

SYSTEM DESCRIPTION
FOR
COAL BLENDING SYSTEM
FOR
AEP BIG SANDY UNIT 2 FGD RETROFIT PROJECT

AEBS-2-SD-CH-0001-RA

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1.0 DESCRIPTION OF SYSTEM

1.1 Description of Process

The Coal Blending System is designed to convey low sulfur coal from existing Station 12 and transfer it to a new coal storage pile. The low sulfur coal will be reclaimed from the storage pile and blended with higher sulfur coal that will be conveyed on the existing reclaim system. The blending ratio will be adjustable based on actual as-fired coal conditions. After the FGD system is installed on Unit 2, Big Sandy Unit 2 will burn blended coal while Unit 1 will continue to burn low sulfur coal only.

2.0 DESIGN CRITERIA

2.1 Design Codes and Standards

2.1.1 The following codes and standards govern the design of the system:

- 1) Conveyors are designed in accordance with the requirements of the Conveyor Equipment Manufacturer's Association (CEMA) - Belt Conveyors for Bulk Materials; and the American Society of Mechanical Engineers (ASME) B21.1 - Safety Standard for Conveyors and Related Equipment.
- 2) Drive pulleys are designed in accordance with the American National Standards Institute (ANSI) B105.1.
- 3) Gear reducers are designed in accordance with the American Gear Manufacturer's Association (AGMA).
- 4) Support structures are designed in accordance with the American Institute of Steel Construction (AISC), and the Kentucky Building Code.
- 5) Stairs, platforms, ladders, handrails, etc. are designed in accordance with the Occupational Safety and Health Administration (OSHA), and the Kentucky Building Code.
- 6) Conveyor belting is in accordance with standards of the Rubber Manufacturer's Association (RMA).
- 7) Safety guards and cages are designed in accordance with OSHA.

2.1.2 The following design criteria are applicable to the design of the system:

DC-FGD/SCR-003-00, Rev. 1, Fleet FGD/SCR Mechanical and Process Design Criteria

AEBS-2-DB-012-0001, Project Design Criteria

AEBS-2-SP-092604, Specification for Coal Blending System

2.2 System Design Basis

The Coal Blending System equipment is designated by the system code CH.

Pre-crushed (2" x 0") low sulfur coal will be delivered to the facility in dump trucks or rail cars. The coal will be unloaded utilizing the existing coal unloading station and conveyed to Transfer Station 12 by the existing coal unloading conveyors. At Transfer Station 12, a new diverter gate will direct the low sulfur coal to a new stackout system. The low sulfur coal will be discharged from the stackout conveyor to a storage pile with a capacity of 35,000 tons (15 days). The pile will be conical in shape and is formed by a telescoping chute. Pile dischargers located under the storage pile will be used to reclaim the coal. Coal will be reclaimed at a rate of 550 TPH and discharged into a surge hopper. From the surge hopper, the coal will be metered onto existing reclaim conveyors 13N and 13S to provide the required blend of high/low sulfur coal to feed Unit 2. Unit 1 will only be feed with unblended low sulfur coal. The Coal Blending System consists of the following components:

One (1) 100% capacity, Station 12 Coal Diverter Gate (BS-2-CH-GA-7601) equipped with an electric actuator will divert the coal from the existing coal unloading chutework to Coal Stackout Conveyor C1. An electric actuator with internal limit switches is used to move and position the gate to direct the flow of coal in either direction.

One (1) 100% capacity, 60-inch wide belt, 2,600 TPH Coal Transfer Conveyor C1 (BS-2-CH-CV-7601) equipped with a belt scale, receives low sulfur coal from the Transfer Station 12 Diverter Gate, weighs it at the belt scale, and transports it to the Coal Blending Station where it will be transferred onto Coal Stackout Conveyor C2. Coal Transfer Conveyor C1 runs from existing Transfer Station 12 at an incline angle of approximately 5 degrees to the Coal Blending Station.

One (1) 100% capacity, 2,600 TPH Coal Belt Scale C1 (BS-2-CH-MS-7601), weighs the coal being conveyed on Coal Transfer Conveyor C1. The belt scale is located on Coal Transfer Conveyor C1 on the outdoor portion of the inclined conveyor support trusses.

One (1) 100% capacity, 60-inch wide belt, 2,600 TPH Coal Stackout Conveyor C2 (BS-2-CH-CV-7602) collects Low Sulfur Coal from Coal Transfer Conveyor C1 and transports it to the Coal Storage Pile. Coal Stackout Conveyor C2 runs from the Coal Blending Station at an incline angle of approximately 15 degrees to the Telescoping Chute.

One (1) 100% capacity, Telescoping Chute C2 (BS-2-CH-QQ-7601) is mounted at the discharge end of Coal Stackout Conveyor C2 head chute. The primary function of the chute is to prevent aeration and drifting of the material during free fall.

One (1) Dust Suppression System (BS-2-CH-QQ-7602) equipped to spray a fogging mist of fine water particles on the material at each conveyor transfer point and the telescoping chute to minimize dust generation.

One (1) 100% capacity, 550 TPH Pile Discharger "A" (BS-2-CH-VB-7601), equipped with a rack and pinion type manual Reclaim Shutoff Gate "A" (BS-2-CH-SG-7601), reclaims low sulfur coal from the uncovered storage pile and feeds it onto Coal Reclaim Belt Feeder C3A. The pile discharger periodically pulses the material in the pile causing the coal to be dislodged from the pile and promoting flow through the discharger and onto Coal Reclaim Belt Feeder C3A. The pile discharger is located beneath the coal storage pile in an underground concrete reclaim pit.

One (1) 100% capacity, 54-inch wide belt, 550 TPH Coal Reclaim Belt Feeder C3A (BS-2-CH-CV-7603) receives Coal from Pile Discharger "A" and transports it to Coal Reclaim Conveyor C4. Coal Belt Feeder C3A is located beneath Pile Discharger "A" in the Coal reclaim pit.

One (1) 100% capacity, 550 TPH Pile Discharger "B" (BS-2-CH-VB-7602), equipped with a rack and pinion type manual Reclaim Shutoff Gate "B" (BS-2-CH-SG-7602), reclaims low sulfur coal from an uncovered storage pile and feeds it into a Frozen Coal Crusher (BS-2-CH-CR-7601). The pile discharger periodically pulses the material in the pile causing the coal to be dislodged from the pile and promoting flow through the discharger and into the Frozen Coal Crusher. The pile discharger is located beneath the coal storage pile in an underground concrete reclaim pit.

One (1) 100% capacity, 550 TPH Frozen Coal Crusher (BS-2-CH-CR-7601) receives Coal from Pile Discharger "B", breaks up any frozen lumps of coal and discharges it onto Coal Reclaim Belt Feeder C3B. The Frozen Coal Crusher is located beneath Pile Discharger "B" in the Coal reclaim pit.

One (1) 100% capacity, 54-inch wide belt, 550 TPH Coal Reclaim Belt Feeder C3B (BS-2-CH-CV-7604) receives Coal from the Frozen Coal Crusher and transports it to Coal Reclaim Conveyor C4. Coal Belt Feeder C3B is located beneath the Frozen Coal Crusher in the Coal reclaim pit.

One (1) 100% capacity, 30-inch wide belt, 550 TPH Coal Reclaim Conveyor C4 (BS-2-CH-CV-7605) equipped with a belt scale and magnetic separator, collects Coal from Coal Reclaim Belt Feeders C3A and C3B, weighs it at the belt scale, removes tramp metal at the magnetic separator and discharges it into the Coal Blending Surge Bin. Coal Reclaim Conveyor C4 runs from the discharge chutes of Coal Reclaim Belt Feeders C3A and C3B, through a concrete reclaim tunnel, at an incline angle of approximately 15 degrees, to the Coal Blending Station.

One (1) 100% capacity, 550 TPH Coal Belt Scale C4 (BS-2-CH-MS-7602), weighs the coal being conveyed on Coal Reclaim Conveyor C4. The belt scale is located on Coal Reclaim Conveyor C4 on the outdoor portion of the inclined conveyor support trusses.

One (1) 100% capacity Coal Magnetic Separator C4 (BS-2-CH-QQ-7302) extracts ferrous tramp metal in the conveyed coal on Coal Reclaim Conveyor C4 as it is discharged from the belt. The magnetic separator is located above the discharge pulley of Coal Reclaim Conveyor C4 inside of the Coal Blending Station. The tramp metal is directed to a tramp iron collection bin located at the floor level within the Coal Blending Station via a tramp iron chute.

One (1) Coal Blending Surge Hopper (BS-2-CH-QQ-7604), 150 ton capacity with two (2) discharges, each equipped with manually operated rack and pinion type Surge Hopper Shutoff Gate (BS-2-CH-SG-7603 and BS-2-CH-SG-7604) on each outlet, receives Low Sulfur Coal from Coal Reclaim Conveyor C4 and discharges it onto either Coal Blending Belt Feeder C5A or Coal Blending Feeder C5B. The Coal Blending Surge Hopper is located in the Coal Blending Station.

Two (2) 100% capacity, 54-inch wide belt, 550 TPH Coal Blending Belt Feeders C5A & C5B (BS-2-CH-CV-7606 and BS-2-CH-CV-7607) receive Low Sulfur Coal from the Coal

Blending Surge Hopper, meters the flow of coal by adjusting the belt speed and discharges it into Coal Blending Diverter Gates C5A & C5B. The Coal Blending Feeders C5A & C5B are located beneath the Coal Blending Surge Hopper in the Coal Blending Station.

Two (2) 100% capacity, Coal Blending Diverter Gates C5A & C5B (BS-2-CH-GA-7602 and BS-2-CH-GA-7603) equipped with an electric actuator will divert the coal from the Coal Blending Feeders C5A & C5B to either existing Coal Reclaim Conveyor 13N or 13S. An electric actuator with internal limit switches is used to move and position the gate to direct the flow of coal in either direction. Coal Blending Diverter Gates C5A & C5B are located below Coal Blending Feeders C5A & C5B in the Coal Blending Station

2.3 Plant System Interfaces

The system interfaces with the Plant Air (PA), Service Water (RW), and Fire Protection (FP) Systems.

2.4 Materials

Conveyor Belting – RMA Grade 2

Belt Cleaners – Urethane, Tungsten Carbide

Chute and Skirtboard Liners – ASTM A304 Stainless Steel

2.5 Redundancy

Redundancy is provided in the coal reclaim system with 2 pile dischargers, each with its own reclaim feeder, and in the blending system with 2 blending belt feeders. The coal stackout system has no redundancy.

3.0 DESCRIPTION OF MAJOR EQUIPMENT

3.1 Piping Systems

Plant Air (PA) and Service Water (SW) piping is provided on the conveyor systems by the vendor in accordance with specification AEBS-2-SP-092604 and meets the requirements of DC-FGD/SCR-003-00, Rev. 1, AEP Fleet FGD/SCR Mechanical & Process Design Criteria.

3.2 Coal Unloading System

Station 12 Diverter Gate (BS-2-CH-GA-7601)

Specification:	AEBS-2-SP-092604
Equipment Data Sheet:	AEBS-2-DS-092604-0001
Quantity:	1
Type:	Diverter

Coal Transfer Conveyor C1 (BS-2-CH-CV-7601)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Rated Capacity: 2,600 TPH
Conveyor Speed: 550 FPM
Belt Width: 60 Inches
Motor HP: 200 (Preliminary)
Motor RPM: 1,800

Coal Stackout Belt Scale C1 (BS-2-CH-MS-7601)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Type: Single Idler, ½% accuracy

Coal Stackout Conveyor C2 (BS-2-CH-CV-7602)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Rated Capacity: 2,600 TPH
Conveyor Speed: 550 FPM
Belt Width: 60 Inches
Motor HP: 350 (Preliminary)
Motor RPM: 1,800

Coal Telescoping Chute C2 (BS-2-CH-QQ-7601)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Type: Retractable steel tubes
Chute Travel Length: 85 ft approx.

3.3 Coal Reclaim and Blending System

Coal Pile Discharger "A" (BS-2-CH-VB-7601)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1

Coal Reclaim Shutoff Gate "A" (BS-2-CH-SG-7601)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Type: Rack & Pinion With Geared Manual Chain – Slide Gate
Size: To match pile discharger outlet

Coal Reclaim Belt Feeder C3A (BS-2-CH-CV-7603)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Rated Capacity: 550 TPH
Belt Width: 54 Inches
Conveyor Speed: 65 FPM
Motor HP: 20 (Preliminary)
Motor RPM: 1,800

Coal Pile Discharger "B" (BS-2-CH-VB-7602)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1

Coal Reclaim Shutoff Gate "B" (BS-2-CH-SG-7602)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Type: Rack & Pinion With Geared Manual Chain – Slide Gate

Size: To match pile discharger outlet

Frozen Coal Crusher (BS-2-CH-CR-7601)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Rated Capacity: 550 TPH
Motor HP: 100 (Preliminary)
Motor RPM: 1,800

Coal Reclaim Belt Feeder C3B (BS-2-CH-CV-7604)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Rated Capacity: 550 TPH
Belt Width: 54 Inches
Conveyor Speed: 65 FPM
Motor HP: 20 (Preliminary)
Motor RPM: 1,800

Coal Reclaim Conveyor C4 (BS-2-CH-CV-7605)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Rated Capacity: 550 TPH
Belt Width: 30 Inches
Conveyor Speed: 520 FPM
Motor HP: 125 (Preliminary)
Motor RPM: 1,800

Coal Reclaim Belt Scale C4 (BS-2-CH-MS-7600-02)

Specification: AEBS-2-SP-092604
Equipment Data Sheet: AEBS-2-DS-092604-0001
Quantity: 1
Type: Single Idler, ½% accuracy

Coal Magnetic Separator C4 (BS-2-CH-QQ-7602)

Specification: AEBS-2-SP-092604
 Equipment Data Sheet: AEBS-2-DS-092604-0001
 Quantity: 1
 Type: In-line, Self Cleaning

Coal Blending Surge Hopper (BS-2-CH-QQ-7604)

Specification: AEBS-2-SP-092604
 Equipment Data Sheet: AEBS-2-DS-092604-0001
 Quantity: 1
 Capacity: 150 TONS

Surge Hopper Shut-Off Gate "A" (BS-2-CH-SG-7603)

Specification: AEBS-2-SP-092604
 Equipment Data Sheet: AEBS-0-DS-092604-0001
 Quantity: 1
 Type: Rack & Pinion With Geared Manual Chain – Slide Gate
 Size: To match hopper outlet

Coal Blending Belt Feeder C5A (BS-2-CH-CV-7606)

Specification: AEBS-2-SP-092604
 Equipment Data Sheet: AEBS-2-DS-092604-0001
 Quantity: 1
 Rated Capacity: 550 TPH
 Conveyor Speed: 65 FPM
 Belt Width: 54 Inches
 Motor HP: 20 (Preliminary)
 Motor RPM: 1,800

Surge Hopper Shut-Off Gate "B" (BS-2-CH-SG-7604)

Specification: AEBS-2-SP-092604
 Equipment Data Sheet: AEBS-0-DS-092604-0001
 Quantity: 1
 Type: Rack & Pinion With Geared Manual Chain – Slide Gate

Size: To match hopper outlet

Coal Blending Belt Feeder C5B (BS-2-CH-CV-7607)

Specification: AEBS-2-SP-092604
 Equipment Data Sheet: AEBS-2-DS-092604-0001
 Quantity: 1
 Rated Capacity: 550 TPH
 Conveyor Speed: 65 FPM
 Belt Width: 54 Inches
 Motor HP: 20 (Preliminary)
 Motor RPM: 1,800

Coal Blending Diverter Gate C5A (BS-2-CH-GA-7602)

Specification: AEBS-2-SP-092604
 Equipment Data Sheet: AEBS-2-DS-092604-0001
 Quantity: 1
 Type: Diverter

Coal Blending Diverter Gate C5B (BS-2-CH-GA-7603)

Specification: AEBS-2-SP-092604
 Equipment Data Sheet: AEBS-2-DS-092604-0001
 Quantity: 1
 Type: Diverter

Dust Suppression System (BS-2-CH-QQ-7603)

Specification: AEBS-2-SP-092604
 Equipment Data Sheet: AEBS-2-DS-092604-0001
 Quantity: 1
 Type: Dry Fog

4.0 DESCRIPTION OF SYSTEM OPERATION (CONTROL DESCRIPTION)

4.1 Description of Controls and Major Interlocks

The Distributed Control System (DCS) provides control and monitoring of the Coal Blending System. The system is graphically displayed on screens in the main control room and the FGD control room. The graphic displays permit the operator to monitor and control these systems via Human Machine Interfacing (HMI). Each conveyor is provided with a local

control station adjacent to the drive for starting, stopping and jogging the conveyor. The following provides a basic description of the control, instrumentation and alarms.

The stackout system is designed to transfer Low Sulfur Coal from existing Transfer Station 12 to the uncovered Low Sulfur Coal Storage Pile as follows:

Station 12 Coal Diverter Gate (BS-2-CV-GA-7601) located in the existing chutework at the discharge of existing Conveyor 11 inside of Transfer Station 12. The Diverter Gate will direct the Low Sulfur Coal to Coal Transfer Conveyor C1. The diverter gate will be operated by an electric actuator designed to move the gate through a stream of coal. The actuator will have two internal position limit switches to control the movement of the diverter gate plate.

Coal Transfer Conveyor C1 (BS-2-CH-CV-7601) receives Low Sulfur Coal from the Station 12 Coal Diverter Gate (BS-2-GA-7601), transports it, weighs it at a belt scale and discharges it onto Coal Stackout Conveyor C2. The conveyor is provided with a belt loading section with a transition chute, belt cleaning devices, automatic vertical gravity type belt take-up, fully covered and lined loading skirtboards, 3/4 fixed hood covers, a discharge head chute, safety guards, warning horns and beacons, safety and control devices/switches, drive system with motor, support structure and bents. Walkways, access stairs and handrails are provided on one side of the conveyor outside of the enclosed Transfer Station. Emergency stop switches with connecting pull cord cables are provided where personnel access is possible. Belt drift switches, including bypass switches, are provided near the head end (one on each side of the carry side belt), near the tail end (one at each side of the return belt), and upstream of the belt take-up (one at each side of the return belt). A low speed switch and belt speed sensor for the belt scale are provided at the tail pulley. The head chute contains a plugged chute switch that actuates when material backups/rises in the chute. A jog pushbutton is provided to enable the Operator to jog the conveyor while attempting to correct alarm conditions and for maintenance operation. The jog pushbutton is only enabled when the Operator initiates "LOCAL" Mode where the equipment is controlled via Manual operations. Warning horns that sound before starting/energizing the conveyor are provided. The horns will not activate during jogging operations. Warning beacons that activate before energizing/starting the conveyor are provided. The beacons will not activate during jogging operations.

Coal Stackout Belt Scale C1 (BS-2-CH-MS-7601) weighs the Low Sulfur Coal as the material travels on the belt of Coal Transfer Conveyor C1. The belt scale is provided with a load sensor and a microprocessor-based integrator - controller. The belt speed sensor installed at the tail pulley of Coal Transfer Conveyor C1 measures the belt speed, and the speed readout from the speed sensor is used by the belt scale integrator in the calculation of the total mass passed over the belt conveyor scale. Some of the microprocessor-based integrator features are touch screen graphical user interface, weigh display, status indicators for annunciation of alarms, input, etc., and 4-20 mA analog outputs for rate. The following contacts and outputs will be used by the DCS: high weight rate alarm, low weight rate alarm, belt scale trouble alarm, as well as isolated analog outputs (4-20 mA dc) for weight rate and weight total.

Coal Stackout Conveyor C2 (BS-2-CH-CV-7602) receives Low Sulfur Coal from Coal Transfer Conveyor C1, transports it, and discharges it through the Coal Telescoping Chute into the storage pile. The conveyor is provided with a belt loading section with a transition chute, belt cleaning devices, automatic vertical gravity type belt take-up, fully covered and

lined loading skirtboards, 3/4 fixed hood covers, a discharge head chute, safety guards, warning horns and beacons, safety and control devices/switches, drive system with motor, support structure and bents. Walkways, access stairs and handrails are provided on one side of the conveyor outside of the enclosed Transfer Station. Emergency stop switches with connecting pull cord cables are provided where personnel access is possible. Belt drift switches, including bypass switches, are provided near the head end (one on each side of the carry side belt), near the tail end (one at each side of the return belt), and upstream of the belt take-up (one at each side of the return belt). A low speed switch is provided at the tail pulley. The head chute contains a plugged chute switch that actuates when material backups/rises in the chute. A jog pushbutton is provided to enable the Operator to jog the conveyor while attempting to correct alarm conditions and for maintenance operation. The jog pushbutton is only enabled when the Operator initiates "LOCAL" Mode where the equipment is controlled via Manual operations. Warning horns that sound before starting/energizing the conveyor are provided. The horns will not activate during jogging operations. Warning beacons that activate before energizing/starting the conveyor are provided. The beacons will not activate during jogging operations.

Coal Telescoping Chute C2 (BS-2-CH-QQ-7601), which is attached to the discharge end of Coal Stackout Conveyor C2 head chute, receives coal from Coal Stackout Conveyor C2 and discharges it into a fifteen (15) day storage pile, while preventing the material from drifting during free fall. The chute is provided with a full up and fully extended rotary travel limit switch kit, a dust control discharge skirt at the discharge end, a triple cable hoisting system for chute stability and smooth even actuation, drive system with motor, and safety and control devices/switches. Each hoisting cable is provided with a slack cable switch, which disengages the motor and drive, prohibiting further unwinding of the cables, when the hoist cables become slack. An automatic raising kit consisting of two product-sensing probes, located 180 degrees apart on the bottom of the chute, and an electronic controller are provided. When the product sensing probe moves from vertical toward horizontal by contacting the rising pile, the probe contact changes state and a relay in the electronic controller provides an output signal to the Distributed Control System (DCS), which in turn causes the chute to raise a preset increment

Low Sulfur Coal is reclaimed from the storage pile via either Coal Pile Discharger "A" (BS-2-CH-VB-7601) or Coal Pile Discharger "B" (BS-2-CH-VB-7602). Coal Pile Discharger "A" feeds coal onto Coal Reclaim Belt Feeder C3A. Coal Pile Discharger "B" feeds coal into the Frozen Coal Crusher. Each discharger is provided with two (2) exciters each driven by a vibratory motor. The operation of the pile discharger is controlled/cycled via a cycle timer implemented in the DCS. A typical cycling operation involves energizing the discharger for a preset amount of time in seconds per each minute of operation. The cycle time must be adjusted during initial start-up to provide for optimum material flow/reclaim. Coal Pile Discharger "A" can be isolated manually from Coal Reclaim Belt Feeder C3A by the Coal Reclaim Shutoff Gate "A" (BS-2-CH-SG-7301). Coal Pile Discharger "B" can be isolated manually from the Frozen Coal Crusher by the Coal Reclaim Shutoff Gate "B" (BS-2-CH-SG-7302). Each shutoff gate is provided with position indication switches for gate position displays in the DCS console and for interlocks. Position switches will be actuated when the gate is fully opened and when the gate is fully closed.

Coal Reclaim Belt Feeder C3A (BS-2-CH-CV-7603) receives coal from the Coal Pile Discharger "A", transports it and discharges it onto Coal Reclaim Conveyor C4. The feeder is provided with a belt loading section, belt cleaning devices, enclosed screw type belt take-up, fully covered and lined loading skirtboards that extend the full length of the feeder,

manually operated material flow adjusting gate, a head chute, safety guards, warning horn and beacon, safety and control devices/switches, drive system and motor, and support structure with support legs to floor. The feeder is accessible on both sides from the floor. Emergency stop switches with connecting pull cord cables are provided on both sides of the feeder. Belt drift switches, including bypass switches, are provided near the head end (one on each side of the carry side belt) and near the tail end (one at each side of the return belt). A low speed switch is provided at the tail pulley. The head chute contains a plugged chute switch that actuates when the chute is plugged. A jog pushbutton is provided to enable the Operator to jog the feeder while attempting to correct alarm conditions and for maintenance operation. The jog pushbutton is only enabled when the Operator initiates "LOCAL" Mode where the equipment is controlled via Manual operations. A warning horn that sounds before energizing/starting the feeder is provided. The horn will not activate during jogging operations. A warning beacon that activates before energizing/starting the feeder is provided. The beacon will not activate during jogging operations.

Frozen Coal Crusher (BS-2-CH-CR-7601) receives coal from Coal Pile Discharger "B", breaks up any frozen lumps and discharges the coal onto Coal Reclaim Belt Feeder C3B. The crusher is provided with a low speed switch, and two (2) mechanical vibration switches/transmitters. Vibration switch/transmitter is mounted at the foot of the crusher bearing on the motor side, and vibration switch/transmitter is mounted at the foot of the crusher bearing on the operator side. The vibration switches provide 4-20 mA outputs for interface with the DCS. The vibration switches are of the dual trip switches. The first trip (high switch) activates an alarm condition to provide early warning that the condition of the crusher is deteriorating when the vibration level reaches 0.5 inches/sec, which corresponds to 10.42 mA output signal. If the crusher condition continues to deteriorate and the vibration level reaches 0.7 inches/sec, which corresponds to 14 mA output signal, the second trip (high-high switch) is activated and a shut down condition occurs, thus shutting down the crusher, and all system equipment/components upstream of the crusher. Speed switch will activate an alarm condition, and a shut down condition if the equipment's speed drops below a preset limit. The low speed switch has a timed setting that de-energizes the motor if the equipment fails to achieve the set speed within a preset time from start-up.

Coal Reclaim Belt Feeder C3B (BS-2-CH-CV-7604) receives coal from the Frozen Coal Crusher, transports it and discharges it onto Coal Reclaim Conveyor C4. The feeder is provided with a belt loading section, belt cleaning devices, enclosed screw type belt take-up, fully covered and lined loading skirtboards that extend the full length of the feeder, manually operated material flow adjusting gate, a head chute, safety guards, warning horn and beacon, safety and control devices/switches, drive system and motor, and support structure with support legs to floor. The feeder is accessible on both sides from the floor. Emergency stop switches with connecting pull cord cables are provided on both sides of the feeder. Belt drift switches, including bypass switches, are provided near the head end (one on each side of the carry side belt) and near the tail end (one at each side of the return belt). A low speed switch is provided at the tail pulley. The head chute contains a plugged chute switch that actuates when the chute is plugged. A jog pushbutton is provided to enable the Operator to jog the feeder while attempting to correct alarm conditions and for maintenance operation. The jog pushbutton is only enabled when the Operator initiates "LOCAL" Mode where the equipment is controlled via Manual operations. A warning horn that sounds before energizing/starting the feeder is provided. The horn will not activate during jogging operations. A warning beacon that activates before energizing/starting the feeder is provided. The beacon will not activate during jogging operations.

Coal Reclaim Conveyor C4 (BS-2-CH-CV-7605) receives coal from Coal Reclaim Belt Feeders C3A and C3B, transports it, weighs it at a belt scale, extracts and collects tramp iron from the material stream at the magnetic separator, and discharges it into the Coal Blending Surge Hopper. The conveyor is provided with a belt loading section, belt cleaning devices, automatic vertical gravity type belt take-up, fully covered and lined loading skirtboards, 3/4 fixed hood covers, a head chute, safety guards, warning horns and beacons, safety and control devices/switches, drive system with motor, support structure with support legs inside the tunnel and support bents outside the tunnel. Walkways, access stairs and handrails are provided on both sides of the conveyor in the reclaim tunnel and pit. Walkways, access stairs and handrails are provided on one side only for the full length of the conveyor section outside of the reclaim tunnel & pit. Emergency stop switches with connecting pull cord cables are provided where personnel access is possible. Belt drift switches, including bypass switches, are provided near the head end (one on each side of the carry side belt), near the tail end (one at each side of the return belt) and upstream of the belt take-up (one at each side of the return belt). A low speed switch and a belt speed sensor for the scale are installed at the tail pulley. A plugged chute switch installed in the head chute will be actuated when the chute is plugged. A jog pushbutton is provided to enable the Operator to jog the conveyor while attempting to correct alarm conditions and for maintenance operation. The jog pushbutton is only enabled when the Operator initiates "LOCAL" Mode where the equipment is controlled via Manual operations. Warning horns that sound before starting/energizing the conveyor are provided. The horns will not activate during jogging operations. Warning beacons that activate before energizing/starting the conveyor are provided. The beacon will not activate during jogging operations.

Coal Reclaim Belt Scale C4 (BS-2-CH-MS-7602) weighs the low sulfur coal as the material travels on the belt of Coal Reclaim Conveyor C4. The belt scale is provided with a load sensor and a microprocessor-based integrator - controller. The belt speed sensor, installed at the tail pulley of Coal Reclaim Conveyor C4, measures the belt speed and the speed readout from the speed sensor is used by the belt scale integrator in the calculation of the total mass passed over the belt conveyor scale. Some of the microprocessor-based integrator features are touch screen graphical user interface, weigh display, status indicators for annunciation of alarms, input, etc., and 4-20 mA analog outputs for rate. The following contacts and outputs will be used by the DCS: high weight rate alarm, low weight rate alarm, belt scale trouble alarm, as well as isolated analog outputs (4-20 mA dc) for weight rate and weight total.

Coal Magnetic Separator C4 (BS-2-CH-QQ-7602) is a self-cleaning magnetic separator that consists of an electromagnet and a belt conveyor with non-magnetic metal flights, which drag the extracted metal to the tramp iron chute. It extracts tramp iron from the coal stream as the material is discharged at the head pulley. The extracted tramp iron is automatically discharged into the Tramp Iron Bin via a tramp iron chute. The magnetic separator's self cleaning conveyor is provided with a low speed switch at its tail pulley. The switch will activate an alarm and emergency shut down of the magnetic separator only when the equipment's speed drops below a preset limit. The low speed switch also has a timed setting that de-energizes the motor if the equipment fails to achieve the set speed within a preset time from start-up. The magnetic separator has a silicon rectifier to convert 460 volt, 60 Hz, 3 Phase AC power to 115 volt DC to energize the magnet. The rectifier is provided with a temperature switch, an under and over current limit alarm with sensor, relay, local/remote selector switch, and DC volt and amp meter for DCS interface/operation.

Coal Blending Surge Hopper (BS-2-CH-QQ-7604) with dual outlets receives the low sulfur coal conveyed by Coal Reclaim Conveyor L4, and discharges it onto the belt of Coal Blending Belt Feeders C5A or C5B. The hopper will function as a surge vessel, and will compensate for any momentary upsets in the system material flow rate. The hopper is provided with two (2) level switches for high and high-high level indications. The first level switch will activate an alarm condition in the DCS when the material rises and reaches the high level setting in the hopper, and the second level switch will activate an alarm condition in the DCS and shut down the system equipment and components on the inlet/feed side of the hopper, when the material rises beyond the high level and reaches the high-high level setting in the hopper. The hopper can be Isolated manually from Coal Blending Belt Feeders C5A and C5B by the Surge Hopper Shutoff Gates "A" and "B" (BS-2-CH-SG-7603 and BS-2-CH-SG-7604) respectively. Each shutoff gate is provided with two (2) position indication switches for gate position displays in the DCS console. Position switches will be actuated when the gate is fully opened and when the gate is fully closed.

Coal Blending Belt Feeder C5A (BS-2-CH-CV-7606) receives coal from the Coal Blending Surge Hopper, transports it and discharges it into Coal Blending Diverter Gate C5A. The speed of the feeder will be adjustable based on the blend of coal required. The feeder is provided with a belt loading section, belt cleaning devices, enclosed screw type belt take-up, fully covered and lined loading skirtboards that extend the full length of the feeder, manually operated material flow adjusting gate, a head chute, safety guards, warning horn and beacon, safety and control devices/switches, drive system and motor, and support structure with support legs to floor. The feeder is accessible on both sides from the floor. Emergency stop switches with connecting pull cord cables are provided on both sides of the feeder. Belt drift switches, including bypass switches, are provided near the head end (one on each side of the carry side belt) and near the tail end (one at each side of the return belt). A low speed switch is provided at the tail pulley. The head chute contains a plugged chute switch that actuates when the chute is plugged. A jog pushbutton is provided to enable the Operator to jog the feeder while attempting to correct alarm conditions and for maintenance operation. The jog pushbutton is only enabled when the Operator initiates "LOCAL" Mode where the equipment is controlled via Manual operations. A warning horn that sounds before energizing/starting the feeder is provided. The horn will not activate during jogging operations. A warning beacon that activates before energizing/starting the feeder is provided. The beacon will not activate during jogging operations.

Coal Blending Belt Feeder C5B (BS-2-CH-CV-7607) receives coal from the Coal Blending Surge Hopper, transports it and discharges it into Coal Blending Diverter Gate C5B. The speed of the feeder will be adjustable based on the blend of coal required. The feeder is provided with a belt loading section, belt cleaning devices, enclosed screw type belt take-up, fully covered and lined loading skirtboards that extend the full length of the feeder, manually operated material flow adjusting gate, a head chute, safety guards, warning horn and beacon, safety and control devices/switches, drive system and motor, and support structure with support legs to floor. The feeder is accessible on both sides from the floor. Emergency stop switches with connecting pull cord cables are provided on both sides of the feeder. Belt drift switches, including bypass switches, are provided near the head end (one on each side of the carry side belt) and near the tail end (one at each side of the return belt). A low speed switch is provided at the tail pulley. The head chute contains a plugged chute switch that actuates when the chute is plugged. A jog pushbutton is provided to enable the Operator to jog the feeder while attempting to correct alarm conditions and for maintenance operation. The jog pushbutton is only enabled when the Operator initiates "LOCAL" Mode where the equipment is controlled via Manual operations. A warning horn

that sounds before energizing/starting the feeder is provided. The horn will not activate during jogging operations. A warning beacon that activates before energizing/starting the feeder is provided. The beacon will not activate during jogging operations.

Coal Blending Diverter Gates C5A & C5B (BS-2-CV-GA-7602 & BS-2-CV-GA-7603) receive coal from Coal Blending Belt Feeders C5A & C5B respectively. Each Diverter Gate will direct the low sulfur coal to either existing Reclaim Conveyor 13N or 13S. The diverter gate will be operated by an electric actuator designed to move the gate through a stream of coal. Each actuator will have two internal position limit switches to control the movement of the diverter gate plate.

4.2 Instrumentation

4.2.1 Belt Drift Switches

Each conveyor and feeder is provided with belt drift switches for monitoring belt tracking through the DCS. The belt drift switches are two position type to indicate a high and/or a high-high position. The conveyor is shutdown on high-high travel. A bypass pushbutton will be provided at each pair of belt drift switches that can be used to deactivate the switches during belt startup after the switches have been activated.

4.2.2 Emergency Stop Switches

Each conveyor and feeder is provided with emergency stop switches for stopping the conveyor/feeder in case of emergencies where an immediate shutdown is required. The switches are bi-directional and are activated by a force applied to a cable attached to each end of the switch. These switches are monitored by the DCS.

4.2.3 Low Speed Switches

Each conveyor, feeder and magnetic separator is provided with a low speed switch for monitoring the equipment's speed and providing an indication if the speed drops below a preset low limit. The switch has a timed setting that de-energizes the motor and shuts the conveyor down if the equipment fails to achieve the set speed within a predetermined time from start-up. These switches are monitored by the DCS.

4.2.4 Plug Chute Switches

Each section of chutework, a plug chute switch is provided to indicate if a chute has become plugged with material. The switch will be a tilt probe type switch. The switch has an adjustable time delay to avoid nuisance trips. These switches are monitored by the DCS. The preceding conveyor and all upstream conveyors are shut down when the plug chute switch is activated.

4.2.5 Position Switches

Each diverter and cut-off gate is provided with position switches to indicate the current position of the gate. These switches are monitored by the DCS.

4.2.6 Surge Hopper Level Switches

The surge hopper is provided with level switches to indicate a high and high-high condition. These switches are monitored by the DCS.

4.3 Alarms

4.3.1 Belt Drift Switches

The belt drift switch actuating arm monitors position of belt and alarms high level through the DCS. Shuts down the conveyor on high-high travel through the DCS.

4.3.2 Emergency Stop Switches

When activated, the emergency stop switches indicate an immediate shutdown is required due to an emergency situation. The equipment is shutdown by a hardwired connection to the starter and is also alarmed through the DCS.

4.3.3 Low Speed Switches

The proximity type transmitter monitors the belt speed and alarms at low level through the DCS.

4.3.4 Plug Chute Switches

The tilt probe indicator monitors the material flow through chutework. Switch alarms when probe is actuated/tilted past a set angle for a preset time duration through the DCS.

4.3.5 Surge Hopper Level Switches

The level transmitters monitor hopper level and alarm at high levels through the DCS.

4.4 Start-up

4.4.1 Coal Unloading & Stacking

Initiate Coal Unloading System automatic start command to begin unloading Coal and the sequence outlined below will be executed by the DCS. If a manual start is preferred/required, the Operator should switch the system setting to "Manual Start" in the DCS, then execute the following equipment start sequence (which is the same sequence as the automatic system start) using the HMI console:

1. Set Station 12 Diverter Gate for Flow Path (Later) (Position (Later)).
2. Confirm Station 12 Diverter Gate is set for Flow Path (Later) through the DCS.
3. Lower Coal Telescoping Chute C2 manually from the DCS HMI screen until the product sensing probes are actuated or until the chute has bottomed out.
4. Initiate start command for the Dust Suppression System.
5. Confirm the Dust Suppression System is operating satisfactorily by monitoring

it through the DCS.

6. Initiate start command for Coal Stackout Conveyor C2.
7. Confirm that Coal Stackout Conveyor C2 is operating satisfactorily by monitoring it through the DCS.
8. Confirm that Coal Stackout Belt Scale C2 is operating satisfactorily by monitoring it through the DCS.
9. Initiate start command for Coal Transfer Conveyor C1.
10. Confirm that Coal Transfer Conveyor C1 is operating satisfactorily by monitoring it through the DCS.
11. Initiate start command for the existing coal unloading equipment based on the plant's current operational sequence.
12. Confirm that the existing coal unloading equipment is operating satisfactorily by monitoring it through the DCS.

4.4.2 Coal Reclaiming & Blending (from Train A)

Verify that the Coal Blending Surge Hopper is able to receive coal by confirming the hopper level switches are not activated. Initiate Coal Reclaim System automatic start command to begin unloading Coal and the sequence outlined below will be executed by the DCS. If a manual start is preferred/required, the Operator should switch the system setting to "Manual Start" in the DCS, then execute the following equipment start sequence (which is the same sequence as the automatic system start) using the HMI console:

1. Set Coal Blending Diverter Gate A or B for Flow Path (Later) (Position (Later)) to feed either existing Coal Reclaim Conveyor 13N or 13S.
2. Confirm Coal Blending Diverter Gate A or B is set for Flow Path (Later) through the DCS.
3. Verify Coal Surge Hopper Shutoff Gate C5A (or C5B) is in "Open" position.
4. Verify Coal Pile Discharger A Shutoff Gate is in "Open" position.
5. Initiate start command for the Dust Suppression System.
6. Confirm the Dust Suppression System is operating satisfactorily by monitoring it through the DCS.
7. Initiate start command for Coal Blending Belt Feeder C5A (or C5B).
8. Confirm that Coal Blending Belt Feeder C5A (or C5B) is operating satisfactorily by monitoring it through the DCS.
9. Initiate start command for Coal Magnetic Separator C4.
10. Confirm that Coal Magnetic Separator C4 is operating satisfactorily by monitoring it through the DCS.
11. Confirm that Coal Reclaim Belt Scale C4 is operating satisfactorily by monitoring it through the DCS.
12. Initiate start command for Coal Reclaim Conveyor C4.

13. Confirm that Coal Reclaim Conveyor C4 is operating satisfactorily by monitoring it through the DCS.
14. Initiate start command for Coal Reclaim Belt Feeder C3A.
15. Confirm that Coal Reclaim Belt Feeder C3A is operating satisfactorily by monitoring it through the DCS.
16. Initiate start command for Coal Pile Discharger A.
17. Confirm that the Coal Pile Discharger A is operating satisfactorily by monitoring it through the DCS.

4.4.3 Coal Reclaiming & Blending (from Train B)

Verify that the Coal Blending Surge Hopper is able to receive coal by confirming the hopper level switches are not activated. Initiate Coal Reclaim System automatic start command to begin unloading Coal and the sequence outlined below will be executed by the DCS. If a manual start is preferred/required, the Operator should switch the system setting to "Manual Start" in the DCS, then execute the following equipment start sequence (which is the same sequence as the automatic system start) using the HMI console:

1. Set Coal Blending Diverter Gate A or B for Flow Path (Later) (Position (Later)) to feed either existing Coal Reclaim Conveyor 13N or 13S.
2. Confirm Coal Blending Diverter Gate A or B is set for Flow Path (Later) through the DCS.
3. Verify Coal Surge Hopper Shutoff Gate C5A (or C5B) is in "Open" position.
4. Verify Coal Pile Discharger B Shutoff Gate is in "Open" position.
5. Initiate start command for the Dust Suppression System.
6. Confirm the Dust Suppression System is operating satisfactorily by monitoring it through the DCS.
7. Initiate start command for Coal Blending Belt Feeder C5A (or C5B).
8. Confirm that Coal Blending Belt Feeder C5A (or C5B) is operating satisfactorily by monitoring it through the DCS.
9. Initiate start command for Coal Magnetic Separator C4.
10. Confirm that Coal Magnetic Separator C4 is operating satisfactorily by monitoring it through the DCS.
11. Confirm that Coal Reclaim Belt Scale C4 is operating satisfactorily by monitoring it through the DCS.
12. Initiate start command for Coal Reclaim Conveyor C4.
13. Confirm that Coal Reclaim Conveyor C4 is operating satisfactorily by monitoring it through the DCS.
14. Initiate start command for Coal Reclaim Belt Feeder C3B.
15. Confirm that Coal Reclaim Belt Feeder C3B is operating satisfactorily by monitoring it through the DCS.
16. Initiate start command for Frozen Coal Crusher.

17. Confirm that Frozen Coal Crusher is operating satisfactorily by monitoring it through the DCS
18. Initiate start command for Coal Pile Discharger B.
19. Confirm that the Coal Pile Discharger B is operating satisfactorily by monitoring it through the DCS.

4.5 Normal Operation

During normal operation the Coal Blending System operates automatically. The system can be placed in service from the plant startup sequencer. The system must be monitored continuously and at all times to ensure safe and satisfactory operation.

4.6 Shutdown

The Coal Blending System, sub-systems and components will normally be shutdown and the conveyor system purged as follows:

4.6.1 Unloading and Stacking Coal

Initiate normal Coal Unloading System stop command and the following sequence will be executed by the DCS:

1. Initiate stop command to existing coal unloading equipment based on the plant's current operational sequence.
2. Verify the existing coal unloading equipment stops by monitoring through DCS.
3. Initiate stop command to Coal Transfer Conveyor C1 once material on the existing coal unloading equipment is purged.
4. Verify Coal Transfer Conveyor C1 stops by monitoring through DCS.
5. Initiate stop command to Coal Stackout Conveyor C2.
6. Verify Coal Stackout Conveyor C2 stops by monitoring through DCS.
7. Initiate stop command to the Coal Dust Suppression System.
8. Verify the Coal Dust Suppression System stops by monitoring through DCS.
9. Raise Coal Telescoping Chute C2 until it reaches full up position.

4.6.2 Reclaiming and Blending Coal (from Train A)

Initiate normal Coal Reclaiming System stop command and the following sequence will be executed by the DCS:

1. Initiate stop command to Coal Pile Discharger A.
2. Verify Coal Pile Discharger A stops by monitoring through DCS.
3. Initiate stop command to Coal Reclaim Belt Feeder C3A.
4. Verify Coal Reclaim Belt Feeder C3A stops by monitoring through DCS.
5. Initiate stop command to Coal Reclaim Conveyor C4.

6. Verify Coal Reclaim Conveyor C4 stops by monitoring through DCS.
7. Initiate stop command to Coal Magnetic Separator C4.
8. Verify Coal Magnetic Separator C4 stops by monitoring through DCS.
9. Initiate stop command to Coal Blending Belt Feeder C5A or C5B (whichever belt feeder is being used for blending at the time).
10. Verify Coal Blending Belt Feeder C5A or C5B stops by monitoring through DCS.
11. Initiate stop command to existing Coal Reclaim System based on the plant's current operational sequence.
12. Verify existing Coal Reclaim System stops by monitoring through DCS.

4.6.3 Reclaiming and Blending Coal (from Train B)

Initiate normal Coal Reclaiming System stop command and the following sequence will be executed by the DCS:

1. Initiate stop command to Coal Pile Discharger B.
2. Verify Coal Pile Discharger B stops by monitoring through DCS.
3. Initiate stop command to Frozen Coal Crusher.
4. Verify Frozen Coal Crusher stops by monitoring through DCS.
5. Initiate stop command to Coal Reclaim Belt Feeder C3B.
6. Verify Coal Reclaim Belt Feeder C3B stops by monitoring through DCS.
7. Initiate stop command to Coal Reclaim Conveyor C4.
8. Verify Coal Reclaim Conveyor C4 stops by monitoring through DCS.
9. Initiate stop command to Coal Magnetic Separator C4.
10. Verify Coal Magnetic Separator C4 stops by monitoring through DCS.
11. Initiate stop command to Coal Blending Belt Feeder C5A or C5B (whichever belt feeder is being used for blending at the time).
12. Verify Coal Blending Belt Feeder C5A or C5B stops by monitoring through DCS.
13. Initiate stop command to existing Coal Reclaim System based on the plant's current operational sequence.
14. Verify existing Coal Reclaim System stops by monitoring through DCS.

4.7 Special or Infrequent Operation

Each piece of equipment included in the coal stackout system and reclaim/blending system is interlocked via programming within the DCS. The equipment is sequentially interlocked beginning with the equipment furthest downstream and moving upstream for each system. Each system is interlocked for starting and stopping of the system. However, in the case of emergency stops, the following applies:

The conveyors and feeders can be tripped manually by activating the emergency stop switches, and automatically by activating the belt drift switches, low speed switches, and/or the plugged chute switches. If a manual or automatic stop occurs for a specific piece of equipment as described, all upstream equipment will immediately shut down to prevent the material from plugging or overfilling the transfer points and causing spillage. The equipment downstream of the piece of equipment that is stopped will continue to run to purge the system.

Coal Transfer Conveyor C1, Coal Stackout Conveyor C2 can be tripped automatically by activating the Coal Telescoping Chute high-high level switches.

Coal Pile Dischargers A & B, Coal Reclaim Belt Feeders C3A and C3B, Coal Reclaim Conveyor C4, Coal Magnetic Separator C4 can be tripped automatically by activating the Coal Surge Bin high-high level switch.

5.0 DESCRIPTION OF PROVISIONS FOR TESTING

There are no provisions required.

6.0 DESCRIPTION OF PROVISIONS FOR MAINTENANCE

Refer to the system supplier's Operation & Maintenance Manual.

7.0 DESCRIPTION OF HAZARDOUS AREAS AND MATERIALS

Enclosed areas where coal dust or methane is present are classified as hazardous areas as defined by NEC. Outdoor areas are not classified as hazardous areas.

7.1 Precautions

Combustible and flammable materials, fires, sparks and other heat sources should be kept away from any operating areas. Methane detectors should be installed in any below grade areas.

8.0 DESCRIPTION OF HOUSING/FOUNDATION REQUIREMENTS

A portion of the Coal Blending System is housed indoors. The remaining portion is located outdoors with $\frac{3}{4}$ fixed hood covers provided to enclose/protect the belt. Foundations are designed and supplied as required to support the coal blending equipment.

9.0 REFERENCES

9.1 Instrument and Control Drawings and Diagrams

Drawing Number

Drawing Title

9.2 Electrical Drawings and Diagrams

Drawing Number

Drawing Title

9.3 Flow Diagrams**Drawing Number**

2-517023

Drawing Title

Flow Diagram – Coal Blending

9.4 Valve List**Document Number****Document Title****9.5 Instrument List****Document Number****Document Title****9.6 Interfacing Connectors****Drawing Number****Drawing Title****9.7 Others****Document Number****Document Title****9.8 Equipment List****Equipment Description****Equipment Tag Number**

Station 12 Coal Diverter Gate

Tag Number BS-2-CH-GA-7601.

Coal Transfer Conveyor C1

Tag Number BS-2-CH-CV-7601.

Coal Stackout Belt Scale C1

Tag Number BS-2-CH-MS-7601.

Coal Stackout Conveyor C2

Tag Number BS-2-CH-CV-7602.

Coal Telescoping Chute C2

Tag Number BS-2-CH-QQ-7601.

Coal Pile Discharger "A"

Tag Number BS-2-CH-VB-7601.

Coal Reclaim Shutoff Gate "A"

Tag Number BS-2-CH-SG-7601.

Coal Reclaim Belt Feeder C3A

Tag Number BS-2-CH-CV-7603.

Coal Pile Discharger "B"

Tag Number BS-2-CH-VB-7602.

Coal Reclaim Shutoff Gate "B"

Tag Number BS-2-CH-SG-7602.

Frozen Coal Crusher	Tag Number BS-2-CH-CR-7601.
Coal Reclaim Belt Feeder C3B	Tag Number BS-2-CH-CV-7604.
Coal Reclaim Conveyor C4	Tag Number BS-2-CH-CV-7605.
Coal Reclaim Belt Scale C4	Tag Number BS-2-CH-MS-7602.
Coal Magnetic Separator C4	Tag Number BS-2-CH-QQ-7602.
Coal Blending Surge Hopper	Tag Number BS-2-CH-QQ-7604.
Surge Hopper Shut-off Gate A	Tag Number BS-2-CH-SG-7601.
Surge Hopper Shut-off Gate B	Tag Number BS-2-CH-SG-7602.
Coal Blending Belt Feeder C5A	Tag Number BS-2-CH-CV-7606.
Coal Blending Belt Feeder C5B	Tag Number BS-2-CH-CV-7607.
Coal Blending Diverter Gate C5A	Tag Number BS-2-CH-GA-7602.
Coal Blending Diverter Gate C5B	Tag Number BS-2-CH-GA-7603.
Dust Suppression System	Tag Number BS-2-CH-QQ-7603.