

From: brent.blun [REDACTED]
Sent: Monday, December 13, 2010 1:31 PM
To: Dimarzio, John A.
Cc: clayton.shedrow [REDACTED]; Cynthia.Williams [REDACTED]; virginia.kay [REDACTED] sachiko-w.mcalhany@nnsa.srs.gov; randy.reddick [REDACTED]
Subject: RE: Chapter 3 Comments on Geology and Soils, "Recent" faulting at SRS
I talked with our folks this morning and here are the answers.

Kathy Martin (GC) states that this is not consistent with the PA for the F-Tank Farm (SRS-REG-2007-00002).
Page 74 of the PA states:

"F-Area could be subject to potential activity of the Tinker Creek Fault, which is associated with activity of the Costal Plain sediments"

The F-Tank Farm PA does not contradict what is stated in the SEIS. All it says is that the Tinker Fault has potential for activity. There has been no activity that we know of since the late Eocene (30 million years ago).

Is additional information available on the status of "capable faults" in the vicinity of SRS?

Also, GC questioned reference to the MFFF License Application for a comprehensive description of SRS geology and soils. Is there another recent comprehensive document that we could reference instead?

We are expecting a report that should address the other two questions, but it is not available yet. So the answer is there is nothing better than the MFFF License Application. We can revise it after the public comment period if that report dictates we should. At the very least we can use it as a reference.

From: "Dimarzio, John A." [REDACTED]
To: <virginia.kay [REDACTED]>
Cc: <Cynthia.Williams [REDACTED]> <clayton.shedrow [REDACTED]> <brent.blun [REDACTED]>
Date: 12/10/2010 12:54 PM
Subject: RE: Chapter 3 Comments on Geology and Soils, "Recent" faulting at SRS

Reading below...I don't think either question has been answered.

From: virginia.kay [REDACTED]
Sent: Friday, December 10, 2010 11:31 AM
To: Dimarzio, John A.
Subject: Fw: Chapter 3 Comments on Geology and Soils, "Recent" faulting at SRS

----- Forwarded by Virginia Kay [REDACTED] on 12/10/2010 11:30 AM -----

From: Brent Blun [REDACTED]
To: Virginia Kay [REDACTED]
Cc: Cynthia Williams [REDACTED]
Date: 12/09/2010 04:02 PM
Subject: Re: Fw: Chapter 3 Comments on Geology and Soils, "Recent" faulting at SRS

Virginia

Barry,

I'm afraid that I've never worked the Tinker Creek Fault, the location of this fault is based on a seismic studies between 1995 and 2000; I haven't worked seismic data since I left the oilfield in 1988. There is very sparse well log control for Tinker Creek. LiDAR may help resolve any exposures of the fault, which don't necessarily mean that there is a seismic hazard, only that erosion has exposed the fault. None of the other faults that I've studied with the same orientation (and precursor stress field) have moved since the late Eocene, so I don't think it's likely that the Tinker Creek Fault has moved more recently either. The Pen Branch and Steel Creek Faults are pretty well controlled by well logs and CPTs; I can document movement in the Tobacco Road (late Eocene), but I don't see any displacement in the Miocene Upland Formation.

I'll let you know about more recent references when I get a chance to look at the LiDAR Report, due tomorrow.

LiDAR is like a very high resolution airborne radar system that senses reflections from various surfaces. In data processing, they filter out anomalies like the reflections from vegetation (canopies), bird hits, and open wells and other holes. Vertical resolution on the ground surface is less than a meter (on the order of one foot).

Jim Mason
Geotechnical Engineering



From: Clayton Shedrow [redacted]
To: Jim Masor [redacted]
Cc: Jim Masor [redacted], Wm L [redacted], Cynthia Williams [redacted], Virginia Kay [redacted]
Date: 11/30/2010 05:24 PM
Subject: Re: Fw: Chapter 3 Comments on Geology and Soils, "Recent" faulting at SRS

Jim

Yes, assuming your work also applies to the referenced Tinker Creek Fault.

The second questions is as follows:

"Also, GC questioned reference to the MFFF License Application for a comprehensive description of SRS geology and soils. Is there another recent comprehensive document that we could reference instead?"

Is there a more recent applicable reference than the MFFF License Application?

Thanks.

C. Barry Shedrow
[redacted]

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From: Jim Mason [REDACTED]
To: Clayton Shedrow [REDACTED]
Cc: Jim Mason [REDACTED] Wm Li [REDACTED]
Date: 11/30/2010 05:09 PM
Subject: Fw: Chapter 3 Comments on Geology and Soils, "Recent" faulting at SRS

Barry,

None of the faults that I have studied in areas with dense well log and CPT coverage have moved since the late Eocene, approximately 33.9 million years before present.

Is this what you need? The current Probabalistic Seismic Hazard Assessment includes an on-going evaluation of the LiDAR (Light Detection and Ranging) data which was flown in the Spring of 2009. This evaluation focuses on topographic and geomorphic evidence for recent faulting across SRS. The final results of this study should be available late this week.

Jim Mason
Geotechnical Engineering

[REDACTED]

----- Forwarded by Jim Mason [REDACTED] on 11/30/2010 04:19 PM -----

From: Wm Li [REDACTED]
To: Jim Mason [REDACTED]
Date: 11/30/2010 03:52 PM
Subject: Fw: Chapter 3 Comments on Geology and Soils

----- Forwarded by Wm Li [REDACTED] on 11/30/2010 03:52 PM -----

From: Clayton Shedrow [REDACTED]
To: wm.l [REDACTED]
Cc: Cynthia Williams [REDACTED] Virginia Kay [REDACTED]
Date: 11/30/2010 03:47 PM
Subject: Fw: Chapter 3 Comments on Geology and Soils

Bill

EIS inquiry I referred to.

Thanks.

C. Barry Shedrow

[REDACTED]

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----- Forwarded by Clayton Shedrow [REDACTED] on 11/30/2010 03:43 PM -----

From: "Dimarzio, John A." [REDACTED]
To: <virginia.kay [REDACTED]>
Cc: <sachiko-w.mcalhany@nnsa.srs.gov>, <Cynthia.Williams [REDACTED]>, <clayton.shedrow [REDACTED]> "Crede, Suzanne C."
[REDACTED]
Date: 11/30/2010 02:11 PM
Subject: Chapter 3 Comments on Geology and Soils

We currently have a paragraph in Chapter 3 that states:
"Geophysical studies of SRS have identified seven subsurface faults: Pen Branch, Steel Creek, Advanced Tactical Training Area, Crackerneck, Ellenton, Upper Three Runs, and an unnamed fault that passes approximately 0.5 miles (0.81 kilometers) south of F-Area, between F-Area and Fourmile Branch (DOE 2002d:3-5). The actual faults do not reach the surface, stopping several hundred feet below grade (CSRACT 2007:34). On the basis of previous studies at SRS and elsewhere, there are no known faults capable of producing an earthquake (referred to as "capable faults") within a 200-mile (320-kilometer) radius of the site, except for faults associated with the Charleston seismic zone (NRC 2005a:3-4)."

Kathy Martin (GC) states that this is not consistent with the PA for the F-Tank Farm (SRS-REG-2007-00002).

Page 74 of the PA states:

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John DiMarzio | SAIC

Senior Environmental Scientist | Project Manager

Energy, Environment & Infrastructure Solutions

[REDACTED]

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[REDACTED]