

From: mark\_sogge@usgs.gov  
Sent: Wednesday, September 15, 2010 10:41:34 PM  
To: FOIA0105@usgs.gov  
Subject: Fw: History of flow estimates from the Flow Rate Technical Group

Attachments: Attachment

---- Forwarded by Mark K Sogge/DO/USGS/DOI on 09/15/2010 07:41 PM ----

From: Mark K Sogge/DO/USGS/DOI  
To: "Lane Miller" <miller99@llnl.gov>  
Date: 07/20/2010 02:17 PM  
Subject: History of flow estimates from the Flow Rate Technical Group

Hi Lane,

It was good to talk with you earlier, and I appreciate the update on the DOE flow estimates. Per your request, here is some material summarizing the history of the past Macondo Well flow estimates. As I mentioned, there are text (pated below) and table (attached) versions.

I also pasted below a brief summary of the FRTG. If you have a similar summary that describes your DOE team and can share it with me, would be much appreciated.

Let me know if any questions.

Mark

Mark Sogge  
Deputy Chair, NIC Flow Rate Technical Group  
Chief of Staff, USGS Western Region  
2255 Gemini Drive, Flagstaff, AZ 86001  
Cell: [REDACTED]; FAX: 928-556-7266  
mark\_sogge@usgs.gov

#### HISTORY OF FRTG

BP initially estimated the leaks at approximately 1,000 barrels of oil per day (BPD). On April 28, the National Oceanic and Atmospheric Administration (NOAA) estimated the oil flow rate at approximately 5,000 BPD. The need for a more refined estimate became apparent after the May 12 public release of videos showing the oil leak from the damaged riser. On May 14, 2010, the National Incident Command (NIC) asked its Interagency Solutions Group (IASG) to provide scientifically-based information on the discharge rate of oil from the well. In response, the NIC IASG chartered the Flow Rate Technical Group (FRTG) on May 19. Experts from many scientific disciplines were brought together to perform the FRTG's two primary functions: (1) as soon as possible, generate a preliminary estimate of the flow rate, and (2) within approximately two months, use multiple, peer-reviewed methodologies to generate a final estimate of flow rate and volume of oil spilled. Leadership of the FRTG was assigned to Dr. Marcia McNutt, Director of the U.S. Geological Survey and Science Advisor to the Secretary of the Interior on May 23.

The Flow Rate Technical Group is comprised of federal scientists, independent experts, and representatives from universities around the country. It includes representatives from the USGS, NOAA, Department of Energy (DOE), Bureau of Ocean Energy Management (BOEM; formerly the Minerals Management Service), and the National Institute of Standards and Technology (NIST). Six DOE National Labs were involved, including Los Alamos National Laboratory, Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, National Energy Technology Laboratory, Pacific Northwest National Laboratory, and Oak Ridge National Laboratory. Members also include academic researchers from UC Berkeley, UC San Diego, UC Santa Barbara, University of Washington, University of Texas, Purdue University, and Clarkson University.

#### HISTORY OF PRELIMINARY FLOW ESTIMATES

The FRTG was charged with quickly producing a preliminary estimate of the spill flow, and then to refine that estimate over time based on additional data and analyses. Due to the complexity of making these estimates and changes in the available data, the FRTG issued a series of preliminary flow estimates prior to this final report.

May 27: The NIC issued a press release on the FRTG preliminary flow results. Three independent methods were used to estimate the amount of flow: (1) plume analysis, (2) mass balance analysis, and (3) a "reality check" of the partial flow rate captured by the Riser Insertion Tube Tool (RITT) and measured aboard ship. The overlap between the methods was 12,000 - 19,000 BPD. One team estimated the flow at 25,000 BPD or higher. The press release can be viewed at <http://www.deepwaterhorizonresponse.com/go/doc/2931/569235/>. The preliminary FRTG report describing the results above was released for distribution on June 2.

June 10: The NIC issued a press release of updated FRTG flow estimates. These resulted from additional Plume Team analysis of May 17 video. The best estimate of flow rate was revised to 25,000 - 30,000 BPD; with a possible range of 20,000 - 40,000 BPD. In the same press release, the Mass Balance Team updated its lower bounds estimate to 12,500 - 21,500 BPD. The press release also referenced a new Woods Hole Oceanographic Institute (WHOI) preliminary report to the USCG, based on Sonar/Doppler analysis of the plume. The WHOI estimated a total flow (oil and gas) of 0.12m<sup>3</sup>/s to 0.23m<sup>3</sup>/s. Under some assumptions, this is consistent with some earlier FRTG range estimates. No formal report was issued in conjunction with the press release, which can be found at <http://www.deepwaterhorizonresponse.com/go/doc/2931/627011/>

June 15: The NIC issued a press release on updated FRTG flow rates that were calculated for the period immediately after the riser was cut from the BOP (June 3). The joint DOI and DOE estimate was 35,000 - 60,000 BPD. This was a consensus flow rate based on new Plume Team analysis of post-riser cut video and DOE analysis of new pressure gage readings. No formal report was issued in conjunction with the press release, which can be found at <http://www.deepwaterhorizonresponse.com/go/doc/2931/661583/>