Perkins, Michael

47-24409-01
03-23933/2010001

From: Joe Benedict [JBenedict@PatriotCoal.com]
Sent: Wednesday, March 24, 2010 2:51 PM
To: Wilson, Scott
Cc: Mark E. Akers; Erman Moore; Joe Wills; Shane Spencer
Subject: Patriot Coal Wells Preparation NRC Inspection
Attachments: Coalscan 3500 Actuator Letter Rev 1.pdf; Kanawha scales & Dosimetry Evaluation.pdf

Scott ..... Attached is the additional information your requested with regards to your inspection on Mar 18 2010. If you have any questions please give me a call at 304 -247-8273.

Kanawha
Scales & Systems

P.O. Box 569, Rock Branch Industrial Park, Poca, WV 25159 Phone: 304.755.8321 Fax: 304.755.3327 www.kanawhascales.com

March 22, 2010

Patriot Coal Company – Wells Preparation Plant
Wharton, WV 25208
Attention: Mr. Joe Benedict

Ref: CoalScan 3500 Coal Analyzer, Clean Coal Conveyor - Actuator Arm

Dear Mr. Benedict,

Per your request, we have reviewed a situation in which Kanawha Scales & Systems had locked the moveable actuator arm of the CoalScan model 3500 Ash Analyzer, which is located on your Clean Coal conveyor, so that the analyzer position is fixed in the "overbelt" normal operating position.

As a clarification, the CoalScan 3500 is a C-frame unit that straddles a conveyor, passing radioisotope signals (gamma rays from Americium and Cesium) through both the conveyor belt and the carried coal. It has a capability to rotate 90 degrees from this normal operating position to a position that is parallel with, but removed from, the conveyor belt. An electric actuator is utilized in its design to carry out this rotation procedure. The purpose of this capability is to provide a convenience to the user, so that periodic standardizations (empty belt or coal sample readings) can take place to assist in routine calibration procedures.

On 9-25-08, at the request of Patriot, Kanawha Scales & Systems came to your site to perform a service on this analyzer. Due to the failure of the actuator itself, the CoalScan 3500 actuator arm was locked in the "overbelt" normal operating position. The actuator device that performs this rotation is no longer available from the manufacturer. As this unit is now an older generation analyzer, it has become more and more difficult to locate service parts.

Eliminating the ability to rotate the C-frame away from the coal stream in no way affects the safety or integrity of the unit. The exposure level to personnel is actually lower when the unit is fixed over the belt. Additionally, the independent operation of the shutter is not affected by the position of the C-frame, which in turn poses no additional threat of exposure to personnel. The Wells Plant CoalScan 3500 source shutter assembly was in proper working condition when the C-frame was locked in the "overbelt" position. As a reference, the CoalScan 2500 analyzer (successor to the 3500) has a C-frame that is permanently positioned over the belt. This unit utilizes the same sources, source holder, shutter mechanism and detector assembly as the CoalScan 3500.

Attached are the 3500 shutter test documentation and the Coalscan 3500 Sealed Source & Device Registry documentation.

In conclusion, the operation of the actuator in no way compromises the integrity of the source holder or shutter mechanism. Therefore we see no infraction with any NRC regulations.

Best Regards,

Mark Bradbury
Systems Support Manager
Kanawha Scales & Systems

CC:
Raj Patel – Analyzer Product Manager
Jerry Buhr - Radiation Safety Officer

Service Report

Kanawha Scales & Systems

Birmingham, AL	(205) 664-2077	Dayton, OH	(937) 836-5440	St Marys, PA	(814) 781-2048
Pikeville, KY	(606) 639-4877	Flint, MI	(810) 687-1320	Fairmont, WV	(304) 363-2365
Cincinnati, OH	(513) 576-0700	Detroit, MI	(734) 947-4030	Parkersburg, WV	(304) 464-5300
Columbus, OH	(614) 501-8600	Pittsburgh, PA	(724) 258-6850	Poca, WV	(304) 755-8321

SERVICING LOCATION Poca

CUST. # 10EASASS

JOB NO: 01-2-015172-1

DATE: 9/25/08

CUSTOMER NAME EASTERN ASSOCIATED COAL/WELLS PC # 846928-0783-1925 SCHEDULED DATE 09/25/2008

CALLER NAME CHARLES * CONTACT NAME CALLER PHONE # 304-247-8264 CONTACT PHONE#

ADDRESS RT 85/BOONE COUNTY CITY & STATE WHARTON, WV ZIP 25208

SERVICE REQUESTED REPAIR COAL SCAN, ARM IS LOCKED OVER BELT

	MANUFACTURER	MODEL	SERIAL NUMBER	KSS DEVICE #	CUSTOMER EQUIPMENT ID
1	COALSCAN	3500	80186	2824	COAL SCAN 3500
	CAPACITY/DIVISION/UNITS	TEST METHOD	DEVICE LOCATION		
			COAL SCAN 3500		
	MANUFACTURER	MODEL	SERIAL NUMBER	KSS DEVICE #	CUSTOMER EQUIPMENT ID
2					
	CAPACITY/DIVISION/UNITS	TEST METHOD	DEVICE LOCATION		

SERVICE PERFORMED/RECOMMENDATIONS:

Made repairs to the COALSCAN 3500 ash analyzer. Disconnected the swing arm actuator and tested system. All appears to be operating properly, Checked output to control room also.

DESCRIPTION OF PARTS USED

QUANTITY	DESCRIPTION P/N	QUANTITY	DESCRIPTION P/N
	No parts		Weights & Measures Compliance Fee:

INTERNAL USE

DAILY TIME SUMMARY		REG HOURS	OT HOURS	DT HOURS			EXPENSES
TRAVEL TO JOB	AM 11:00 / PM 12:40				# MEN 2	FINAL MILEAGE —	ZONE MILEAGE
ON SITE	AM 12:40 / PM 4:00				TRUCK # G254	START MILEAGE —	JOB COMPLETE YES NO
TRAVEL FROM JOB	AM 4:00 / PM 5:30				TRUCK #	TOTAL MILEAGE 120	INSPECTOR

5.5 1

REGISTRATION #1 Benny Browning TECH #1

REGISTRATION #2 Chuck Andrews TECH #2

CUSTOMER PRINTED NAME Dayman Harvey CUSTOMER ACCEPTANCE

9-25-08 DATE

FORM 710 (REV DATE 10/03)

ORIGINAL

Table J.1 Dosimetry Evaluation BEAM OFF

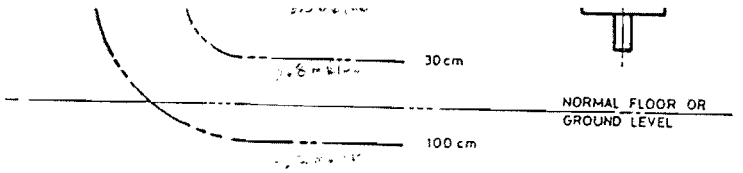
Dosimetry Evaluation for Sealed Rep. **Model** 3.5ci **Gauge** 80186

A.	Time needed to perform the entire routine maintenance procedure.	30 minutes/60	.5 hour
B.	Expected whole body dose rate received by the individual, determined using exposure rates measured on contact with the gauge while the sealed source is in the shielded position.	1.5 MAX mrem/hr	
C.	Time the hands were exposed to the shielded source.	1.5 minutes/60	.25 hour
D.	Expected extremity dose rate received by the individual, determined using measured or manufacturer-provided data for the shielded source at the typical distance from the hands to the shielded source.	1.5 MAX mrem/hr	

Formula: (.5 # hours in Row A) x (1.5 mrem/hr in Row B) = (.75 mrem per routine procedure) x (4 # of routine maintenance procedures each year) = 3.0 mrem *Whole Body Dose

Formula: (.25 # hours in Row C) x (1.5 mrem/hr in Row D) = (.38 mrem per routine procedure) x (4 # of routine maintenance procedures each year) = 1.52 mrem **Extremity Dose

* Expected Whole Body Doses ***less than*** 500 mrem requires no dosimetry
** Expected Extremity Doses ***less than*** 5000 mrem requires no dosimetry



Source Housing : Vertical Plane Through Center of Housing

Instrument [illegible] Last Calibrated 2/04/04