SECTION 20

MINING OPERATIONS

TABLE OF CONTENTS

SECTION 20

MINING OPERATIONS

TABLE OF CONTENTS (Continued)

SECTION 20

MINING OPERATIONS

LIST OF TABLES

SECTION 20

MINING OPERATIONS

LIST OF FIGURES

SECTION 20

MINING OPERATIONS

LIST OF EXHIBITS

SECTION 20

MINING OPERATIONS

LIST OF APPENDICES

SECTION 20

MINING OPERATIONS

LIST OF REVISIONS DURING PERMIT TERM

REV. NUMBER	REVISION DESCRIPTION	DATE APPROVED

SECTION 20 MINING OPERATIONS

20.1 Mining Areas and Methods

Surface coal mining methods adapted for multiple coal seam mining will be used for the Pinabete mine plan. Dragline stripping is the primary overburden removal method used in the Pinabete Mine Plan permit area (permit area). Secondary waste removal methods include truck/loader and dozer stripping operations. The typical sequence for multiple seam mining is:

1. Vegetation and topdressing removal (where these materials exist)
2. Overburden drilling and blasting
3. Overburden stripping
4. Coal drilling and blasting
5. Coal removal
6. Interburden drilling and blasting
7. Interburden removal
8. Coal drilling and blasting
9. Coal removal

Steps 6 through 9 are repeated for each economically recoverable coal seam.

20.1.1 Vegetation and Topdressing Removal

Past soil investigations have determined that a negligible topsoil resource exists within the permit area. As such, the material that is suitable for plant growth is considered a topsoil substitute. Materials to be used as topsoil substitute are denoted based upon their *in-situ* location in the soil profile. The material found in the top 60 inches of the soil profile is called "topdressing", while the material found deeper than 60 inches within the soil profile is called "regolith".

~~BHP Navajo Coal~~ Navajo Transitional Energy Company (~~BNCC~~NTEC) will salvage all suitable topdressing for use as topsoil substitute. Topdressing will be salvaged from all areas to be affected by surface operations or construction of major structures. However, certain soils cannot be removed without jeopardizing the safety of the operators and equipment or diminishing the quality of the topdressing salvaged. Because of these limitations, topdressing is not salvaged where:

1. Slopes are greater than ~~4~~ 3 horizontal to 1 vertical (~~4h~~3h:1v or >~~25~~ 33 %)
2. Suitable surface deposits are less than 6 inches~~-~~ (this soil is too shallow to allow removal without considerable contamination from underlying unsuitable material)
3. Areas are less than 1 acre in size (pockets)
4. Areas where rock rims and/or rock outcrops exist

The maximum allowable limit of topdressing removal in advance of the active mining area is 1,800 feet beyond the current extent of mining (e.g., highwall crest). Topdressing is removed far enough ahead of highwall drilling and blasting to prevent contamination from blasting flyrock, and to accommodate mining support infrastructure such as roads and powerlines. In the event that a greater area is needed for topdressing removal, the Office of Surface Mining Reclamation and Enforcement (OSM) will be notified prior to topdressing removal, and the appropriate adjustments to the reclamation bond will be made. The extent of topdressing removal will fully consider and comply with the applicable hydrology performance standards.

The allowable extent of topdressing salvage ahead of active mining (1,800 feet) will allow operational flexibility to utilize opportunistic direct live haul of topdressing, which may result in increased reclamation success. In addition, the permitted extent offers greater flexibility in production operations.

~~BNCC~~NTEC uses a dedicated fleet to perform all coal haulage, topdressing removal, overburden prestripping, spoil mitigation, interburden removal, regrading, and topdressing replacement activities. Under current manning levels and equipment configurations, ~~BNCC~~NTEC is set up to haul about 6.0 million tons of coal and about 6.0 million cubic yards of other materials annually.

Suitable regolith may be salvaged for use in reclamation as either topsoil substitute or root-zone material, or it may be spoiled if deemed necessary by the operator. Regolith in each resource area (Area 4 North and Area 4 South) will be salvaged or spoiled depending on the need for topsoil substitute or root-zone material in that specific resource area. Where it is practicable to do so, regolith that has been found suitable for use as topsoil substitute will be removed for use as such.

If stockpiling of topdressing and regolith is necessary, the topdressing and regolith will be segregated and stockpiled in separate piles. Stockpiles are discussed in Section 22 (Support Facilities).

Supplemental information regarding topdressing salvage and redistribution operations is presented in Section 36 (Post-Reclamation Soil).

20.1.2 Overburden Drilling and Blasting

After the suitable topdressing material has been removed, rotary drills are used to drill overburden blast holes. Blast-hole diameter ranges from 5 to 10-5/8 inches. ~~BNCC~~NTEC may use two methods of overburden drilling and blasting, cast blasting and stand-up or buffer blasting, within the Pinabete Permit area. Prior to blasting if areas of unconsolidated overburden exist, this loose overburden is pushed off the highwall and into the open pit by dozers in advance of drilling operations.

Cast blasting is used to move some of the in-place overburden off of the top of the uppermost coal seam. This improves the efficiency of the stripping operation and improves the economics of recovering deeper coals. In areas of cast blasts, or cast blocks, blast holes are typically drilled on an angle (5 to 30 degrees from vertical). Blast holes that have been drilled to the top of coal seam are backfilled with drill hole stemming to prevent coal chilling and to minimize coal loss from blasting.

When the appropriate conditions exist, a pre-split line will be drilled and shot as part of the overburden blasting process. This involves a single row of closely spaced blast holes that are drilled on a similar angle to the holes in the cast block. This row of holes is located and drilled to intersect the top of the uppermost coal seam at the predefined 'coal line' which defines the width of the strip being mined. These holes are very lightly loaded and shot in a manner that creates a line of breakage which defines the face and extent of the next highwall. The dragline is then able to strip back to this pre-split line and create a uniform width highwall.

In areas of shallower overburden, stand-up blasting is used to loosen the overburden for stripping. In this method blast holes are drilled to the top of the uppermost mineable coal seam. The holes are then backfilled with drill cuttings. This backfill serves the same purpose as 'standoff' drilling, namely to reduce coal chilling and related coal loss due to blasting. This blasting practice would be the most common one used in Area 4 North and Area 4 South given the absence of overburdens thick enough for cast blasting.
~~Blast holes are typically drilled to the top of the coal seam being uncovered. To prevent coal shattering and accompanying coal loss from overburden blasting, blast holes are drilled until coal is encountered and backfilled with 1 to 10 feet of drill hole cuttings. On some cast shots, holes may be drilled to a specified elevation of 3 to 7 feet above the coal seam and not backfilled to reduce coal loss due to the movement of the overburden over the coal seam.~~

Once the rotary drill has completed drilling a block of blast holes, the holes are loaded with bulk explosives (typically ammonium nitrate and fuel oil [ANFO], an emulsion and ANFO blend, or bagged slurry product). The explosive column is detonated by a ½-pound to 3-pound primer initiated with either a nonelectric detonating cord, nonelectric blasting caps, or electronic/electric blasting caps. To ensure proper blast sequencing and minimize adverse effects, the shots are typically controlled using in-hole delays and/or surface delays.

20.1.3 Overburden Stripping Methods

Overburden and interburden materials (commonly referred to "spoil" after removal by stripping operations) are removed primarily with walking draglines. The coal seams in the permit area are exposed in parallel cuts commonly referred to as "strips". A "pit" is a mining area comprised of a generally contiguous sequence of strips. Strips will vary in width as a function of the size and capability of the dragline

operating in a given pit. Pit depths (measured from the topographic crest to the toe of the highwall) will vary from 5 to 250 feet, dependent on the stratigraphic location of recoverable coal seams and other operating constraints. Pit lengths will vary from several hundred to 20,000 feet, dependent on pit geometry and planned mining sequence.

In most cases, a minimum pit width of 100 feet is required to facilitate safe operation of the mobile mining equipment. Overburden and interburden is primarily removed using the dragline in a series of blocks, the length of which depends on the particular pit geometry. However, ~~BNCC~~NTEC may use cast blasting methods to remove overburden. A discussion on overburden cast blasting is provided in Section 20.1.2. The typical strip layout (Figure 20.1-1) demonstrates how spoil material is spoiled into the previously mined-out strip.

Two methods of dragline stripping are typically employed by ~~BNCC~~NTEC. The first is conventional side casting, which is generally used on the upper seams. The second is conventional spoil-side stripping, which is used on the lower seams. Geologic conditions, such as depth of coal and the number of coal seams, along with the size of the dragline and its basic configurations determine the methods of stripping employed in any given pit.

In addition to primary dragline stripping, dozers and trucks are utilized in overburden and interburden removal operations as required. Dozer and truck stripping is utilized to buffer inventory lows and to remove overburden in isolated areas where dragline stripping is not practical (e.g., mesas, pits with very short lengths, constrained spaces, etc.). Trucks and dozers are also utilized within dragline pits on thin burdens where dragline operations are not effective.

The progression of uncovered coal is in linear strips as shown on Exhibit 20.1-1. Information regarding the areas mined by years, compiled from Exhibit 20.1-1 is presented in Table 20.1-1. This table summarizes pit locations, mining sequences, start and end dates of mining, and approximate number of acres disturbed.

20.1.4 Coal Removal

20.1.4.1 Coal Drilling and Blasting

After the coal is exposed by stripping operations, the top of the coal is cleaned using small front-end loaders. The diluted coal is piled on the spoil side of the pit and left behind. The coal seam is then drilled in preparation for blasting. Thin coal seams are typically ripped with dozers, rather than blasted. The holes are typically loaded with ANFO, with an emulsion/ANFO blend, or bagged slurry product. The explosive column is detonated by a ½-pound to 3-pound primer initiated with either a nonelectric detonating cord, nonelectric blasting caps, or electronic/electric blasting caps. Surface or in-hole delays are used to ensure proper blast sequencing.

20.1.4.2 Coal Removal

Once the coal is blasted or ripped it is removed (mined) using large front-end loaders, which load large-capacity haul trucks. The entire thickness of the coal seam is mined in one pass except where an included parting or coal quality makes a distinct division in the coal seam. In this case, the top part of the seam is mined by the front-end loader, the parting is ripped by dozers and pushed into the adjoining spoil area, and the rest of the seam is mined with the front-end loaders.

Although operations are engineered and planned to recover the maximum amount of coal, a small percent of coal is lost as wedges and ribs, and at the top and bottom of coal seams. There are a number of operational and safety-related conditions that necessitate limited coal losses. In general, two types of wedge losses occur: a wedge left on upper seams in multiple-seam pits as a safety berm, and a wedge left on spoil-encroached seams as a spoil barrier.

Upper seams are mined from benches where the bottom of the coal elevation is higher than the toe of the spoil. When these conditions are encountered, a wedge of coal is typically left as a safety berm intended to prevent equipment from accidentally going over the highwall. Once the coal seam has been mined out, front-end loaders are used to recover as much of the wedge as safe operating practices allow.

When a seam is spoil-encroached, the coal wedge acts as a spoil barrier, contributing to spoil stability and reducing the occurrence of loose material rolling into the active mining face. Both spoil slides and loose material rolling into the pit are potentially serious safety hazards. Once the seam has been mined out, front-end loaders are used to recover as much of the spoil-side wedges as safe operating practices allow.

A small percentage of coal may be lost on the top and bottom of the coal seam and as coal ribs due to the geologic condition of the coal and due to the equipment utilized in the stripping and mining sequences.

In most cases, the coal is loaded into large-capacity haul trucks that travel up the pit ramps to the primary haulroads for delivery to field stockpiles. In extraordinary circumstances coal may be hauled directly to the coal processing plant located adjacent to the power plant.

Front-end loaders are used at the field stockpiles to load the coal into rail cars for dumping at the processing plant. Normally, one electric locomotive pulls sixteen to twenty cars from the stockpiles to the processing plant.

~~BNCC~~NTEC is in negotiations with the owners of the Four Corners Power Plant (FCPP) to establish a long-term contract that would provide coal for the power plant. The tonnage per year delivered to the

power plant is subject to change depending on demand for power, the availability of the mining equipment, and possible additional sales generated through future contracts. The tonnage anticipated to be mined from the permit area during the first permit term is discussed in Section 20.3.

20.1.5 Steep Slope Mining

This section is not applicable.

20.1.6 Auger Mining

This section is not applicable.

20.1.7 Surface Mining Near Underground Mines

This section is not applicable.

20.2 Major Equipment to Be Used

The major mining equipment used in production operations within the permit area is listed in Table 20.2-1. The types and number of equipment are subject to change during the permit term due to fluctuations in production levels, equipment outages, and equipment replacement schedules.

20.3 Coal Production

~~BNCC~~NTEC is in negotiations with the owners of the Four Corners Power Plant (FCPP) to establish a long-term contract that would provide a supply of coal over a period of years specified in the contract. The anticipated tonnage to be mined from the mining areas (Areas 4 North and Area 4 South) for each calendar year of the initial permit term and each five-year period beyond the initial permit term is presented in Table 20.3-1.

Annual total tonnage may be subject to change depending on the demand for coal and availability of mining equipment. Exhibit 20.1-1 shows the areas anticipated to be mined during the permit period.

20.4 Special Materials-Handling and Disposal Procedures

20.4.1 Acid-Forming and Toxic-Forming Materials and Combustibles Handling Plan

During mining operations in the permit area, ~~BNCC~~NTEC may encounter strata that contain limited quantities of potentially acid- and toxic- forming materials (PATFM). Based on the geologic description and the overburden characterization in Section 17 (Geologic Information), the quantity of PATFM will be minimal and thus does not require special handling and disposal procedures. Section 17 presents data for the physical and chemical properties of overburden within the permit area and discusses the PATFM strata that will be encountered during mining operations.

As discussed in Section 20.5, ~~BNCC~~NTEC will not generate or dispose of coal mine or coal processing wastes in the permit area. ~~BNCC~~NTEC may place small quantities of coal and coal materials that do not meet quality standards (e.g., low BTU) in mined-out areas. These small quantities of coal may come from the coal transfer and storage facilities, coal stockpiles, or other incidental areas of the mine. This coal material represents a low combustion risk, but in the event the material does combust, ~~BNCC~~NTEC will follow the procedures discussed in the combustibles and coal mine waste fire control plan presented in Section 20.9. Section 34 (Post-Reclamation Topography) describes the procedures that may be used for burying or covering PATFM and combustibles not suitable for supporting plant growth encountered during reclamation operations.

20.5 Coal Mine Waste Disposal

Mining operations will not generate coal mine waste. ~~BNCC~~NTEC operates coal sizing, coal conveyor, and coal handling and blending facilities however, those facilities are not located within the permit area.

~~BNCC~~NTEC will not generate coal processing waste, as defined by 30 CFR 701.5; however, small quantities of coal materials are routinely cleaned up around the mine operations and placed in mined-out areas. Small quantities of coal not meeting contract specifications may also be placed in mined-out areas in a manner that protects environmental resources. The volume of coal material generated during routine cleanup is expected to be small. Therefore ~~BNCC~~NTEC does not have a designated disposal location. Rather, these materials will be hauled to a mined-out area and free-dumped along the bottom of the pit or in an alternate location where the materials will not adversely affect reclamation operations. The small volumes of coal waste material will be buried; therefore the surface drainage or final surface configuration will not be impacted. ~~BNCC~~NTEC does not plan to dispose of coal mine waste in banks, refuse piles, waste dams, impoundments, or underground workings. ~~BNCC~~NTEC does not plan to accept coal mine waste from outside the permit area. Refer to Section 17 (Geologic Information) for physical and chemical information on the coal seams that will be mined.

20.6 Non-Coal Mine Waste Disposal

In compliance with Navajo Nation Environmental Protection Agency (NNEPA), Navajo Nation Solid Waste Regulations Part II §202, all non-coal mine waste, including "solid waste", as defined in Navajo Nation Solid Waste Regulations Part I §105 LL, and materials classified as hazardous waste are removed from the mine site for disposal. Nonhazardous, non-coal solid waste/trash and refuse (e.g., paper, cardboard, office trash, tires, lumber, concrete, etc.) are accumulated, managed, and disposed of or recycled in accordance with applicable U.S. Environmental Protection Agency (USEPA), NNEPA, and New Mexico Department of Transportation regulations. Solid waste generated by ~~BNCC~~NTEC is stored in dumpsters located at various designated areas around the mine site and transported by a third-party contractor to the San Juan County Regional Landfill or other permitted solid waste landfill on a regular schedule. Appendix

20.A contains a copy of the Certificate of Registration for San Juan County's Regional (Crouch Mesa) Sanitary Landfill, demonstrating it is a permitted facility in compliance with Section 103 of the New Mexico Environmental Improvement Board, Solid Waste Management Regulations.

Special wastes, such as used sorbents and oily rags, are accumulated, managed, and disposed of in accordance with applicable USEPA, NNEPA, and Department of Transportation regulations. These special wastes are transported by a third-party contractor to the San Juan County Regional Landfill for appropriate handling and disposal. An example of ~~BNCC~~NTEC's special waste profile is provided in Appendix 20.B. Special waste profiles and manifests, along with sampling and analysis records, are maintained by the ~~BNCC~~NTEC Environmental Quality Department and are available for review at the request of the regulatory authority.

Hazardous materials are accumulated, managed, and disposed in accordance with applicable USEPA, NNEPA, and Department of Transportation regulations. ~~BNCC~~NTEC will obtain and maintain an USEPA Identification (ID) number and submit the required forms to USEPA as required under Resource Conservation and Recovery Act (RCRA) regulations to obtain and maintain a RCRA ID number. The RCRA ID number will be used on all transport manifests and any other hazardous waste management documents required by Subtitle C of RCRA. Hazardous waste manifests along with sampling and analysis records are maintained by the ~~BNCC~~NTEC Environmental Services Department and are available for review at the request of the regulatory authority.

~~BNCC~~NTEC may establish a landfarm within the permit area to bioremediate petroleum-contaminated soils that are collected on-site. The selected landfarm site will be included on an exhibit and a description of the landfarm will be included in Section 22 (Support Facilities) of this permit application package, should ~~BNCC~~NTEC decide to have a landfarm in the permit area.

20.7 Protection From Slides

This section is not applicable.

20.8 Blasting Operations

20.8.1 Blasting Plan

20.8.1.1 Blasting Operations

~~BNCC~~NTEC complies with the following laws governing the use of explosives where applicable:

- 26 CFR Part 181 "Commerce in Explosives"
- 30 CFR Part 77 "Mine Safety and Health Regulations"
- 30 CFR Part 816 "Permanent Program Performance Standards - Surface Mining Activities"

All blasting is conducted under the supervision of OSM-certified blasters. The blaster and one other person present at the firing of a blast and all personnel responsible for blasting operations will be familiar with the blasting plan and site-specific performance standards.

~~BNCC~~NTEC will prepare and submit a blasting design before blasting within 1,000 feet of any dwelling, public building, school, church, or community or institutional building outside the permit area or within 500 feet of an active or inactive underground mine. The design contains drill patterns, delay periods, tie-in description, amount and type of explosives used, and pertinent data describing the scaled distance considerations used to minimize the risk of damage to structure(s) closest to the blast. These blasting designs are submitted to the regulatory authority as part of a permit application or before the scheduled date of the blast. Appropriate changes will be made to these designs as required by the regulatory authority.

The location and design of the explosives handling and storage areas are discussed in Section 22 (Support Facilities).

20.8.1.2 Blasting Signs, Warnings, and Blast Area Access Control

Signs posted conspicuously at all public road entrances contain the following warning: "WARNING! EXPLOSIVES IN USE". The signs list the audible blast warning signals and the physical methods used to control blast area access. These signs also indicate that "Loaded Holes Are Barricaded and Marked with Warning: DANGER- EXPLOSIVES-KEEP OUT".

The audible warnings described on the blast warning signs will be audible within a range of one-half mile from the point of the blast.

Access to the general area where blasting is planned or where holes are being loaded in advance of a blast is controlled by signs posted stating the blasting activities. These are typically temporary signs reading "DANGER EXPLOSIVES - LOADED HOLES - NO UNAUTHORIZED ENTRY - CALL BLAST FOREMAN BEFORE ENTERING" or a similar message to warn the party reading the sign.

Access to the area of potential impacts (primarily from flyrock) surrounding a blast is controlled by manned roadblocks that deny access by unauthorized personnel. Access is denied prior to the actual blast and not allowed until the area is cleared after the blast.

20.8.2 Preblasting Survey

~~BNCC~~NTEC notifies in writing all known residents located within one-half mile of the permit area on how to request a preblast survey. All preblast surveys requested more than 10 days before the planned blasting activities are to be completed prior to the commencement of blasting activities. A list of all known residences within one-half mile of the permit area is included in Appendix 20.C. A map showing the blast

areas to be described in the public blast notice and the location of all known residences can be found on Exhibit 20.8-1.

20.8.3 Blasting Schedule

~~BNCC~~NTEC will publish and distribute the public blast notice and schedule, per 30 CFR 816.64(b), after OSM's final agency decision on the permit application package (PAP) at least 10 days and no more than 30 days prior to initiating the blasting program. ~~BNCC~~NTEC has prepared a draft public blast notice and schedule and included it as Appendix 20.D. The public blast notice will include the following: 1) name, address, and telephone number of ~~BNCC~~NTEC; 2) identification of the specific areas where blasting may take place; 3) dates and time periods when blasts are to take place; 4) methods used to control access to the blasting areas; and 5) type and patterns of audible warning and all-clear signals to be used before and after blasting. After publication of the public blast notice, the PAP will be updated to include the notice and distribution list in Appendix 20.D.

All blasting shall conform to the blasting schedule as described in the public blast notice (Appendix 20.D) except for emergency situations. Emergency situations warranting blasting outside the specified periods include any situation that constitutes a safety hazard to employees, a safety hazard to the public, and/or has the potential to damage equipment, property, or otherwise.

The public blast notice is to be published at least 10 days, but not more than 30 days, before blasting, and at regular intervals that will not exceed 12 months. ~~BNCC~~NTEC will also re-publish the public blast notice when the information (e.g., area or schedule), changes significantly from the previous published public blast notice. Copies of the public blast notice will be distributed to local governments, public utilities, and each residence within one-half mile of the blasting area via certified mail.~~.~~ A copy of the public blast notice is shown in Appendix 20.D. Proof of publication of the public blasting notice and certified mail receipts will be kept on the mine site at all times and may be reviewed by the regulatory authority upon request.

20.8.4 Blasting Monitoring System

20.8.4.1 Control of Adverse Effects

Blasting is conducted so that air blast does not exceed the limits prescribed in 30 CFR 816.67(b)(1)(i) at any dwelling, public building, school, church, or community or institutional building outside the permit area. ~~BNCC~~NTEC periodically monitors air blast to insure compliance with the standards. At least once per year a coal, interburden, overburden, pre-strip, and cast blast will be monitored for air blast if that type of blast is conducted within the year. All blasts that are monitored for ground vibration are also monitored for air blast. The criteria followed to establish when a type of blast is not monitored include:

1. If a blast was previously monitored in the calendar year then, subsequent blasts of that same type in the same calendar year will not be monitored.
2. If there is no occurrence of a specific type of blast in a calendar year then, no monitoring will occur for that type of blast.

All blasts are designed to prevent the likelihood that flyrock will travel beyond the blast area, more than one-half the distance to the nearest occupied building or dwelling, or outside the permit area.

Blasting is conducted so that the maximum ground vibration does not exceed the limits prescribed in 30 CFR 816.67(d)(2)(i) at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area. To ensure that the maximum peak particle velocity for ground vibration is not exceeded, the scale-distance equation as described in 30 CFR 816.67(d)(3) is utilized.

Seismic monitoring will not be required when blasting is performed in accordance with the scale-distance equation. When application of the scale-distance equation shows that the allowable peak particle velocity may be exceeded, seismic monitoring will be conducted using a seismograph. The data will be included in the blast report for this particular shot.

20.8.5 Blasting Records

All blasting data are recorded on blast reports that are retained at the mine offices for three years. Blasting records will contain the information required by 30 CFR 816.68.

20.8.6 Blasting Near Protected Structures and Underground Mines

It is not anticipated that structures other than those mentioned above will be encountered. In the event that other structures are encountered, such as powerlines, pipelines, water towers, tunnels, dams, impoundments, underground mines, or other utilities, a maximum peak particle velocity limit will be developed to use in the vicinity of the structure. After obtaining regulatory authority approval, one of the above-mentioned methods will be used to show that the maximum allowable peak particle velocity limit is not exceeded at the location of the structure.

The maximum air blast and ground vibration limits will not apply at structures owned by ~~BNCC~~NTEC and not leased to another person.

20.9 Combustibles and Coal Mine Waste Fire Control Plans

The mining operations do not generate any coal mine waste; therefore, no coal refuse piles have been constructed. Future plans do not require the construction of refuse piles, therefore, a MSHA coal mine waste fire control plan is not required, per 30 CFR 77.214 through 77.215(4).

Fires caused by the inclusion of stringer coal or carbonaceous shale in the dragline spoil occasionally occur in the spoil rows and previously mined areas of the pits. Spoil fires are controlled or extinguished by covering the burning spoil with non-coal spoil material to smother the fire. Coal spoil fires that cannot be covered will be manipulated with a dozer to expose the coal spoil material, allowing it to burn itself out.

If a coal stockpile fire occurs, the burning coal is removed from the pile and spread out on the ground away from the pile. The fire is smothered by back dragging the material with mine equipment or is left spread out to burn itself out.

Extinguishing operations will be initiated immediately after a coal spoil/stockpile fire is reported. Coal fires are carefully evaluated and deemed safe before equipment and personnel are allowed to enter the area for extinguishing operations. Only experienced personnel conduct extinguishing operations. Coal fires are monitored until all evidence indicates that the fire has burned itself out or is extinguished.

To ensure safe working conditions, all work areas are inspected at least once during each work shift by the supervisor in charge of the work area. An inspection log is maintained, with follow-up actions for any unsafe conditions that are identified. This shift inspection is required by MSHA. Any potential fire hazard(s) and, if appropriate, the corrective action(s) taken are identified and reported during this inspection by the on-shift supervisor.

20.10 Certification of Designs and Exhibits

All certified exhibits for this section of the PAP are available for review upon request at the mine office or OSM, Western Region, technical office in Denver, Colorado. Certified as-built drawings will be kept on file at the mine site and made available upon request.

Personnel

Persons or organizations responsible for data collection, analysis, and preparation of this permit application package section:

~~Ron Van Valkenburg~~	BHP Billiton Mine Management
~~Dustin Fisher~~	Company (disclosed agent)
~~Kent Applegate~~	Farmington, NM
~~Matt Owens~~	

~~BHP Navajo Coal~~Navajo Transitional Energy Company

References