



ADMLC and CERC are hosting an in-person workshop

Model Evaluation Workshop: Thresholds & Toolkit

10:00-16:00 Thursday 11th June 2026

Address: UKHSA (Training Centre), Harwell Campus, Didcot, Oxfordshire, OX11 0RQ.

Directions: [Radiation Protection Services - Chilton office \(ukhsa-protectionservices.org.uk\)](http://ukhsa-protectionservices.org.uk).

Agenda

Time	Activity
10:00 – 10:30	Registration & coffee
10:30 – 10:35	Introduction to the day, including housekeeping
10:35 – 11:40	Project overview
11:40 – 12:10	Threshold criteria methodology & results
12:10 – 13:00	Discussion
13:00 – 14:00	Lunch
14:00 – 14:30	Introduction to the Model Evaluation Toolkit
14:30 – 15:15	Model Evaluation Toolkit worked examples
15:15 – 15:55	Outcomes of threshold criteria discussions & next steps
15:55 – 16:00	Closing remarks

Registration

There is no fee to attend this seminar. However, places are limited and registration is required. Please register to attend this in person event by completing this form: <https://forms.cloud.microsoft/e/6MRPrW3Yzq> any issues with the form, contact the ADMLC Secretariat at: admlc@ukhsa.gov.uk. **Please register by Thursday 21st May.**

Background information

CERC have undertaken a project for ADMLC entitled “A review of methods used to assess the performance of atmospheric dispersion models”. The project included a literature review, a set of model evaluation case studies and associated analyses, and a project report (at final review, to be published prior to the workshop).

Who should attend?

Those with experience and interest in the evaluation of atmospheric dispersion modelling results using measurement data.

Workshop Goals

i) Discussing the suitability of recommended threshold criteria for model evaluation

Chang & Hanna (2004, 2012) describe methodologies for calculating non-dimensional metric thresholds that can be used to assess model performance across different model applications. Through publication in peer-reviewed literature, these thresholds have been broadly accepted for use by the air quality modelling community. Acceptance criteria for specific applications have also been proposed e.g. Ivings (2013) in relation to liquified natural gas (LNG) vapour dispersion modelling. The ADMLC project has led to proposals for threshold criteria associated with the majority of non-dimensional statistical metrics calculated in the study, including the subset of metrics considered by Chang & Hanna (2004, 2012). In general, two thresholds have been calculated, one more stringent and one less stringent.

CERC and the ADMLC are seeking feedback from the atmospheric dispersion modelling community on the recommended threshold criteria for model evaluation, with the aim to conclude on the acceptability of these criteria for general use. Threshold criteria development methodologies will be presented to attendees alongside threshold values.

ii) Presenting CERC's Model Evaluation Toolkit

The case studies involved the calculation of a wide range of model evaluation statistical metrics and graphics. The majority of statistical metrics, and some graphics, were generated using CERC's Model Evaluation Toolkit, which is freely available for download from CERC's website. An overview of the features and usage of the Model Evaluation Toolkit will be presented.

References

Chang, J. & Hanna, S. (2004). Air quality model performance evaluation. *Meteorology and Atmospheric Physics*, 87, 167–196. <https://doi.org/10.1007/s00703-003-0070-7>

Hanna, S.R. & Chang, J.C. (2012). Acceptance criteria for urban dispersion model evaluation. *Meteorology and Atmospheric Physics*, 116(3), 133-146. <https://doi.org/10.1007/s00703-011-0177-1>

Ivings, M. J., Lea, C. J., Webber, D. M., Jagger, S. F., & Coldrick, S. (2013). A protocol for the evaluation of LNG vapour dispersion models. *Journal of Loss Prevention in the Process Industries*, 26(1), 153-163. <http://dx.doi.org/10.1016/j.jlp.2012.10.005>