

**Amendment to the  
MEMORANDUM OF UNDERSTANDING**

(herein referred to as the “Agreement”)

**between**

**the  
World Meteorological Organization**

**and**

**the  
NPL Management Limited,  
Teddington, Middlesex, United Kingdom**

related to the provision of a Primary Standard for specified Volatile Organic  
Compounds to the World Meteorological Organization, Global Atmosphere  
Watch Programme

(2024)

The below mentioned sections or paragraphs (highlighted in **Italic and Bold**) of the original Agreement have been updated under this amendment. All other sections of the original Memorandum of Understanding remain valid.

Memorandum of Understanding related to the provision of a Primary Standard for specified Volatile Organic Compounds to the World Meteorological Organization, Global Atmosphere Watch Programme

*Memorandum of Understanding related to the provision of a Central Calibration Laboratory for specified Volatile Organic Compounds to the World Meteorological Organization, Global Atmosphere Watch Programme*

#### 4. Reporting

All matters regarding this MoU shall be addressed to the NPL point of contact:

Dr Martin Milton  
Analytical Science Division  
National Physical Laboratory, Hampton Road, Teddington, TW110LW  
UK

to the WMO/GAW point of contact:

Dr Liisa Jalkanen  
Chief, Atmospheric Environment Research Division (AER)  
Research Department (RES)  
World Meteorological Organization  
7bis, avenue de la Paix, Case postale 2300, CH-1211 Geneva 2  
Switzerland

#### **4. Reporting**

*All matters regarding this MoU shall be addressed to the NPL point of contact:*

*Dr David Worton  
Science Area Leader and Principal Scientist  
National Physical Laboratory, Hampton Road, Teddington, TW110LW  
United Kingdom*

*to the WMO/GAW point of contact:*

*Dr Paolo Laj  
Head, Atmospheric and Environment Research Division (AER)  
Science and Innovation Department  
World Meteorological Organization  
7bis, avenue de la Paix, CH-1211 Geneva 2  
Switzerland*

Volatile Organic Compounds (VOCs) covered by this MoU

Compound	
Ethane	Eight components included in a multi-component Primary Standard Mixture
Propane	
n-Butane	
n-Pentane	
Acetylene	
Toluene	
Benzene	
Isoprene	

*ANNEX C*

*Volatile Organic Compounds (VOCs) covered by this MoU*

<i>Compound</i>	
<i>Ethane</i>	<i>Ten components included in a multi-component Primary Standard Mixture</i>
<i>Propane</i>	
<i>n-Butane</i>	
<i>n-Pentane</i>	
<i>Acetylene</i>	
<i>Toluene</i>	
<i>Benzene</i>	
<i>Isoprene</i>	
<i>Isobutane</i>	
<i>Isopentane</i>	

Signed in duplicate in the English language.

On behalf of the World Meteorological Organization

Prof. Celeste Saulo  
Secretary-General

Signature: \_\_\_\_\_



Date: 12.12.2024

On behalf of the National Physical Laboratory

Dr Jan-Theodoor Janssen  
UK's Representative on the International Committee for Weights and Measures

Signature: \_\_\_\_\_



Date: 27/03/2025