



**SARNIA REFINERY**

**ASBESTOS CONTROL**

Issue Date: November 29, 2018    Revision #: 13

**STANDARD**

Document Number:

4000-ZSD-S-MSAFECA-00181

Next Review Date: August 29, 2023

Document Owner: Manager, Environment, Health & Safety

Document Contact: Occupational Hygienist

**SCOPE AND PURPOSE**

This Standard identifies controls required to reduce the risk of exposure to asbestos and to ensure compliance with Ontario Regulation 278/05, Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations – made under the Occupational Health and Safety Act.

This Standard applies to all:

- buildings in which material that may be asbestos-containing has been used; and
- all work that involves the handling and/or disturbance of material that:
  - is asbestos-containing;
  - is being treated as if it were asbestos-containing;
  - has been identified as potentially asbestos-containing; and/or
  - may disturb known or potential asbestos-containing material.

**ROLES & RESPONSIBILITIES**

**Occupational Hygienist** is accountable to:

- Provide support, as necessary, to ensure appropriate control of worker exposure to asbestos, conformance to this Standard and compliance with O.Reg.278/05;
- Conduct monitoring of airborne asbestos, as required, for the determination of potential worker exposure and clearance of asbestos work areas; and
- Maintain documentation and records relating to this Standard.

**Occupational Health Nurse** is accountable to provide medical surveillance and pre-placement testing in accordance with this Standard and maintain associated records.

**Contractors** are accountable to ensure conformance to this Standard and compliance with all applicable requirements under O.Reg.278/05.

**Shift Supervisor** is accountable to sign all Safe Work Permits for Type 3 asbestos work activities and subsequently notify the Shift Supervisor for the other area (i.e., the would-be On-Scene Commander) of the work activity as well.

The **In-House Maintenance Insulator group** is accountable to ensure that assessments of suspect asbestos-containing materials are conducted by members of the group who are deemed competent to do so based on appropriate trade-related knowledge and experience.

## **RISK ASSESSMENT**

### Asbestos Assessment

Insulating material that is not physically identified as non-asbestos and is to be handled or disturbed by an in-house Maintenance Insulator must be visually assessed for the presence of asbestos prior to disturbance. An initial assessment shall be conducted by the Insulator(s) who will be disturbing the material. If the material cannot be identified with certainty, a more experienced Insulator shall be consulted. If the material remains suspect, it shall either be sampled or assumed to be asbestos and handled accordingly and an Asbestos Assessment Form (Appendix A) shall be completed prior to disturbance of the material. If the material is visually deemed non-asbestos, work may continue without completion of an Asbestos Assessment Form.

Whenever work involves the handling or disturbing of known or suspect potential asbestos-containing material, by persons other than an in-house Maintenance Insulator, an assessment shall be completed and documented on the Asbestos Assessment Form. The assessment shall include all suspect materials that may be disturbed within at least a 3m radius of the work area. Drawings, plans and/or specifications shall be used, as appropriate, to show the location of the material(s) involved. For planned work, the assessment shall be initiated by the Planner or Project Engineer. For urgent/emergency situations, a Shift Supervisor shall initiate an assessment by contacting an Insulator Foreman.

A completed Asbestos Assessment Form is valid for a maximum period of 3 months. One Asbestos Assessment Form may be used for more than one job provided the scopes of work and necessary precautions are similar. A copy of the Asbestos Assessment Form and all supporting documents shall be submitted to the Occupational Hygienist.

Note: An Asbestos Assessment Form is not required for Type 1 gasket removals or bulk sample collection.

---


## **ASBESTOS CONTROL**

Current versions of approved documents are maintained in Livelink. Printed copies are uncontrolled.

## Evaluation of Material

Some ACM is physically identified as ACM. All other suspect materials must be assumed to be ACM unless verified otherwise.

Acceptable methods for verifying that a material is non-ACM may include:

1. Visual inspection by the in-house Maintenance Insulator group.
2. Bulk sampling and analysis:
  - Sampling and analysis shall be conducted in accordance with O.Reg.278/05, section 3. The samples shall be analyzed by an American Industrial Hygiene Association (AIHA) accredited laboratory. Interpretation of the results shall be conducted by the Occupational Hygienist or designate. Records of all samples collected shall be maintained by the Occupational Hygienist.
3. The following field identification methods only:
  - Blue banding;
  - 2" brass "NON-ASBESTOS GASKET" tag; or
  - Clear identification of the material with the following symbol, , spray-painted blue. (This symbol is used to identify material that is in fair/poor condition and has been visually determined to be non-ACM by a qualified Insulator).
4. Verification of the following installation date:
  - Gaskets: ≥January 1, 2000;
  - Black mastic and cement pipe: not applicable – may be deemed non-ACM based on analytical verification only;
  - All other suspect materials: ≥January 1, 1990.

## Classification of Work

With the exception of bulk sample collection, all work that involves the disturbance of asbestos-containing material shall be classified as a Type 1, Type 2 or Type 3 operation in accordance with O.Reg.278/05, section 12.

- Removal of asbestos-containing gaskets shall be classified as a Type 1 operation if the gasket is non-friable, or a Type 2 operation if the gasket is friable.
- All work that involves removal or repair of asbestos-containing refractory materials in/on a heater, other than the clean-up of fallen material, shall be classified as a Type 3 operation.
- The clean-up of fallen asbestos containing refractory materials shall be classified as a Type 2 operation.
- A Type 3 asbestos work area may be classified as a Type 2 asbestos work area while no asbestos-related work activity is occurring.

## Bulk Sample Collection

The Occupational Hygienist or designate shall be contacted to assist with coordinating the collection of samples of material for the purpose of determining whether or not it is asbestos.

The activity of collecting bulk samples of **non-friable** suspect material shall be classified as a Type 1, Type 2 or Type 3 operation as follows:

Tool Used		Type
Non-powered	Material can be wetted	1
Hand tool	Material cannot be wetted	2
Power tool	Attached to a dust-collection device equipped with HEPA filters	
	Not attached to a dust-collection device equipped with HEPA filters	3

When sampling **friable** suspect materials, using only non-powered hand tools, the following control measures are prescribed:

### *General Exposure Control Measures*

- Ensure there are no other workers in the immediate area (i.e., within 3m) prior to collecting the sample;
- If the material is in less than good condition, it should be wetted prior to collecting the sample, unless wetting would create a hazard or cause damage;
- If outdoors, stand up-wind while collecting the sample, if possible;
- If indoors, collect the sample when the room is unoccupied if possible, or otherwise when minimally occupied;
- Have the sample bag ready to insert the sample immediately after removal and ensure it is opened and positioned so as to prevent dropping or spilling the sample;

### *Personal Protective Equipment:*

- Gloves, made of a material that does not readily retain nor permit penetration of asbestos fibres, must be worn;
- If a worker would like to wear additional protective clothing, it must be provided to the worker in accordance with O.Reg.278/05, S.15(12); and
- If a worker would like to wear respiratory protection, he/she must be provided with a half-face air-purifying respirator equipped with P100 filters.

*Note:* If a power tool must be used to gain access to a friable suspect material and, as a result, the suspect material may be disturbed, this sampling activity must be classified as though the material were non-friable using the table above.

### Discovery of Unidentified ACM – Actual or Suspect

If, during work, material is discovered that may contain asbestos and was not referred to in an asbestos assessment, all work shall be stopped and the Occupational Hygienist or designate shall be verbally notified immediately. A decision will be made regarding the need to provide notification to the Ministry of Labour and other parties as prescribed by O.Reg.278/05, section 10.(8)&(9). The material shall be assessed and work may resume in accordance with O.Reg.278/05.

*Note:* if the suspect material has been or may have been disturbed, effort should be made to prevent the spread of contamination to other areas. Workers should remain in/near the area if possible and safe to do so until they can be decontaminated as per direction from the Occupational Hygienist or designate.

## **COMMUNICATION**

### Work Involving ACM

Prior to conducting work that involves asbestos-containing material, a copy of the Asbestos Assessment Form shall be:

- Provided to all contractors whose work may involve the assessed material; and
- Provided to the permit issuer.

### Work in Close Proximity to Known or Suspect ACM

Prior to conducting work that does not involve a known or suspect ACM but is carried out in close proximity to it and may disturb it:

- All contractors involved shall be provided with written notice of all information contained within the Hazmat Inspector asbestos database that applies to the work area; and
- All workers involved shall be advised of all information contained within the Hazmat Inspector asbestos database that applies to the work area.

## **RISK CONTROL**

### Ongoing Asbestos Management



All potential and known asbestos-containing material shall be managed in accordance with O.Reg.278/05, Section 8. All associated documentation and records shall be maintained by the Occupational Hygienist, via the HazMat Inspector database. Reports containing information regarding all known and presumed ACM are available at: [The Core → Departments → Refining and Marketing → Sarnia Refinery → Environment Health & Safety → Asbestos Reports](#) and are updated by the Occupational Hygienist as new information becomes available.

The condition of all known or potential asbestos-containing building materials shall be inspected at least every 3 years. The condition of all known or potential asbestos-containing materials in process or other outdoor areas shall be inspected annually.

### Suspect Material in Less Than Good Condition

If suspect material that is present at or near a work area and likely to be disturbed by the current work activity is observed to be in fair/poor condition and is not identified as non-ACM (by field identification or date verification), an Insulator Foreman must be contacted immediately to arrange for evaluation by an Insulator to determine if it is ACM.

Upon Insulator evaluation:

- If the material is verified to be non-ACM it shall be clearly identified using the following symbol, , spray-painted in blue. Where possible, the exposed material itself shall also be spray-painted blue.
- If the material is verified or assumed to be ACM it shall be repaired or removed according to the following timelines and identified as ACM (using the following symbol, , spray-painted in red) in the interim:
  - Poor condition – as soon as possible. Preparations for repair/removal (i.e., erecting scaffolding, etc...) shall begin immediately;
  - Fair condition – immediately, if it is likely to be disturbed by current work activity.Otherwise:
  - Friable ACM – 2 weeks;
  - Non-Friable ACM – 8 weeks.

The suspect material should not be disturbed while awaiting Insulator evaluation and/or repair/removal. The contacted Insulator Foreman may prescribe interim exposure controls, if deemed necessary.

## Measures and Procedures

Type 1, Type 2 and Type 3 operations shall be conducted in accordance with the measures and procedures prescribed in O.Reg.278/05, sections 14-18. In addition to the legislated measures and procedures, the following is prescribed for all asbestos work activity with the exception of gasket removals and bulk sample collection:

- For Type 1 operations, the immediate work area shall be cordoned off using asbestos warning tape; and
- For Type 2 and Type 3 outdoor operations:
  - Where the work area is enclosed by  $\geq 6'$  walls that extend  $\geq 3'$  above the disturbed ACM and/or a constructed enclosure that includes a ceiling, the work area shall be cordoned off a minimum of 30' in all directions;
  - Where the work area is not enclosed by  $\geq 6'$  walls that extend  $\geq 3'$  above the disturbed ACM or a constructed enclosure that includes a ceiling, the work area shall be cordoned off a minimum of 50' in all directions.

For entry into a heater, equipment skirt or similar structure inside which asbestos-containing refractory is present, the following PPE shall be worn:

- Protective clothing in accordance with O.Reg.278/05, S.15.12; and
- Minimum half-face air-purifying respirator equipped with P100 filters.

The Occupational Hygienist shall be consulted, as necessary, to review the need for additional control measures and procedures.

A variation of the prescribed measures and procedures may be approved by the Occupational Hygienist if the variance affords at least an equivalent level of protection for the health and safety of workers. The Joint Health and Safety Committee shall be provided advance written notice of the variance.

## Information for Workers

All workers whose work may involve asbestos-containing material or may be carried out in close proximity to asbestos-containing material and may disturb it shall be advised of the location of the asbestos-containing material and whether the material is friable or non-friable.

Building occupants shall be notified in advance of any work involving asbestos that will be conducted near their work area.

### Advance Notice to the Ministry of Labour

Before commencing a Type 3 operation or a Type 2 operation in which more than 1m<sup>2</sup> of material is removed using a glove bag, the Occupational Hygienist or designate shall be notified. The Occupational Hygienist or designate shall coordinate advance notice to the Ministry of Labour both verbally and then in writing using the MOL Asbestos Work Notification Form (Appendix C).

### Demolition

The demolition of all or part of a building or equipment shall be conducted only when any asbestos-containing material within a 3m radius of the work area has been removed where practicable.

### Respiratory Protection

Respiratory protection shall be used and maintained in accordance with both O.Reg.278/05, section 13 and the Sarnia Refinery Respiratory Protection Standard.

### Asbestos Work Reports

Asbestos work reports shall be completed and submitted to the Ministry of Labour in accordance with O.Reg.278/05, section 21 for each worker working in a Type 2 or Type 3 operation.

### Medical Surveillance

Voluntary medical surveillance for Suncor employees and identified contractors is coordinated through the Health Centre and is based on job demands analysis, task analysis, managerial review, employee input and final discretion of Suncor medical professionals. Standard examinations consist of a medical questionnaire, chest x-rays and pulmonary function tests. Additional testing may be recommended by Suncor medical professionals.

### Asbestos Removal Reports

Upon completion of any ACM removal, an Asbestos Removal Report (Appendix B) shall be completed. A copy of this form shall be submitted to the Occupational Hygienist for the purpose of updating the asbestos database.



### Other Controls

- No new asbestos-containing material may be used on-site.
- Blue banding shall be used to identify all new insulation as non-ACM.
- Liquid sealants may not be used to cover visibly deteriorating asbestos-containing material.
- All ACM or potential ACM shall be treated as though it contains a type of asbestos other than chrysotile unless analytically verified otherwise.

## **EMERGENCY PREPAREDNESS AND RESPONSE**

Considerations for entry into a controlled asbestos work area for the purpose of emergency response shall be made during the planning stages of work. Personal protective equipment necessary for entry into a controlled asbestos work area must be readily available to Operators and/or rescue personnel in the event of an emergency. Where necessary and where practicable, all workers shall be decontaminated prior to exit/removal from the controlled asbestos work area. Where incident-related asbestos contamination is suspected, the determination of asbestos contamination shall be made by the Occupational Hygienist or designate prior to initiating post incident clean-up activities.

### Type 3 Emergency Protocol

Prior to a Type 3 asbestos operation:

- The wind direction shall be determined and used to identify:
  - the most appropriate location to park the asbestos transport vehicle; and
  - the anticipated route of travel to the decontamination facility in the event that the refinery siren is sounded;
  - all applicable secondary decontamination locations (i.e., safety showers)
- A bag containing a new pair of disposable FR coveralls for each Type 3 worker must be made available near the work area to be donned, as necessary, after using a safety shower for decontamination.

If the refinery siren sounds while working in a Type 3 asbestos work area, the Type 3 workers must stay together to maintain radio communication and proceed as follows:

- Move to the perimeter of the work area and remove disposable coveralls.
- Wait for the emergency broadcast in the work area if safe do so. Move upwind to a safe area if necessary.
- If both the wind direction and broadcast information indicate that it is safe to do so, walk to the asbestos transport vehicle and use it to transport the workers to the decontamination facility.

- If accessibility of the van and/or decontamination facility is compromised:
  - Obtain the bag of new disposable coveralls and walk away from the hazardous area and toward a safety shower that is a safe distance upwind; and
  - Notify the control room via radio before the safety shower is used.
  - Notify the foreman of the intended decontamination location.
  - Decontaminate using the safety shower and don the new disposable coveralls.
- Walk to the most appropriate muster station and notify the foreman of the muster location.

Note: During cold weather months, the foreman must make arrangements with the On Scene Commander to retrieve workers who have decontaminated using a safety shower and moved to an outdoor muster location as soon as safely possible.

In order to support this emergency protocol, Appendix D must be completed and reviewed by the Type 3 workers at the start of each shift and kept near the work area.

## **TRAINING**

All workers shall receive asbestos awareness training in accordance with O.Reg. 278/05, section 19. All workers involved in the planning and/or supervision of work to which this Standard applies shall receive training on this Standard. All workers and supervisors involved in a Type 3 asbestos operation must successfully complete the Asbestos Abatement Worker Training Program or the Asbestos Abatement Supervisor Training Program, as appropriate and as approved by the Ministry of Training, Colleges and Universities prior to performing or supervising a Type 3 asbestos operation.

## **AUDIT**

This Standard shall be audited against legislation and industry best practice at regular and appropriate intervals of no more than 3 years. The Joint Health and Safety Committee shall be provided the opportunity to review audit findings.

## DEFINITIONS

<b>Asbestos</b>	Any of the following fibrous silicates: actinolite, amosite, anthophyllite, chrysotile, crocidolite and tremolite.
<b>Asbestos-Containing Material (ACM)</b>	Material that contains 0.5% or more asbestos by dry weight.
<b>Building</b>	Any structure, vault, chamber or tunnel including, without limitation, the electrical, plumbing, heating and air handling equipment of the structure, vault, chamber or tunnel.
<b>Designate</b>	The Manager, Environment, Health & Safety or a Fluor Driver Insulator Foreman may act as a designate to the Occupational Hygienist with respect to this standard.
<b>In-House Maintenance Insulator</b>	An Insulator that is an employee of the resident maintenance contractor.
<b>Friable Material</b>	Material that, (a) when dry, can be crumbled, pulverized or powdered by hand pressure, or (b) is crumbled, pulverized or powdered.
<b>Poor Condition</b>	Encapsulating material is missing, damaged or deteriorated. Friable ACM is exposed and surface disintegration is visible.
<b>Fair Condition</b>	Encapsulating material shows deterioration or minor penetration damage. Friable ACM may be exposed but does not show surface disintegration. Non-friable ACM shows surface disintegration and/or is damaged.

## REFERENCES

[Ontario Regulation 278/05, "Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations"](#)


[Respiratory Protection Standard](#)

[Variance Document – Remote Decon Facility & Transport Vehicle](#)

[Variance Document – Clearance Sampling](#)

[Risk Assessment for the Collection of Samples of Friable Material for the Purpose of Determining Whether or Not it is Asbestos](#)

**END OF STANDARD**

		<b><u>REVISION LOG</u></b>	
Date MM/DD/YYYY	Revision	Section	Comment
03/20/06	0		Original issue. Replaces SO#1.006.
04/27/07	1	4.1	Added the activity of removing non-friable gaskets to Type 1.
		4.2	Added the activity of removing friable gaskets to Type 2.
		5.1	Changed requirements for Type 1 operations to be more in line with regulations and industry standard.
			Added requirement to tag newly installed gaskets.
		5.2	Added requirement for an enclosure for indoor Type 2 work.
			Added wording as required due to changes in 5.1
		Added requirement to tag newly installed gaskets.	
07/15/2010	2	General	Reformatted to current standard template and: <ul style="list-style-type: none"> <li>▪Renamed "Asbestos Control Standard" from "Asbestos on Construction Projects, Buildings &amp; Repair Operations".</li> <li>▪Removed information that was deemed to be unnecessary or redundant either with this Standard or another standard/procedure;</li> <li>▪Removed requirement for the JHSC to review asbestos training material every year;</li> <li>▪Removed requirement for the JHSC to approve</li> </ul>

## ASBESTOS CONTROL

Current versions of approved documents are maintained in Livelink. Printed copies are uncontrolled.

			<ul style="list-style-type: none"> <li>variances;</li> <li>▪Removed requirement for the OH to notify the OMC to label material in the field;</li> <li>▪Removed/changed information that was deemed to be unnecessarily prescriptive;</li> <li>▪Removed information that consisted of an incomplete summary of very detailed sections of the regulation;</li> <li>▪Supplemented/added information from the regulation that was missing from the Standard;</li> <li>▪Revised all related forms to improve practicality, ensure compliance with the regulation and enhance due diligence.</li> </ul>
10/20/2010	3	Evaluation of Material	<ul style="list-style-type: none"> <li>▪Section renamed from “Bulk Sampling and Analysis”</li> <li>▪Statement that all suspect materials must be assumed to be ACM unless verified otherwise.</li> <li>▪The following methods for verification of non-ACM added. <ul style="list-style-type: none"> <li>- visual inspection;</li> <li>- field identification methods; and</li> <li>- verification of prescribed installation dates.</li> </ul> </li> </ul>
		Ongoing Asbestos Management in Buildings	<ul style="list-style-type: none"> <li>▪Added information regarding field identification of non-ACM in fair/poor condition.</li> <li>▪Added removal timelines for ACM in fair/poor condition.</li> </ul>
		Other Controls	<ul style="list-style-type: none"> <li>▪Added requirement to tag all newly-installed gaskets as non-ACM (with the exception of Plant 4, Plant 1 GDS and buildings construction in or after 2000.</li> </ul>
		Definitions	<ul style="list-style-type: none"> <li>▪Added definitions for: <ul style="list-style-type: none"> <li>- Poor Condition; and</li> <li>- Fair Condition.</li> </ul> </li> </ul>
		References	<ul style="list-style-type: none"> <li>▪Added references to the following documents: <ul style="list-style-type: none"> <li>- Variance Document – Remote Decon Facility and Transport Vehicle; and</li> <li>- Variance Document – Clearance Sampling.</li> </ul> </li> </ul>
		Appendix B – Asbestos Removal Report	<ul style="list-style-type: none"> <li>▪Report modified to accommodate removal of asbestos-containing building materials.</li> </ul>
		1/13/2011	4
3/11/2011	5	Risk Assessment	<ul style="list-style-type: none"> <li>▪Revision to first sentence.</li> </ul>
6/2/2011	6	Risk Assessment	<ul style="list-style-type: none"> <li>▪Removed requirement to distribute the Asbestos Assessment Form (added to new Communication section).</li> </ul>
		Communication	<ul style="list-style-type: none"> <li>▪New section added to prescribe the distribution of Asbestos Assessment Forms and asbestos database information in accordance with the Ontario asbestos regulation</li> </ul>
		Ongoing Asbestos	<ul style="list-style-type: none"> <li>▪Added statement regarding availability of asbestos reports on SARLinks including</li> </ul>

**ASBESTOS CONTROL**

Current versions of approved documents are maintained in Livelink. Printed copies are uncontrolled.

		Management	navigational direction.
07/06/2012	7	All	Updated format, but content was NOT altered.
06/04/2014	8	Roles and Responsibilities	<ul style="list-style-type: none"> <li>▪ Added requirement for Shift Supervisor to sign all Safe Work Permits for Type 3 asbestos work activity.</li> </ul>
		Risk Assessment	<ul style="list-style-type: none"> <li>▪ <i>Asbestos Assessment:</i> <ul style="list-style-type: none"> <li>- Added statement that AAF is not required for Type 1 gasket removals or bulk sample collection (statement of existing practice).</li> </ul> </li> <li>▪ <i>Evaluation of Material:</i> <ul style="list-style-type: none"> <li>- Added cement pipe.</li> </ul> </li> <li>▪ <i>Classification of Work:</i> <ul style="list-style-type: none"> <li>- Added exception to regulation-based classification for bulk sample collection.</li> <li>- Removed Type 2 classification for entry into heaters with asbestos-containing refractory.</li> <li>- Added Type 2 classification for clean-up of fallen asbestos-containing refractory.</li> <li>- Added Type 2 classification for entry into Type 3 area when no work is occurring.</li> </ul> </li> <li>▪ <i>Bulk Sample Collection:</i> <ul style="list-style-type: none"> <li>- Added section to provide guidance for who can coordinate sample collection and classification of this activity based on tool used.</li> </ul> </li> <li>▪ <i>Discovery of Unidentified ACM – Actual or Suspect:</i> <ul style="list-style-type: none"> <li>- Changed title from “<i>Discovery of Material</i>” to address confusion regarding the application of this section.</li> </ul> </li> </ul>
		Risk Control	<ul style="list-style-type: none"> <li>▪ <i>Ongoing Asbestos Management:</i> <ul style="list-style-type: none"> <li>- Updated link to Asbestos Reports.</li> </ul> </li> <li>▪ <i>Suspect Material in Less Than Good Condition:</i> <ul style="list-style-type: none"> <li>- Added title and revised section to provide guidance for when material is found to be in fair/poor condition.</li> <li>- Changed wording regarding the deadline for addressing ACM in poor condition to be more practicable.</li> </ul> </li> <li>▪ <i>Measures and Procedures:</i> <ul style="list-style-type: none"> <li>- Increased guidance re: asbestos tape distance for areas with and without walls and/or an enclosure.</li> <li>- Added exception to additional controls for gasket removals and bulk sample collection.</li> <li>- Specified that additional controls refer to outdoor operations.</li> <li>- Prescribed PPE for entry into heaters with asbestos-containing refractory.</li> </ul> </li> </ul>

**ASBESTOS CONTROL**

Current versions of approved documents are maintained in Livelink. Printed copies are uncontrolled.

			<ul style="list-style-type: none"> <li>▪ <i>Other Controls:</i> <ul style="list-style-type: none"> <li>- Removed requirement to install non-asbestos gasket tags.</li> </ul> </li> </ul>
		Emergency Preparedness and Response	<ul style="list-style-type: none"> <li>▪ <i>Type 3 Asbestos Emergency Protocol:</i> <ul style="list-style-type: none"> <li>- Added.</li> </ul> </li> </ul>
		Definitions	▪ Added definition for “Designate”.
		References	▪ Added reference to variance document for bulk sample collection of friable materials.
		Appendix A	<ul style="list-style-type: none"> <li>▪ Added reason for assessment.</li> <li>▪ Removed 2<sup>nd</sup> set of signatures.</li> <li>▪ Added sample collection information section on reverse.</li> </ul>
		Appendix B	▪ Removed re-insulation section.
		Appendix C	<ul style="list-style-type: none"> <li>▪ Added job titles.</li> <li>▪ Replaced Project Engineer/Planner signature for Manager, Maintenance &amp; Construction signature.</li> </ul>
		Appendix D	▪ Added to support Type 3 emergency protocol.
		Roles & Responsibilities	▪ Added accountability for In-House Maintenance Insulator group.
		Risk Assessment	<ul style="list-style-type: none"> <li>▪ <i>Asbestos Assessment:</i> <ul style="list-style-type: none"> <li>- Added exemption for TAMS Insulators to the requirement for an AAF.</li> <li>- Added requirement for TAMS Insulators to conduct visual assessment prior to disturbing unidentified insulating materials.</li> </ul> </li> <li>▪ <i>Evaluation of Material:</i> <ul style="list-style-type: none"> <li>- Replaced “qualified person” with “the in-house Maintenance Insulator group” for visual inspections.</li> </ul> </li> </ul>
		Communication	<ul style="list-style-type: none"> <li>▪ <i>Work Involving ACM:</i> <ul style="list-style-type: none"> <li>- Changed title from “Work Involving Known or Suspect ACM” for simplicity.</li> </ul> </li> </ul>
		Risk Control	<ul style="list-style-type: none"> <li>▪ <i>Suspect Material in Less Than Good Condition</i> <ul style="list-style-type: none"> <li>- Changed “ACM” to “non-ACM” (typo correction).</li> </ul> </li> </ul>
		Definitions	▪ Added definition for “In-House Maintenance Insulator”
		Appendix A	<ul style="list-style-type: none"> <li>▪ Removed planner signature (no value).</li> <li>▪ Removed requirement to bring AAF to job site.</li> <li>▪ Other minor changes.</li> </ul>
		Appendix B	<ul style="list-style-type: none"> <li>▪ Removed planner signature (no value).</li> <li>▪ Other minor changes.</li> </ul>
03/11/2015	9		
08/28/2017	10	Risk Assessment	<ul style="list-style-type: none"> <li>▪ <i>Discovery of Unidentified ACM – Actual or Suspect:</i> <ul style="list-style-type: none"> <li>- Added direction to remain in work area if suspect material has been disturbed in order to prevent spreading contamination</li> </ul> </li> </ul>

### ASBESTOS CONTROL

Current versions of approved documents are maintained in Livelink. Printed copies are uncontrolled.

		Definitions	▪ <i>“Designate” - updated reference for Insulator Foreman from TAMS to Fluor Driver</i>
		Appendix A	▪ <i>updated reference for mtce contractor from TAMS to FD</i>
		Appendix C	▪ <i>“MOL Notification#” changed to “Notice of Project#”</i>
12/08/2017	11	Risk Assessment	▪ <i>Bulk Sample Collection:</i> <ul style="list-style-type: none"> <li>- Added info to table and deemed it applicable to non-friable material only</li> <li>- Added prescribed control measures for collecting samples of friable material</li> </ul>
		Risk Control	▪ <i>Advance Notice to the Ministry of Labour:</i> <ul style="list-style-type: none"> <li>- Removed requirement for MOL confirmation number prior to starting work</li> </ul>
		References	▪ <i>Added reference to the Risk Assessment for the Collection of Samples of Friable Material for the Purpose of Determining Whether or Not it is Asbestos</i>
07/18/2018	12	Risk Control	▪ <i>Increased timeline for addressing non-friable ACM to 8 weeks if not likely to be disturbed by current work activity</i>
		References	▪ <i>Removed reference to Variance Document – Bulk Sample Collection of Friable Materials (Obsolete)</i>
11/29/2018	13	Risk Control	▪ <i>Clarified requirements regarding the identification of suspect material in less than good condition</i> ▪ <i>Added requirement to physically identify fair/poor condition ACM while waiting for repair/removal</i>

---

**ASBESTOS CONTROL**

Current versions of approved documents are maintained in Livelink. Printed copies are uncontrolled.





**APPENDIX A**  
**Asbestos Assessment Form**

Document  
Number:  
4000-ZSD-S-  
MSAFEca-00181



**ASBESTOS ASSESSMENT FORM**

**A - ASSESSMENT**

Date of Assessment\*: \_\_\_\_\_ Contractor:  FD  Other:

Assessment Initiated by: \_\_\_\_\_

General Location/Material(s): \_\_\_\_\_

Reason for Assessment:  Work Activity - select one: Maintenance / Capital Projects / Turnaround / Proactive Removal  
W/O#: \_\_\_\_\_  
Description of work:  
 Material found to be in less than good condition (select condition below)  
 ACM Identification (no work involving the assessed material is planned at this time)  
 Other, specify: \_\_\_\_\_

**NON-ASBESTOS CONTAINING MATERIAL(S)** (Complete this section if applicable)

The following material(s) has/have been determined to be non-asbestos containing:

Method of determination:  Field identification (specify: \_\_\_\_\_)  
 Analytical verification by accredited lab (lab report attached)  
 Asbestos database consultation

**ASBESTOS CONTAINING MATERIAL(S)** (Complete this section if applicable)

The following material(s) has/have been determined to contain asbestos:

Method of determination:  Field identification (specify: \_\_\_\_\_)  
 Analytical verification (lab report attached)  
 Asbestos database consultation  
 Material assumed/known to contain asbestos  
(Note: a type of asbestos other than chrysotile is assumed unless analytically verified otherwise)

Condition of material:  Good  Fair  Poor Friable?  Yes  No

**B - CONTRACTOR INFORMATION REVIEW** (Complete this section if ACM is to be removed)

Date of Review: \_\_\_\_\_

Type of work:  Indoor  Outdoor Ministry of Labour Notification Required?  
 Type 1  Type 2  Type 3  No  Yes, Ref#:

<b>The following has been completed by and/or reviewed with the Contractor:</b>	Yes	N/A
Contractor Control Program requirements met (Pre-job meeting, Checklist, Orientations complete)	<input type="radio"/>	<input type="radio"/>
Precise location/scope of work identified on pipe plan (or P&ID if plan not available)	<input type="radio"/>	<input type="radio"/>
Precautionary measures established as per type of asbestos work performed	<input type="radio"/>	<input type="radio"/>
Contractor JHSC variance provided for decon facility, transportation vehicle, glove bag, etc...	<input type="radio"/>	<input type="radio"/>
Waste management practices (bags, disposal bin, labels)	<input type="radio"/>	<input type="radio"/>
Verification of contractor training, fit-testing and asbestos work reports	<input type="radio"/>	<input type="radio"/>
Review of emergency entry/egress procedures (mustering, rescue and other scenarios)	<input type="radio"/>	<input type="radio"/>
Verified provision of adequate Contractor and Suncor supervision	<input type="radio"/>	<input type="radio"/>
Tagging/banding of completed work (if reinsulating)	<input type="radio"/>	<input type="radio"/>

**ASBESTOS ASSESSMENT FORM COMPLETED BY:**

\_\_\_\_\_ Name (Print) \_\_\_\_\_ Signature

\*The Asbestos Assessment Form is valid for 3 months from Date of Assessment.  
**Copy to Occupational Hygienist. For work involving ACM, copy to Permit Issuer and all contractors whose work may involve the assessed material or may be carried out in close proximity to such material and may disturb it.**



**APPENDIX A**  
**Asbestos Assessment Form**

Document  
Number:  
4000-ZSD-S-  
MSAFeca-00181

**C - SUSPECT ASBESTOS-CONTAINING MATERIAL SAMPLE COLLECTION INFORMATION**

(Complete this section if samples were collected as part of this assessment)

Date Collected:	<b>Asbestos? (Y/N)</b>	<b>Complete if ACM</b>		
Collected by:		<b>Friable? (Y/N)</b>	<b>Condition<sup>2</sup></b>	<b>Accessibility<sup>3</sup></b>
Collected for:				

ACM Zone <sup>1</sup>	Sample ID	Type of Material	Specific Sample Location	Asbestos? (Y/N)	Friable? (Y/N)	Condition <sup>2</sup>	Accessibility <sup>3</sup>

<sup>1</sup>ACM Zone to be identified by the Occupational Hygienist  
<sup>2</sup>Condition = Good, Fair or Poor  
<sup>3</sup>Accessibility =  
     A – Within reach to all                            E – Not accessible  
     B – Below 8' maintenance                   F – Above 8' concealed  
     C – Above 8' exposed                           G – No access without demolition  
     D – Above ceiling concealed



**APPENDIX B**  
**Asbestos Removal Report**

Document Number:  
4000-ZSD-S-  
MSAFeca-00181

	<b>ASBESTOS REMOVAL REPORT</b>
--	--------------------------------

Date of Removal:	W/O#:
------------------	-------

ACM Removal Contractor:	Contractor Representative:
-------------------------	----------------------------

Project Engineer/Planner:

**ASBESTOS CONTAINING MATERIAL**

Plant:	Unit:	Equipment#:	P&ID Line:
--------	-------	-------------	------------

Building:	Building#:	Room/Area:
-----------	------------	------------

Description of Material(s) Removed:

How much of the asbestos-containing material was removed from the equipment/process line/area?

- Complete removal – all ACM was removed from the identified equipment/process line/area.
- Partial removal – only what was needed to accommodate the work activity was removed.
- Partial removal – other, specify:

Date of QC Inspection:

**ACM REMOVAL CONTRACTOR REPRESENTATIVE / QC INSPECTOR SIGNATURE:**

_____	_____
Name (Print)	Signature

**Copy to Occupational Hygienist.**



**APPENDIX C**  
**Ministry of Labour Asbestos Work Notification**

Document Number:  
 4000-ZSD-S-  
 MSAFEca-00181



**MINISTRY OF LABOUR ASBESTOS WORK NOTIFICATION**

Date:	Notice of Project#:	MOL Confirmation#:
Submitted to: Ontario Ministry of Labour 217 York Street, 5 <sup>th</sup> Floor London, Ontario N6A 5P9 Fax: (519)672-0268		Submitted by (Owner): Suncor Energy Products Inc. Sarnia Refinery 1900 River Road Sarnia, Ontario N7T 7J3
ACM Removal Contractor:	Contractor Representative:	
Suncor Project Supervisor (Manager, Maintenance & Construction):		
Suncor Site Contact (Occupational Hygienist):		
<b>DESCRIPTION OF WORK:</b>		
Planned Start Date:	Planned End Date:	
General Description and Location of Work:		
<b>SIGNATURES</b>		
ACM Removal Contractor Representative:	Manager, Maintenance & Construction:	Occupational Hygienist:
Date:	Date:	Date:

**Fax to MOL**  
**Copy to Occupational Hygienist**



**APPENDIX D**  
**Type 3 Asbestos Operation**  
**Emergency Preparedness Checklist**

Document Number:  
4000-ZSD-S-  
MSAFEca-00181



***TYPE 3 ASBESTOS OPERATION EMERGENCY PREPAREDNESS CHECKLIST***

Date:

Work Location:

Wind direction:



The asbestos transport vehicle will be parked in the following location:

Decontamination Facilities:

If deemed safe, the following route to the decontamination facility shall be taken:

The following safety shower(s) shall be considered for use in the event that the primary decontamination facility is inaccessible:

A pair of disposable FR coveralls for each Type 3 worker is present at the work area.

***Appendix D to remain near Type 3 asbestos work area***



The following individuals have approved and signed this document.

UserName: Todd Murray (toddmurray)

Title: Mgr EH&S Sarnia Refinery

Date: Friday, 30 November 2018, 08:24 AM Mountain Time

Meaning:

=====