 workers will bring a family to the area.

Again using monitoring data from the North Antelope and the Rochelle Coal Companies, and also based on information from the Campbell County Economic Development Corporation (CCEDC), Black Hills estimates the average family size for the 39 workers moving their family to the area will be approximately 4.0, for a total of 156 persons. Based on this information, it is estimated that a total of 76 children will move into the affected area and of those, Black Hills projects that 33 children will be age 0-5 years, 23 children will be age 6-10 years, 13 children will be age 11-15 years, and 7 children will be 16-19 years of age. Taken together the total construction workers and construction worker family members moving into the area on a permanent basis is estimated to be 177, or 0.9% of the 1990 population of the City of Gillette.

In addition to the construction laborers and their families migrating into the area, the added construction labor force population and construction activities during the construction phase can be expected to generate non-basic jobs in businesses offering services such as food and entertainment and, to some degree for other businesses such as equipment suppliers. The creation of indirect jobs as a result of the direct employment during construction for this project is referred to as the "ripple effect" and can be estimated to generate 3 such jobs during the third quarter of the second calendar year of construction, 14 jobs during the fourth quarter of the second year of construction, 15 jobs during the first quarter of the third year of construction, 13 jobs during the second quarter of the third year of construction, and 1 job during the third quarter of the third year of construction. These estimations are based on information contained in the Addendum to Industrial Siting Administration Staff Review, Permit Amendment Application for the Tenneco Mineral Company Soda Ash Expansion Project, dated September 10, 1990. Based on the information in this report, non-basic family members are estimated at an additional 1.97 times the number of construction-generated non-basic employment positions. Using this figure, the estimated number of non-basic family members is expected to range from 2 to 30 persons over the five-quarter period.

Of these positions, approximately 70%, will be filled by local workers and 30% will be filled by in-migrating individuals, according to the estimates of the CCEDC. Based on this information, the maximum in-migration resulting from construction-generated non-basic employment will be 4 persons.

The foregoing information for the construction phase of the project is expected to remain the same regardless of whether construction begins in July, 1993 or in August, 1994, assuming that there are no dramatic demographic changes in the existing population of the affected area.

#### **OPERATIONAL PHASE POPULATION INCREASES**

With respect to the population increases during the operational life of the Power Plant, the information provided in the Request for Waiver of Permit Application filed on November 20, 1991, is anticipated to be reliable regardless of whether construction

begins in July, 1993 or in August, 1994, as no factors have been identified as resulting in significant demographic changes during the relevant time periods.

The information contained in the Request for Waiver regarding in-migration for the operational life of the plant includes an estimate that 20 workers will migrate into the area to fill permanent positions at the plant. Of these individuals, the CCEDC estimates that the average family size will approximate that of the current population of Gillette. According to 1991-92 demographic raw data provided by the City of Gillette, Department of Community Development, Planning Division, the average household size is currently 2.47 persons per household. This figure calculates to an estimated total population increase of 50 persons or 0.2% of Gillette's 1990 population. For those migrating into the area, it is estimated that 16 will be school age children, based on information from City of Gillette's 1990-91 Housing and Demographic Study and the Campbell County School District. Based on information from the CCEDC, information contained in monitoring data of North Antelope and Rochelle Coal Companies, and current enrollment information, Black Hills projects that 9 children will be in the kindergarten through sixth grade age range, 4 children will be in the seventh through ninth grade age range, and 3 children will be in the tenth through twelfth grade age range.

Based on information from the CCEDC, information contained in monitoring data of North Antelope and Rochelle Coal Companies, and data contained in the Request for Waiver of Permit Application submitted by Dry Fork Coal Company, Black Hills projects that for each permanent job created directly by the operation of the Power Plant an additional 2.1 non-basic jobs will be created in the local economy. Based on this ratio, Black Hills estimates that 92 jobs will be created within the affected area in addition to the permanent positions required to operate the Power Plant. This figure has been revised from the original estimate of 100 secondary and/or non-basic jobs contained in the Request for Waiver based on further discussions with the CCEDC and additional analysis of existing data of Black Hills. Of the 92 additional jobs, Black Hills estimates that 70%, or 64, can be expected to be filled by local persons and 28 can be expected to be filled by persons migrating into the affected area, according to the CCEDC. Of the 28 migrating into the area to fill these jobs, an average household size of 2.47

calculates to a figure of 69 total in-migrants, a population increase of 0.3% of Gillette's present population. Based on information from the CCEDC, it is projected that these additional jobs will be created in industries such as wholesale and retail trade, finance, insurance, real estate, transportation, communications, and utilities. Based on information from the CCEDC, City of Gillette demographic information and Campbell County School District, it is estimated that a total of 23 of the non-basic in-migrants will be school age children. Of those, Black Hills projects that 13 children will be in the kindergarten through sixth grade age group, 6 children will be in the seventh through ninth grade age group, and 4 children will be in the tenth through twelfth grade age group.

Based on these revised figures, total potential population increase during the operation of the Power Plant is projected to be 119, an increase of 0.6% of Gillette's 1990 population.

STATUTORY REQUIREMENT, W.S. 35-12-107(b) (vi): Estimated additional revenue to local governments due to the facility;

SUPPLEMENTAL RESPONSE:

Black Hills estimates that the additional revenue generated by state and local sales taxes during the construction phase of the project to be in the approximate amount of \$1.9 million. Calculations of the estimated monthly state and local sales and use taxes for the 28-month construction phase, assuming a July, 1993 construction start date, are set out in Exhibit S-8. Actual construction contracts have not been awarded and these estimations are preliminary projections only. These monthly materials costs and tax revenue figures are also projected to be the same for the later construction start date of August, 1994, with adjustments required only to indicate the one-year delay.

STATUTORY REQUIREMENT, W.S. 35-12-107(b) (viii): A brief description of the methods and strategies the applicant will use to maximize the employment and utilization of the existing local or in-state contractors and labor force during the construction and operation of the facility;

SUPPLEMENTAL RESPONSE:

In addition to the measures described in the Request for Waiver of Permit Application, Black Hills will require that all contractors and subcontractors

advertise all job openings, including unskilled, skilled, and professional positions, in the local Gillette newspaper, The News-Record, and in the Wyoming statewide newspaper, the Casper Star-Tribune, in an effort to seek out qualified Wyoming workers. Black Hills believes that these efforts, together with the measures described in the Request for Waiver of Permit Application, will maximize the possibility that qualified Wyoming workers will be informed of the openings at the Power Plant and be afforded a meaningful opportunity to seek such positions. To the extent reasonable, all unskilled, skilled and professional positions will be staffed by qualified local job applicants. Black Hills is committed to seeking out and giving preference for Wyoming hires to the full extent required by law. Black Hills believes it to be in the best interest of the project and the local community to utilize Wyoming workers whenever reasonably possible to maximize the positive benefits to the area as a result of the Power Plant and to minimize any possible adverse impacts.

STATUTORY REQUIREMENT, W.S. 35-12-107(b) (x): The procedures proposed to avoid constituting a public nuisance, endangering the public health and safety, human or animal life, property, wildlife or plant life, or recreational facilities which may be adversely affected by the facility;

SUPPLEMENTAL RESPONSE:

**TRAFFIC PATTERNS AND PUBLIC SAFETY**

Contained in the Supplement Appendix is Exhibit S-6, an aerial map of the proposed construction site and the City of Gillette. As indicated on this map, access to the construction site is available via Interstate 90, a divided four lane interstate highway, which has a "Wyodak Exit" providing access to the existing Wyodak 330 MW Power Plant, Neil Simpson Unit #1 20 MW Power Plant, and the Wyodak Coal Mine. It is expected that access via the interstate will be the primary choice of construction and operation phase workers, based on the ease of access to the interstate and its capacity for two lanes of traffic in each direction. Supplemental access to the site is available via old U.S. Highways 14 and 16/Wyoming Highway 51, a two lane state highway. Several roadways currently exist providing public access from both the interstate and state highways directly to the existing facilities and the proposed construction site.

Presently old U.S. Highways 14 and 16/Wyoming Highway 51 is closed approximately two times per week for a period of one (1) to one and one-half (1½) hours due to activities at the Wyodak Coal Mine. Such temporary closings of this highway have regularly occurred over the years and have created no significant problems for residents of the area. By the summer of 1993, Wyodak expects that coal mining activities adjacent to this highway will be reduced and will require a temporary closing of the highway on the average of only one time per week for approximately one (1) to one and one-half (1½) hours.

A 24-hour study of traffic patterns on old U.S. Highways 14 and 16/Wyoming Highway 51 was conducted on November 14, 1990, at milepost 131 between the City of Gillette and the Wyodak Coal Mine. The results of that 24-hour study are attached hereto as Exhibit S-7. This study found a peak morning hourly traffic count of 125 east bound occurs during the hour of 7:00 a.m. and a peak evening hourly traffic count of 130 west bound occurs during the hour of 4:00 p.m. The overall results of this study indicate a relatively low volume of traffic on this highway. Since the date of this study, there have been no additional facilities or structures added along the old U.S. Highways 14 and 16/Wyoming Highway 51 corridor which could be anticipated as creating any significant change in the traffic volume on this road.

The relatively low volume of traffic on old U.S. Highways 14 and 16/Wyoming Highway 51 indicates that Interstate 90 is the preferred route for east-west travelers in the area. It is projected that these two highways will be able to absorb additional traffic from the construction workforce and the permanent workforce of the Power Plant. As a matter of public safety, Black Hills will consider whether any additional measures, such as constructing a left-hand turn lane on existing roads leading into the proposed site and/or whether additional construction or public access to the site, are necessary. It is expected that construction of a crossing over Donkey Creek may be required to bring materials across the creek to the construction site. All highway improvements and public safety measures will be planned and completed in consultation with and upon approval of the state Highway Department.

## RESIDENTIAL STRUCTURES

Exhibit S-6 also shows that residential structures nearest to the proposed plant site exist immediately northeast of the Wyodak 330 MW Power Plant. Other residential structures near the site are located east of the site along U.S. Highways 14 and 16/Wyoming Highway 51, and west of the site near Gillette in the Fox Park and Collins Heights neighborhoods. Because the proposed site for the Power Plant is in an existing industrial site which is home to two existing power plants and a coal mine, it is expected that residential structures will experience no added impacts as a result of locating the Power Plant at this site. Residents of the area have lived in the existing residential structures which are in proximity to the proposed site and existing industrial facilities for a considerable time with no significant adverse impacts from the location of the existing facilities identified.

## RECREATIONAL FACILITIES

Local recreation facilities are expected to experience minimal impact as result of in-migrating construction workers and permanent employees. During construction, estimated population increases due to in-migration are anticipated to range from 20 to 363 persons. Based on 1990 population figures contained in the 1990-91 Land Use Inventory, Volume 1: Housing and Demographic Estimates, prepared by the City of Gillette's Department of Community Development, Planning Division, these increases during construction range from 0.1% to 1.9% of the City's population, assuming that the total population increase locates in Gillette. The 1990 figures of the Campbell County Parks and Recreation Department report 620,650 participants in programs and activities. Although the construction population is generally in an age group which uses recreational facilities more frequently, according to the Addendum to Industrial Siting Administration Staff Review, Permit Amendment Application for the Tenneco Mineral Company Soda Ash Expansion Project, dated September 10, 1990, monitoring data of other industrial projects indicates that construction in-migrant populations tend to use such facilities less than the existing population. Assuming that the total average number of in-migrating construction workers per month each participate in 5 activities or programs per year, increases in participation in parks and recreation

programs and activities would range from 100 to 1,815 persons, an increase of 0.02% to 0.29%.

During operation of the plant the total number of persons migrating to the area is expected to be 119, a figure equal to 0.6% of Gillette's 1990 population. Assuming that 100% of all permanent in-migrants will participate in 10 activities or programs per year, an increase of 0.2% in parks and recreation participation can be projected. Taken together, the increased participation which may be anticipated during both the construction and operation phases is minimal, and the existing facilities should be adequate to absorb any increase in use. This conclusion has been confirmed by Dave McCormick, Director of Campbell County Parks and Recreation. Mr. McCormick has stated that the local facilities are capable of handling an estimated 345 workers during construction, and that no adverse impact to the operations of the Campbell County Parks and Recreation Department are expected.

#### **ESSENTIAL SERVICES**

Other essential services in the Gillette area are expected to be adequate to handle the in-migration resulting during the construction and operational phases. Black Hills has discussed its plans to construct and operate Neil Simpson Unit #2 with Campbell County Sheriff, Byron F. Oedekoven. The Sheriff anticipates an increase of one to two calls for service per day, depending on the number of local hires and their work schedule. Sheriff Oedekoven stated that this increase can be absorbed by the Sheriff's Department with only minimal impact on current operations. Jeffrey M. Pfau, Chief of Police for the City of Gillette Police Department has also acknowledged that the Power Plant will have an impact on local police services, but anticipates that impact assistance should be adequate to address any local law enforcement needs. Local fire protection is provided by a staff of both full-time and volunteer firefighters of the Campbell County Fire Department, with 50 firemen within the city limits and another 110 outside the City limits. The Fire Chief, Gary Scott, has stated that he believes that the construction of the Power Plant will not present any undue hardship on the Fire Department in terms of response or manpower. With regard to medical care, Campbell County Memorial Hospital's Chief Executive Officer, Donald W. Shouse, has stated that

the impact of the project on Campbell County Memorial Hospital is not expected to be significant.

Basic services such as sewer, water and utility services are estimated to be adequate to handle population increases associated with the project. According to Jon Young, Director of Utilities for the City of Gillette, a maximum daily water capacity of 10.6 million gallons and experiences a peak daily demand of 9 million gallons. Sewage treatment capacity is rated at a maximum of 3.6 million gallons per day with a present daily peak at 2.5 million gallons per day. Mr. Young has indicated that current facilities are adequate to service an increase in population ranging from 0.1% to 1.9%

**PUBLIC SCHOOL SYSTEM**

Schools in the area are also expected to be able to absorb the impact of this project without a significant effect on current operations. Both Mark A. Higdon, Superintendent of Schools for Campbell County School District and Jeffrey S. Carrier, Superintendent of Schools for Crook County School District No. 1 have stated that the project will not pose a significant impact on the area school systems. Gillette schools report a November 1991 student population of 7,973, and report plans to build an additional elementary school, Pronghorn Elementary, which will have an added capacity of 500 students. The current enrollment capacity of the Campbell County School District by grade level, according to information from the Campbell County School District, are as follows:

	<u>Gillette</u>	<u>Rural Campbell County</u>
Elementary Schools (Grades K-6)	3,572	2,644
Junior High Schools (Grades 7-9)	2,040	650
Senior High School (Grades 10-12)	<u>1,660</u>	<u>0</u>
TOTAL	7,272	3,294

The total capacity of the Campbell County School System, excluding any net additional capacity created by construction of Pronghorn Elementary, is 10,566

students which, when compared to the current enrollment level of 7,973 has a present ability to facilitate an additional 2,583 students. The anticipated number of additional school age children during the construction phase is approximately 43, or 0.5% of the current student population. During the operational phase, 39 school age children, 0.4% of the current student population, are estimated to be added to the public school system.

Moorcroft elementary school has a present student population of 253 students and school officials estimate an additional 100 elementary student could be accommodated. Two hundred two students currently attend Moorcroft High School/Junior High School and an additional 100 students could also be accommodated, according to Crook County School District No. 1 officials.

#### **EROSION CONTROL/RECLAMATION**

During construction of the Power Plant, erosion will be controlled through a number of efforts including keeping to a minimum the area of natural vegetation disturbed, and minimizing alteration of the site. Excavation and grading will be minimal as the natural condition of the site is relatively level and no subterranean structures will be constructed. A limited borrow area will exist to the north and west of the plant site and a silt fence will be established where necessary to limit erosion and prevent accumulations into Donkey Creek. Storage of construction equipment and materials will be made away from the drainage areas. When construction is completed, the main roadways will be surfaced with asphalt to provide an adequate driving surface, and the remaining Power Plant grounds will be surfaced with a large size, dense gravel through which water can permeate and percolate. Existing drainage systems at the site are expected to be adequate to handle normal runoff, and no additional drainage systems are planned. When the Power Plant eventually ceases to be operational, the structures will be sold for scrap and removed from the site. The site will then be returned to grade and replanted with indigenous vegetation.

STATUTORY REQUIREMENT, W.S. 35-12-107(b) (xi): Preliminary evaluations of or plans and proposals for alleviating social, economic or environmental impacts upon local government or any special districts which may result from

the proposed facility, including voluntary company agreements with local governments.

SUPPLEMENTAL RESPONSE:

Black Hills has made a preliminary analysis of housing impacts based on available information including the 1990-91 Land Use Inventory, Volume 1: Housing and Demographic Estimates prepared by the City of Gillette, raw data collected by the City of Gillette regarding its 1991-92 housing survey, information compiled by the Campbell County Economic Development Corporation, and information from local real estate firms.

During the construction phase, it is assumed that in-migrating construction workers will choose housing based on the anticipated length of the worker's employment, whether the worker plans to move his or her household and family (if any) to the area, and the availability, cost, and selection of housing. For the 25% of the construction workforce derived from the local area, it is assumed that they will continue to reside where they are at when hired and will remain in the same type of housing unit, thus creating no net change in existing demographic information. For the 75% migrating into the area, it is assumed based on information from the CCEDC that the in-migrating population will reside in the Gillette area, rural Campbell County, and in Moorcroft. Data is not available from which to accurately predict where such workers would elect to live, although it is anticipated that approximately 85% of the in-migrating population will live in Gillette or the Gillette area. This assumption is based on the close proximity of Gillette to the proposed construction site, the availability of services, shopping and other amenities, and the number of available housing units. In reviewing information from CCEDC and contained in the Request for Waiver of Permit Application of Dry Fork Coal Company, Black Hills assumes that approximate 85%, or 139 workers could be expected to live in the City of Gillette, with the remaining 15%, or 25 workers living elsewhere in Campbell County or Moorcroft.

Current figures from the City of Gillette's Planning Division and local real estate firms indicate that the present Gillette area housing supply can be estimated as follows:

	Total <u>Units</u>	<u># Vacant</u>	<u>% Vacant</u>
Single Family*	4,700	310	6.5%
Multi Family	1,688	93	5.5%
Mobile Homes/Lots	1,500	450	30.0%
Motel Rooms	1,058	529	50.0%
Other Units**	<u>242</u>	<u>121</u>	<u>50.0%</u>
TOTAL	9,188	1,503	16.4%

\* includes duplexes and townhouses

\*\* includes occupied recreational vehicles,  
and similar occupied dwelling units of a  
temporary nature

According to the City of Gillette's 1990-91 Land Use Inventory, Volume 1: Housing and Demographic Estimates, the housing market is described as "healthy" and "basically stable," with "most of the changes in housing attributed to gains or losses in mobile homes." The City's 1990-91 report also predicts additional activity in construction and corresponding expansion in the housing market. Based on these conclusions by the City of Gillette and information from local real estate firms, Black Hills estimates that housing availability during the construction and operation of the facility will be similar to current data and vacancy rates.

The peak construction phase in-migration will occur in either the fourth quarter of 1994 (assuming a 1993 construction start date) or the first quarter of 1996 (assuming a 1994 construction start date), periods which typically experience higher vacancy rates, according to information from real estate firms and local lodging and hospitality businesses. According to the three largest hotels in Gillette, the Holiday Inn, the Tower West Lodge, and the Rodeway Inn, this is particularly true for motel and hotel units and these three hotels typically experience an average fall/winter vacancy rate of approximately 50%.

For the 39 in-migrating construction workers with families, it is presumed that each family will require one housing unit, creating a demand for 39 units. For the approximately 253 remaining in-migrating construction workers, based on information in the Addendum to Industrial Siting Administration Staff Review, Permit Amendment Application for the Tenneco Mineral Company Soda Ash Expansion Project, dated September 10, 1990, that one housing units will be required for every two workers, creating a demand for

127 units. Using these estimations, it is projected that the in-migrating construction workforce will create a demand for 166 housing units. Based on the timing of the in-migrating construction workforce and the foregoing assumptions, it is the analysis of Black Hills that existing vacancies will be adequate to accommodate the anticipated 0.1% to 1.3% increase in population during the 28-month construction phase, with little impact to the existing housing supply.

Black Hills also expects the 20 permanent operation phase in-migrating workers to each require one housing unit, creating a permanent demand for 20 units beginning in either January 1996 or January 1997. Based on present information, the increased demand for housing is expected to have a minimal impact on existing housing resources.

STATUTORY REQUIREMENT, W.S. 35-12-107(h) (i): That the facility would not produce an unacceptable environmental, social or economic impact;

SUPPLEMENTAL RESPONSE:

Black Hills projects that construction and operation of the Power Plant will not produce an unacceptable environmental, social, or economic impact on the affected area or its residents. With regard to environmental impacts, as previously noted in the Request for Waiver of Permit Application, Responses to W.S. 35-12-107(b) (x) and to W.S. 35-12-108(a), and in the Supplemental Response to W.S. 35-12-107(b) (x), the Power Plant will be operated in compliance with all applicable state and federal air, water, land quality, and solid waste laws and regulations. Environmental quality will be assured by use of state-of-the-art pollution control equipment, including a lime spray-dry scrubber to control sulfur dioxide emissions and a fabric filter bag house to remove particulate matter. The Power Plant is designed to meet all requirements of the Clean Air Act Amendments well into the twenty-first century. In addition, the facility will be air-cooled to conserve on water use, and the Power Plant's water requirements will be met by recycling effluent water from the City of Gillette. No hazardous waste, as that term is defined by the Federal Resource Conservation and Recovery Act, will be used or produced by the Power Plant.

Black Hills also predicts that the proposed facility will not have unacceptable social and economic impacts.

The primary social and economic effects of the Power Plant on the existing population and infrastructure of the affected area have been previously analyzed both in the original Request for Waiver of Permit Application, filed on November 20, 1991, and hereinabove in this Supplement, in response to the statutory requirements listed:

Employment	W.S. 35-12-107(b) (iv) W.S. 35-12-107(b) (viii)
Housing	W.S. 35-12-107(b) (xi)
Traffic	W.S. 35-12-107(b) (x) W.S. 35-12-107(h) (i)
Schools	W.S. 35-12-107(b) (x)
Recreation	W.S. 35-12-107(b) (x)
Population	W.S. 35-12-107(b) (iv) W.S. 35-12-107(b) (v)
Revenue	W.S. 35-12-107(b) (vi)
Essential Services	W.S. 35-12-107(b) (x)

These prior responses are incorporated into this supplemental response by reference. The plans of Black Hills to maximize employment of Wyoming residents is expected to have a positive impact on the affected area by reducing local unemployment and increasing personal income, both during construction and operation of the Power Plant. The secondary and non-basic jobs created as a result of the "ripple effect" of the added construction and permanent jobs is also expected to have a positive impact on current levels of employment and personal income. The proposed project will also increase local revenue, both by way of local sales, use, property and similar taxes, and by way of expenditures in the local economy by workers and their families.

The construction and operation of the Power Plant can also be expected to reduce current housing vacancy levels and availability, and increase slightly school enrollment levels, use of parks and recreational facilities, traffic levels on Interstate 90 and old U.S. Highways 14 and 16/Wyoming Highway 51, and

increase slightly the demand for essential services such as water, sewage treatment, utilities, and police and fire protection.

These possible negative impacts are expected to be minimal based on the fact that the population increases during construction are estimated to be 0.1% to 1.9% of Gillette's 1990 population, and during operation are estimated to be 0.8% of Gillette's 1990 population. The 1990-91 Land Use Inventory, Volume 1: Housing and Demographic Estimates, prepared by the City of Gillette, Department of Community Development, Planning Division, reported the population of Gillette to be 19,285 in 1990, compared with a high in 1985 of 20,943. Adding in the population of the unincorporated urban service area, the City's estimated population total for 1990 was 21,839, and for 1985 was 23,629. According to the City's 1990-91 report, in 1984, 1985, and 1986 Gillette had a higher population than in 1990.

Based on the information and data presented herein and in the Request for Waiver of Permit Application, Black Hills has concluded that Gillette and the surrounding area have an infrastructure in place which is equipped to handle the larger population levels experienced in 1984 through 1986. Essential services, schools, recreation and housing currently have adequate capacity to absorb an increase in the population base of 0.1% to 1.9%. Further, the City's 1990-91 Land Use Inventory, Volume 1: Housing and Demographic Estimates also reports that housing was "overbuil[t in] earlier years," and that the market is continuing to adjust to such overbuilding and is predicted to expand in the near future. In addition, the largest population increases resulting from the project will occur in the fall and winter months, which place the peak impacts during periods in which infrastructure resources such as housing and recreation traditionally experience a lower level of use. The anticipated population increases during both construction and operation of the Power Plant will not increase the population near the high levels of 1985, and represent only fractional increases to the existing population base.

BLACK HILLS CORPORATION,  
d/b/a BLACK HILLS POWER  
AND LIGHT COMPANY

By: *Daniel P. Landguth*  
Daniel P. Landguth  
Chairman, President and  
Chief Executive Officer

*Mrg Simon*  
Mrg Simon

*David E. Morrill*  
David E. Morrill  
Attorneys for Black Hills  
Corporation  
MORRILL BROWN & THOMAS  
625 Ninth Street, 8th Floor  
P. O. Box 8108  
Rapid City, SD 57709  
605-348-7516

By: *Tom Ohlmacher*  
Tom Ohlmacher  
Director of Engineering  
and Operations

STATE OF SOUTH DAKOTA  
COUNTY OF PENNINGTON

On the 2nd day of December, 1991, Daniel P. Landguth, being first duly sworn on his oath, deposes and says: That he is the Chairman, President and Chief Executive Officer of Black Hills Corporation, a South Dakota corporation, d/b/a Black Hills Power and Light Company, and that he, as such Chairman, President and Chief Executive Officer, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as Chairman, President and Chief Executive Officer; that he has read the same and knows the contents thereof to be true of his own knowledge except as to those matters therein stated on information and belief, and as to such matters he believes them to be true.

*Daniel P. Landguth*  
Daniel P. Landguth

Subscribed and sworn to before me this 2nd day of  
December, 1991.

(SEAL)

Jeanette M. Howe  
Notary Public  
My commission expires:

JEANETTE M. HOWE  
NOTARY PUBLIC  
MY COMMISSION EXPIRES MARCH 11, 1998

STATE OF SOUTH DAKOTA

COUNTY OF PENNINGTON

On the 2nd day of December, 1991, Tom Ohlmacher, being first duly sworn on his oath, deposes and says: That he is the Director of Engineering and Operations of Black Hills Power and Light Company, an assumed name of Black Hills Corporation, a South Dakota corporation, and that he, as such Director of Engineering and Operations, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as Director of Engineering and Operations; that he has read the same and knows the contents thereof to be true of his own knowledge except as to those matters therein stated on information and belief, and as to such matters he believes them to be true.

Tom Ohlmacher  
Tom Ohlmacher

Subscribed and sworn to before me this 2nd day of  
December, 1991.

(SEAL)

Jeanette M. Howe  
Notary Public  
My commission expires:

JEANETTE M. HOWE  
NOTARY PUBLIC  
MY COMMISSION EXPIRES MARCH 12, 1998

NEIL SIMPSON UNIT #2  
80 MW COAL-FIRED POWER PLANT

WYOMING INDUSTRIAL SITING ADMINISTRATION  
REQUEST FOR WAIVER OF PERMIT APPLICATION

SUPPLEMENT

SUBMITTED BY  
BLACK HILLS CORPORATION  
A SOUTH DAKOTA CORPORATION  
DOING BUSINESS AS  
BLACK HILLS POWER & LIGHT COMPANY

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DOCKET NO. WISA 92-1

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DECEMBER 1991

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SUPPLEMENT APPENDIX

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- Exhibit S-1: Vicinity map: Site Location in Relation to State of Wyoming and Campbell County (Enlargement)
- Exhibit S-2: Vicinity map: Site Arrangement (Enlargement)
- Exhibit S-3A: Construction Milestone Summary Schedule (Replacement)
- Exhibit S-3B: Revised Construction Milestone Summary Schedule
- Exhibit S-4: Estimated Construction Workforce Labor Summary by Calendar Quarter for 28-Month Construction Phase In Man Months Assuming July 1993, Construction Start Date
- Exhibit S-5: Estimates of Monthly Average of Local and Non-Local Construction Workforce by Calendar Quarter for 28-Month Construction Phase in Man Months

Quarter for 28-Month Construction Phase in  
Man Months

Exhibit S-6: Vicinity map: Aerial Photograph Illustrating  
Access to Proposed Construction Site and  
Residential Structures

Exhibit S-7: 24-Hour Volume Study of Traffic at old U.S.  
Highways 14 and 16/Wyoming Highway 51 at  
Milepost 131.00 West of Wyodak Coal Mine,  
November 14, 1990

Exhibit S-8: Estimated Monthly State and Local Sales and  
Use Taxes for 28-Month Construction Phase  
Assuming July 1993, Construction Start Date







NEIL SIMPSON UNIT #2  
PROJECT DATA SUMMARY  
DECEMBER 1991

EXHIBIT S-4

Estimated Construction Workforce Labor Summary  
By Calendar Quarter for 28-Month Construction Phase  
In Man Months Assuming July 1993 Construction Start Date

<u>Job</u> <u>Classification</u>	<u>1993</u>		<u>1994</u>				<u>1995</u>			
	<u>3rd</u> <u>Qtr</u>	<u>4th</u> <u>Qtr</u>	<u>1st</u> <u>Qtr</u>	<u>2nd</u> <u>Qtr</u>	<u>3rd</u> <u>Qtr</u>	<u>4th</u> <u>Qtr</u>	<u>1st</u> <u>Qtr</u>	<u>2nd</u> <u>Qtr</u>	<u>3rd</u> <u>Qtr</u>	<u>4th</u> <u>Qtr</u>
Boiler Makers				40	122	162	128	122	52	5
Bricklayers						10	43	35	2	
Carpenters	6	57	75	68	77	72	53	34	8	
Cement Masons		25	9	5	14	7	24	3	2	
Electricians	11		6	30	68	176	250	227	133	30
Insulators					48	51				
Ironworkers		7	47	100	84	129	130	77	15	2
Laborers	29	52	117	84	62	94	120	119	62	8
Millwrights					14	41	30	15	5	1
Operating Engineers	44	36	31	34	40	34	37	22	6	1
Painters					6	6	6	24	17	3
Pipefitters			10	32	57	107	91	92	68	7
Sheet Metal Workers						14				
Other Craft	<u>11</u>	<u>12</u>	<u>15</u>	<u>20</u>	<u>32</u>	<u>53</u>	<u>60</u>	<u>18</u>	—	—
Monthly Average	37	63	103	138	208	319	334	263	123	19

NEIL SIMPSON UNIT #2  
 PROJECT DATA SUMMARY  
 DECEMBER 1991

Exhibit S-5

Estimates of Monthly Average of Local  
 and Non-Local Construction Workforce by Calendar Quarter  
 for 28-Month Construction Phase in Man Months

Assuming July 1993 Construction Start Date

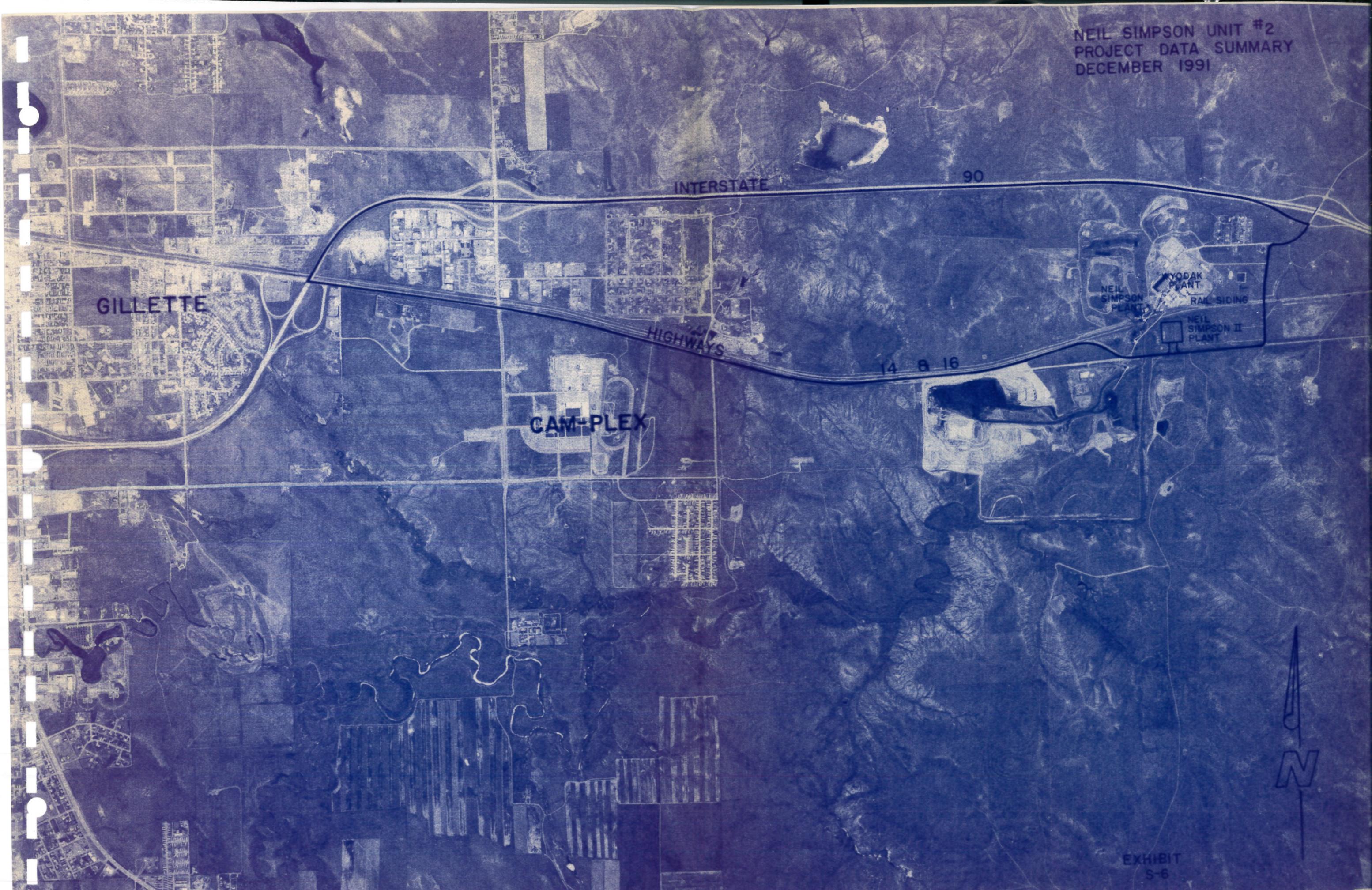
<u>Job Classification</u>	<u>1993</u>		<u>1994</u>				<u>1995</u>			
	<u>3rd Qtr</u>	<u>4th Qtr</u>	<u>1st Qtr</u>	<u>2nd Qtr</u>	<u>3rd Qtr</u>	<u>4th Qtr</u>	<u>1st Qtr</u>	<u>2nd Qtr</u>	<u>3rd Qtr</u>	<u>4th Qtr</u>
Local	8	19	36	37	44	69	77	71	35	17
Non-Local	<u>25</u>	<u>45</u>	<u>67</u>	<u>102</u>	<u>167</u>	<u>248</u>	<u>247</u>	<u>196</u>	<u>90</u>	<u>40</u>
Monthly Average Total	33	64	103	139	211	317	324	267	125	57

Assuming August 1994 Construction Start Date

<u>Job Classification</u>	<u>1994</u>		<u>1995</u>				<u>1996</u>			
	<u>3rd Qtr</u>	<u>4th Qtr</u>	<u>1st Qtr</u>	<u>2nd Qtr</u>	<u>3rd Qtr</u>	<u>4th Qtr</u>	<u>1st Qtr</u>	<u>2nd Qtr</u>	<u>3rd Qtr</u>	<u>4th Qtr</u>
Local	5	13	34	35	39	62	78	72	45	16
Non-Local	<u>15</u>	<u>37</u>	<u>62</u>	<u>86</u>	<u>136</u>	<u>232</u>	<u>258</u>	<u>220</u>	<u>118</u>	<u>37</u>
Monthly Average Total	20	50	96	121	175	294	336	292	163	53

Local workers are defined as those living within a radius of approximately 110 miles of the proposed construction site.

Non-Local workers are defined as those living more than approximately 110 miles from the proposed construction site.



GILLETTE

INTERSTATE

90

HIGHWAYS

14 8 16

CAM-PLEX

NEIL SIMPSON PLANT

HYODAK PLANT

RAIL SIDING

NEIL SIMPSON II PLANT



NEIL SIMPSON UNIT #2  
PROJECT DATA SUMMARY  
DECEMBER 1991

EXHIBIT S-7

24-Hour Volume Study of Traffic at  
old U.S. Highways 14 and 16/Wyoming Highway 51  
at Mile Post 131.00 West of WYODAK Coal Mine  
November 14, 1990

<u>TIME</u>	<u>EAST BOUND LANE</u>	<u>WEST BOUND LANE</u>
1:00 a.m.	6	6
2:00 a.m.	7	1
3:00 a.m.	3	2
4:00 a.m.	0	2
5:00 a.m.	2	11
6:00 a.m.	23	33
7:00 a.m.	125	81
8:00 a.m.	79	108
9:00 a.m.	69	97
10:00 a.m.	101	75
11:00 a.m.	78	73
12:00 p.m.	57	79
1:00 p.m.	68	61
2:00 p.m.	67	75
3:00 p.m.	93	76
4:00 p.m.	97	130
5:00 p.m.	120	105
6:00 p.m.	102	89
7:00 p.m.	57	72
8:00 p.m.	49	36
9:00 p.m.	57	21
10:00 p.m.	36	15
11:00 p.m.	21	13
12:00 a.m.	<u>11</u>	<u>6</u>
TOTAL	1317	1261

NEIL SIMPSON UNIT #2  
PROJECT DATA SUMMARY  
DECEMBER 1991

EXHIBIT S-8

Sheet 1 of 2

Estimated Monthly State and Local Sales and Use Taxes  
for 28-Month Construction Phase Assuming July, 1993  
Construction Start Date\*

	<u>Est. Monthly Cost of Materials</u>	<u>State Sales &amp; Use Tax (3%)</u>	<u>Local Sales &amp; Use Tax (1%)</u>
<u>1993</u>			
July	\$ 480,760	\$ 14,423	\$ 4,807
August	152,320	4,570	1,523
September	261,800	7,854	2,618
October	295,120	8,854	2,951
November	1,037,680	31,130	10,376
December	990,080	29,702	9,900
<u>1994</u>			
January	999,600	29,988	9,996
February	233,240	6,997	2,332
March	299,880	8,996	2,998
April	299,880	8,996	2,998
May	952,000	28,560	9,520
June	1,389,920	41,698	13,899
July	2,641,800	79,254	26,418
August	4,774,280	143,228	47,742
September	4,179,280	125,378	41,792
October	4,098,360	122,950	40,983
November	3,355,800	100,674	33,558
December	3,193,960	95,819	31,939

EXHIBIT S-8 (cont.)

Sheet 2 of 2

Estimated Monthly State and Local Sales and Use Taxes  
for 28-Month Construction Phase Assuming July, 1993  
Construction Start Date\*

	<u>Est. Monthly Cost of Materials</u>	<u>State Sales &amp; Use Tax (3%)</u>	<u>Local Sales &amp; Use Tax (1%)</u>
<u>1995</u>			
January	\$ 1,861,160	\$ 55,835	\$ 18,611
February	1,408,960	42,269	14,089
March	1,428,000	42,840	14,280
April	1,232,840	36,985	12,328
May	1,285,200	38,556	12,852
June	1,289,960	38,699	12,899
July	1,166,200	34,986	11,662
August	780,640	23,419	7,806
September	775,800	23,276	7,758
October	823,480	24,704	8,234
November	785,400	23,562	7,854
December	4,836,160	145,085	48,361
 TOTAL	 \$ 47,009,680	 \$ 1,419,287	 \$ 473,084

\* Construction is estimated to be 90% complete in September, 1995.

Due to rounding, the figures in this exhibit do not necessarily equal those estimations contained in the Request for Waiver of Permit Application and the Supplement.

This exhibit includes data beyond the anticipated construction completion date because the start up and testing activities will also involve materials expenditures and as a result of estimations made prior to award of contracts.