

Procedural History

On November 19, 2009, pursuant to the Data Quality Act of 2000 [Section 515 of the Fiscal Year 2001 Treasury and General Government Appropriations Act, Pub.L. 106-554], Public Employees for Environmental Responsibility (PEER) submitted a complaint demanding that the National Oceanic & Atmospheric Administration (NOAA) withdraw or rescind its August 2006 *Assessment of Potential Tsunami Impact for Pearl Harbor, Hawaii* (NOAA Technical Memorandum OAR PMEL-131, hereinafter "the Assessment") [ATTACHMENT I].

In a letter dated January 22, 2010, Ms. Carla Steinborn from the NOAA Office of Chief Information Officer acknowledged receipt of our Data Quality Act (also called Information Quality Act but hereinafter DQA) complaint and indicated that the agency expected to issue a "response no later than February 22, 2010" [ATTACHMENT II]. That date came and passed without the promised response.

On March 26, 2010, PEER wrote to Ms. Steinborn to inquire about the status of the NOAA response [ATTACHMENT III]. PEER received no response to this inquiry. By letter dated April 31, 2010, PEER appealed this extended delay as a constructive denial of our DQA complaint [ATTACHMENT IV]. PEER received no acknowledgement of or response to this appeal.

By e-mail on September 8, 2010, Ms. Sarah Brabson of the NOAA Office of Chief Information Officer transmitted a NOAA response to our original complaint and

acknowledged that despite the fact that the NOAA response was dated January 26, 2010, it had not been previously delivered [ATTACHMENT V].

The NOAA response dated January 26, 2010 denied our DQA complaint on two grounds:

1) appropriate pre-dissemination review of the Technical memorandum was conducted, and 2) the Technical Memorandum is not Influential Scientific Information. [ATTACHMENT VI].

As detailed below, PEER contests these reasons for denial as based on erroneous application of the NOAA's Information Quality Guidelines and a gross distortion of the facts about the Assessment.

Rationale for Appeal

The PEER DQA complaint detailed how the Assessment was based on inaccurate, incomplete and unreliable information regarding the risks of tsunami impact on Ford Island, the proposed site of the Pacific Tsunami Warning Center. The less than two-page NOAA response 1) did not substantively respond to the specified bases of our complaint and 2) misapplied the NOAA Information Quality Guidelines in making specious procedural arguments for sloughing off our complaint.

In addition, the NOAA response raised the irrelevant issue of information integrity from tampering, as defined by the Government Information Security Reform Act, among other authorities. PEER did not contend that the assessment was tampered with or that its electronic security was breached. Our complaint revolved around the objectivity, accuracy and reliability of the information within the Assessment.

I. Pre-Dissemination Review Failed to Ensure the Quality of the Assessment

The NOAA response asserts that the Assessment underwent “pre-dissemination review...as called for by the NOAA IQG”. Further the NOAA response asserted:

The objectivity of the Technical Memorandum was ensured by applying the guidelines for interpreted products outlined in the NOAA IQG. The Technical Memorandum identified and used data and information sources of known quality, explained the methods used, and provided context for the assessment. Technically qualified individuals peer reviewed the Technical Memorandum prior to dissemination to ensure that the document was valid, complete, unbiased, objective and relevant.

Thus, a principal basis for NOAA denying our DQA complaint is that the Assessment underwent peer review and/or appropriate pre-dissemination review.

A. Pre-Dissemination Review Is Not a Complete Defense to a DQA Challenge

The NOAA denial erroneously concludes that the mere occurrence of peer review is a complete defense to a DQA challenge. That is an incorrect reading of the NOAA IQG. The existence of prior review does not end the data quality debate, it begins the debate. Peer review is not a conclusive guarantor of information quality, it only affects the burden of proof. As the Guidelines state:

The burden of proof is on the requester to show both the necessity and type of correction sought. Information that is subjected to a formal, independent external peer review is presumed to be objective...The requestor has the burden of rebutting that presumption.

Guidelines at III A. 4, emphasis added.

As argued below, the Assessment did not undergo “formal, independent external peer review” and is not entitled to any presumption of objectivity. Further, even if it did, the PEER complaint more than met its burden of rebutting any presumption of objectivity, completeness and absence of bias. Significantly, NOAA did not even mention, let alone rebut the PEER arguments adduced as the basis for our complaint.

B. Pre-Dissemination Review Was, at Best Informal and Did Not Ensure Quality

The NOAA response tacitly admits that the Assessment did not undergo a formal peer review as outlined in the OMB Peer Review Bulletin, when it argues that the Assessment was not influential scientific information and therefore was “not subject to the requirements” of the OMB standards for peer review.

Specifically, the NOAA response indicates that the sole pre-dissemination review was provided by “Pacific Marine Laboratory (PMEL) scientists, PMEL management, and the PMEL editor. Furthermore, in advance of publication, supplementary review was provided by Professor Fai Chung, University of Hawaii ocean engineer and tsunami specialist.” This cursory description gives no indication of how extensive was the pre-publication review, what if any issues were raised and, other than Professor Chung, what were the relevant qualifications of the PMEL reviewers.

On February 10, 2009, PEER submitted a request to NOAA under the Freedom of Information Act (FOIA) for “information documenting the peer reviewing of this assessment prior to its publication or, in the alternative, explaining the lack thereof” concerning NOAA Technical memorandum OAR PMEL-13, *Assessment of Potential Tsunami Impact for Pearl Harbor, Hawaii*. In a letter dated March 30, 2009, NOAA responded but did not provide any documentation that external or internal reviews had occurred. Instead, the agency offered only the following statement:

[The Assessment] was reviewed, in advance of publication following standard PMEL procedures for technical reports, including peer review by other PMEL scientists, review by laboratory management, and editorial review by the PMEL editor. The publication was also informally reviewed, in advance of publication, by Professor Fai Chung, University of Hawaii ocean engineer and tsunami specialist, who complimented the lead author on her scientific approach and results.

Note that this NOAA answer conceded that Professor Chung's review was "informal". Thus, no "formal, independent, third party review" took place, as contemplated by the NOAA IQG.

In a FOIA appeal on April 28, 2009, PEER again requested documentation that any review process had actually occurred. More than a year later, NOAA has yet to respond to this request. Nor did NOAA provide any evidence that any formal review occurred with PMEL personnel occurred. For the purposes of the appeal, we must assume that the review process created not a shred of records. For all we know, the PMEL review could have consisted solely of a spell-check for typos.

The only remaining question is whether this informal, largely internal review was "appropriate" given the significance of the issues influenced by the Assessment. The PEER complaint explained that reliance on the Assessment could result in significant loss of life (see arguments below). Surely, a document with public safety implications deserved a more formal review before it was disseminated.

Our complaint argued that NOAA's reliance upon an internal, informal review strongly suggested that the Assessment is a study based on incompletely or wholly erroneous evidence, created solely in order to buttress a politically-motivated decision by the agency to relocate its tsunami warning center to a location that, ironically, is itself vulnerable to disruption in the event of a tsunami. NOAA did not rebut this contention.

C. The Assessment Did Not Meet Objectivity Guidelines for Interpreted Products

NOAA asserted that the Assessment met the IQG standard for "interpreted products", ones that include original data and synthesized products which have been interpreted and contextualized. The NOAA response says that this standard was met

because “Technically qualified individuals peer reviewed the Technical Memorandum prior to dissemination to ensure that the document was valid, complete, unbiased, objective and relevant.”

As explained above, we have no indication that a peer review of any rigor was conducted nor do we know the qualifications of the NOAA reviewers. The IQG contain other criteria for interpreted products and the Assessment failed to meet these criteria. For example, the Assessment did not provide “information that demonstrates the quality and limitations of the interpreted products”.

The PEER DQA complaint detailed out these deficiencies but NOAA did not respond to a single specification contained in the PEER complaint, which are catalogued (but not reargued) here:

- I. The Assessment’s Methodology is Inaccurate and Unreliable.
 - a. The Shallow Water Modeling Used is Inaccurate
 - b. The Coefficient of Friction is set at an Inappropriate Constant
 - c. The Historical Data for Hawaiian Islands Is Ignored
 - d. The Assessment’s Conclusions Contradict Its Own Scientific Sources
- II. The Assessment is Incomplete Because It Fails to Address Several Key Issues.
 - a. The Possibility of a Multiple Wave Tsunami Pileup
 - b. The Potential of a Sumatra-Sized Wave Is Ignored
 - c. Conflict with External Reports
 - d. Probable Hazards to the Pontoon Bridge Accessing Ford Island Not Addressed
 - e. Probable Hazard of Strong Tsunami-Induced Currents Ignored

The fact that NOAA did not dispute a single deficiency outlined in the PEER complaint means that, for purposes of the appeal, NOAA must consider these critiques as valid. To the extent that NOAA maintains that a scientific study suffering from all of these deficiencies still represented information quality, then the agency Guidelines are meaningless and do not provide assurance of quality, objectivity and completeness as understood by the average person.

II. **The Assessment is Influential Scientific Information and Subject to NOAA's Information Quality Guidelines**

The NOAA response claims that that the "Technical Memorandum, whose scope was limited to providing technical information relevant to the siting, planning and design of a NOAA facility, was evaluated and determined not to have a clear and substantial impact on important public policies or private sector decisions." However, NOAA does not indicate who made this evaluation and determination, when it was made or what criteria were used to reach this conclusion. Presumably, as with the pre-dissemination review, this determination was not reduced to writing. It is difficult to take this bald un-sourced statement seriously.

Moreover, the apparent reasoning by NOAA illustrates a further misinterpretation of the IQG. Influential scientific information is not a category an agency can opt into or out from. This categorization stems from the nature of the document itself, including its context and importance.

The Assessment clearly meets the definition of influential information, subject to information quality standards. NOAA Guidelines define information as "any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual

forms.” The Assessment purports to be a representation of NOAA’s knowledge and data on tsunami inundation on the island of Oahu.

The Assessment is influential because it is reasonably expected to “have a genuinely clear and substantial impact on major public policy and private sector decisions.”. The Assessment plainly states that its purpose was to study the suitability of Ford Island as a site for the Pacific Region Center facility. See Assessment, p. 1-2.

Indeed, this point is conceded in the NOAA response where it states:

The utility of the Technical Memorandum was achieved by providing the CAO one component of their overall analytical/due diligence effort in determining any constraints on siting, planning and design of the NOAA Pacific Region Center.

The response notes that there were other factors that the CAO considered but, nonetheless, it is clear that the Assessment was influential in informing the CAO siting decision on the factor of tsunami risk. Thus, NOAA cannot simultaneously argue that the Assessment was not influential scientific information within the meaning of the IQG..

As our DQA complaint explains, the Assessment was used to justify a decision to move the Pacific Tsunami Warning Center (PTWC) to an island in an inland waterway. The PTWC serves a vital role in protecting populations from a tsunami hazard and therefore the location of said center is a matter of major public policy. In order to accurately assess the fitness of the Ford Island site, NOAA must use the best available data and processes, but has failed to do so in this case.

The PTWC bears significant responsibility for interpreting data and disseminating information to emergency response officials, the media and the public concerning tsunami-related events. The PTWC’s ability to perform this vital function is a major public safety concern. Not only does the PTWC serve the citizens of Hawaii and the

Pacific Coast, but it also serves also nearly all the other countries surrounding the Pacific, Indian and Caribbean basins. If the Center is moved based on the conclusions of the Assessment as it is currently drafted, NOAA will have significantly jeopardized PTWC's ability to successfully warn and protect the public from a tsunami disaster. This risk is unnecessary and unacceptable considering that the safety of millions could be jeopardized.

Our analysis is buttressed by a NOAA press release issued August 25, 2006 entitled "New Study Confirms Low Tsunami Risk at Pearl Harbor" to announce the Assessment [ATTACHMENT VII]. This news release declared:

NOAA's Center for Tsunami Research has completed a comprehensive tsunami modeling study for Pearl Harbor. The study concludes that the risk of a destructive tsunami inside Pearl Harbor is low. Model results show minor inundation even for the worst case scenario. The study has **direct relevance for NOAA's decision** to locate its new Pacific Regional Center on Ford Island -- located in the middle of Pearl Harbor. The new center will consolidate NOAA operations, including the Pacific Tsunami Warning Center, whose offices are currently scattered throughout the island of Oahu. (emphasis added)

While the NOAA response indicates the Assessment concerned only "one component ...in determining any constraints on siting" that one component was important enough for NOAA to issue a national news release -- something it presumably does not often do for scientific information deemed not to be influential.

Further the NOAA release states that "These tsunami models [used in the study] have been thoroughly validated and are the bases for the new U.S. tsunami forecast system being implemented at NOAA's Tsunami Warning centers in Hawaii and Alaska." The importance of accurate reliable warning in tsunami forecasting has direct public

safety relevance and unquestioned “impact on important public policies or private sector decisions”.

Relief Requested

Because of the potential loss of life that could result from moving PTWC to a site where it would be vulnerable in the event of a tsunami or even a large storm, PEER respectfully demands that NOAA withdraw or rescind the Assessment. Moreover, PEER strongly urges NOAA to conduct a new, thorough assessment of such risks *prior* to moving the PTWC to Ford Island. Accordingly, PEER reiterates our demands that the Department of Commerce and its National Oceanic & Atmospheric Administration take the following steps to comply with the Data Quality Act:

1. Remove the *Assessment of Potential Tsunami Impact for Pearl Harbor, Hawaii* from official publication and cease further distribution.
2. Issue a public statement, posted on official websites, that the Assessment has been withdrawn from publication due to violations of the Data Quality Act.
3. Undertake a new externally peer-reviewed assessment concerning the potential impact of a tsunami on Pearl Harbor.

Thank in advance for your prompt attention to this appeal.

Sincerely,



Jeff Ruch

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