



ArcelorMittal

MID-VOL COAL SALES, INC.

August 21, 2019

Via Email Only

RIDNMSMail.Resource@nrc.gov

Reference – Jonathan Pfingsten

Mail Control No. 612269

*Re: Mid-Vol Coal Sales, Inc., Request for Additional Information, Mail
Control No. 612269 – License No. 47-31035-01/03036910*

Mr. Pfingsten

Please see the below responses to the letter dated July 8, 2019. I am hopeful this additional information satisfies your request; however, if you need additional information, please do not hesitate to contact me at the below telephone or email.

In specific response to the questions related to Appendix E of NUREG, please see as follows:

1.

- A. The ownership structure changed as specified in Exhibit A. Specifically, please see as follows:
 - a. Ownership: The initial sale was to ArcelorMittal Mid Vol Group, Inc. (a Delaware Corporation) and ArcelorMittal Mining Equipment LLC (A Delaware LLC). (Exhibit A)
 - b. ArcelorMittal Mid Vol Group and ArcelorMittal Mining Equipment were both merged into ArcelorMittal USA Holdings, II, LLC (a Delaware LLC) who is the current owner (as referenced in Exhibit B).
 - c. The name Mid-Vol Coal Sales, Inc. has not changed and is still the licensee. Mid-Vol Coal Sales, Inc. still resides at 640 Clover Dew Dairy Road, Princeton, WV 24739. The telephone number is 304-325-5719.
 - d. The Current Board of Directors are as follows: John Brett and Keith Howell. (Exhibit B)
- B. Kim Reed is the designated qualified person. Mr. Reed's training and experience are provided in Exhibit C.
- C. There is no change to the location, Facilities, equipment, Radiation program. Other than the removal of all the sources.
- D. The status of the facility is active, equipment is in place, and the radiation safety program remains the same. There was no contamination prior to transfer. Calibrations, leak tests, area surveys, wipe tests, training, quality control. Have been done up to the time of source removals. All related records are available.
- E. All records have been kept by Mid-Vol Coal Sales, Inc.

Rec'd. in LAT-09/05/2019

NUSS/RONI MATERIALS-002

- F. No transfer took place other than to the ownership structure; Mid-Vol Coal Sales, Inc. continues to operate and is aware of all open inspection items and is responsible for possible resulting enforcement actions, if any.
- G. Mid-Vol Coal Sales, Inc. continues to abide by all constraints, conditions, requirements, representations, and commitments required.
- H. All required materials have been maintained by Mid-Vol Coal Sales, Inc.

2.

- A. The License applicant is Mid-Vol Coal Sales, Inc with an address of 640 Clover Dew Dairy Road, Princeton, WV 24739.
- B.
 - Cesium 137 A.
 - Sealed Sources (QSA Global Models CDC.705; Isotope Products Laboratories Model 225)
 - A. 10 millicuries total and no single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State B.
 - Californium 252
 - B. Sealed Sources (QSA Global Models CVN.CYn series; Frontier Technology Corp. Model 100 series; Monsanto Research Corp. Model 2765; Tenex/FSUE State Scientific Center of Russia Model HK252M41 Series)
 - B. 25 millicuries total and no single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State
- C. Please see Exhibit C
- D. Bo Mabardy, Steve Lambert, and Jon Casey should be removed from the license. Kim Reed shall be added. Please see Exhibit C for his training and qualifications.
- E. Information provided on item 9 of our January 27, 2009 application pertaining to our Facilities and equipment is still applicable.
- F. Information provided on item 10 of our January 27, 2009 application pertaining to our Radiation Safety Program is still applicable.
 - a. We will develop, implement and maintain procedures for ensuring accountability of licensed materials at all times.
 - b. Operating, emergency, and security procedures will be developed, implemented, maintained, and distributed and will meet the criteria in Section 8.10.6, "Operating, Emergency, and Security Procedures," in NUREG-1556, Volume 4, Revision 1.

Please let me know if there is any additional information necessary. Thank you.

Sincerely,

Tyler Adkins, Esq.

Tyler Adkins
General Counsel
Mid-Vol Coal Sales, Inc.
640 Clover Dew Dairy Road,
Princeton, WV 24739
Tyler.adkins@arcelormittal.com
(304) 223-7220

Encl: Exhibit A, B, C

Radiation and Radioactivity

Course Outline and Schedule

Day 1

Radiation and Radioactivity

- Definition and Units
- Half-Life and Decay
- Interaction of Radiation with Matter
- Radiation Dose
- Background Radiation Exposure

Biological Effects

- Cellular Effects
- Short-Term Effects
- Long-Term Effects

Radiological Hazards

- External Radiation
- Protection Methods
 - Time
 - Distance
 - Shielding
- Contamination
- Protection Methods
 - Protective Clothing
 - Respirators
 - Ventilation

Direction and Measurement

- Basic Principles
- Detention Efficiency
- Counting Statistics
- Dose/Dose Rate Measurements
- Fixed Laboratory Instruments

Day 2

Operational Program

- ALARA
- Radiation Safety Program Goals and Requirements
- Procedures
- Training
- Surveys
- Posting and Labeling
- Dosimetry
- Leak Testing
- Instrument Calibration
- Record Keeping
- Waste Disposal
- "Declared Pregnant Woman" Requirements

Regulatory Agencies

- ETI Specific and General License
- NRC/Agreement States
 - License Conditions, Revised 10 CFR 20
- DOT
 - Transportation Requirements
- State Relations for Protection Against Radiation

The Atom and Types of Radiation

- Atomic Structure
- Elements
- Isotopes
- Radiation
- Alpha Particles
- Beta Particles
- Gamma and X-rays
- Neutrons
- Units of Radiation Energy

Units of Measure

- Radioactivity
 - The curie
 - Subunits of curie
- Radiation
 - Radiation Exposure vs. Radiation Dose
 - Radiation Exposure: the roentgen
 - Absorbed dose: the rad
 - Dose Equivalent: the rem
 - Determination of dose and dose rate
- Cpm vs. Activity
- Specific Activity
- SI Units

Day 3

Background Radiation

- Introduction
- Cosmic Radiation
- Radioactivity of the Earth
- Radioactivity of the Air
- Radioactivity of the Water
- Radioactivity of the Human Body
- Artificial (Manmade) Radioactivity
 - Medical and Dental Exposures
 - Nuclear Reactors
 - Transportation
 - Low-level waste storage
 - Nuclear reactors accidents
- Summary

Applications

- Industrial Sources
 - Level and density gauges

Biological Effects

- Introduction
- Cell Damage
- Acute and Delayed Effects
- Somatic and Genetic Effects
- Linear or Threshold
- Stochastic and Non-Stochastic Effects

Personal Dosimetry

- Dose Limits
 - Definitions
 - 10 CFR 20 occupational dose limits
 - Pregnant Workers
 - Minors
 - Non-radiation workers
 - Violations
 - ALARA
- Personal Dosimetry
 - Badge Placement
 - Film Badge
 - Thermoluminescent dosimeter (TLD)
 - Pocket ion chambers
 - Chirpers and alarming dosimeters
 - Neuron dosimeters
 - Control Badges
- Regulatory Guide 8.13

Day 4

Radiation Detection and Measurement

- Gas-Filled Detectors
 - Geiger-Mueller (GM)
- Solid State Detectors
 - Scintillation detectors (NaI)
 - Semiconductor detectors
- Detector Applications
 - Calibration Programs
- Basic Calibration Spectrometer
 - Spectrometer
 - Single and multi-channel analyzers

Regulations and Guides

- History of Protective Standards
 - ICRU, ICRP, and NCRP
 - Radiation exposure concerns
 - Basic Recommendations
 - Federal Policy
 - Regulating agencies
- Other Organizations
- Regulations and Guides
 - 10 CFR 19
 - 10 CFR 20
 - 10 CFR 21
 - 10 CFR 30
 - 10 CFR 71

Regulations and Guides (continued)

- 10 CFR 150
- 10 CFR 170
- Regulatory guides
- American National Standards Institute (ANSI) Standards
 - Information notices
- Specific vs. General License

Day 5

External Exposure Control and Surveys

- ALARA
 - 10 CFR 20
 - Current ALARA-related regulatory guides
- Radiation Exposure Control
 - Time
 - Distance
 - Shielding
- Access Control
 - 10 CFR 20
- Posting and Control
 - 10 CFR 20
- Surveys
 - 10 CFR 20
- Survey Form Contents
- Distance
 - Point sources
 - Line sources
 - Plane sources
- Shielding
 - Beta
 - Gamma
 - Neutron

Emergency Planning

- Audits
- In-house Audits
 - Performing an Audit
 - Audit Preparation
- Audit Performance
- Suggested Audit Finding Format
- Closing out Previous Audits
- Dealing with Findings
- Other Regulatory Action
- General Comments

Review and Questions

Test

Certificate of Completion

Kim Reed

has participated in and completed:

*Radiation Safety Officer Training
In accordance with
USNRC NUREG-1556, VOLUME 4*

Presented on: *February 22, 2019*

By:



David Swindell
ETI Radiation Safety Officer



Energy Technologies Inc.
Knoxville, TN 37931