Cossaboom, Carey C POA

From: Cossaboom, Carey C POA
Sent: Monday, May 16, 2005 10:17 AM
To: Sharp-Dahl, Julie L POA
Cc: Geist, Lisa K POA
Subject: RE: NE Cape data "usability" review stuck...help!

Julie:
I am responding to your e-mail, just so that we have a record of our resolution to this issue for the files. You, Lisa and I discussed the situation. Our discussion conclusions were:

1. Affect on soil samples is likely negligible since split spoons were washed, rinsate samples showed a maximum of 1.7 mg/L DRO, spoon was driven into virgin ground, and penetration of oil into virgin ground was likely negligible.
2. Affect on water samples is likely negligible since water samples from all new monitoring wells were either ND or very low detection for DRO and RRO.
3. Well point samples showing significant DRO and RRO (Site 3), were obtained by driving well points with sledge hammer; no corn oil was used.

Carey Cossaboom
Project Manager
U.S. Army Corps of Engineers
907-753-2689 (ph.)
907-753-5626 (fax)
carey.c.cossaboom@poa02.usace.army.mil

From: Sharp-Dahl, Julie L POA
Sent: Friday, May 13, 2005 5:36 PM
To: Cossaboom, Carey C POA
Cc: Geist, Lisa K POA
Subject: NE Cape data "usability" review stuck...help!

Carey,

S&W used corn oil during the air-rotary drilling. Corn oil can show up in the Alaska methods as fuel (the analysis of a corn oil sample showed high DRO "results"). Split spoons that were washed and rinsed, were noted by the field sampler to have a shine- so he rinsed the shiniest spoons and collected (3) composite rinsate samples. The rinsate samples had "hits" of DRO and RRO greater than ½ the water cleanup level (the highest rinsate result was 1.7 mg/L DRO).

The challenge is this: How to determine if the corn oil sheen left on the "cleaned" spoons impacts the analytical results for fuels (and TOC- but that's another matter). The rinsate data (presented in liquid units, mg/L) only tells how much was on the spoon after cleaning and before the next sample was taken. It doesn't tell what impact the corn oil introduced during the air-rotary drilling may have on the soils sampled, if any. It doesn't tell how much came out of the spoon with the sample. It only indicates that after washing the sampling equipment, the sampling equipment was not totally clean prior to collecting the next soil sample.

Here are some ideas:

- All results < ADEC cleanup level (250 mg/kg for DRO and 10,000 mg/kg for RRO) – data can be used for project purposes (flag as potentially contaminated from the corn oil). No further action/concern ("Who cares? We are below cleanup level!")
- All results > ADEC cleanup level may be biased high (or not? **Or** it simply doesn't matter because the results are above cleanup level and by strict definition of the AK methods, the biogenic/corn oil/etc. all

count as fuel for comparison purposes). Results near the cleanup level should have their chromatograms examined to determine if corn oil shows up.

Other ideas:

- The results from the analytical lab's biogenic assessment (not sure which samples/how much I have of this) may be examined- the sample results potentially impacted by corn oil but determined by the lab as "biogenic" are therefore biogenic (i.e. no corn oil impact- or who cares if corn oil impacted- the lab has said it's NOT fuel).
- The chromatograms from each and every soil sample (not sediments- they were collected with a dredge) are compared against the corn oil rinsate and the raw corn oil chromatogram, and evaluated for presence of corn oil.
- All fuel results for the soils are rejected due to incompetence by the contractor (NOT my recommendation, nor my idea)

My labor code is not fat enough to do much of any of the ideas I have described. Let's talk.

Concerning the TOC results- Mike Utley is pulling together all of the TOC data and corresponding fuel results. S&W did not necessarily collect their TOC samples from "clean" soils. Richard tells me ADEC has a method to keep/reject soil TOC data by calculating the amount of fuel somehow (since fuel is loaded with carbon, the fuel carbon adds to the TOC result- since TOC is in the Method 3 calculator, it cannot contain much if any fuel). The TOC data was not reviewed during data review (only the standard analytical methods from SW846 and Alaska fuel method were reviewed). Since these data were collected for Method Three (I am assuming?) they need to be reviewed. I had planned to do that. We probably should talk about this as well.

Ideas/recommendations/easy solutions are welcome!

Julie