

## Katanic, Janine

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**From:** Wales, Donald <Donald.Wales@pacificorp.com>  
**Sent:** Friday, January 10, 2020 4:38 PM  
**To:** Katanic, Janine  
**Cc:** Hargis, Norman; Palmer, Scott  
**Subject:** [External\_Sender] Bridger Coal Company September 2019 Inspection  
**Attachments:** Bridger Coal Company Inspection Response.pdf; Leak Test Oct 7-2019.pdf; Service Report Oct 7-2019.pdf

Janine,

Attached is Bridger Coal's summary as follow up to the September 18, 2019 inspection. During the inspection there were two items in need of correction. The summary indicates the steps and timeline taken to resolve the issues. Bridger Coal worked very diligently to correct the identified deficiencies in a timely manner. If you have any questions please feel free to contact either myself or Norm Hargis at 307-922-7664. Bridger Coal appreciates your consideration in this matter.

Thank You,  
**Don Wales**  
**Mine Engineer**  
Bridger Coal Company  
P.O. Box 68  
Point of Rocks, WY 82942  
(307) 922-7665

## Bridger Coal Company Responses

### Nuclear Regulatory Commission (NRC) Inspection 9/18/2019

During the inspection of records the Inspector noted two (2) items in need of attention. The first item was a training issue.

#### Training

It was noted that in Bridger Coal's Material License 49-21022-02, Attachment D, Item No. 8 it states "Refresher training for the same group of employees shall be provided at least once every two years". This group of employees includes Conveyor and Field Maintenance personnel. The last noted or documented training was completed on August 13, 2015. The lack of refresher training is a violation of the compliance standards as indicated in the Materials License.

On 9/19/2019, Bridger Coal began scheduling training for all personnel who could be involved in daily activities or maintenance activities in proximity to the nuclear bin gauges. To insure this training was comprehensive, all Conveyor and Field Maintenance (including field mechanics, welders and electricians) personnel at both the surface and underground mines were scheduled for training. The first class was held on 9/21/2019 with subsequent classes completed on 9/23, 9/24 and 9/25/2019. A total of 50 employees from the surface mine and 39 employees from the underground mine received training. See the attached class rosters.

Steps being taken to prevent a reoccurrence are:

1. The company has a corporate Compliance Management System which tracks all significant activities to insure compliance with any applicable regulations. This training has been added to this system which provides email notifications prior to the input due dates. Radiation Safety Training has been input to be completed every 2 years beginning in September 2021. Notifications by email will begin in August 2021.
2. Radiation Safety Training has been added to the basic new hire training for all personnel in the Conveyor or Field Maintenance classification at Bridger Coal. This will insure all new employees receive the necessary safety training. If any employee has a question pertaining to this training they have been directed to contact the current designated Radiation Safety Officer, Don Wales.

The second item of concern was the time interval for completing leak tests on the two (2) ScanTech Coal Scan Ash Analyzers.

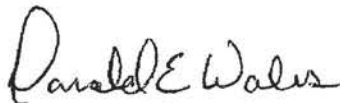
#### Leak Test

During the inspection on September 18, 2019, while reviewing the service records it was noted that the previous leak test was completed on February 21, 2019. Under the General License Regulations, leak tests are to be completed at an interval not to exceed six (6) months.

The leak test should have been completed on or before August 21, 2019. At the time of this NRC inspection, Bridger Coal indicated the ScanTech technician had contacted the Project Manager for the analyzers on August 30, 2019 about setting a date for the next service visit which included completing the leak tests. The Project Manager was not aware of the 6 month interval and scheduled the service visit for October 7, 2019. The ScanTech technician was on site on October 7, 2019 and completed the leak tests. See the attached Leak Test results and Service Report.

Steps being taken to prevent a reoccurrence are:

1. A meeting was held with the ScanTech technician when he arrived on site, October 7, 2019. Bridger Coal reviewed the contract with ScanTech with the technician and stated that the delay in completing the leak test was unacceptable and had put Bridger Coal in a very bad situation. The contract specifies that ScanTech will ensure compliance in all the service and maintenance activities pertaining to the ash analyzers. ScanTech will ensure they adhere to the 6 month interval for subsequent leak tests. This item has also been added to the Compliance Management System which will provide email alerts ahead of the due dates. (See Meeting Notes in Service Report)
2. The Inspector noted that neither the ScanTech nor the Project Manager communicated with the Radiation Safety Officer prior to the February 21, 2019 site visit or during the previous site visits. In the future ScanTech will contact both the Project Manager and the Radiation Safety Officer when the technician arrives on site for a service visit. Any safety concerns or other concerns will be communicated to the Project Manager and Radiation Safety Officer immediately and a brief of the service visit will be given to the Project Manager and Radiation Safety Officer before leaving the mine site.

  
Donald E. Walen  
Radiation Safety Officer

**Scan Technologies, Inc.**

P.O. Box 519  
Grayson, GA 30017  
770-338-2868

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November 5, 2019

Mr. Don Wales  
Bridger Coal Co.  
Point of Rocks  
PO Box 68  
Point of Rocks, WY 82942-0068

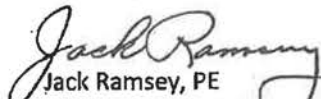
RE: Leak Test Results

Dear Mr. Wales,

Attached are the results of your leak tests and shutter tests performed by Alex Bartle-Smith on October 7, 2019. These tests were conducted as part of a 6-month device test.

If you have any questions or concerns, please feel free to contact me at any time.

Sincerely,

  
Jack Ramsey, PE  
Radiation Safety Officer

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**SCANTECH**  
Process control specialists

Scantech International Pty Ltd.  
143 Mooringe Ave  
Camden Park, South Australia, 5038  
Australia



**Scan Technologies, Inc.**

P.O. Box 519  
Grayson, GA 30017  
770-338-2868

**Leak Test & Shutter Test  
Certificate**

Licensee: Bridger Coal Co.

Point of Rocks

1088 Nine Mile Road

Point of Rocks WY 82942-0068

The following device tests were performed on October 7, 2019 by Alex Bartle-Smith under Scan Technologies, Inc. License GA 1299-1. These tests were completed in accordance with NRC 10CFR §31.5(c)(2).

Device		Source			
Model	Serial#	Isotope	Activity	Model	Serial#
CS2100	4245	Cs-137		CDC.800	7311CM
		Am-241		AMC.17	3467CW
CS2100	4345	Cs-137		CDC.800	7319CM
		Am-241		AMC.17	3391AR

**Test Results**

A visual inspection showed no significant damage or other non-compliance of the device

Labels are legible and accurate

Inspection of the shutter and shutter indicator revealed no malfunction

No removable contamination was found in excess of .005  $\mu$ Ci

Your next Leak Test and Shutter Test are due in April, 2020.

Signature: Jack Ramsey

Jack Ramsey

Radiation Safety Officer

Date: November 5, 2019

**SCANTECH**  
Process control specialists

Scantech International Pty Ltd.  
143 Mooringe Ave  
Camden Park, South Australia, 5038  
Australia



## Coalscan DUET PSA Service Visit Report

### Bridger Coal - ROM Analyser

**Application Material:** Coal

**Process Location:** ROM

**Geographic Location:** Point of Rocks, WY

**Service Visit Start Date:** 7 October 2019

**Service Visit End Date:** 7 October 2019

**Service Engineer:** Alex Bartle-Smith

**Analyser Type:** Coalscan 2100 Mk2

**Analyser Number:** C21- 058

**Serial Number:** 4345



# Coalscan DUET PSA Service Visit Report

## Bridger Coal - ROM Analyser

### Service Inspection Summary:

The source housing/shutter mechanism was replaced at this visit, and now moves freely and easily.  
A source wipe test was conducted on 7 October 2019. Results will be forwarded when available.

### Opening Meeting

Topics for discussion:		Discussed?
	Calibration	Yes
	Belt Loading	No
	Radiation Safety / Concerns	Yes
	Maintenance / Spare Parts	Yes
	Training Requirements	Yes
	Other	Yes

### Meeting Report

Bridger Coal were recently audited by the NRC, with a few issues noted:

Leak test was out of date. Leak tests are required every six months, and the last wipe was completed in February 2019. A leak test will be conducted at this visit. Scantech to ensure all future service visits are scheduled before the previous leak test expires.

The source shutter mechanism on the ROM analyser was frozen, and had been reported as such at the last several service visits. A replacement was recently ordered, and is to be installed at this service visit.

Radiation training was out of date. Scantech to discuss radiation safety at each service visit, and make note of that in the report.

In addition, the following concern was noted:

A calibration review may be required. A new analyser has been installed downstream of the overland analyser, to which the overland analyser can be calibrated. The ROM analyser is a bit more difficult to collect samples for.



# Coalscan DUET PSA Service Visit Report

## Bridger Coal - ROM Analyser

### Known Fault Rectification

		Status	Notes		
1	Are there any known faults with the analyser?	Yes	Frozen source shutter		
	Have all faults been resolved?	Yes			
2	Were any parts used to resolve the fault(s)?	Yes			
	<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>	<b>Serial No.</b>	<b>Taken From:</b>
		Source housing assembly	1		Customer Stock
3	Confirm that above list has been sent to the Customer Service Manager for Spares.	<input type="checkbox"/>			
	4	Were any parts removed from the analyser?	Yes		
	<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>	<b>Serial No.</b>	<b>Removed To:</b>
		Source housing assembly	1		Disposed

### Plant Status

		Status	Notes			
1	Is the conveyor belt in good condition?	Yes				
2	Belt feed rate.		Min	Max	Average	Range
	What is the typical InCs?		-2.47	-0.50	-1.22	1.97
3	Is the material:					
	Segregated by size across belt?	No				
	Profile symmetrical across belt?	Yes				
4	Material quality:					
	Has the quality changed recently?	No				
	If yes, is recalibration required?					

### External Analyser Inspection

		Status	Notes
1	Is the analyser clean?	Yes	
2	Is the paintwork in good condition?	No	
3	Is the analyser protected from:		
	Direct sunlight?	Yes	
	Machinery impact in the area?	Yes	
4	Is the local atmosphere damp / corrosive?	Yes	Damp
6	Are all bolts secure and in good condition?	No	Bolts rusted
7	Has the belt been striking the detector arm?	No	
	Estimated belt clearance (mm):	100	



## Bridger Coal - ROM Analyser

Identify if the following components are installed here.	USB Extender	<input checked="" type="checkbox"/>	Type:	Non-approved
	Panel Meters	<input type="checkbox"/>		
	Gateway Module	<input type="checkbox"/>		
	Other:			

		Status	Notes			
1	Are all components receiving power?	Yes				
		Units	Value		Tolerance	Pass?
			Correct	Actual		
2	Voltage & Power Supply Checks					
	Mains Power	VAC	120.00	117.60	+12, -7.2	Pass
	24VDC Power Supply	VDC	24.00	24.58	1.20	Pass
	ACM Power Supply	VDC	12.00	12.28	+0.6/-0.36	Pass
	USB Extender Power Supply	VDC	N/A			

		Status	Notes
1	Are all wiring terminations secure?	Yes	
2	Are all components securely mounted?	No	
3	Is all wiring inside ducts; duct covers in place?	Yes	
4	Are all live terminals covered?	No	
5	Is the door mechanically OK?	Yes	
6	Is the door kept locked?	No	
7	Is the door sealing properly?	Yes	
8	Is the cabinet free of foreign material?	No	Excess wiring
9	Is there any non-standard hardware installed?	Yes	USB extender
10	Have there been any setup changes?	No	

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# Coalscan DUET PSA Service Visit Report

## Source Shutter Inspection

	Status	Notes
1 Is the source shutter mechanically OK?	Yes	
2 Can the source shutter be locked off?	Yes	
3 Are dose rates reduced with shutter off?	Yes	

## Analyser Control Module (ACM) Inspection

	Status	Notes
1 What is the ACM's serial number?	1205-120	
2 What is the ACM's model number?		Model Number: MPC-445-H
3 Were the obsolete files cleaned up?	Yes	
4 Does this computer have a Solid State Drive?	Yes	
5 Is there a minimum of 10% disk space?	Yes	Total (GB): 29.80 Free (GB): 10.00
6 Were Standard Result Files, PAR File & CsSchedule logs backed up?	Yes	
7 Have there been any communication faults between the ACM & SuperSCAN / plant PLC?	No	
8 What version of CsSchedule is running?		Time adjusted manually
9 Is ACM clock syncing to a plant PC/SuperSCAN?	No	
10 Is there a spare ACM kept on site?	No	If the current PC fails, the analyser won't work.
11 What CsSchedule device is configured?	CS2800	
12 Network configuration setup.		IP Address: 172.30.45.69
		Subnet Mask: 255.255.254.0
		Default Gateway: -
		Preferred DNS Server: -

## Inputs / Outputs

	In Use?	Description	4mA	20mA	Status
1 Digital Inputs.	DI0	Yes	Conveyor Running		Not OK
	DI1	Yes	Material Available		OK
	DI2 - 5	No			
	DI6 - 9	No			
2 Digital Outputs.	DO0	No			
	DO1	No			
	DO2	No			
	DO3	No			
	DO4	No			
3 Analogue Outputs.	AO0	No			
	AO1	No			
	AO2	No			
	AO3	No			
	AO4	No			
	AO5	No			
	AO6	No			
	AO7	No			





## Coalscan DUET PSA Service Visit Report

## Bridger Coal - ROM Analyser

### Detector Housing

	Status	Notes
1 Is the thermostat working and set to 40°C?	Yes	
2 Is the housing free from material ingress?	Yes	
3 Has the housing received any physical impact?	Yes	Significant impact in past
4 Is the detector window OK?	Yes	
5 Check the detector heater resistance ( $\Omega$ ).	18.3	

### Spare ACM Setup

			Status	Notes
			<input type="checkbox"/>	
			<input type="checkbox"/>	
			<input type="checkbox"/>	
			<input type="checkbox"/>	
			<input type="checkbox"/>	

### Spectral Checks

		Status	Notes
1	Standardisation		
	Average no. of standards / month.	3000	Taken with stopped belt
	Resolution of the Caesium Peak.		7.77%
	CalcTime	07/10 12:12	
	PeriodCount	20953	
	Std1Result	10.9433	
	Std2Result	8.5575	
2	Detector Lock-On Values:		
	Gain	0.9010	
	Voltage	470.0000	
3	Detector start values updated?		Yes
4	Was the water test completed this visit?		No

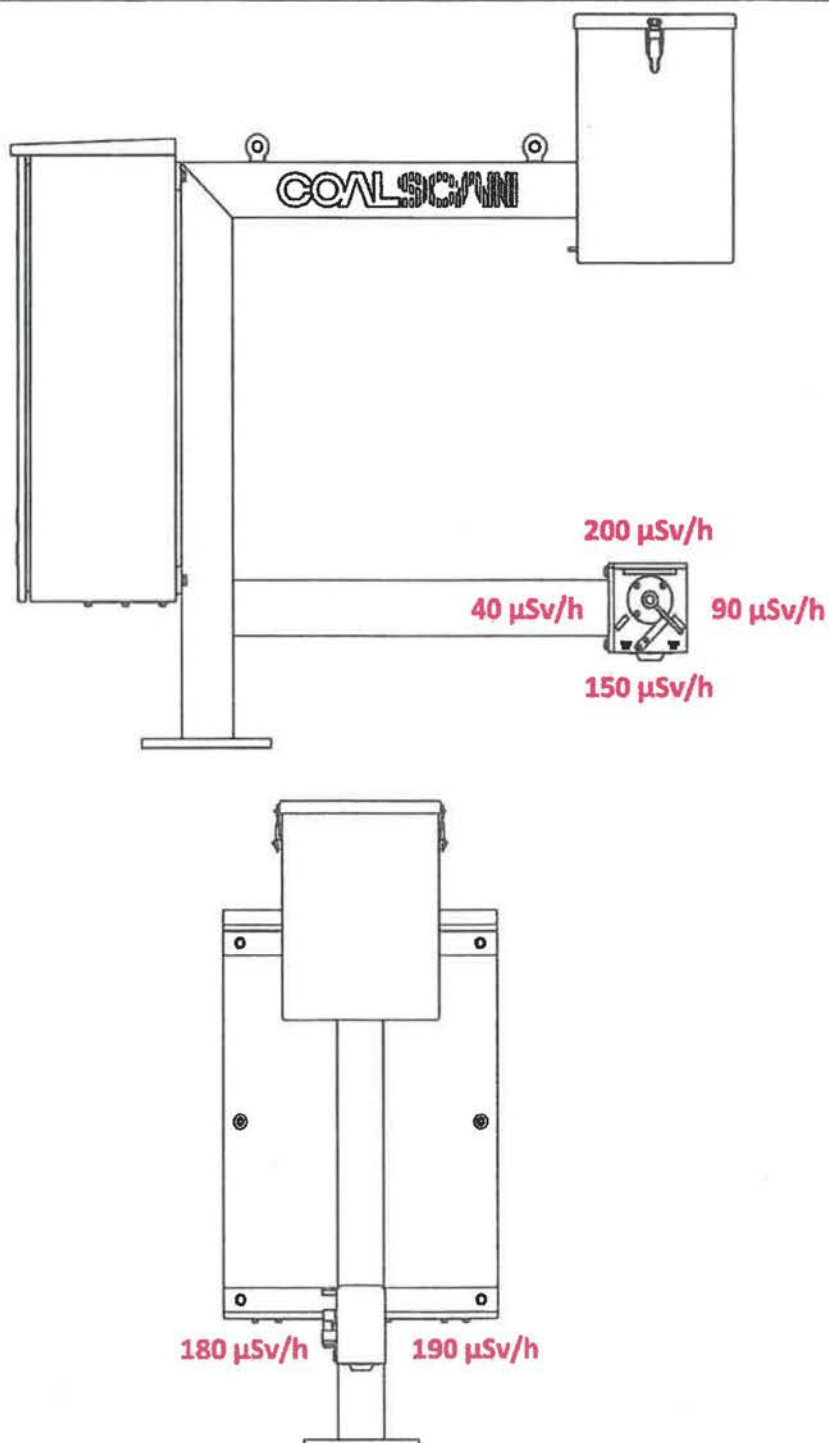






**Customer Name:****Bridger Coal - ROM Analyser**

Analyser & Site Details		Gamma Meter Details	
Location:	Point of Rocks, WY	Manufacturer:	Ludlum
Application:	Coal	Model:	9
Analyser Number:	C21-058	Serial Number:	226091
Source Position:		Calibration Date:	1/08/2019
Service Engineer:	Alex Bartle-Smith	Meter Warm-up time	Analogue Meter = 2 minutes
Date of Survey:	7-Oct		Digital Meter = 20 seconds



# Coalscan DUET PSA Service Visit Report

## Bridger Coal - ROM Analyser

C21-058

### Summary, Issues & Recommendations

#### **Source Housing Replacement**

It has been noted in past service visits that the source shutter mechanism is frozen, and a replacement is required. The housing was replaced at this service visit. After many years of moisture and dust ingress, the source was stuck inside the original housing, and required cutting the housing to replace the source. Some never-seize was applied inside the new housing to prevent this from happening again.

#### **Calibration**

There are a few methods available to calibrate the analyser. These include comparing the results directly to an automatic sampler, or simulating the operation of an auto-sampler by manually taking samples from a falling stream. Possibly the best option for Bridger Coal is stop-belt sampling. This requires the belt to be stopped and a reading taken by the analyser, then the sample under the analyser to be analysed by the lab. At least 10 samples should be taken to improve confidence in the calibration.

#### **Standardisation**

This involves running the belt empty for a period of time. Standardisation maintains calibration by accounting for environmental changes such as belt wear/change or source decay. It should be performed for around 2 hours per week.

The "Conveyor Running" signal (DI0) has been forced ON, meaning the analyser always thinks the belt is running. This means it will enter standardisation mode whenever the belt is stopped. This is not a huge problem when the belt is stopped while empty, though it is better to collect standards on a running belt, given the analyser readings may vary slightly along the length of the belt. If the belt is stopped with coal on it however, the TPH signal will drop to zero, indicating an empty belt to the analyser, causing it to enter standardisation mode. When the analyser standardises on coal, it may cause a significant shift in results, making the analyser unreliable.

It is recommended to fix the Conveyor Running signal, so it reads 1 only when the belt is running.

#### **Radiation Safety**

If anyone needs to access the detector enclosure (top arm of the C-frame) or any of the space between the two arms, the source shutter should be closed to reduce the dose rate.

A radiation survey was completed at this service visit, with no concerns noted. While the dose rates are high at the surface of the source housing, it is important to note that they drop off rapidly further away from the housing. At the cabinet, the dose rate is barely above background levels.

When working with radiation, follow the ALARA principle: keep your dose "As Low As Reasonably Achievable". Minimise time around the source, and maximise the distance between you and the source.

The above principle was mentioned to anyone involved in working on or handling the source housing during its replacement.



## Katanic, Janine

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**From:** Wales, Donald <Donald.Wales@pacificorp.com>  
**Sent:** Friday, January 10, 2020 4:48 PM  
**To:** Katanic, Janine  
**Subject:** [External\_Sender] Bridger Coal Company September 2019 Inspection  
**Attachments:** Radiation Class Roster SM 9-21-19 0700 AM.pdf; Radiation Class Roster SM 9-25-19 0700 AM.pdf; Radiation Class Roster UG 9-23-19 0700 AM.pdf; Radiation Class Roster UG 9-24-19 0630 AM.pdf; Radiation Class Roster UG 9-25-19 0600 AM.pdf; Radiation Training Class Lists 9-2019.docx

Janine,

I inadvertently omitted the Training Roster from the earlier email. Attached is the training roster. Give me a call if you have any questions.

Thanks Again,  
**Don Wales**  
**Mine Engineer**  
Bridger Coal Company  
P.O. Box 68  
Point of Rocks, WY 82942  
(307) 922-7665

# Radiation Safety Training

Surface Mine

Page 1/2

Date 9/21/19 Time 07:00

Printed Name	Employee Number	Signature
Rich Naucke		Rich Naucke
Jennifer Exlissdale		Jennifer Exlissdale
Kaiten Bernath	Contractor Helper	MMW
J.C. O'Neil		J.C. O'Neil
RAY WARDLAW		R. Wardlaw
Tyler Aldredge		Tyler Aldredge
Jake Bozarth		Jake Bozarth
JOSE PORTUO		JOSE PORTUO
Shane Lewis		Shane Lewis
Kenneth Robert		Kenneth Robert
Derek Baker		Derek Baker
Larry Mercedes		Larry Mercedes
Kenneth Merzlik		Kenneth Merzlik
Paul Hunsaker		Paul Hunsaker
S. Thomas		S. Thomas
Dan White		Dan White
Duane Sherman		Duane Sherman
Jeromindo Gutierrez		Jeromindo Gutierrez
Merrill Addison	Komatsu	Merrill Addison

Date 9/21/19 Time 07:00





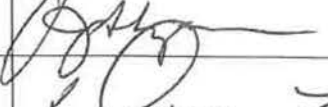

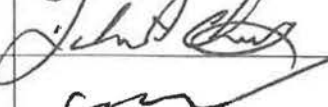
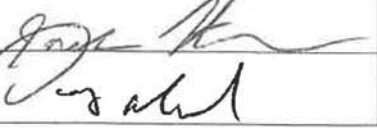
Page 2/2

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# Radiation Safety Training

## Surface Mine

Date 9/25/19 Time 07:00

Printed Name	Employee Number	Signature
Buzz Rendell		
Jim PASBORG		
Ashley Gibson	JENNmar	Ashley Gibson
Ken J Hunte		Ken J Hunte
C Ball		C Ball
Phillip Freeman		Phillip Freeman
Nicholas chipp		
Dayton DeLack		
Jim Shipman		
DARREN LOCKE		Darren Locke
Fred TORP		Fred Torp
Dean Joffe		
Bepuk		Bepuk
Svensen		Jack Svensen
JOHN FANCILL		John Fancill
John A Chesley		
CLINT SHAFER		CLINT SHAFER
Jack Starkson		Jack Starkson
Darryl Mehel		

## Surface Mine

Time 07:00

[illegible]

Date 9/23/19 Time 07:00

[illegible]

## Radiation Safety Training

## Underground Mine

Date 9/23/19 Time 07:00

p.1/2

Printed Name	Employee Number	Signature
Ron Joshi Jr		Ron Joshi Jr
STEVE MAESTAS		Steve Maestas
Stuart Chrusciel		Stu
Brandon Allen		Brandon Allen
Logan Hanson		Logan Hanson
Larry Hunsaker		Larry Hunsaker
Vincent Jefferies		Vincent Jefferies
Juan Leon Sr		Juan Leon Sr
Cesar Pena		Cesar Pena
Armando Lora		Armando Lora
Oliver Polito		Oliver Polito
Juan C Ortega		Juan C Ortega
Chris Klockman		Chris Klockman
David Ehlert		David Ehlert
Clemente Hdz		Clemente Hdz
Roman Juarez		Roman Juarez
M. Meckling		M. Meckling
Davin Mitchell		Davin Mitchell
Zachary Piter		Zachary Piter



Date 9/24/19 Time 06:30 AM

Date 9/24/19 Time 06:30 AM

[illegible]



**Radiation Safety Training  
List of Trained Employees  
September 2019**

Employees listed below attended radiation safety training in September 2019 and are trained in U.S. Nuclear Regulatory Commission requirements for radiation safety, health effects of radiation, types of radiation, radioisotopes in use at the mine, and lock out – tag out procedures.

**Surface Mine (50)**

Employee Name	Employee Number
Buzz Rondinelli	
Jim Passborg	
Ashley Gibson	Jenmar
Ken Hunte	
Charles Ball	
Phillip Freeman	
Nicholas Child	
Jayden DeLack	
Jim Shipman	
Darren Locke	
Fred Turpen	
Brian Stoffers	
Don Bakula	
Jake Swensen	
John Facinelli	
John Cheesley	
Clint Shaefer	
Jack Starken	
Doug Mehal	
Steve Spence	
Sherman Nilson	
Jeremy Reed	
Rich Naucke	
Jennifer Tisdale	
Kolten Bernatis	Contractor Helper
J.C. O'Neil	
Ray Wardlaw	
Tyler Alldredge	
Jake Bozarth	
Jose Portillo	
Shane Lewis	
Ken Roberts	
Derek Baker	
Larry Merchen	

Ken Merzlek	
Paul Hunsaker	
Sean Thomas	
Don White	
Duane Sherman	
Jeronimio Gutierrez	
Merrill Adison	Komatsu
Keith Cutlip	
A Pedersen	
Jeremiah Carmora	Komatsu
Andy Kuhnley	
Chet Malloy	
R.D. Nolan	
Matt Seay	
Don Wales	
Norm Hargis	

#### Underground Mine (39)

Employee Name	Employee Number
Tony Bear	
Curtis Huitt	
Carl Willson	
Lucas Anstett	
Shane Riding	
Kevin Erickson	
Rick Porter	
Dan Biery	
Jeff Swenson	
Brady Woolsey	
Richard Mortensen	
Christopher Kriest	Contractor
Deric Hogan	
Joe Jorgensen	
Shawn Yeager	
Ron Justus Jr.	
Steve Maestas	
Stuart Chrusciel	
Brandon Allen	
Logan Hanson	
Larry Hunsaker	
Vincent Jefferies	
Juan Leon Sr.	
Cesar Pena	
Armando Loza	
Elias Polito	

Juan C. Ortega	
Chris Klockman	
David Ehlert	
Clemente Hernandez	
Roman Juarez	
M. Mechling	
Devin Mitchell	
Zachary Potter	
Joe Behnke	
Tim Hansen	
Les Hottel	
Mike Christensen	
Dan Bear	