

## Overview of Changes in Air Monitoring Directive – Amendments to Chapter 1 Introduction

The following amendments were made to Chapter 1 of the AMD following the September 23, 2014 release to reflect alignment with other updated chapters.

Chapter 1: Introduction		
Page	Section/Clause	Amendment
Cover, back page		Changed “Environment and Sustainable Resource Development” to “Environment and Parks”.
2 – 14	Definitions	<p>“accuracy” – Modified to “means the level of agreement between a measurement or measurements and a known value”.</p> <p>“analyzer” – Modified to “means any of various instruments used for performing an analysis (e.g., continuous ambient air analyzer)”.</p> <p>“approval” – Modified to “means an approval issued under the Act in respect of an activity, and includes the renewal of or an amendment to an approval”.</p> <p>“ASTM” – Added “means American Society for Testing and Materials”.</p> <p>“canister” – Added “means a sampling device or sampling system for conducting canister sampling”.</p> <p>“canister sampling” – Added “means intermittent sampling using canisters as sampling media”.</p> <p>“CO” – Added “means carbon monoxide”.</p> <p>“distance constant” – Added “means the length of fluid flow past the sensor required to cause it to respond to 63.2% of the increasing step-function change in speed”.</p> <p>“filtration sampler” – Added “means a sampling device or sampling system for conducting filtration sampling”.</p> <p>“filtration sampling” – Added “means intermittent sampling using filters as sampling media”.</p> <p>“HiVol” – Added “means a type of intermittent sampler called a high-volume air sampler”.</p> <p>“integrated sampler” – Added “means a sampling device or sampling system for conducting integrated sampling”.</p>

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2 – 14	Definitions	<p>“integrated sampling” – Added “means an ambient air monitoring method such as passive sampling, intermittent sampling, and static sampling, where a concentration or mass uptake of a pollutant in the ambient air is determined by laboratory analysis and integrated over the sampling period for a time-weighted average measurement”.</p> <p>“intermittent sampling” – Modified to “means a discrete, non-continuous measurement of a pollutant concentration using a filter, sorbent, canister or other sampling media through which air is either actively pumped or flows by differential pressure (vacuum)”.</p> <p>“meteorological sensor” – Added “means a device that measures or estimates the state of the atmosphere at a given time, such as temperature, pressure, humidity, wind speed and direction”.</p> <p>“method blank” – Added “as it relates to passive sampling, means an unexposed passive sample”.</p> <p>“mobile air monitoring” – Modified to “means ambient air monitoring that is conducted using a motorized, mobile vehicle that houses instruments and supplies power for these instruments for measuring continuous ambient air pollutant concentrations and meteorology in both stationary and moving scenarios”.</p> <p>“Monitoring Chapter” – Added “means the Monitoring Requirements and Equipment Technical Specifications chapter (Chapter 4) of the AMD”.</p> <p>“passive sampling” – Modified to “means determination of a pollutant concentration in ambient air by collecting gases or vapours from the atmosphere at a rate controlled by a physical process such as gaseous diffusion through a static air layer or a porous material, or permeation through a membrane, but which does not involve active pumping of ambient air through the sampler”.</p> <p>“precision” – Modified to “means the agreement between repeated measurements”.</p> <p>“reference method monitor” – Added “as it relates to passive sampling, means a suitable monitor or sampler of known performance, such as a continuous analyzer, for comparison with the performance of a passive sampler”.</p> <p>“Reporting Chapter” – Added “means the Reporting Chapter (Chapter 9) of the AMD”.</p> <p>“required operating range” – Modified to “(full scale) means the ranges allowed for analog data collection from analyzers”.</p> <p>“sampling period” – Added “means the period of time between the start and end of a sampling event”.</p>

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2 – 14	Definitions	<p>“span drift” – Modified to “means the percent change in analyzer output response to a consistent upscale pollutant concentration within a 24 hour period of unadjusted continuous operation”.</p> <p>“special air studies” – Added “means any additional air monitoring studies carried out by an industrial operation or Alberta airshed that go beyond their normal routine air monitoring (for example for the industrial operation’s or Alberta airshed’s own purposes, or to satisfy an EPEA approval requirement or written notice from the Director)”.</p> <p>“Standard Operating Procedure” or “(SOP)” – Modified to “means a document that details in writing the procedure for an operation, analysis, or action with thoroughly prescribed techniques and steps, designated as the official method for performing routine or repetitive tasks”.</p> <p>“static sampler” – Added “means a sampling device or sampling system for conducting static sampling”.</p> <p>“static sampling” – Added “means a measurement of total accumulated mass uptake of a pollutant in ambient air using a container for gravitational settling of particulate matter, or a cylinder or plate containing a filter coated with a reactive surface to absorb the pollutant of interest”.</p> <p>“TSP” – Added “means total suspended particulate”.</p> <p>VOC” – Added “means volatile organic compound”.</p> <p>“zero drift” – Modified to “means the change in analyzer output response to a consistent zero air input concentration within a 24 hour period of unadjusted continuous operation”.</p> <p>“zero noise” – Modified to “means a measure of the deviations from zero while sampling constant zero air input, measured as the root mean square (RMS).”</p>
16	Int 1-C	Added bullets to clause to require that “(a) monitoring, (b) reporting, and (c) maintenance requirements set out in the AMD must be adhered to for any air monitoring data or reports submitted to the Regulator or any other person acting on its behalf”.
16	Section 2.0	Added Chapters 4 to the list of components that make up the current AMD.
17	Section 2.1	Updated the description of the review and revision process of the AMD, now that the revision is nearly complete, to outline that the AMD will be amended from time to time and that information on revisions to the AMD can be found on the AMD website. The AMD website address was removed as it is subject to change.

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Page	Section/Clause	Amendment
19	Int 3-G	Changed the wording of the clause for readability and to better reflect that with transfers of facility ownership, the person responsible must transfer all records and data to the successor.
18-19	4.0	Changed wording in last paragraph on confidentiality to encourage timely sharing of “air data”, which is defined in the chapter, as opposed to “air monitoring data”.
19	5.0	Updated text in the stated feedback process to encourage that stakeholders can submit any questions or comments on the AMD in writing. Updated the mailing address to “Environment and Parks”.