
From: Esswein, Eric J. (CDC/NIOSH/OD)
To: Howard, John (CDC/NIOSH/OD); Kitt, Margaret (CDC/NIOSH/OD); Decker, John A. (CDC/NIOSH/OD); Hearl, Frank J. (CDC/NIOSH/OD)
CC: Spahr, James S. (CDC/NIOSH/OD); McKernan, Lauralynn Taylor (CDC/NIOSH/EID)
Sent: 6/12/2010 11:03:29 PM
Subject: ASTM F 1788 -97 (2003)
Attachments: Volume Estimation Protocol_Controlled Burnsv5.pdf

The Standard that Lauralynn and I became aware of is Standard F 1788-97 (2003) In-Situ Burning of Oil Spills on Water: Environmental and Operational Considerations. This document is contained in the attached .pdf after page 2 in entirety

Sections 5 Environmental Considerations for Deciding to Use In-Situ Burning (5.1 Air Quality) and X1.2 of the Appendix are both relevant. The document states that several studies have been done re: air emissions resulting from in-situ burns and "the smoke plume consists largely of carbon". Appendix X1.2 goes into the greater detail, specifically addressing PAH's VOCs and other toxics that due to high temperatures generated during in-situ burning are "burned to fundamental gases" (presumably CO, CO₂, NO_x) but this is not explained.

I've only done a quick read of this, but the discussion of temperatures and gaseous emissions certainly seems relevant in considerations of exposure risks to workers who may be proximal to the burn. The document indicates that particulate matter, is the main hazard of concern. Metals are also described as below the limit if detection in soot but present in residues (unburned material). Reference 23 seems particularly pertinent.

I have some photos that hopefully I can download on this laptop and forward along.

Regards,

Eric

From: Howard, John (CDC/NIOSH/OD) Section 5.1.1
Sent: Saturday, June 12, 2010 8:52 PM
To: Kitt, Margaret (CDC/NIOSH/OD); Decker, John A. (CDC/NIOSH/OD); Hearl, Frank J. (CDC/NIOSH/OD)
Cc: Spahr, James S. (CDC/NIOSH/OD); Esswein, Eric J. (CDC/NIOSH/OD); McKernan, Lauralynn Taylor (CDC/NIOSH/EID)
Subject: Re: Update from Eric

One of the standards in question is ASTM F2152-07 -- Standard Guide for In-Situ Buring of Spilled Oil: Fire Resistant Boom.

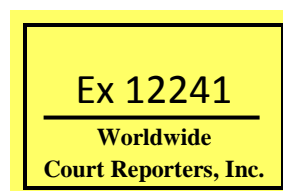
This guide is one of 4 related to in-situ burning of oil spills. Guide F 1768 addresses environmental and operational considerations, Guide F 990 addresses ignition devices, and Guide F 2230 addresses burning in ice conditions.

See <http://www.astm.org/Standards/F2152.htm>

John Howard

From: Kitt, Margaret (CDC/NIOSH/OD)
To: Howard, John (CDC/NIOSH/OD); Decker, John A. (CDC/NIOSH/OD); Hearl, Frank J. (CDC/NIOSH/OD)
Cc: Spahr, James S. (CDC/NIOSH/OD); Esswein, Eric J. (CDC/NIOSH/OD); McKernan, Lauralynn Taylor (CDC/NIOSH/EID)
Sent: Sat Jun 12 21:23:15 2010
Subject: Update from Eric

John, John, and Frank,



Just got a call from Eric—he and Lauralynn just returned from their fly-over of the burn areas. I took the best non-expert notes I could but Eric will send a follow-on email later. There is an ASTM document out there on these types of burns that we need to get our hands on if we have not already. Frank can you possibly look for this (after specifics from Eric)?

Eric, correct me if I am wrong but I think you said these burns are at extremely high temps (1300 Celsius) and that we believe there are little VOCs and PAHs at this level and that indeed it is mostly particulate matter.

I told Eric this document is a work in progress, has already been forwarded to others outside of NIOSH for review, and modifications can be made as we move forward. Ok—that is my non-expert synopsis. Hope I did not butcher Eric's info too much! He will graciously correct me I am sure.

Margaret

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