

From: Saxton, John
To: [John Cash](#)
Subject: Clarifications on Lost Creek East/KM Amendment application
Date: Monday, April 03, 2017 9:53:00 AM
Attachments: [Mapping the approved license application to km-lc east amendment.xlsx](#)

John,

As you are aware, NRC is a cooperating agency with BLM on the NEPA and NHPA reviews of the Lost Creek East/KM amendment application. BLM began their review in 2014 while the earlier submittals to the NRC were deemed administratively incomplete and NRC is only beginning our acceptance review of the most recent submittal.

In order to facilitate NRC's acceptance review, the NRC is providing Lost Creek with (1) a spreadsheet which maps the sections of the approved license application to the amendment applications and (2) clarification questions raised during the initial acceptance review. The purpose of the spreadsheet/questions is to ensure NRC staff has identified the areas in which the subject matter is discussed; the questions are not intended to portray staff's technical finding as this is only in the early stages of the administrative completeness review.

Attached, please find a spreadsheet in which staff attempts to map sections of the approved license application to the proposed amendment application. Several sections are missing and/or could not be found though your generic reference in the KM Amendment Preamble suggests a section (i.e., Section 5 is in the Operations Plan (Ops plan) in Volume 3 of the Lost Creek East Amendment Application). Please complete and verify that the spreadsheet is accurate to facilitate staff's review, in particular, those cells that are highlighted in yellow. If a section is not changed from the approved license application please indicate as such.

The NRC staff requests clarification on several key aspects of the amendment applications as follows:

1. Please clarify that, for NRC purposes, the KM amendment and the Lost Creek amendment applications are interdependent (e.g., statements in the Lost Creek East are applicable to the KM amendment).
2. Please clarify that the narrative, tables, figures and plates in the amendment applications are meant to supplement rather than replace pages in the existing approved application.
3. Please clarify the definition of a resource area in the KM Amendment. (A Resource Area is appears to be defined in an attachment to Tetra Tech's evaluation of MILDOS in the Lost Creek East Amendment Application).
4. Please clarify the proposed mine units' horizontal and vertical locations. The presentation in the amendments is somewhat confusing and contradictory. For example, in the KM amendment, Resource Area 3 (aka, Mine Unit 3) is described as operations in the KM Horizon whereas the Lost Creek East Amendment Operations Plan describes Mine Unit 3 in the HJ Horizon. In addition, Table OP-3 (and the corresponding table in the ER) lists the locations (LC or LCE) and horizon (HJ or KM) for various mine units that differ from the narrative.

5. Please clarify that the disturbance areas are same as the production unit areas for a mine unit as currently defined by Lost Creek for this proposal.
6. Please clarify that the amendment application(s) also requests an increase of toll milling from 1 million pounds to 2.2 million pounds.
7. Please clarify that the proposed increase in annual production to 2.2 million gallons is consistent with the design of the plant, which, according to the approved application, was for annual production of 2 million gallons.
8. Please clarify that the amendment application also includes three additional deep disposal wells.
9. Please clarify the nature of the increase in horizontal expansion to the existing license area. The original application estimated 254 acres of pattern areas but the current application consists of approximately 240 acres of pattern area for both the HJ and KM mine units, which is a decrease.
10. Please clarify how the 500-foot requirement for distance to a perimeter well is satisfied if the distance between several production areas within a mine unit is 1600 feet. Also, please clarify that an aquifer exemption can be obtained for an entire wellfield with such scattered production areas.
11. Please clarify that the "L" Horizon will be the designated underlying aquifer for the KM unit in the Lost Creek East area.
12. Please clarify that the mapping is accurate as the legend appears to be inconsistent with the isopach maps on Plate 2.6-3a and Plate 2.6-3b of the KM amendment.
13. Please clarify whether the water level data provided in the amendment applications are complete and provide a summary of locations within the applications where the data can be found.
14. Please clarify that the Lost Creek East Amendment Section D10 on background radiological characteristics summarizes all activities to establish and document the pre-operational radiological environment and that no additional summary information on this topic is provided in other sections of the application(s).
15. Please clarify that the wellfield production schedule used for MILDOS calculations is consistent with that schedule currently proposed for the Lost Creek East Amendment Application.
16. Please clarify that the MILDOS input and output files are provided with the Lost Creek East Amendment Application.
17. Please clarify that Lost Creek has elected not to include a summary of the operational history for the Lost Creek facility in either application.
18. Please clarify that the environmental reports encompass all expected impacts from the proposed activities, in particular, impacts from new wells for the KM Amendment Application.
19. Please clarify that Lost Creek will be sending or has sent to the NRC the Cultural

Resources Report in the application as indicated in Section 3.9 of the Lost Creek East Amendment Application.

Thanks

John

| Approved Licensee Application Sections | | Approved License Application Pages | Mapping to KM Amendment Sections | Mapping to LC East Amendment Sections | Comments |
|--|---|------------------------------------|----------------------------------|---------------------------------------|---|
| TOC | | | | | |
| 1.0 | PROPOSED ACTIVITIES | 1-1 | preamble * LC East TR | | No Succinct description of the KM Amendment |
| 1.1 | Licensing Action Requested | 1-1 | | D2 | |
| 1.2 | Project Background | 1-2 | | | |
| 1.3 | Site Location and Description | 1-3 | | | |
| 1.4 | Orebody Description | 1-4 | | | |
| 1.5 | Solution Mining Method and Recovery Process | 1-4 | | | |
| 1.6 | Operating Plans, Design Throughput, and Production | 1-5 | | | |
| 1.7 | Project Schedules | 1-6 | | | |
| 1.7.1 | Pre-Operational Development Schedule | 1-6 | | | |
| 1.7.2 | Operations Schedule | 1-6 | | | |
| 1.8 | Waste Management and Disposal | 1-7 | | | |
| 1.9 | Source and Byproduct Material Transportation | 1-7 | | | |
| 1.10 | Groundwater Restoration | 1-8 | | | |
| 1.11 | Decommissioning and Reclamation | 1-9 | | | |
| 1.12 | Surety Arrangements | 1-9 | | | |
| 2.0 | SITE CHARACTERIZATION | 2.1-1 | | | |
| 2.1 | Site Location and Layout | 2.1-1 | | | |
| 2.2 | Uses of Adjacent Lands and Waters | 2.2-1 | No Change | | |
| 2.2.1 | Land Use | 2.2-1 | No Change | D1 | |
| 2.2.1.1 | Planned Land Uses and Developments | 2.2-3 | No Change | | |
| 2.2.2 | Water Use | 2.2-3 | No Change | | |
| 2.2.2.1 | Surface Water | 2.2-3 | No Change | No change OP2.11.1 | |
| 2.2.2.2 | Groundwater | 2.2-4 | No Change | OP2.11.2 | |
| 2.3 | Population Distribution and Socioeconomic Conditions | 2.3-1 | No Change | | |
| 2.3.1 | Demographics | 2.3-1 | No Change | | |
| 2.3.1.1 | Sweetwater County | 2.3-1 | No Change | | |
| 2.3.1.2 | Carbon County | 2.3-2 | No Change | | |
| 2.3.2 | Socioeconomic Conditions | 2.3-2 | No Change | | |
| 2.3.2.1 | Employment Sectors and Industry Income | 2.3-3 | No Change | | |
| 2.3.2.2 | Labor | 2.3-4 | No Change | | |
| 2.3.2.3 | Personal Income | 2.3-4 | No Change | | |
| 2.3.3 | Other Resources | 2.3-5 | No Change | | |
| 2.3.3.1 | Housing | 2.3-5 | No Change | | |
| 2.3.3.2 | Public Facilities and Services | 2.3-6 | No Change | | |
| 2.3.3.3 | Taxes and Revenues | 2.3-9 | No Change | | |
| 2.4 | Historic, Scenic, and Cultural Resources | 2.4-1 | No Change | | |
| 2.4.1 | Historic and Cultural Resources | 2.4-1 | No Change | D3; OP2.4 no change to procedures | Submitted to BLM only |
| 2.4.2 | Scenic Resources | 2.4-4 | No Change | | |
| 2.4.2.1 | Visual Quality | 2.4-5 | No Change | | |
| 2.4.2.2 | Visual Sensitivity | 2.4-5 | No Change | | |
| 2.5 | Meteorology, Climatology and Air Quality | 2.5-1 | No Change | D4 | |
| 2.5.1 | Meteorology and Climatology | 2.5-1 | No Change | D4 | |
| 2.5.1.1 | Temperature | 2.5-3 | No Change | D4 | |
| 2.5.1.2 | Precipitation | 2.5-3 | No Change | D4 | |
| 2.5.1.3 | Humidity and Evaporation | 2.5-4 | No Change | D4 | |
| 2.5.1.4 | Wind, Mixing, and Stability | 2.5-4 | No Change | D4 | |
| 2.5.1.5 | Violent Weather | 2.5-5 | No Change | D4 | |
| 2.5.2 | Air Quality - Non-Radiological Parameters | 2.5-5 | No Change | D4 | |
| 2.6 | Geology and Soils | 2.6-1 | D-5 | D5 | |
| 2.6.1 | Regional Geology | 2.6-1 | D-5 | D5 | |
| 2.6.1.1 | Stratigraphy | 2.6-1 | D-5 | D5 | |
| 2.6.1.2 | Structure | 2.6-1 | D-5 | D5 | |
| 2.6.2 | Site Geology | 2.6-2 | D-5 | D5 | |
| 2.6.2.1 | Stratigraphy | 2.6-3 | D-5 | D5 | |
| 2.6.2.2 | Structure | 2.6-4 | D-5 | D5 | |
| 2.6.2.3 | Ore Mineralogy and Geochemistry | 2.6-4 | D-5 | D5 | |
| 2.6.2.4 | Historic Uranium Exploration Activities | 2.6-6 | D-5 | D5 | |
| 2.6.3 | Seismology | 2.6-7 | D-5 | D5 | |
| 2.6.3.1 | Historic Seismicity | 2.6-7 | D-5 | D5 | |
| 2.6.3.2 | Uniform Building Code | 2.6-11 | D-5 | D5 | |
| 2.6.3.3 | Deterministic Analysis of Active Fault Systems | 2.6-12 | D-5 | D5 | |
| 2.6.3.4 | Maximum Tectonic Province Earthquake "Floating Earthquake" Seismogenic Source | 2.6-12 | D-5 | D5 | |
| 2.6.3.5 | Probabilistic Seismic Hazard Analysis and IBC | 2.6-13 | D-5 | D5 | |
| 2.6.4 | Soils | 2.6-13 | No Change | D7; no changes to procedures | |
| 2.6.4.1 | Soil Survey | 2.6-14 | No Change | D7 | |
| 2.6.4.2 | Field Sampling | 2.6-14 | No Change | D7 | |
| 2.6.4.3 | Results and Discussion | 2.6-15 | No Change | D7 | |
| 2.6.4.4 | Soil Suitability as a Plant Growth Medium | 2.6-16 | No Change | D7 | |
| 2.6.4.5 | Topsoil Protection | 2.6-16 | No Change | D7; no changes to procedures | |
| 2.6.4.6 | Prior Surface Disturbances | 2.6-17 | No Change | D7 | |
| 2.7 | Hydrology | 2.7-1 | D-6 | D6 | |
| 2.7.1 | Surface Water | 2.7-1 | D-6 | D6 | |
| 2.7.1.1 | Drainage Characteristics | 2.7-1 | D-6 | D6 | |
| 2.7.1.2 | Surface Water Quality | 2.7-3 | D-6 | D6 | |
| 2.7.2 | Groundwater Occurrence | 2.7-4 | D-6 | D6 | |
| 2.7.2.1 | Regional Hydrogeology | 2.7-4 | D-6 | D6 | |
| 2.7.2.2 | Site Hydrogeology | 2.7-9 | D-6 | D6 | Did not contain MODFLOW Input/Output files in LC East Attachment d6-6 |
| 2.7.3 | Groundwater Quality | 2.7-17 | D-6 | D6 | |
| 2.7.3.1 | Regional Groundwater Quality | 2.7-17 | D-6 | D6 | |
| 2.7.3.2 | Site Groundwater Quality | 2.7-20 | D-6 | D6 | |
| 2.7.4 | Hydrologic Conceptual Model | 2.7-23 | D-6 | D6 | |
| 2.7.4.1 | Regional Groundwater Conceptual Model | 2.7-23 | D-6 | D6 | |
| 2.7.4.2 | Site Groundwater Conceptual Model | 2.7-24 | D-6 | D6 | |
| 2.8 | Ecology | 2.8-1 | | | |
| 2.8.1 | Vegetation | 2.8-1 | No Change | D8 | No radiological data presented |
| 2.8.1.1 | Upland Big Sagebrush Shrubland | 2.8-2 | No Change | D8 | |
| 2.8.1.2 | Lowland Big Sagebrush Shrubland | 2.8-3 | No Change | D8 | |
| 2.8.1.3 | Threatened, Endangered, and Special Concern Plant Species | 2.8-4 | No Change | D8 | |
| 2.8.1.4 | Weeds and Selenium Indicator Species | 2.8-5 | No Change | D8 | |
| 2.8.2 | Aquatic Life and Wetlands | 2.8-5 | No Change | D11 | |
| 2.8.3 | Wildlife | 2.8-6 | No Change | D9 | |
| 2.8.3.1 | Wildlife Habitat Description | 2.8-6 | No Change | D9 | |

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|--|---|------------------------------------|----------------------------------|---------------------------------------|--|
| 2.8.3.2 | Methods. | 2.8-7 | No Change | D9 | |
| 2.8.3.3 | Results | 2.8-8 | No Change | D9 | |
| 2.9 | Background Radiological Characteristics | 2.9-1 | No Change | D10 | |
| 2.9.1 | Background Gamma Radiation Survey and Initial Soils Sampling | 2.9-1 | No Change | D10 | |
| 2.9.1.1 | Methods. | 2.9-2 | No Change | D10 | |
| 2.9.1.2 | Data Quality Assurance and Quality Control | 2.9-6 | No Change | D10 | |
| 2.9.1.3 | Results | 2.9-7 | No Change | D10 | |
| 2.9.1.4 | Additional Information | 2.9-11 | No Change | | |
| 2.9.2 | Passive Gamma and Radon Monitoring | 2.9-11 | No Change | Table D4-11 | Is there additional information available in the Technical Report? |
| 2.9.3 | Supplementary Radiological Studies | 2.9-12 | No Change | | |
| 2.9.3.1 | Supplementary MILDOS Modeling | 2.9-14 | | D10 | No electronic copy of MILDOS input file. Wellfield production schedule information differs from other Technical Report sections. |
| 2.9.3.2 | Vegetation and Associated Surface Soil Sampling | 2.9-14 | No Change | | |
| 2.9.3.3 | Soil Profile Sampling | 2.9-15 | No Change | | |
| 2.9.3.4 | Sediment Sampling | 2.9-15 | No Change | D10 | Sediment sampling data and results not found |
| 2.9.3.5 | Food and Fish Sampling | 2.9-16 | No Change | D9 | No fish sampling performed |
| 2.9.3.6 | Radon Flux Measurements | 2.9-16 | No Change | Table D10-3 | Is there additional information available in the Technical Report? |
| 2.9.3.7 | Radiological Air Particulate (High-Vol) Sampling | 2.9-16 | No Change | Tables D10-1 and D10-2 | Is there additional information available in the Technical Report? |
| 2.9.4 | 2010-11 Baseline Radiological Studies | 2.9-19 | No Change | | |
| 2.10 | Other Environmental Features | 2.10-1 | No Change | | |
| 3.0 | DESCRIPTION OF THE PROPOSED FACILITY | 3-1 | LC East TR | OP 3.0 | |
| 3.1 | ISR Process and Equipment | 3-1 | LC East TR | Op Plan 2.5.2.1 no Changes | |
| 3.1.1 | Site Facilities Layout | 3-2 | LC East TR | Op Plan 2.5.2.1 no Changes | |
| 3.1.2 | Ore Deposits. | 3-3 | LC East TR | Op Plan? | |
| 3.2 | Mine Unit Processes, Instrumentation, and Control | 3-3 | LC East TR | Op Plan 2.12.2 mo changes | |
| 3.2.1 | Mine Unit Chemistry | 3-4 | LC East TR | OP 3.1 no changes | |
| 3.2.2 | Mine Unit Design | 3-4 | LC East TR | OP3.2 no changes | |
| 3.2.2.1 | Production and Injection Well Patterns | 3-5 | LC East TR | OP 3.2.1 no changes | |
| 3.2.2.2 | Monitor Well Locations | 3-6 | LC East TR | op 3.2.2 no changes | |
| 3.2.3 | Mine Unit Installation | 3-7 | LC East TR | Op Plan? | |
| 3.2.4 | Well Completion | 3-8 | LC East TR | op 3.3 no changes | |
| 3.2.5 | Well Integrity Testing | 3-9 | LC East TR | op 3.4 no changes | |
| 3.2.6 | Mine Unit Piping and Instrumentation | 3-10 | LC East TR | op 3.5 no changes | |
| 3.2.7 | Mine Unit Control | 3-10 | LC East TR | op 3.6 no changes | |
| 3.2.7.1 | Header House Control | 3-11 | LC East TR | op 3.6.1 no changes | |
| 3.2.7.2 | Pattern Control | 3-13 | LC East TR | op 3.6.2 no changes | |
| 3.2.7.3 | Projected Water Balance and Water Level Changes | 3-13 | LC East TR | op 3.6.3.1 no changes | Op 3.6.3.2 discusses mine unit interference |
| 3.2.7.4 | Excursion Monitoring and Control | 3-17 | LC East TR | op 3.6.4 | OP 3.6.3.3 discussed cumulative drawdown |
| 3.2.7.5 | Spill Prevention and Detection | 3-18 | LC East TR | Op Plan? | |
| 3.3 | Plant Processes, Instrumentation, and Control | 3-23 | LC East TR | op 4.0 no changes | |
| 3.3.1 | Ion Exchange (Resin-Loading) Circuit | 3-24 | LC East TR | op 4.1 no changes | |
| 3.3.2 | Elution Circuit | 3-24 | LC East TR | op 4.2 no changes | |
| 3.3.3 | Precipitation/Filtration Circuit | 3-25 | LC East TR | op 4.3 no changes | |
| 3.3.4 | Major Process Equipment and Instrumentation | 3-25 | LC East TR | op 4.4 no changes | |
| 4.0 | EFFLUENT CONTROL SYSTEMS | 4-1 | No Change | op 5.0 no changes | |
| 4.1 | Gaseous Emissions and Airborne Particulates | 4-1 | No Change | op 5.1 no changes | |
| 4.1.1 | Non-Radioactive Emissions and Particulates | 4-1 | No Change | op 5.1.1 no changes | |
| 4.1.2 | Radioactive Emissions | 4-3 | No Change | op 5.1.2; D10 | |
| 4.1.2.1 | Particulates | 4-3 | No Change | op 5.1.2; D10 | |
| 4.1.2.2 | Radon | 4-5 | No Change | op 5.1.2; D10 | |
| 4.2 | Liquid Wastes | 4-8 | No Change | op 5.2 no changes, slight increase | |
| 4.2.1 | "Native" Groundwater Recovered during Well Development, Sample Collection, and Pump Testing | 4-9 | No Change | op 5.2.1.1 no changes | |
| 4.2.2 | Storm Water Runoff | 4-9 | No Change | op 5.2.1.2 no changes | |
| 4.2.3 | Waste Petroleum Products and Chemicals | 4-10 | No Change | op 5.2.1.3 no changes | |
| 4.2.4 | Domestic Liquid Waste | 4-10 | No Change | op 5.2.1.4 no changes | |
| 4.2.5 | Liquid 11(e)(2) Byproduct Material | 4-11 | No Change | op 5.2.2 no changes | |
| 4.2.5.1 | Liquid Process Wastes | 4-11 | No Change | op 5.2.2.1 no changes | |
| 4.2.5.2 | "Affected" Groundwater Generated during Well Development and Sample Collection | 4-11 | No Change | op 5.2.2.2 no changes | |
| 4.2.5.3 | Groundwater Generated during Aquifer Restoration | 4-11 | No Change | op 5.2.2.3 no changes | |
| 4.2.5.4 | Disposal of Liquid 11(e)(2) Byproduct Materials | 4-12 | No Change | op 5.2.3 no changes | Mentioned Class I wells but not Class V |
| 4.2.5.5 | Prevention and Remediation of Accidental Releases | 4-15 | No Change | Op Plan? | |
| 4.2.5.6 | Activity Concentration Cleanup Criteria | 4-18 | No Change | Op Plan? | |
| 4.3 | Solid Wastes. | 4-22 | No Change | op 5.3 no changes | |
| 4.3.1 | Solid Non-11(e)(2) Byproduct Materials | 4-22 | No Change | op 5.3.1 no changes | |
| 4.3.2 | Solid 11(e)(2) Byproduct Materials | 4-23 | No Change | op 5.3.2 no changes | |
| 5.0 | OPERATIONAL ORGANIZATION, MANAGEMENT, PROGRAMS, & TRAINING | 5-1 | LC East OP Plan | Op Plan? | |
| 5.1 | Corporate Organization and Administration | 5-1 | LC East OP Plan | Op Plan? | |
| 5.1.1 | President | 5-2 | LC East OP Plan | Op Plan? | |
| 5.1.2 | General Manager | 5-3 | LC East OP Plan | Op Plan? | |
| 5.1.3 | Mine Manager | 5-3 | LC East OP Plan | Op Plan? | |
| 5.1.4 | Manager of EHS and Regulatory Affairs | 5-3 | LC East OP Plan | Op Plan? | |
| 5.1.5 | RSO (Nov 16) | 5-4 | LC East OP Plan | Op Plan? | |
| 5.1.5.1 | Health Physics Technician | 5-5 | LC East OP Plan | Op Plan? | |
| 5.1.6 | Department Heads | 5-5 | LC East OP Plan | Op Plan? | |
| 5.1.7 | Uranium Recovery Workers | 5-6 | LC East OP Plan | Op Plan? | |
| 5.2 | Management Control Program | 5-6 | LC East OP Plan | Op Plan? | |
| 5.2.1 | Environmental, Health, and Safety Management System (EHSMS) | 5-6 | LC East OP Plan | Op Plan? | |
| 5.2.2 | Safety and Environmental Review Panel (SERP) | 5-10 | LC East OP Plan | Op Plan? | |
| 5.2.2.1 | Organization of the SERP | 5-11 | LC East OP Plan | Op Plan? | |
| 5.2.2.2 | SERP Responsibilities | 5-11 | LC East OP Plan | Op Plan? | |
| 5.2.2.3 | Record Keeping and Reporting | 5-12 | LC East OP Plan | Op Plan? | |
| 5.3 | Management Audit and Inspection Program | 5-12 | LC East OP Plan | Op Plan? | |
| 5.3.1 | Radiation Safety Inspections. | 5-13 | LC East OP Plan | Op Plan? | |
| 5.3.1.1 | Daily Inspections | 5-13 | LC East OP Plan | Op Plan? | |
| 5.3.1.2 | Weekly Operations Inspections | 5-13 | LC East OP Plan | Op Plan? | |
| 5.3.1.3 | Monthly RSO Reports | 5-14 | LC East OP Plan | Op Plan? | |
| 5.3.2 | Storage Pond Inspections | 5-14 | LC East OP Plan | Op Plan? | |
| 5.3.2.1 | Daily Storage Pond Inspections | 5-14 | LC East OP Plan | Op Plan? | |
| 5.3.2.2 | Weekly Storage Pond Inspections | 5-15 | LC East OP Plan | Op Plan? | |
| 5.3.2.3 | Quarterly Storage Pond Inspections | 5-15 | LC East OP Plan | Op Plan? | |

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|--|---|------------------------------------|----------------------------------|---------------------------------------|---------------------------------------|
| 5.3.2.4 | Annual Technical Evaluation of Storage Ponds | 5-16 | LC East OP Plan | Op Plan? | |
| 5.3.3 | ALARA Operating Philosophy | 5-16 | LC East OP Plan | Op Plan? | |
| 5.4 | Qualifications for Personnel Conducting Radiation Safety Program | 5-18 | LC East OP Plan | Op Plan? | |
| 5.4.1 | Mine Manager | 5-18 | LC East OP Plan | Op Plan? | |
| 5.4.2 | Manager of EHS and Regulatory Affairs | 5-18 | LC East OP Plan | Op Plan? | |
| 5.4.3 | Site Supervisor EHS / RSO | 5-18 | LC East OP Plan | Op Plan? | |
| 5.4.3.1 | Health Physics Technician | 5-19 | LC East OP Plan | Op Plan? | |
| 5.4.3.2 | Designee | 5-19 | LC East OP Plan | Op Plan? | |
| 5.4.4 | Department Heads | 5-19a | LC East OP Plan | Op Plan? | |
| 5.5 | Radiation Safety Training | 5-20 | LC East OP Plan | Op Plan? | |
| 5.6 | Permit Area Security | 5-22 | LC East OP Plan | Op Plan? | |
| 5.6.1 | Mine Unit and Storage Pond Security | 5-22 | LC East OP Plan | Op Plan? | |
| 5.6.2 | Plant Security | 5-22 | LC East OP Plan | Op Plan? | |
| 5.6.3 | Transportation Security | 5-23 | LC East OP Plan | Op Plan? | |
| 5.7 | Radiation Safety Controls and Monitoring | 5-23 | LC East OP Plan | Op Plan? | |
| 5.7.1 | Effluent Control Techniques | 5-23 | LC East OP Plan | Op Plan? | |
| 5.7.1.1 | Release of Radon | 5-24 | LC East OP Plan | Op Plan? | |
| 5.7.1.2 | Release of Airborne Particulate | 5-27 | LC East OP Plan | Op Plan? | |
| 5.7.1.3 | Release of Liquid Effluent (Pregnant Lixiviant) | 5-27 | LC East OP Plan | Op Plan? | |
| 5.7.1.4 | Prevention of Accidental Releases | 5-29 | LC East OP Plan | Op Plan? | |
| 5.7.2 | External Radiation Exposure Monitoring Program | 5-30 | LC East OP Plan | Op Plan? | |
| 5.7.2.1 | Personal External Dosimetry | 5-34 | LC East OP Plan | Op Plan? | |
| 5.7.2.2 | Direct Readings for External Exposure | 5-35 | LC East OP Plan | Op Plan? | |
| 5.7.3 | In-Plant Airborne Radiation Monitoring Program | 5-37 | LC East OP Plan | Op Plan? | |
| 5.7.3.1 | Airborne Uranium Particulate Monitoring | 5-37 | LC East OP Plan | Op Plan? | |
| 5.7.3.2 | Establishing Derived Air Concentrations | 5-39 | LC East OP Plan | Op Plan? | |
| 5.7.3.3 | Surveys for Radon-222 and Its Decay Products | 5-42 | LC East OP Plan | Op Plan? | |
| 5.7.4 | Worker Dose Calculations | 5-44 | LC East OP Plan | Op Plan? | |
| 5.7.4.1 | Dose Calculation Equations | 5-46 | LC East OP Plan | Op Plan? | |
| 5.7.4.2 | Action Levels Tied to Worker Exposure Calculations | 5-48 | LC East OP Plan | Op Plan? | |
| 5.7.4.3 | Controlling Exposure to Soluble Uranium | 5-49 | LC East OP Plan | Op Plan? | |
| 5.7.5 | Bioassay Program | 5-49 | LC East OP Plan | Op Plan? | |
| 5.7.6 | Contamination Control Program | 5-52 | LC East OP Plan | Op Plan? | |
| 5.7.6.1 | Personnel Surveys | 5-52 | LC East OP Plan | Op Plan? | |
| 5.7.6.2 | Area Surveys | 5-54 | LC East OP Plan | Op Plan? | |
| 5.7.6.3 | Material Release Surveys and Limits | 5-55 | LC East OP Plan | Op Plan? | |
| 5.7.6.4 | Inspections | 5-58 | LC East OP Plan | Op Plan? | |
| 5.7.6.5 | Standard Operating Procedures | 5-58 | LC East OP Plan | Op Plan? | |
| 5.7.6.6 | Plant and Mine Unit Control | 5-59 | LC East OP Plan | Op Plan? | |
| 5.7.6.7 | Reports and Records | 5-61 | LC East OP Plan | Op Plan? | |
| 5.7.7 | Airborne Effluent and Environmental Monitoring Programs | 5-62 | LC East OP Plan | Op Plan? | |
| 5.7.7.1 | Operational Radiation Monitoring | 5-62 | LC East OP Plan | Op Plan? | |
| 5.7.8 | Groundwater and Surface-Water Monitoring Programs | 5-65 | LC East OP Plan | Op Plan? | |
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