

**PIÑON RIDGE MILL**  
**HEALTH AND SAFETY PLAN**  
**MONTROSE COUNTY, COLORADO**



**ENERGY FUELS RESOURCES CORPORATION**  
**31525 Highway 90**  
**Nucla, Colorado 81424**

**October 2009**

**Prepared by Energy Fuels Resources Corporation**

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## Appendices

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Appendix C	General Health and Safety Procedures
Appendix D	Radiological Health and Safety Procedures

## Master Procedure List

Procedure Number	Procedure Name	Latest Revision Date	Latest Revision Number
<b>Administrative Procedures</b>			
AD020	Procedure Preparation	8/31/2009	0
AD030	Organization of Radiation Health and Safety	8/31/2009	0
AD040	Performance Review	8/25/2009	0
AD060	Training Records	8/31/2009	0
AD080	As Low As Reasonably Achievable (ALARA)	8/31/2009	0
AD090	Accident Investigation	8/17/2009	0
AD100	Job Safety Analysis	8/14/2009	0
AD110	Contractor Requirements	8/14/2009	0
AD120	Drug Policy	8/14/2009	0
<b>General Health and Safety Procedures</b>			
HS010	Safety Meetings	8/13/2009	0
HS020	Bloodborne Pathogen Exposure Control	8/13/2009	0
HS030	Hearing Conservation	8/13/2009	0
HS040	Vehicle and Mobile Equipment	8/14/2009	0
HS050	Confined Space Entry	8/14/2009	0
HS060	Electrical Safety	8/14/2009	0
HS070	Excavation and Trenching	8/14/2009	0
HS080	Fall Protection	8/14/2009	0
HS090	Flammable Materials Storage	8/14/2009	0
HS100	Ladders and Scaffolding	8/14/2009	0
HS110	Lockout/Tagout	8/14/2009	0
HS120	Tools-Hand and Powered	8/14/2009	0
HS130	Respiratory Protection – Use And Fit Test	8/27/2009	0
HS131	Respiratory Maintenance, Inspection, Cleaning and Storage	8/27/2009	0
HS132	Medical Evaluation for Respirator Use	8/27/2009	0
HS140	Air Quality Surveys - Non-Radiological	8/17/2009	0

## Master Procedure List (continued)

Procedure Number	Procedure Name	Latest Revision Date	Latest Revision Number
<b>Radiological Health and Safety Procedures</b>			
RH010	Radiological Health and Safety Training	8/13/2009	0
RH020	Decontamination	8/12/2009	0
RH030	Posting	8/12/2009	0
RH040	Radiation Exposure Action Levels	8/31/2009	0
RH050	Bioassay	8/20/2009	0
RH060	Radiation Work Permits	8/31/2009	0
RH070	Release of Equipment to Unrestricted Areas	9/1/2009	0
RH100	Shipment of Yellowcake, Ore or Contaminated Equipment by Truck	9/1/2009	0
RH110	Beta and/or Gamma Exposure Rate Surveys	9/1/2009	0
RH120	Alpha Beta Gamma Contamination Surveys	9/1/2009	0
RH130	Occupational General Air Particulate Survey	8/31/2009	0
RH140	Radon -222/Radon-220 Decay Product Surveys	9/1/2009	0
RH150	Occupational Breathing Zone Monitoring	9/1/2009	0
RH151	Calibration of Air Samplers Using the Bubble Method	8/11/2009	0
RH160	Source Leak Test, Shutter Test, and Inventory	9/1/2009	0
RH170	Nuclear Density Gauge	8/11/2009	0
RH200	Personnel Release Surveys	9/1/2009	0
RH210	Personal Radiation Dosimeters	8/31/2009	0
RH300	Radiological Dose Calculation	9/1/2009	0
RH301	Worker Exposure to Long-lived Radionuclides in Airborne Particulate Matter	9/1/2009	0
RH302	Radionuclide Concentrations in Air Samples	9/1/2009	0
RH303	Dose Calculation Procedures	8/31/2009	0
RH310	Pregnant Women	8/27/2009	0

## Master Procedure List (continued)

Procedure Number	Procedure Name	Latest Revision Date	Latest Revision Number
<b>Environmental Monitoring Procedures (See Operational Monitoring Plan)</b>			
EV010	Environmental Dose	7/25/09	0
EV020	Perimeter Air	7/25/09	0
EV021	High Volume Air Sampler Calibration	7/25/09	0
EV030	Radon 222	8/20/09	0
EV060	Vegetation Sampling	8/17/09	0
EV070	Environmental TLD	8/20/09	0
EV080	Stack Sampling	8/20/09	0
EV110	Soil Sampling	7/25/09	0
EV120	Radon Flux	8/20/09	0
EV130	Weather Monitoring	8/20/09	0
<b>Security Procedures (See Security Plan)</b>			
SP010	General	TBD	0
SP020	Hourly Employees	TBD	0
SP030	Entrance Authorization	TBD	0
SP040	Visitors	TBD	0
SP050	Vehicle Policy	TBD	0
SP060	Property Removal	TBD	0
SP070	Telephone Messages	TBD	0
SP080	Radiation Safety	TBD	0
SP090	Bomb Threat	TBD	0
SP100	Payroll Distribution	TBD	0
SP110	Drug and Alcohol Abuse	TBD	0
SP120	Unauthorized Entry	TBD	0
SP130	Yellowcake Shipment	TBD	0
SP140	Emergencies	TBD	0
SP150	Entrance Through Electronic Gate	TBD	0
SP160	General Controls for Access	TBD	0
SP170	Waiver and Release Form	TBD	0

## Acronym List

<b>A</b>	Area
<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>AL</b>	Action Level or airline (respirator)
<b>ALARA</b>	As Low As Reasonably Achievable
<b>ALI</b>	Annual Limit on Intake
<b>ANSI</b>	American National Standards Institute
<b>BP</b>	Barometric Pressure
<b>Bq</b>	Becquerel
<b>BZ</b>	Breathing Zone
<b>CACP</b>	Company-Approved Competent Person
<b>CDPHE</b>	Colorado Department of Public Health and Environment
<b>CEDE</b>	Committed Effective Dose Equivalent
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CF</b>	cubic foot
<b>cfm</b>	cubic feet per minute
<b>Ci</b>	Curie
<b>cm</b>	centimeter
<b>cpm</b>	counts per minute
<b>d</b>	days
<b>DAC</b>	Derived Air Concentration
<b>DDE</b>	Deep Dose Equivalent
<b>DOT</b>	Department of Transportation
<b>dpm</b>	disintegrations per minute
<b>ED</b>	Effective Dose
<b>EDE</b>	Extremity Dose Equivalent
<b>EDTA</b>	Ethylenediaminetetraacetic Acid
<b>EFR</b>	Energy Fuels Resources Corporation
<b>EPA</b>	U.S. Environmental Protection Agency
<b>FF</b>	Full Face
<b>g (gm)</b>	gram
<b>HazCom</b>	Hazard Communication
<b>HBV</b>	Hepatitis B Virus
<b>HCP</b>	Hearing Conservation Program
<b>HF</b>	Half Face
<b>Hg</b>	Mercury
<b>HIV</b>	Human Immunodeficiency Virus
<b>HR</b>	Human Resources
<b>IARC</b>	International Agency for Research on Cancer

## Acronym List

<b>ICRP</b>	International Commission on Radiological Protection
<b>IDLH</b>	Immediately Dangerous to Life and Health
<b>kV</b>	Kilovolt
<b>L</b>	liter
<b>LDE</b>	Lens Dose Equivalent
<b>LEL</b>	Lower Explosive Limit
<b>LLD</b>	Lower Limit of Detection
<b>lpm</b>	liters per minute
<b>LPN</b>	Licensed Practical Nurse
<b>MDA</b>	Minimum Detectable Activity
<b>MEC</b>	Minimum Explosive Concentration
<b>ml (mL)</b>	milliliter
<b>MSDS</b>	Material Safety Data Sheet
<b>MSHA</b>	Mine Safety and Health Administration
<b>NEC</b>	National Electrical Code
<b>NFPA</b>	National Fire Protection Association
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NIST</b>	National Institute of Standards & Technology
<b>NRC</b>	U.S. Nuclear Regulatory Commission
<b>NTP</b>	National Toxicology Program (U.S. Department of Health and Human Services)
<b>NUREG</b>	U.S. Nuclear Regulatory Commission Guidance Document
<b>NVLAP</b>	National Voluntary Laboratory Accreditation Program
<b>O<sub>2</sub></b>	Oxygen
<b>ODE</b>	Organ Dose Equivalent
<b>OPIM</b>	Other Potentially Infectious Material
<b>OSHA</b>	Occupational Safety and Health Administration
<b>OSL</b>	Optically Stimulated Luminescent Dosimeter
<b>PAS</b>	Personal Air Sampler
<b>PEL</b>	Permissible Exposure Limit
<b>PF</b>	Protection Factor
<b>PPE</b>	Personal Protection Equipment
<b>ppm</b>	parts per million
<b>psi</b>	pounds per square inch
<b>QA</b>	Quality Assurance
<b>Ra</b>	Radium
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>RDP</b>	Radon Decay Products
<b>Rn</b>	Radon

## Acronym List

<b>RN</b>	Registered Nurse
<b>RSO</b>	Radiation Safety Officer
<b>RST</b>	Radiation/Security Technician
<b>RWP</b>	Radiation Work Permit
<b>SCBA</b>	Self-Contained Breathing Apparatus
<b>SDE</b>	Shallow Dose Equivalent
<b>SSTF</b>	Sample Submittal and Tracking Form
<b>Sv</b>	Sievert
<b>TBq</b>	Terabecquerel
<b>TEDE</b>	Total Effective Dose Equivalent
<b>TGAC</b>	Total Gross Alpha Activity Concentration
<b>Th</b>	Thorium
<b>TLD</b>	Thermoluminescent Dosimeter
<b>TLV</b>	Threshold Limit Value
<b>TWA</b>	Time Weighted Average
<b>U</b>	Uranium
<b>U3O8</b>	Uranium Oxide (Yellowcake)
<b>WL</b>	Working Level
<b>WLM</b>	Working Level Month
<b>yr</b>	year
<b>µg</b>	microgram
<b>°C</b>	degrees Celsius
<b>°F</b>	degrees Fahrenheit

## **Safety Policy Statement**

It is Energy Fuels Resources belief that our people are our most important asset and that the preservation of employee Safety and Health must remain a constant consideration in every phase of our business. It is our intent to provide a work environment as free of hazards as possible.

All employees are responsible for working safely and productively, always remaining aware of hazards in their jobs and following recognized safe work practices, including the use of Personal Protection Equipment (PPE).

It is also Energy Fuels Resources belief that any Health and Safety Program must have total employee involvement. Therefore this program has management's highest priority, support, and participation.

***PRODUCTION IS NOT SO URGENT THAT WE CANNOT TAKE TIME TO DO OUR WORK SAFELY.***

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Stephen P. Antony,  
Executive Vice President, Chief Operating Officer

### **Responsibilities**

#### **Safety Department**

Responsible for developing and maintaining the Health and Safety Plan which represents Energy Fuels Safety Program. The Safety Department shall provide support and resources, as required, to assist in implementation and verification of this program.

#### **Safety Committee**

Responsible for assessing conditions in the Mill to evaluate if actions can be taken to reduce personnel and environmental doses to levels that are As Low As Reasonably Achievable (ALARA).

#### **Managers and Supervisors**

Responsible and accountable for implementing and maintaining safe operation of activities over which they have control, and ensuring immediate corrective actions are taken to eliminate or control hazards.

#### **Employees**

Responsible and accountable for the safety of their own actions, the use of safety devices and personal protective equipment, and for complying with safe practices and approved procedures. Work-related accidents, incidents, injuries, illnesses, and near misses shall be reported to supervisors as soon as practicable.

## 1.0 Introduction

The Piñon Ridge Mill is committed to the protection from accidental loss of all its resources, including employees and physical assets. In fulfilling this commitment to protect both people and property, Energy Fuels Resources Corporation (Energy Fuels) will provide and maintain a safe and healthful work environment in accordance with current industry standards and compliance with legislative requirements. We will strive to eliminate any foreseeable hazards which may result in fires, security losses, property damage accidents, and personal injuries or illnesses.

All personnel (including employees, visitors and contractors) will be responsible for minimizing accidents within our facilities. Job practices and procedures are defined in the Health and Safety Plan for all employees to follow. Accidental loss can be controlled through good management in combination with active personnel involvement. Loss prevention is the direct responsibility of all managers and employees alike.

This plan has been prepared to inform Mill personnel of the rules, procedures and work practices that are designed to keep them and their fellow workers from being injured. The procedures in this plan relate directly to health and safety. This plan should be used in conjunction with other procedures that are in place at the Mill presented in the following plans:

- Emergency Response Plan
- Material Containment/Spill Prevention Control and Countermeasure Plan
- Security Plan
- Operational Monitoring Plan

We place personnel safety above every other consideration. It is the policy of Energy Fuels Resources to provide all Mill personnel with the working conditions and procedures necessary to make a safe work place and that everyone be allowed sufficient time to do their work safely.

The safe practices and work procedures outlined in this plan were derived from actual experiences, and are the results of joint cooperation by many individuals who have worked in the industry in an attempt to establish a sound set of rules for safe conduct. These procedures consist essentially of the application of “best industry practices”, good judgment and common sense.

If Mill personnel do not understand a work rule or procedure, they should ask their supervisor to explain it to them. Mill personnel are responsible for a thorough knowledge of all the rules which apply to the work they are doing. They may be given an examination at any time to test their knowledge of the applicable rules.

Disregard for or violation of any of these rules may result in a serious or fatal injury to Mill personnel or their fellow employees. Compliance with the safety rules is a condition of employment. Violation can result in a disciplinary action, up to and including discharge.

Preparing and distributing this plan will not in itself make the Mill safe. The Mill can only be made safe by the efforts of Mill personnel and their application of these rules.

**OUR GOAL IS TO ELIMINATE ACCIDENTS.**

The Health and Safety Plan presents the following information:

- Guidelines for reporting unsafe conditions in the workplace (Section 2.0)
- Company policy on employee conduct (Section 3.0)
- Use of personal protection equipment (PPE) (Section 4.0)
- Health and safety programs and procedures (Section 5.0)
  - HazCom Program (Appendix A),
  - Administrative Procedures (Appendix B),
  - General Health and Safety Procedures (Appendix C), and
  - Radiological Health and Safety Procedures (Appendix D).
- Mill safety personnel organizational structure (Section 6.0)
- Radiation Work Permits (Section 7.0)

## **2.0 Reporting Unsafe Work Conditions**

Mill personnel have a responsibility to themselves and their fellow coworkers to make the Mill a safe environment. A primary tenet in making the workplace safe is identifying unsafe conditions before an injury, illness or fatality occurs. As such, it is the responsibility of all management and operational personnel to:

- Correct or report all unsafe conditions to a supervisory person or to the Safety Department as soon as possible.
- Report all injuries, no matter how slight, to a supervisor immediately. Also report all accidental occurrences or conditions that may have a potential for injuring someone. If you wish to see a physician for any occupational injury or illness, contact your supervisor for an authorization slip before seeing the doctor.

### **3.0 Employee Conduct**

The conduct of Mill employees significantly affects the overall safety of all those working and visiting the Mill. For this reason, Mill employees will be subject to disciplinary action, up to and including discharge, for any of the following safety offenses.

- Violation of any safety rule.
- Smoking on Mill property. It is the policy of Energy Fuels to prohibit smoking in all locations in order to provide and administer a safe and healthy environment for all employees. This is a smoke-free facility.
- Entering the Mill site while under the influence of liquor or drugs, or having them in your possession while in the Mill site.
- Fighting, wrestling, or engaging in "horseplay" such as water fighting while on the premises.
- Removing without authority or destroying or tampering with any safety device, sign, signal or sampling equipment.
- Removal of any company property without specific written authorization.
- Carrying firearms into the Mill area without specific written permission.
- Giving false information or testimony during investigation of incidents.
- Eating, drinking and chewing in the restricted area of the Mill; except in areas designated by the Radiation Safety Officer (RSO).
- Failure to properly "scan" equipment or personnel when leaving the restricted area of the Mill.

## 4.0 Personal Protection Equipment

Personal Protection Equipment (PPE) is a useful method of protection in hazardous environments and is required to be worn at all times in the restricted area of the Mill (except where noted below). In addition, PPE is required for specific activities that are conducted on the Mill property. Mill personnel have a responsibility to make their supervisor aware of any situation in which they feel the provided PPE is inadequate or malfunctioning for any reason. The following guidelines shall be followed in regards to PPE:

- Hard hats, safety shoes, and safety glasses with side shields must be worn at all times in the plant area; except in the control rooms, offices and change rooms.
- "Bump" caps, metal hard hats and contact lenses are not allowed.
- Other PPE may be required based on the location and nature of the work being performed including, but not limited to ear plugs, respirators, rain gear, welding helmets, goggles, gloves, rubber boots, face shields and safety belts. If an employee has doubt regarding the adequacy of PPE provided, they will contact their supervisor.
- Each employee is responsible for the condition of their PPE which shall be inspected prior to each use. Defects in the PPE will be immediately reported to a supervisor.
- The following equipment is required when working on pipelines or vessels containing acids or caustics:
  - Face shield and/or chemical splash goggles.
  - Rubber coat and pants.
  - Rubber gloves and rubber boots.
  - Other equipment specified by the RSO, Assistant RSO, Plant Manager, or Foreman for that particular job.
- Hair that extends below the T-Shirt collar or extends two inches laterally from the head (on a natural lay) must be contained by a net or other adequate means.
- Unusually large or protruding rings or other hazardous items of jewelry shall not be worn except while working in the Administration Building.
- The use of a safety belt and properly adjusted life line is required where there is a danger of falling six feet or more except while performing work under the ladder and scaffolding procedure in this plan. This rule applies when going beyond the handrails of walkways and on top of any tanks at the Mill.
- Proper clothing shall be worn at all times. Loose, ragged clothing which could create a hazard will not be allowed on the job. Sleeveless shirts are not to be worn on the job.

- It is a condition of employment that all personnel who may be required to wear a respirator must be clean shaven to assure that the respirator fits properly. Personnel will be fully trained and must be medically approved prior to using respirators.

The PPE required for specific tasks is defined in employee training, health and safety procedures and/or radiation work permits.

## 5.0 Health and Safety Procedures

The procedures developed for the Piñon Ridge Mill include a variety of processes that are performed at the Mill. The procedures are divided into six categories. The procedures presented in this plan relate to the Hazard Communication Program, Administrative Procedures, General (non-radiological) Health and Safety Procedures, and Radiological Health and Safety Procedures. Environmental Procedures and Security Procedures are presented in the Operational Monitoring Plan and the Security Plan, respectively.

The six categories of procedures used at the Mill are:

**Hazard Communication (HazCom) Program** – Includes the training, labeling and other ways in which Mill workers, contractors and visitors are advised about the hazardous chemicals are to be stored, used, or produced on the Piñon Ridge Mill site.

**Administrative Procedures** - Includes corporate policy, administration of the procedures manual itself, Mill organization, conduct of audits, recordkeeping, project evaluation, and material acceptance processes.

**General Health and Safety Procedures** – Includes health and safety practices that do not necessarily include radiological materials such as safety meetings, occupational safety, trade safety, respiratory protection, confined space entry, and non-radiological air quality.

**Radiological Health and Safety Procedures** – Includes radiological training, bioassays, instrument calibration, occupational monitoring, radiological surveys of equipment and personnel, and calculation of occupational doses.

**Environmental Procedures** – Includes sampling of environmental media including air, water, vegetation, and soil. The process for calculating environmental dose is also described in this section. These procedures are provided in the Operational Monitoring Plan.

**Security Procedures** – Includes procedures that security personnel use for site access control, employee relations, yellowcake shipment, emergencies, and bomb threats. These procedures are provided in the Security Plan.

When the Health and Safety Plan or a procedure requires a revision, the person responsible for supervising the activities covered by the procedure initiates the change in accordance with Procedure AD -020, Preparation, Control, and Distribution of Procedures. Following final approval of the procedure, the procedure is issued a new revision number and date. The revised procedure is then distributed to affected Mill personnel as soon as practical and training materials are updated to reflect the revisions made, as necessary. Additionally, the RSO will determine if immediate re-training of affected personnel is necessary.

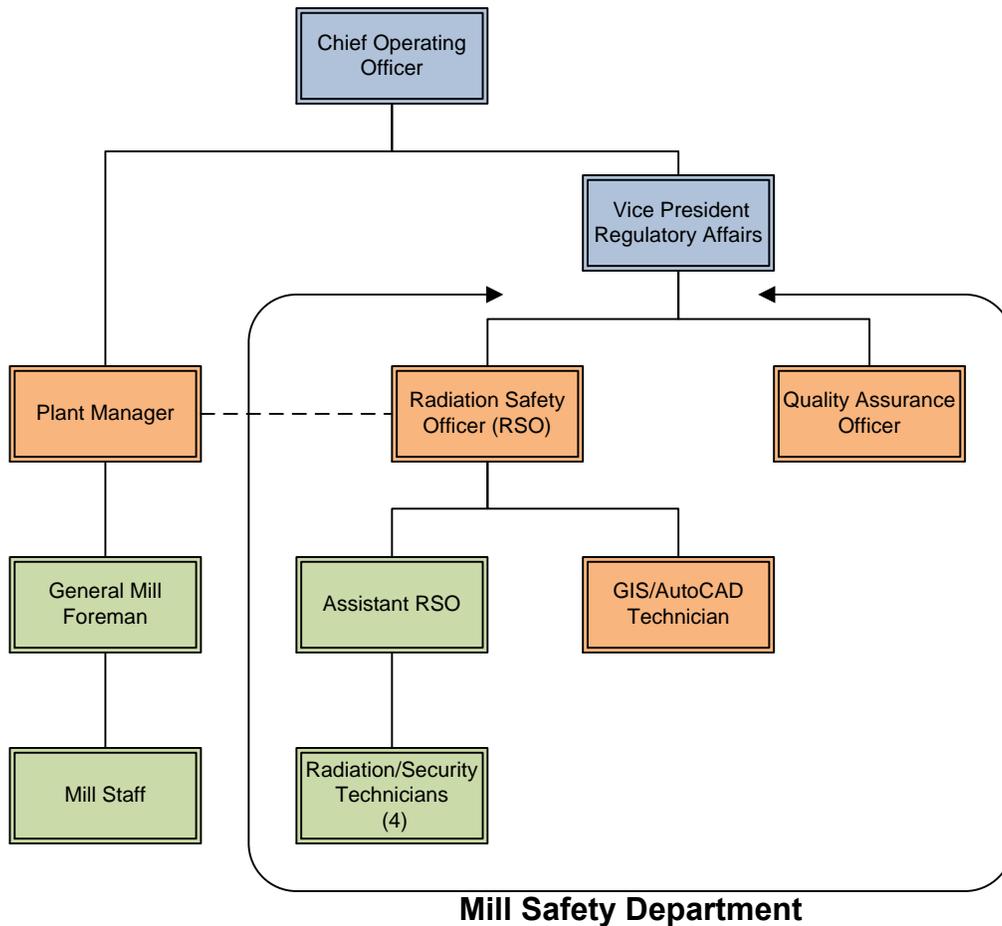
All procedures are retained on file for the active period of the CDPHE radioactive material license. In practice, nearly all records will be retained for the duration of the Piñon Ridge Mill radioactive material license and well beyond. This is necessary for the purposes of determining the liability during and after the lifetime of the Mill. For

example, radiation doses of workers may need to be verified and/or recalculated in response to an employees health issues later in life. This would require access to the employees records of their training and where and when they worked as well as the supporting data that was used to calculate the employees dose.

## 6.0 Mill Health and Safety Personnel

### 6.1 Health and Safety Department

The Health and Safety Department consists of Mill personnel responsible for day-to-day health and safety of operations. The organizational chart below illustrates the Health and Safety Department positions and where they are in the Mill organizational structure.



### 6.2 Safety Committee

The Mill Safety Committee is responsible for assessing conditions in the Mill to evaluate if actions can be taken to reduce personnel and environmental doses to levels that are As Low As Reasonably Achievable (ALARA). The Safety Committee consists of the Mill Manager, the RSO, the Assistant RSO, a foreman, and an hourly employee from both Operations and Maintenance.

The Safety Committee is responsible for evaluating the overriding principles and justification of any proposed or ongoing activity. The committee aims to optimize the activity in relation to potential dose and dose limitation. Based on their review, the Safety Committee may recommend modifications and improvements to operations, facilities, equipment and personnel utilization. The review process will consist of aspect

definition, listing the pros and cons, screening the pros and cons using applicable laws, regulations and regulatory guidance documents, recommending action on an aspect, and follow-up on a recommended action.

## 7.0 Radiation Work Permits

An Radiation Work Permit (RWP) is required for any work with radioactive materials which has not been described in a written operating or maintenance procedure.

Operation that may require a RWP include:

- Work on equipment (pumps, piping etc) in the near vicinity of any unshielded (shutter open) nuclear source.
- Work on the bag houses or pollution control equipment which may contain radioactive material.
- Work involving processing equipment, e.g. work in a tank containing or suspected to contain concentrated uranium (yellowcake or pregnant solution) in a dry form or in such a form that contamination by ingestion or inhalation of radioactive materials could occur.
- Work as may be directed by the RSO or the Assistant RSO to ensure ALARA.

The detailed procedure for requesting, producing and issuing a RWP is presented in Procedure RH-060 in Appendix D.