From: Wetmore, Cynthia
To: Saska, Laszlo@DTSC
Cc: Hume, Richard@DTSC
Subject: RE: pCBSA request
Date: Friday, February 27, 2015 8:34:00 AM
Attachments: image003.png

No, don't need the maps – sorry my email wasn't clear. Thanks for the pilot test reports.

Cynthia Wetmore, Technical Support Section
US.EPA, Region IX, Superfund Division
75 Hawthorne Street, San Francisco, 94105
(415)972-3059

From: Saska, Laszlo@DTSC [mailto:Laszlo.Saska@dtsc.ca.gov]
Sent: Friday, February 27, 2015 8:26 AM
To: Wetmore, Cynthia
Cc: Hume, Richard@DTSC
Subject: Re: pCBSA request

You are welcome for the pilot and bench testing reports. So do you still need pCBSA groundwater contours at Stringfellow?

Laszlo Saska (Ca. DTSC-Stringfellow)
Sent from my mobile device.

On Feb 27, 2015, at 7:56 AM, "Wetmore, Cynthia" <Wetmore.Cynthia@epa.gov> wrote:

Thank you! Long story, but I was able to talk to Daewon yesterday and get these maps. But thank you for sending anyway.

-Cynthia

<image003.png>

Cynthia Wetmore, Technical Support Section
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75 Hawthorne Street, San Francisco, 94105
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From: Saska, Laszlo@DTSC [mailto:Laszlo.Saska@dtsc.ca.gov]
Sent: Thursday, February 26, 2015 7:20 PM
To: Wetmore, Cynthia
Subject: FW: pCBSA request

Hi Cynthia,

A couple of months ago I sent to Daewon the same reports that you requested recently. Please see my brief email summary below to Daewon from that time for an overview of the attachments.

You also asked for groundwater pCBSA contour lines at Stringfellow. Please give me a few days to dig around and see what I can find. These will come from our geology unit.

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LASZLO SASKA, P.E.
DEPT. OF TOXIC SUBSTANCES CONTROL
LEGACY LANDFILLS OFFICE – STRINGFELLOW
8800 CAL CENTER DRIVE
SACRAMENTO, CA. 95826
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****

From: Saska, Laszlo@DTSC
Sent: Friday, December 19, 2014 9:37 AM
To: ROJAS-MICKELSON, DAEWON
Cc: Pahwa, Tej@DTSC
Subject: RE: pCBSA request

Hello Daewon,

Since the early 2000s, at Stringfellow we conducted conceptual treatability studies, bench-scale treatability studies, as well as pilot-scale treatability studies, for many compounds, one of which was pCBSA. We found that pCBSA can be oxidized in an aerobic fluidized bed reactor (FBR) to below detection limits, which for us were as low as 0.5 ppm using LC/MS/MS, although the removal efficiency varied significantly due to reactor equipment control issues at the pilot-scale level (1 gpm).

Note that pCBSA is not specifically regulated in our Stringfellow discharge. The reason we were interested in removing pCBSA is because it exerts a sizeable oxidative demand or BOD. We were really interested in removing NDMA and 1,4-dioxane in the ppb and ppt ranges using HiPOX (ozone/hydrogen peroxide-based advanced oxidation), but we first had to remove this large oxidative demand exerted primarily by pCBSA using a relatively inexpensive approach. Otherwise, HiPOX would have been hugely expensive in our opinion to also take on pCBSA.

I am attaching two reports for your information: 1) Our summary of the bench-scale testing activities (SAAB BTSR) (along with a few photos), and 2) the summary of the pilot-scale tests (SAAB AOP Pilot-scale Test Summary). Note that the latter is a summary of a treatment train that consisted of an anaerobic fluidized bed reactor (anaerobic FBR) used for perchlorate destruction, followed by the aerobic FBR for BOD reduction (most of which was pCBSA), followed by advanced oxidation (AOP) or HiPOX (we tried both) for NDMA and 1,4-dioxane destruction. Note that none of these treatment units were scaled up to full scale, as we still are not required to remove any of these compounds.

If you need more info, please let me know. Have a god day,

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LASZLO SASKA, P.E.
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****

From: Pahwa, Tej@DTSC
Sent: Thursday, December 18, 2014 2:25 PM
To: ROJAS-MICKELSON, DAEWON; Saska, Laszlo@DTSC
Subject: RE: pCBSA request

Daewon,

Laszlo was involved in the PCTF testing, which included an aerobic bioreactor p-CBSA. I spoke with him and he is at the Site today and will respond to your question as soon as practical.

Tej

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Hi Tej,

I was asked about the results of a fluidized reactor treatment bed study for pCBSA that was conducted at Stringfellow roughly ten years ago. Can you send the summary report? Again this inquiry is not related to Stringfellow but pCBSA issues at another Superfund site.

Thanks
Daewon Rojas-Mickelson, EIT
Remedial Project Manager
US EPA Region 9
(415) 947-4191