3465913983-25082-19682-184-130 From: Marcia K McNutt <mcnutt@usgs.gov> Sent: Wed, 4 Aug 2010 15:16:46 To: GS FOIA 0105 <foia0105@usgs.gov> Subject: Fw: draft conclusions

Dr. Marcia McNutt

Director

US Geological Survey

12201 Sunrise Valley Drive, MS 100

Reston, VA 20192

(703) 648-7411

(703) 648-4454 (fax)

(571) 296-6730 (cell)

mcnutt@usgs.gov

www.usgs.gov

----- Forwarded by Janet N Arneson/DO/USGS/DOI on 08/04/2010 03:16 PM -----

From: "Wereley, Steven T." <wereley@purdue.edu>

To: "Bill.Lehr@noaa.gov" <Bill.Lehr@noaa.gov>, Alberto Aliseda <aaliseda@u.washington.edu>, James J Riley <rileyj@u.washington.edu>, ira

leifer <ira.leifer@bubbleology.com>, Juan Lasheras <lasheras@ucsd.edu>, "savas@newton.berkeley.edu" <savas@newton.berkeley.edu>,

Poojitha Yapa <pdy@clarkson.edu>, "Espina, Pedro I." <pedro.espina@nist.gov>, Franklin Shaffer <Franklin.Shaffer@NETL.DOE.GOV>, Paul

Bommer <pmbommer@mail.utexas.edu>, "antonio.possolo@nist.gov" <antonio.possolo@nist.gov>, Marcia K McNutt <mcnutt@usgs.gov>, Mark K

Sogge <mark_sogge@usgs.gov>

3465913983-25082-19682-184-130

Date: 06/08/2010 01:19 PM

Subject: RE: draft conclusions

Bill, this looks fine to me.

Best,

Steve Wereley, Professor of Mechanical Engineering Birck Nanotechnology Center, Room 2019, 1205 West State Street Purdue University West Lafayette, IN 47907 phone: 765/494-5624, fax: 765/494-0539 web page: http://engineering.purdue.edu/~wereley

From: Bill Lehr [mailto:Bill.Lehr@noaa.gov] Sent: Monday, June 07, 2010 7:23 PM To: Alberto Aliseda; James J Riley; ira leifer; Juan Lasheras; savas@newton.berkeley.edu; Poojitha Yapa; Espina, Pedro I.; Franklin Shaffer; Paul Bommer; Wereley, Steven T.; antonio.possolo@nist.gov; Marcia K McNutt; Mark K Sogge Subject: draft conclusions

3465913983-25082-19682-184-130 As with earlier estimates, the conclusions in this report are only to aid the Response, not to determine the final Federal estimate of spillage. Because of time and other constraints, only a small segment of the leakage time was examined, and assumptions were made that may through later information or analysis be shown to be invalid. For example, the Team assumes that the average flow between the start of the incident and the insertion of the RITT was relatively constant and the time frames that were included in the examined videos were representative of that average. If this were not true, then the actual spillage may differ significantly from the values stated below.

Most of the experts have concluded that, given the limited data available and the small amount of time to process that data, the best estimate for the average flow rate for the leakage prior to the insertion of the RITT is between 25 to 30 thousand bbl/day. However, it is possible that the spillage could have been as little as 20,000 bbl/day or as large 40,000 bbl/day. Further analysis of the existing data and of other videos not yet viewed may allow a refinement of these numbers.

The team has not estimated the flow rate during the period of active measures to reduce leakage such as after the insertion of the RITT or during and immediately after Top Kill. It is expected that the flow rate increased with the severing of the riser above the BOP. However, the team is still examining the video of that flow and will produce an addendum, if appropriate, with an updated leakage estimate.