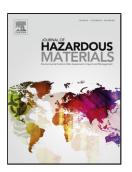
Accepted Manuscript

Title: Joint release rate estimation and measurement-by-measurement model correction for atmospheric radionuclide emission in nuclear accidents: An application to wind tunnel experiments



Authors: Xinpeng Li, Hong Li, Yun Liu, Wei Xiong, Sheng Fang

PII:	S0304-3894(17)30741-0
DOI:	https://doi.org/10.1016/j.jhazmat.2017.09.051
Reference:	HAZMAT 18897
To appear in:	Journal of Hazardous Materials
Received date:	21-7-2017
Accepted date:	27-9-2017

Please cite this article as: Xinpeng Li, Hong Li, Yun Liu, Wei Xiong, Sheng Fang, Joint release rate estimation and measurement-by-measurement model correction for atmospheric radionuclide emission in nuclear accidents: An application to wind tunnel experiments, Journal of Hazardous Materials https://doi.org/10.1016/j.jhazmat.2017.09.051

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Joint release rate estimation and measurement-by-measurement model correction for atmospheric radionuclide emission in nuclear accidents: An application to wind tunnel experiments

Xinpeng Li, Hong Li, Yun Liu, Wei Xiong, Sheng Fang*

Institute of Nuclear and New Energy Technology, Collaborative Innovation Centre of Advanced Nuclear Energy Technology, Key Laboratory of Advanced Reactor Engineering and Safety of Ministry of Education, Tsinghua University, Beijing 100084, China

*Correspondence to: Sheng Fang (fangsheng@tsinghua.edu.cn)

Highlights

- 1. Joint measurement-by-measurement model correction and release rate estimation.
- 2. Validated by wind tunnel simulations of a heterogeneous and densely-built site.
- 3. The correction significantly improves both release estimate and model prediction.
- 4. More robust to multiple uncertainties over a wide range than Tikhonov's method.
- 5. Extendible with robust statistics and generic for various models and scenarios.

Download English Version:

https://daneshyari.com/en/article/6969301

Download Persian Version:

https://daneshyari.com/article/6969301

Daneshyari.com