Message

**From**: LEE, LILY [LEE.LILY@EPA.GOV]
**Sent**: 10/6/2017 10:32:45 PM
**To**: Brooks, George P CIV [george.brooks@navy.mil]
**CC**: Chesnutt, John [Chesnutt.John@epa.gov]; Robinson, Derek J CIV NAVFAC HQ, BRAC PMO [derek.j.robinson1@navy.mil]; Janda, Danielle L CIV [danielle.janda@navy.mil]
**Subject**: Survey Units re areas with uncertainty - FW: Updated spreadsheet attached - using current PRG Calculator & FRED: results that exceed EPA PRG 10^-4 risk
**Attachments**: HPNS837-066 Exceedances.xlsx

Dear Pat,

In areas of uncertainty, you had asked for information about particular survey units where EPA might have relatively higher or lower levels of concern.

One of the priorities that we had recommended last fall was survey units where measurements of radionuclide concentrations were relatively higher based on PRG calculator estimates of risk. This is a potential indicator of higher concern if potential contamination were to have been left un-remediated. It is also a potential indicator of greater likelihood that concentrations above RG's could have spread farther from the storm drain/sewer lines, so multiple rounds of excavation might have been done. This was one of the scenarios described by former workers associated with motivation falsify. The attached spreadsheet uses the May, 2017 version of FRED. I just received a new version today, and I am interested in what updates have been made since May.

As I promised yesterday by phone, I will send information in the next few weeks about particular Survey Units as they relate to other potential indicators of higher vs. lower concern in areas of uncertainty that we have discussed in written recommendations in October 2016 and March 2017.

I understand that different assumptions can be made using the EPA PRG calculator that could generate different results. The 10^-4 risk benchmark is based on a June 2017 run of the EPA PRG calculator for residential soil that assumed that a durable cover was in place with 2 inches of asphalt and 4 inches of ABC, as described in the RD for Parcel B, which is similar to that at other parcels. It assumed a density of ABC based on the average of measured values at Parcel B, performed by ERRG. It assumed no consumption of homegrown produce.

This spreadsheet did not subtract out reference background given that different values were used in different locations historically at Hunters Pt. It is meant to be a relative indicator of level of concern and not an absolute determinant of actual CERCLA responsibility or actual risk. I understand that presumably all the soil with these values should in theory have already have been removed from the site. I understand that Ra-226 is the predominant RoC at Hunters Point. I understand that for most locations Th-232 was not a RoC. For most parcels, RACRs did not state a reference background level for Th-232. And I understand that at one particular reference background location, the measured values for Th-232 averaged around 1.5 pCi/g (vs. RG of 1.69 pCi/g).

Please contact me any time if you'd like to talk more about this. Thanks!

Lily

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**From:** LEE, LILY
**Sent:** Monday, July 24, 2017 1:20 PM
**To:** 'Brooks, George P CIV' <george.brooks@navy.mil>; 'derek.j.robinson1@navy.mil' <derek.j.robinson1@navy.mil>; Janda, Danielle L CIV <danielle.janda@navy.mil>
**Subject:** Updated spreadsheet attached - using current PRG Calculator & FRED: results that exceed EPA PRG 10^-4 risk

Dear Pat,

Last fall we sent you the concentrations of radionuclides associated with 10^-4 risk using the then-current version of the PRG calculator. At that time we only had NIRIS, so we sent you maps showing locations where results in NIRIS exceeded 10^-4 risk.

Since that time, USEPA has updated the PRG Calculator. And you have now created FRED, which is better than NIRIS. So we have re-run using updated values for PRG calculator. Here are the results of screening FRED. There is one tab for each parcel and type (trench, fill). Generally Radium 226 and Thorium 232 were the only exceedences, but there is one Strontium 90 exceedance.

Lily