
State Water Resources Control Board

TO: Kevin Graves, P.E., Manager
UST Program Section
DIVISION OF WATER QUALITY

Gerald M. Bowes

FROM: Gerald Bowes, Ph.D., Manager
Cal/EPA Scientific Peer Review Program
OFFICE OF RESEARCH, PLANNING AND PERFORMANCE

DATE: February 29, 2012

**SUBJECT: EXTERNAL SCIENTIFIC PEER REVIEW OF THE SCIENTIFIC BASIS OF
THE TECHNICAL JUSTIFICATION FOR THE PROPOSED LOW-THREAT
UST CLOSURE POLICY**

This letter responds to your request for external scientific peer reviewers for the subject noted above. Later, you also asked me to manage the review and keep reviewer's identities confidential until I had received their reviews.

To begin the process of identifying reviewers, I contacted the University of California, through an Interagency Agreement with Cal/EPA, to recommend candidates it considered qualified to perform this assignment. The university was provided the identical December 8, 2011 letter of your request to me, and attachments. No additional material was requested by the university, and no additional material was forwarded to augment the request.

Each candidate who was both interested and available for the review period was asked to complete a Conflict of Interest Disclosure form and send it to me for review. In follow-up communications with selected candidates, I asked them to affirm there is nothing in their background a) that might be reasonably construed by others as affecting their judgment, and b) which might constitute an actual or potential source of bias. They also were asked to affirm they would be able to perform an objective and independent review.

In a subsequent letter approving each as reviewer, I provided the attached January 7, 2009 Supplement to the Cal/EPA Peer Review Guidelines, which, in part serves two purposes: a) it provides guidance to ensure confidentiality through the course of the external review; and, b) it notes reviewers are under no obligation to discuss their comments with third-parties after reviews have been submitted. We recommend they do not. All outside parties are provided opportunities to address a proposed regulatory action through a well-defined rulemaking process.

I later sent each reviewer a detailed cover letter initiating the review. Attached to this was your December 8, 2011 request for reviewing to me, and its eight attachments. Attachment 2 was highlighted as the focus of the review, and each reviewer was asked to address each topic, as expertise allows, in the order given. Thirty days were provided for the review, although not all reviewers could meet that schedule due to other commitments. In the letter, I also asked reviewers to direct inquiring third-parties to you after they have submitted their reviews.

The approved reviewers are identified below. No reviewer was aware of the identity of the others, except for Professors Mark Widdowson and John Little, who co-authored a review.

1. Professor Pedro J.J. Alvarez, Ph.D., Chair
Department of Civil and Environmental Engineering
Rice University
6100 Main Street, MS 519
Houston, Texas 77251-1892
Telephone: 713-348-5903
Fax: 713-348-5203
Email: alvarez@rice.edu
2. Professor Elizabeth Edwards, Ph.D.
Department of Chemical Engineering and Applied Chemistry
University of Toronto
200 College Street
Toronto, Ontario M5S 3E5 Canada
Telephone: 416-946-3506
FAX: 416-978-8605
Email: Elizabeth.edwards@utoronto.ca
3. Professor John Little, Ph.D., P.E.
Coordinator, Environmental and Water Resources Engineering Program
Department of Civil and Environmental Engineering
Virginia Polytechnic Institute and State University
418 Durham Hall
Blacksburg, Virginia 24061-0246
Telephone: 540-231-8737
Email: jcl@vt.edu
4. Professor Robert C. Spear, Ph.D.
School of Public Health
University of California
Berkeley, California 94720-7360
Telephone: 510-642-0761
FAX: 510-642-5815
Email: spear@berkeley.edu
5. Professor Mark A. Widdowson, Ph.D., P.E.
Department of Civil and Environmental Engineering
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061-0105
Telephone: 540-231-7153
FAX: 540-231-7532
Email: mwiddows@vt.edu

Attachments to this letter are listed below.

If you have questions, or require clarification from the reviewers, please contact me directly.

cc: Victoria A. Whitney
Deputy Director
Division of Water Quality

ATTACHMENTS

1) Peer Reviewers' Curriculum Vitae

[Professor Pedro J.J. Alvarez, Ph.D.](#)
[Professor Elizabeth A. Edwards, Ph.D.](#)
[Professor John C. Little, Ph.D., P.E.](#)
[Professor Robert C. Spear, Ph.D.](#)
[Professor Mark A. Widdowson, Ph.D., P.E.](#)

2) Cover Letters to Reviewers Initiating Review

[Professor Pedro J.J. Alvarez, Ph.D.](#)
[Professor Elizabeth A. Edwards, Ph.D.](#)
[Professor John C. Little, Ph.D., P.E.](#) (Same letter provided to Professor Widdowson.)
[Professor Robert C. Spear, Ph.D.](#)
[Professor Mark A. Widdowson, Ph.D., P.E.](#)

3) [January 7, 2009 Supplement to the Cal/EPA Peer Review Guidelines](#)

4) Documents to be Peer Reviewed (Attachments 4-7 of the December 8, 2011 request letter, in concert with assertions listed in Attachment 2)

- a) [Low-Threat UST Closure Policy \(11-10-11\)](#)
- b) [Technical Justification for Groundwater Media-Specific Criteria](#)
- c) [Technical Justification for Vapor Intrusion Media-Specific Criteria](#)
- d) [Technical Justification for Soil Screening Levels for Direct Contact and Outdoor Air Exposure Pathways](#)

5) [Well Standards Question from Professor Robert Spear and Staff Response](#)

6) Peer Reviews

[Professor Pedro J.J. Alvarez, Ph.D.](#)
[Professor Elizabeth A. Edwards, Ph.D.](#)
[Professor Mark A. Widdowson, Ph.D., P.E., and Professor John C. Little, Ph.D., P.E. \(co-authors\)](#)
[Professor Robert C. Spear, Ph.D.](#)