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From: Marcia K McNutt <mcnutt@usgs.gov>
Sent: Wed, 4 Aug 2010 15:09:20
To: GS FOIA 0105 <foia0105@usgs.gov>
Subject: Fw: Kink plume estimated flow of 48 cm/s

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

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Date: 05/26/2010 01:36 PM

Subject: RE: Kink plume estimated flow of 48 cm/s

Conclusion? We need to subtract off V_{up} or measure close to the orifice?

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Subject: Kink plume estimated flow of 48 cm/s

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Dear Colleagues,

Based on a study I published in JPO, 2009 (below), a flow of 3000 bbl/day (I dropped some of Steve's digits) suggested for one kink plume should be ~48 cm/s steady state upwelling flow. I am assuming here that the buoyancy flux is dropped by 10% due to density, and a 50:50 oil to gas ratio. Neglecting hydrate effects.

Note, V_{up} is very insensitive to flow.

Ira