



REFRACTORY CERAMIC FIBRES

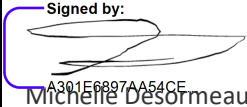
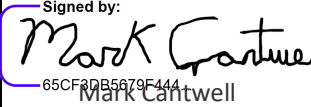
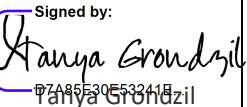
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About This Document

Purpose	This Practice establishes a One Canada uniform approach for conducting low-risk Refractory Ceramic Fibre (RCF) work.				
Scope	The scope of this practice is set to the following limits: <table> <tr> <th>In scope</th><th>Out of scope</th></tr> <tr> <td>Low risk RCF work (<50% of the OEL of Refractory Ceramic Fibres).</td><td>Detailed work direction for high-risk RCF work, including installation and removal activities.</td></tr> </table>	In scope	Out of scope	Low risk RCF work (<50% of the OEL of Refractory Ceramic Fibres).	Detailed work direction for high-risk RCF work, including installation and removal activities.
In scope	Out of scope				
Low risk RCF work (<50% of the OEL of Refractory Ceramic Fibres).	Detailed work direction for high-risk RCF work, including installation and removal activities.				
Authorized user	Those authorized to perform low risk RCF work, who have reviewed the RCF Safety Data Sheet and completed respirator fit testing.				

1. Identification and Classification

1.1 RCF Risk Level-Exposure

Refractory Ceramic Fibres (RCF) Definition	RCF is a high-temperature insulation material that releases invisible respirable fibres when disturbed. Inhalation of these fibres is hazardous (classified A2 – suspected human carcinogen). 1.1.1 Before any work that may disturb RCF, the supervisor must complete a risk classification (Section 1.2) and implement controls per this practice.
Routes of Exposure	Refractory Ceramic Fibres (RCF) are respirable, fibres that may become airborne when RCF-containing materials are handled, disturbed, damaged, or removed. The primary route of exposure is inhalation, with additional potential for skin and eye contact.
Low Level Short-Term Health Effects (Low Risk RCF Work)	Typically associated with low-risk RCF work where fibre release is minimal and controls are in place. 1.1.2 Workers experiencing skin itching, eye/throat irritation, or coughing during RCF work must stop, verify PPE integrity, and reassess controls before continuing.

High-Level Long-Term Health Effects
(High-Risk RCF Work)

Associated with high-risk RCF work involving significant disturbance of RCF materials.

Chronic or high-concentration RCF exposure is associated with serious lung disease including fibrosis and cancer (RCF is classified A2 – suspected human carcinogen per ACGIH).

1.2 Risk Classification

Requirements for
Determining Risk
Level of RCF

Before any work is near or involving RCF, the work supervisor must:

- 1.2.1 Classify the task as low risk or high risk based on the potential for fibre release and worker exposure.
- 1.2.2 If conditions change during work, the risk classification must be reassessed immediately.

The risk level of work involving Refractory Ceramic Fibres (RCF) must:

- 1.2.3 Determine the potential for fibre release and worker exposure. Residual dust and debris can escalate risk from low to high.
- 1.2.4 Continuous reassessment is required when working around RCF.

Risk Assessment
Factors

When evaluating RCF risk the following risk assessment factors must be assessed:

Risk Assessment Factors	Low Risk Indicators
RCF Material Condition	New, intact, or sealed material with minimal fibre release potential.
Dust and Residues	No visible dust or debris is present. RCF is 50% below the OEL.
Type of Work	Visual inspection, non-intrusive work
Air Movement	Minimal air movement
Work Location	Outdoor or well-ventilated areas
Worker Proximity	Limited time and distance from RCF source

**Risk Level- Work
Scope Distinction**

Low-risk and high-risk RCF work decision criteria table:

Low-Risk RCF Work (In Scope)	High-Risk RCF Work (Out of Scope)
Minor disturbance of intact RCF (e.g., inspection, small-area repair)	Bulk removal, demolition, or large-scale disturbance of RCF insulation
Short-duration tasks with minimal fibre release	Prolonged handling or cutting of RCF material
Adequate engineering controls can maintain exposure well below OEL	Exposure is likely to approach or exceed OEL without specialized controls



NOTE: Any task classified as high risk is outside this practice. High-risk RCF work must be performed by qualified contractors under their own approved procedures.

2. Exposure Control

2.1 Pre-Job Planning

**Pre-Job Planning
Requirements**

When planning work near or around RCF, the following pre-work activities must be assessed by the job supervisor:

Item	Check
Ensure all permits and works plan identify RCF risk and control measures	✓
Establish a decontamination area, where required as per sec. 2.4	✓
Establish exclusion zones	✓

**Exclusion Zone
Requirements**

Exclusions zone must:

- 2.1.1 Be established before starting RCF work. Red “Do Not Enter” barricade tape must be utilized to control access to the work front.
- 2.1.2 Contain posted warning signs or tags at the work area. Signage must meet requirements in Appendix A.
- 2.1.3 Set up in compliance with CPC Barricades and Hole Cover Practice.

2.2 Exposure Control Requirements

Exposure Control Measures

When working around RCF, the following exposure control measures must be implemented:

Item	Check
Remove all visible dust from work surfaces using damp cloth or a HEPA-filtered vacuum.	✓
Wet RCF material before and during work, unless wetting creates a hazard to workers.	✓
Prevent RCF waste from accumulating or drying prior to final bagging.	✓
Use plastic drop sheets or equivalent controls where required to prevent the spread of RCF dust.	✓
Ensure all RCF-contaminated equipment and materials are thoroughly cleaned before removal from the RCF work area.	✓
No eating, drinking, or smoking in the RCF work area or exclusion zone.	✓
Workers must wash their hands and faces before any break.	✓

Permitted and Prohibited RCF Management Methods

The following methods apply to all phases of RCF work, including active handling, cleanup, and decontamination.

Permitted Methods	Prohibited Methods
Wet cleaning (mist-spraying, damp wiping) HEPA-filtered vacuum system	Dry brushing Shaking or beating PPE Use of compressed air Dry sweeping

2.3 Exposure Limits and Personal Protective Equipment Needs

RCF Exposure Limits

RCF jurisdictional exposure limits are:

Jurisdiction	OEL	Reference
Alberta	0.2 fibres/cc (8-hr TWA) 0.1 fibres/cc (12-hr TWA)	AB OHS Schedule 1
British Columbia	0.2 fibres/cc (8-hr TWA) 0.1 fibres/cc (12-hr TWA)	BC OHS Table s.5.48

Respiratory Protection

Respiratory protection must be used for all RCF work:

- 2.3.1 Respirator users must have current training and valid quantitative fit tests for the respirator being used.
- 2.3.2 The minimum respiratory protection must be half-face air-purifying respirator equipped with P100 (HEPA filters).

Body Protection

Body protection must consist of:

- 2.3.3 Snug-fitting disposable coveralls (e.g., Tyvek®), fitted at the neck, wrists, and ankles
- 2.3.4 Disposable gloves, or gloves that can be effectively decontaminated
- 2.3.5 Impervious, cleanable boots (e.g., rubber, neoprene, or nitrile), or boots fitted with disposable boot covers.



Eye Protection

When exposure to dust is unexpected:

- 2.3.6 Mono goggles or tight-fitting eyewear including spoggles or foamback glasses must be used for low-risk RCF work.



NOTE: A full-face respirator equipped with P100 filters provides enhanced protection against airborne particulates during the decontamination process. This reduces worker exposure while also providing integrated eye protection, eliminating the need for separate goggles..

2.4 Decontamination

Decontamination Requirements

Decontamination must be used to prevent the release and spread of airborne RCF fibres.

- 2.4.1 The decontamination tent(s) must be fully equipped and operational prior to starting work.
- 2.4.2 Use only the permitted methods defined in Section 2.2 – Exposure Control Requirements.
- 2.4.3 Be completed using a two-stage process each time personnel exit a RCF restricted work area.
- 2.4.4 Decontamination process must be posted on decontamination tents and available to all workers prior to and during RCF work.

**Decontamination
Process
Requirements**

Stage 1 (Dirty Side) Primary decontamination process must be:

2.4.5 Completed prior to entering clean side of the decontamination area.

2.4.6 Performed in accordance with Appendix A.

Stage 2 (Clean Side) Final decontamination process must be:

2.4.7 Completed prior to exiting the controlled work area.

2.4.8 Performed in accordance with Appendix B.

**Decontamination
Tent Set-up
Requirements**

The decontamination tent must meet these general set-up requirements:

Item	Check
Be located as close as practicable to the RCF work area.	✓
A clearly defined dirty side and clean side must be established and identified with signage.	✓
Sized to allow workers to move freely during decontamination.	✓

**Dirty-Side Set-Up
Requirements**

Dirty side of the decontamination tent must consist of:

Item	Check
HEPA-filtered vacuum.	✓
Negative Air Filtration System with HEPA filters.	✓
6-mil poly waste bags.	✓
Sealed waste receptacle.	✓
"WARNING– RPE Required" signage.	✓
Water source with rags or wet wipes.	✓

**Clean-Side Set-Up
Requirements**

Clean side of the decontamination tent must consist of:

Item	Check
Clean TYVEK coveralls (multiple sizes)	✓
P-100 HEPA filters	✓
6-mil poly waste bags	✓
Sealed waste receptacle	✓
Water source with rags or wet wipes	✓
Respirator storage bags	✓

3. Waste Management

3.1 Disposal and Cleanup

Disposal Requirements

All RCF waste containing RCF must be managed in the following way to prevent fibre release during cleanup, transport and disposal. To achieve this waste must be:

- 3.1.1 Bagged and sealed in 6mil polyethylene bags, exterior damp-wiped prior to removal from the work area.
- 3.1.2 Placed in sealed, clearly labelled containers located within the RCF restricted area, until removal from site.
- 3.1.3 Transported from the job site in sealed containers. Content clearly labelled on the exterior, in accordance with WHMIS 2015 regulations.
- 3.1.4 Dispose of RCF waste in accordance with applicable federal, provincial, and local regulatory requirements.
- 3.1.5 All waste generated where possible NORM contamination may occur must be evaluated and disposed of in accordance with CPC NORM Management Standard.

Work Area Cleanup Requirements

Work areas must be

- 3.1.6 Cleaned only using permitted methods as per Section 2.2.
-

4. Appendix

4.1 Appendix A- Clean Side-Decontamination Process

Clean Side-Decontamination-Work Ongoing

Step	Action
1.	Hang respirator with cartridges on designated CLEAN SIDE hook, ensuring respirator does not leave the CLEAN SIDE.
2.	Wipe respirator exterior using approved wet wipes or a damp cloth.
3.	Wash or wipe hands and any exposed skin. Disposing of used wipes in designated RCF waste container.
4.	Wipe down CLEAN SIDE surfaces and report low inventory or concerns to the job supervisor.

Clean Side- Decontamination- Work Complete

Step	Action
1.	Remove respirator cartridges while avoiding contact with filter media and place directly into an RCF waste bag.
2.	Remove respirator by tilting it forward and away from the face. - Clean using approved wet wipes or a damp cloth. - Dispose in designated RCF waste bin
3.	Wash or wipe hands and any exposed skin.
4.	Wipe down CLEAN SIDE surfaces and report low inventory or concerns to the job supervisor.

DECONTAMINATION FLOW		CLEAN SIDE INVENTORY
	Remove Cartridges	Clean TYVEK Coveralls – Multi Size
	Dispose of Cartridges	P-100 HEPA Filters
	Remove the Respirator	6 mil poly waste bags
	Clean and Store Respirator	Sealed waste receptacle
		Water source and rags or Wet Wipes
		Respirator Storage Bags

4.2 Appendix B- Dirty Side-Decontamination Process

Use this process when entering the DIRTY SIDE of the decontamination area while maintaining required respiratory protection.

Step	Action
1.	Remove visible dust from PPE using a HEPA vacuum or wet rags, following a top-to-bottom sequence • Respirator and hard hat. • Shoulders and arms. • Torso. • Legs. • Boots.
2.	Remove disposable PPE in the following order: • Outer gloves. • Disposable coveralls rolled inside-out from top to bottom, and boot covers if worn.
3.	Place all disposable PPE immediately into a designated RCF waste bag.
4.	Inspect visually for remaining contamination and proceed to the CLEAN SIDE once no visible contamination remains.

DECONTAMINATION FLOW	DIRTY SIDE INVENTORY
 Exterior of Hard Hat and Respirator	HEPA-filtered vacuum
 Shoulders, Arms and Torso	Negative Air Filtration System with HEPA Filters
 Legs	6 mil poly waste bags
 Boots	Sealed waste receptacle
	Do Not Enter - RPE Required Signage
	Water source and rags or Wet Wipes

4.3 Appendix C- RCF Signage

SUBSTRATE: D/S Crezone Sandwich Board
SIZE: 24inch x 36inch



SIDE A,B

SUBSTRATE: .040 Alum
SIZE: 35cm x 25cm



SUBSTRATE: Vinyl
SIZE: 12inch x 10inch





CLEAN SIDE DECONTAMINATION PROCEDURE

1. RESPIRATOR REMOVAL

- If work is complete - Remove cartridges from the respirator.
 - o Avoid contact with filter media during removal.
 - o Place used cartridges in waste bag.
- If work is not complete – Hang masks in CLEAN Side.
 - o Masks with used cartridges must not leave the CLEAN Side.
- Carefully remove the respirator, tilting it forward and away from your face.
- Clean respirator with pre-packaged cleaning wipes, damp cloth, or another appropriate cleaning method.
- Wash or wipe down hands and bare skin.

***NO DRY BRUSHING, SHAKING, SWEEPING, OR COMPRESSED AIR AT ANY TIME.**

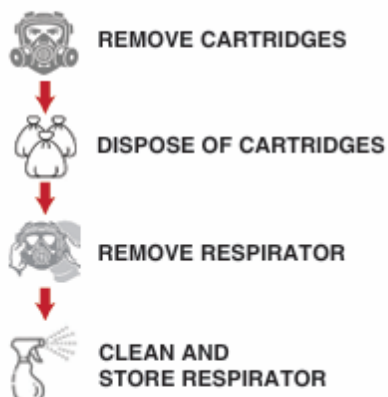
2. STORAGE AND CLEAN-UP

- Ensure all waste is properly disposed of in a designated RCF disposal container.
- Wipe down work area as required.
- Report any low inventory or concerns to the project supervisor.

***HOUSEKEEPING IS "ALL WORKERS" RESPONSIBILITY.**

***ENSURE THAT HEPA FILTERS ARE CHANGED REGULARLY AND AREAS ARE KEPT CLEAN.**

DECONTAMINATION FLOW



CLEAN SIDE INVENTORY

ITEM

Clean TYVEK Coveralls – Multi Size

P-100 HEPA Filters

6 mil poly waste bags

Sealed waste receptacle

Water source and rags or Wet Wipes

Respirator Storage Bags

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****REFRACTORY RISK****

RPE REQUIRED AT ALL TIMES WHILE IN DIRTY SIDE

DIRTY SIDE DECONTAMINATION PROCEDURE

1.GROSS REFRACTORY FIBER REMOVAL

While wearing required respiratory protection:

- Utilize HEPA vacuum and/or wet rags to remove all visible dust and debris from disposable coveralls and PPE.
- Following top-to-bottom sequence to prevent contaminating cleaned areas:
 - o Exterior of respirator and hard hat
 - o Shoulders and arms
 - o Torso
 - o Legs
 - o Boots

***NO DRY BRUSHING, SHAKING, SWEEPING, OR COMPRESSED AIR AT ANY TIME.**

2.DISPOSABLE PPE REMOVAL

- Remove disposable PPE in the following order:
 - o Outer gloves
 - o Disposable coveralls (rolled inside-out from top to bottom)
 - o Boot covers (if worn)
- Place all disposable PPE immediately into designated waste bag.
- Once confirmed there is no visible contamination, proceed to the clean side.

DECONTAMINATION FLOW



EXTERIOR OF HARD HAT
AND RESPIRATOR

SHOULDERS, ARMS
AND TORSO

LEGS

BOOTS

DIRTY SIDE INVENTORY

ITEM

HEPA filtered vacuum
Negative Air Filtration System with
HEPA Filters
6 mil poly waste bags
Sealed waste receptacle
Do Not Enter - RPE Required
Signage
Water source and rags or Wet Wipes

5. Appendix D: Revision Control Sheet

REVISION CONTROL SHEET		
Revision	Date Issued (YYYY/MM/DD)	Comments
0	2026-Aug-10	Complete rewrite-Replaces Refractory Ceramic Fiber Guideline (ALL-A0A-00-000-HGL-0020).