Thompson Rivers University Asbestos Exposure Control Plan

1. **PURPOSE**

1.1. To outline the responsibilities and procedures in the control and handling of asbestos containing materials at Thompson Rivers University.

2. **SCOPE**

2.1. These procedures apply to all TRU staff. TRU aims to maintain a safe and healthy environment by containing and correcting any situation involving asbestos containing materials that caused or could likely cause an injury or illness.

3. **PRECAUTIONS**

POTENTIAL HEALTH & SAFETY HAZARDS

HAZARD		TO PROTECT YOURSELF
EXPOSURE		Understand the chemical(s) you are working in the vicinity of. Consult the MSDS and wear the appropriate PPE.

4. RESPONSIBILITIES

4.2 Asbestos Control Coordinator

The Asbestos Control Coordinator for Thompson Rivers University is:

Gordon Maurits
Occupational Health and Safety Officer,
AHERA Certified Building Inspector # CABI-13-034
Telephone: (250) 828-5139 (250) 320-9252

Overall responsibility and authority for the coordination of the AECP has been assigned to the Asbestos Control Coordinator (ACC) who shall:

I. Implement and manage the AECP in a conscientious manner and be qualified through training and experience in the safe handling of asbestos, in accordance with Work Safe BC regulations.

II. Develop and implement an inspection program to monitor the condition of asbestos containing materials throughout the buildings. Damaged or deteriorated asbestos containing materials must be promptly removed, enclosed or encapsulated to prevent the release of asbestos fibers. The AECP must be formally re-evaluated at least annually. This will include reassessment of the potential hazards, remedial action as required and an update of the tagging and identification system.

III. Perform bulk asbestos sampling in areas where clarity of the location of asbestos is unsure.

IV. Ensure that a "Notice of Project Asbestos" is sent to Work Safe BC and the TRU Health and Safety Department (OHS) prior to performing any work activities involving asbestos containing materials. Detailed site specific work procedures must be submitted with the NOPA.

V. Coordinate the removal contract with the asbestos consultant and the contractor to ensure that sampling records and waste disposal forms and records are filed with the ACC and OHS.

VI. Monitor and review authorized asbestos work performed by maintenance personnel, including contracted trades, to ensure that their work activities are not disturbing asbestos containing materials and that identifying tags are not being inadvertently removed, damaged or painted.

VII. Communicate with staff/faculty/ workers to ensure that their activities are not disturbing asbestos containing materials. Building occupants must have, even minor renovations or service work (e.g. hanging boards on textured walls, replacing floor tiles) authorized by the ACC.

VIII. Renovations and maintenance activities increase the potential for disturbance of ACM. Prior to conduction any renovations or maintenance work, the ACC will be notified by affected parties and will review the work to assess the likelihood of ACM being disturbed and will take the appropriate actions to ensure that no asbestos fibers are released. The ACC will ensure that safe work practices will be used in accordance with Work Safe BC regulations and that work is only carried out by suitable trained and qualified personnel.

IX. Review contractor work plans and procedures for work on, or in close proximity to asbestos abatement and repair projects.

X. Review air sampling results for airborne asbestos.

4.2 TRU Safety & Emergency Management Department

The Safety Department is responsible for the following:

I. Ensure that the location of asbestos containing materials and presence of suspected asbestos containing materials are documented in the HMIS.

II. Review annual inspection reports.
- Identify areas requiring repairs and will prioritize removal in collaboration with TRU Facilities and the ACC

III. Report findings to the Manager of Safety & Emergency Management

IV. Respond to reports of asbestos damage by:
- Visiting disturbance site for a visual inspection
- Contact the ACC to consult on the need to undertake sampling.
- When necessary, advise area occupants of work activity and organize information meetings.
- If the ACC cannot be reached, consult the Facilities Director for further action.

V. Asbestos removal projects:
   - Attend pre-construction meetings and area walk troughs to identify potential sources of adverse impact on adjacent area occupants and potential problems.
   - Monitor the removal work for compliance with regulatory and TRU Health and Safety requirements and liaises with the ACC for the duration of the removal project.

VI. Renovation Projects with potential for ACM disturbance
   - Participate in planning meetings to assess potential for asbestos disturbances

VII. Maintain documentation of:
   - Copies of all NOPAs
   - Inventory of asbestos locations
   - Sampling records
   - Work procedures
   - Waste disposal records

4.3 Supervisors

Supervisors have the following responsibilities:

- Have workers instructed in the safe work procedures with asbestos
- Ensure that workers are familiar with and follow the exposure control plan
- Ensure workers are trained for all tasks assigned to them, and regularly check that they are doing their work safely.
- Must consult with the TRU Asbestos Control Coordinator before assigning any work that has the potential to result in exposure to asbestos.
- Ensure that only authorized, adequately trained workers operate tools and equipment or use hazardous materials.
- Ensure that workers follow safe work procedures for handling, storing, and maintaining equipment and materials
- Enforce health and safety requirements
- Correct unsafe acts and conditions immediately.
- Identify workers with problems that could affect safety at the worksite, and follow up with interviews and referrals where necessary.
- Create health and safety rules, and inspect the workplace regularly for hazards.

In addition, if at any time the supervisor suspects that ACM poses an exposure hazard to their employees or others they must cease work immediately and consult with the TRU Asbestos Control Coordinator. Work must not recommence until a risk assessment has been performed and risks of exposure to asbestos have been mitigated.

4.4 Contractors/Prime Contractors

Contractors/Prime Contractors have the following responsibilities:

- Ensure the coordination of health and safety activities for employers, workers, and others at the workplace.
- Does everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with relevant sections of the Work Safe BC regulations?
- Be made aware of the presence and location of all asbestos containing materials, the AECP and the tagging and identification system.
- Not be permitted to disturb any asbestos containing materials.
- Be trained in the safe handling of asbestos, if required
- All work activities relating to asbestos containing materials will only proceed after being authorized by the Asbestos Control Coordinator
- Immediately inform the ACC if damage or disturbance of asbestos containing materials occurs during the course of their work.
- Not damage, remove, paint or otherwise interfere with the AECP identification tags.

4.5 Workers

Workers and Staff shall:

- Be made familiar with the presence and location of asbestos containing materials and the ACEP, including labeling and identification.
- Not disturb asbestos containing materials. This will prevent any asbestos fibers from being released.
- Know and follow health and safety requirements that apply with working with or near asbestos
- Ask the supervisor for training to perform work tasks and use equipment safely.
- Participate in all health and safety education and training pertaining to asbestos.
- Work safely, and encourage co-workers to do the same.
- Use all required PPE and clothing.
- Correct any unsafe conditions or immediately report them to a supervisor
- Inform their supervisor of any physical or mental impairment that may affect their working safely with asbestos.
- Immediately report any injury or exposure to a first aid attendant and supervisor.
- Have all renovations, maintenance or service work authorized by the ACC prior to work being carried out.
- Not damage, remove, or paint over any AECP identification labels.
- Immediately inform their supervisor and the ACC if any asbestos containing materials are damaged or disturbed.

5. Risk Identification and labeling of ACM

An important part of the AECP is to ensure that potential workplace hazards are identified and that the risk associated with those hazards are assessed. If any work where asbestos materials may be disturbed TRU will conduct an asbestos survey to identify potential hazards, assess the risks associated with those hazards and control the risk by eliminating or minimizing them. To identify all asbestos containing materials they will be clearly labeled where practicable.

The identification system informs building occupants, maintenance workers and contractors about the presence of asbestos containing materials. It is essential that such a system be accompanied by proper training for all contracted workers and maintenance staff.

The labeling system used at TRU is a white rectangular notice which can be found on asbestos piping or in door jambs to rooms where asbestos is or may be located. The label shows a toxic symbol along with building location, room #, and what form of asbestos is located at this location. Example below:

Any labeled materials containing asbestos must not be disturbed by maintenance or service personnel, contracted trades, or building occupants until work has been quantified and identified by the Asbestos Control Coordinator. Those materials not labeled or identified otherwise shall be considered not to be asbestos containing until analysis of the suspect materials determines otherwise.

6. Asbestos Survey and Inventory

An extensive Asbestos Survey was conducted in 2012, at Thompson Rivers University. A room by room hazard analysis was performed to determine the presence and risk, if any, of asbestos on campus. Although no immediate hazard exited, asbestos containing areas have been identified and the Asbestos Exposure Management Plan has been developed to monitor their locations and conditions.

7. Risk Control

Asbestos has been classified as an ALARA substance, for which exposures must be kept **as *low as reasonably achievable.***

The Work Safe BC Safe Work Practices for Handling Asbestos booklet outlines a variety of appropriate controls to prevent asbestos exposure when working in areas where ACM exists. The information found in the Work Safe BC booklet should be used as a resource for supervisors when creating work on or around ACM.

The following control measures must be used to eliminate or minimize the risk of exposure to asbestos to TRU employees, students, contractors and visitors. The use of control measures should be prioritized with Elimination and Substitution being the best control, and then Engineering controls such as barriers, and containment and Administrative controls such as signage. Personal Protective Equipment should be used in situations where other controls are not practicable or where the other controls are not adequate in eliminating concerns of exposure to asbestos. The proper use, fit and disposal of PPE must be considered.

Asbestos Containing Material must be substituted for less hazardous materials whenever possible

8. Written Safe Work Procedures

Written safe work procedures describe how to carry out specific tasks safely and efficiently. Safe work procedures are written for:

- Hazardous tasks
- Complicated tasks, so that important steps don't get missed
- Frequently performed tasks
- Less routine tasks, to remind workers of the hazards and how to control the risks.

8.1 Low Risk Work Activities

Low risk work activities are those that involve working with or in proximity to asbestos containing material. Activities that carry a low risk of exposure include:

- Disturbing materials that contain less than 0.5% asbestos, providing dust controls are in place.
- Repairs to drywall that has ACM drywall filler
- Moving asbestos containing waste material that is contained within cleaned, properly sealed bag and then double-bagged,

Low risk work activities do not require the use of PPE or engineering controls to prevent exposure to airborne asbestos fibers.

8.2 Moderate Risk Activities

Moderate risk work activities are those that involve working with or in proximity to asbestos containing materials that is being cut, sanded, drilled, broken, ground down, fragmented, or otherwise disturbed. It is necessary to use PPE and/or engineering controls to prevent worker exposure to airborne asbestos fibers.

Activities that carry a moderate risk of exposure include:

- Using hand tools to cut, shape, drill, grind. Or remove non-friable materials containing asbestos.
- Using power tools to cut, shape, drill, grind, or remove non-friable materials containing asbestos provided that each tool is equipped with a HEPA filtered vacuum system.
- Backing mounting screws out of asbestos cement products (such as transite board) and removing the boards or tiles intact.
- Buffering vinyl asbestos floor tiles with a course disc.
- Collecting asbestos samples for laboratory analysis
- Removing any part of a false ceiling to gain access to a work area where materials containing asbestos are or are likely to be, lying on the surface of the false ceiling.
- Removing drywall materials where joint filing compound containing asbestos have been used.
- Removing asbestos tape or paper on ductwork
- Removing vinyl asbestos floor tile or other non-friable materials.
- Removing an entire piece of equipment or pipe with the asbestos containing material remaining effectively intact, or removing sections by means of a glove bag apparatus.
- Changing out a vacuum bag from a HEPA vacuum that was used for asbestos abatement procedures.

8.3 High Risk Activities

High risk activities include activities that carry a high risk of exposure to airborne asbestos fibers. These activities require specific procedures and containment to ensure the safety of workers and others who may be affected by the activities. Activities that carry a high risk of exposure include:

- Removing, encapsulating, or enclosing materials containing asbestos during repairs, alteration, maintenance, demolition or dismantling of any part of a building, structure, or piece of machine.
- Removing asbestos containing textured materials from ceiling or walls
- Using power tools without water or dust control to cut, drill through ACM
- Repairing, altering, or dismantling any part of a boiler, furnace, kiln or similar device in which insulating materials containing asbestos have been used or applied.
- Removing ACM vermiculite insulation
- Removing any asbestos containing materials in circumstances where there would be a significant release of fibers.

High risk activities will not be performed by TRU employees. These activities will be contracted t to outside contractors

Written safe work procedures must specify any required PPE, when it must be used, and where it can be found. Procedures are to be posted where they will be available to workers. These procedures must be submitted to Work Safe BC along with an NOPA prior to the start of an asbestos abatement project.

9. Employee and Contractor Training

Worker training is a requirement for all individuals that may come into contact with asbestos containing materials during the normal course of their work. The training for Facilities and Maintenance staff that may inadvertently disturb ACM will typically be less involved that that of contracted workers, who will be required to show that they have had recent training. TRU facilities and maintenance staff will be required to recognize any damaged materials or debris that they may encounter and report their findings immediately to the ACC for action. TRU facilities and maintenance staff will be trained in Moderate risk abatement asbestos procedures and personal protection equipment required for performing these procedures, this includes respirator fit testing.

All contracted employees working in areas containing ACM will be informed of the presence of the material and will be responsible for adequately training their workers to deal correctly with the hazard.

The training program will include:

- An asbestos awareness program, including health effects and elements of risk.
- The means of identifying Asbestos Containing Materials (ACM)
- Training in the use of protective clothing and equipment, work procedures and air monitoring
- The current Work Safe BC regulations
- The use and maintenance of respirators and the respirator fit program.
- An awareness of the Asbestos Exposure Control Plan (AECP)

10. Waste Management

All asbestos waste and other waste contaminated with asbestos must be placed into a sealed containers or bags and labeled as containing asbestos.
Asbestos containing waste includes:

- Debris or asbestos containing materials.
- Disposable coveralls, gloves and booties used during asbestos work.
- Sponges and other disposable cleaning materials
- Plastic drop sheets.
- HEPA vacuum bags

The containers and bags must be cleaned with a damp cloth or vacuum cleaner with a HEPA filtered exhaust prior to removal from the designated work area. Once sealed and cleaned the asbestos waste must be disposed of at an authorized landfill in accordance with the appropriate provincial and municipal environmental requirements. All asbestos waste must be accompanied with a waste manifest prior to delivery to a waste landfill.

A copy of the manifest will go to the Asbestos Control Coordinator and to the TRU Safety Department.

The handling and loading of asbestos waste will be undertaken in accordance with established low risk procedures.

11. Written Records/Verification of Understanding

The exposure control plan must be documented and records should be kept and maintained for a minimum of 3 years. Documents of the exposure control plan will include:

- All asbestos training for staff and workers
- Respirator fit testing records
- Reports to JOHSC meetings
- Written work procedures
- Accident investigations
- Health monitoring records

Records of asbestos containing materials inventory, risk assessments, inspections and air monitoring results

12. Health Monitoring

Chronic exposure to asbestos may increase the risk of lung cancer, mesothelioma, asbestosis, and pleural disorders. Symptoms include shortness of breath, persistent and productive cough, chest tightness, chest pains, loss of appetite, or a dry crackling sound in the lungs while inhaling. Cigarette smoking greatly increases the likelihood of a person developing lung cancer as the result of asbestos exposure. Health monitoring of workers, such as annual lung function testing and periodic (every 2 to 3 years) chest X-rays for asbestos abatement workers.

13. Review of Asbestos Exposure Control Plan

The TRU asbestos exposure control plan must be reviewed annually.

14.SUMMARY OF CHANGES

Revision #	Date	Change (include section #)	Issued By
1	11/28/2013	NEW	S&EM Safety Officer
2	09/08/2015	Reviewed and revised	S&EM Safety Officer