

BEFORE THE U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ADMINISTRATIVE LAW JUDGES

In the Matter of:)
)
ENVIRONMENTAL PROTECTION) OPA-09-2018-00002
AGENCY,)
)
Complainant,) Administrative Law Judge
v.) Susan L. Biro
)
VSS INTERNATIONAL, INC.,)
)
Respondent.)

Courtroom 15, 18th Floor
Phillip Burton Federal
Building and United States
Courthouse
450 Golden Gate Avenue
San Francisco, California
Monday,
May 20, 2019

The above-entitled matter came on for hearing,
pursuant to notice, at 9:06 a.m.

BEFORE: HONORABLE SUSAN L. BIRO
Chief Administrative Law Judge

APPEARANCES:

For the Complainant:

REBECCA SUGERMAN, Esquire
J. ANDREW HELMLINGER, Esquire
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WITNESSES DIRECT CROSS REDIRECT RECROSS DIRE

For the Respondent:

| | | | | | |
|----------------|-----|-----|-----|-----|----|
| Art Lee Delano | 510 | 552 | 569 | 570 | -- |
| Michael Sears | 575 | 590 | 596 | -- | -- |
| Craig Fletcher | 599 | 635 | 645 | -- | -- |

APPEARANCES: (Cont'd)

For the Respondent:

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EXHIBITS

RESPONDENT'S

EXHIBITS: IDENTIFIED RECEIVED

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1 PROCEEDINGS
 2 (9:06 a.m.)
 3 JUDGE BIRO: Good morning. Please be
 4 seated. Is everybody ready to proceed? Okay. We're
 5 going to go back on the record.
 6 I think, Mr. McNeil, you were going to call
 7 your next witness?
 8 MR. MCNEIL: Yes, Your Honor, we're ready to
 9 do so. And Respondent calls Mr. Lee Delano.
 10 JUDGE BIRO: Would you please remain
 11 standing, Mr. Delano, so the court reporter can swear
 12 you in?
 13 THE COURT REPORTER: Will you please raise
 14 your right hand.
 15 Whereupon,
 16 ART LEE DELANO
 17 having been duly sworn, was called as a
 18 witness and was examined and testified as follows:
 19 THE COURT REPORTER: Thank you. Please have
 20 a seat. And for the record, would you please state
 21 and spell your first and last name?
 22 THE WITNESS: Art Lee Delano, A-R-T, L-E-E,
 23 D-E-L-A-N-O.
 24 THE COURT REPORTER: Thank you.
 25 JUDGE BIRO: Please proceed.

1 DIRECT EXAMINATION
 2 BY MR. MCNEIL:
 3 Q Good morning, Mr. Delano.
 4 A Good morning.
 5 Q May I ask you first to let us all know by
 6 whom you're currently employed?
 7 A I'm employed by WHF, Incorporated, an
 8 environmental and engineering firm.
 9 Q All right. And what is your job description
 10 at WHF?
 11 A Two. I'm Vice President of the corporation,
 12 and I'm the engineer on staff.
 13 Q Okay. And how long have you been associated
 14 with WHF?
 15 A Since the mid-1990s, so 20-plus years.
 16 Q Okay. And prior to your affiliation with
 17 WHF, did you hold other employment positions?
 18 A A few. I worked for Modesto Irrigation
 19 District for a period of time. They were both an
 20 irrigation supplier and electric supplier, so I got to
 21 work on a multiple number of projects for them.
 22 Q What kind of projects did you do for Modesto
 23 Irrigation?
 24 A We would do power facilities, and there was
 25 a mixture. We did gas turbine plants, we did power

1 transmission plants, and we did hydroelectric plants.
 2 Q And what typically would be your role, say,
 3 for example, with a hydroelectric plant?
 4 A It varied a little bit. We did some
 5 inspections on an existing large facility, and then we
 6 did design new facilities. We had two or three new
 7 facilities I was involved with.
 8 Q And if you were involved in the design, what
 9 typically would be your responsibility or the tasks
 10 that you'd be responsible for?
 11 A Again, it would vary a little bit. Some of
 12 the smaller projects, I got to act as the actual
 13 design engineer. The larger projects, we would
 14 typically use a third-party consultant to do designs
 15 if it's just too large for our smaller firm to do.
 16 Then I would review the contracts, be the contract --
 17 the project manager, so to speak, make sure the
 18 project got done properly.
 19 Q Okay. And other than -- how long were you
 20 at Modesto Irrigation District?
 21 A I think that was 17 years or so. And then,
 22 previous to that, I was with Caltrans. I was in the
 23 Bridge Department, and we did bridge design
 24 essentially.
 25 Q Okay. For Caltrans?

1 A Yes.
 2 Q That's the California Department of
 3 Transportation?
 4 A Correct.
 5 Q A state agency?
 6 A Bridge Department, yes. It's a separate
 7 department.
 8 Q The Bridge Department would be involved with
 9 the large infrastructure bridges that you see
 10 throughout the California roadways?
 11 A Yes, typically the freeway system, yes.
 12 Q Freeway system?
 13 A Right. We did a variety of bridge types,
 14 concrete, steel, different types.
 15 Q And what was -- what kind of job
 16 responsibilities or duties just in general did you
 17 perform while you were at -- employed by Caltrans?
 18 A That was sort of in my young career, so it
 19 was more of an intern arrangement that I was learning
 20 the business, so to speak, and learning their methods
 21 and processes.
 22 Q Okay. And was Caltrans your first or one of
 23 your first jobs after you finished your education?
 24 A That's correct, yes.
 25 Q Okay. And can you briefly outline your

1 education for us, starting with your undergraduate
 2 studies?
 3 A I graduated from Fresno State with a degree
 4 in civil engineering.
 5 Q Is that a Bachelor of Science?
 6 A Yes.
 7 Q And what was your -- did you have a major or
 8 a minor emphasis of study?
 9 A I had an emphasis in surveying and
 10 structures.
 11 Q And structures including -- would that
 12 include concrete structures, steel structures, things
 13 of that nature?
 14 A Yes, just in general, so, from a theoretical
 15 aspect, we would analyze structures, just the general
 16 structure, trusses, bridges, houses, buildings, just
 17 in general.
 18 Q And do you have any licenses or
 19 certifications related to engineering?
 20 A I hold two professional licenses. I hold a
 21 license in civil engineering and I hold a license in
 22 agricultural engineering from the State of California.
 23 They're both active.
 24 Q Okay. And has your civil engineering
 25 license been active without interruption since 2014?

1 A I think since 1973.
 2 Q Okay. And since the time that you've been
 3 employed by WHF, have you been involved in the
 4 preparation of or review of what are called Spill
 5 Prevention, Control, and Countermeasure, SPCC, plans?
 6 A Yes, I have.
 7 Q Okay. And do you work with Ms. Kari Casey,
 8 who testified the other day, on those kind of plans?
 9 A I do, very closely.
 10 Q Okay.
 11 A And, typically, I lend the technical support
 12 that she doesn't have, so I'll do some of the site
 13 surveying that's required for those plans.
 14 Q All right. And any engineering review
 15 that's required?
 16 A That's correct.
 17 Q Okay. And Ms. Casey, I think, indicated
 18 that she had worked on a number of SPCC plans,
 19 somewhere in the, you know, couple dozen or more
 20 range. Would the same be true for you?
 21 A That's correct. She's been our point lead,
 22 and I am her major technical support. There's no
 23 other engineer on staff, so I've done all of her
 24 reports, essentially.
 25 Q Okay. And if you work on a report with Ms.

1 Casey that requires an engineering certification,
 2 would that also fall to you to stamp and sign the
 3 plan?
 4 A Yes, it does.
 5 Q Okay. And in so doing, would you review the
 6 work that she had done and, before you sign it,
 7 satisfy yourself that, you know, you approved it and
 8 it was good to go out under your signature?
 9 A Yes, in each case.
 10 MR. MCNEIL: Okay. Your Honor, I would move
 11 to qualify Mr. Delano as an expert in two areas: one,
 12 civil engineering, and secondly, preparation of SPCC
 13 plans.
 14 MR. HELMLINGER: No objection for those
 15 specific expertise.
 16 JUDGE BIRO: So qualified.
 17 MR. MCNEIL: Thank you.
 18 BY MR. MCNEIL:
 19 Q Mr. Delano, let me ask you if there came a
 20 time in the last few years where you were asked to
 21 become involved in the SPCC plan that was undergoing
 22 preparation or review by WHF for the -- there's a
 23 photograph there in front of you there -- the VSS
 24 facility in West Sacramento?
 25 A Yes.

1 Q Okay. Do you see it? I think it's CX-1.
 2 MR. HELMLINGER: It's written in black at
 3 the bottom. It is CX-1.
 4 BY MR. MCNEIL:
 5 Q Okay. So are you able to see the aerial
 6 photograph that's been identified in this matter as
 7 CX-1 as that photograph there?
 8 A Yes, I do.
 9 Q Okay. And do you recognize that as the VSS
 10 West Sacramento facility?
 11 A Yes, I do.
 12 Q Okay. Have you visited the facility?
 13 A A couple, few times. The first time I was
 14 on site, Kari had asked me to do a topography of the
 15 tank site specifically for work that she wanted done.
 16 Q Did you have an understanding of what work
 17 she was undertaking that she asked you to help out
 18 with?
 19 A I really didn't know the background too
 20 much. She indicated we needed site information for
 21 flow, and, typically, we're looking at storm flow. We
 22 did the topography. I have an instrument that I use,
 23 so I was on site, and I took topography shots on the
 24 site. We didn't do -- it wasn't all-encompassing.
 25 She wanted me to focus on the tank, the secondary

1 containment, and some of the storm drains that were
2 north of the tank, and there's a railroad spur to the
3 west of the tanks, and so we took detailed information
4 of that area.

5 Q Okay. And when you say the tank, just, of
6 course, there are a number of tanks on site, but were
7 there any tanks in particular that she wanted you to
8 focus on?

9 A Yeah. At that time, I think the first time
10 that we were there, I'm not sure if both tanks were
11 there. This is the two and a half million gallon
12 tanks, the two large white tanks in that photo.

13 Q The two large white tanks just left of
14 center --

15 A Right.

16 Q -- in the photograph?

17 A Right.

18 Q Okay. And if I said those tanks have been
19 designated with tank identification numbers of 2001
20 and 2002, does that sound familiar to you?

21 A It does.

22 Q Okay. And those are the tanks that you were
23 interested in or that Ms. Casey was interested in
24 having you survey and look at in particular?

25 A Right, and the surrounding topography.

1 That's what I say, the parking lot area, we took some
2 shots on. We didn't concentrate -- there's two
3 buildings that can be seen on the right-hand side of
4 the photo. We did not do any topography to the
5 right-hand side. We focused on the tank area slightly
6 to the south but mostly to the north in that storm
7 drain area.

8 Q Okay. We'll move on in a second, but while
9 we're all looking at CX-1, could you just, because of
10 your familiarity, how many times actually have you
11 been to the site to the best of your recollection?

12 A A minimum of two. I don't really know, but
13 a minimum twice.

14 Q Okay. Can you just kind of for everybody's
15 benefit, just describe the physical observations that
16 you made in and around the area of the two large
17 tanks, 2001 and 2002?

18 A Sure. Immediately around the tanks, there
19 is a depressed area that's surrounded by a retaining
20 wall, the secondary containment. The asphalt around
21 that secondary containment is a little bit higher than
22 the depressed area where the tanks are. There are
23 graded areas around the tanks; that is, it's not level
24 there inside the containment. There are some contours
25 inside that containment. Outside the containment,

1 there is typically hardstand; that is, it's typically
2 paved with asphalt. So we looked at those areas. And
3 then we wanted to see sort of the surrounding areas.
4 We took a couple of shots on the railroad spur that's
5 off to the left. And then, like I said, we went to
6 the north. It's undulating. There are some storm
7 drain catch basins in that parking lot area, you see,
8 with all the trucks there.

9 Q And what about to the south, generally the
10 south, I guess, south/southeast; in other words, the
11 direction between the tanks, the two large tanks and
12 the shipping channel shown in the bottom right portion
13 of the photograph?

14 A Generally, there's an access road that's
15 adjacent to the secondary containment. That's a paved
16 road, which is some 15 feet wide. Beyond that,
17 towards the channel, there is a storage area typically
18 for vehicles and material, and that area is about 50
19 feet wide, and then it's bounded by a concrete set of
20 K-rails that essentially are at the property boundary.

21 Q Okay. And what's the general topography
22 from the southern boundary of the tank area to the top
23 of the levee where the vegetation is shown there?

24 A Generally, it slopes up from that southeast
25 containment wall, slopes upward. We did not shoot the

1 top of those rails, and we did not go to the property
2 line with our topography. We stopped short. We just
3 want to know the general storm flow, and it generally
4 flows to the north towards the street.

5 Q Okay. And we can look at one of your
6 figures here shortly, but do you have a recollection
7 of what the general change in grade, upward change in
8 grade, from the tanks to the top of the embankment
9 would be?

10 MR. HELMLINGER: Objection. Calls for
11 speculation. He testified he didn't measure it.

12 JUDGE BIRO: He can estimate based on his
13 expertise if he feels comfortable.

14 THE WITNESS: It's about a foot and a half.

15 BY MR. MCNEIL:

16 Q Foot and a half rise in elevation?

17 A Yeah. It's what we measured on that ground
18 where those vehicles are parked, about a foot and a
19 half from the access road next to the containment
20 structure up to that dirt area.

21 Q Okay. So the foot and a half is what?
22 That's the extent of what you actually measured?

23 A Correct.

24 Q Okay. And then could you, Mr. Delano, just
25 go back for a moment to this description that you had

1 given us briefly about the depression area around the
 2 tank and the -- in other words, you described the
 3 secondary containment wall around the tank storage
 4 area?
 5 A Correct. It's not level inside that
 6 containment, the secondary containment wall. That is,
 7 there's a high spot between the tanks that runs north
 8 and south between the tanks, and then, as storm water
 9 falls in that containment area, it flows away from the
 10 tanks towards the corners of the containment area, and
 11 then the facility then can pump that storm water
 12 later.
 13 Q Okay. So then --
 14 A It ponds there in the corner.
 15 Q Okay. So the man-made, to be clear, the
 16 man-made depression, is there a portion of the
 17 man-made depression that you're referring to that does
 18 not contain or it does not have as part of it the
 19 secondary containment of the concrete wall?
 20 A There's only one small opening, sort of at
 21 the southeast corner, there's a vehicle access gate
 22 that's not a concrete wall.
 23 Q Okay. And what about, is there a portion of
 24 the tank storage area that is at grade or below grade?
 25 A All of that concrete wall that's secondary

1 containment is above the outside asphalt some
 2 distance.
 3 Q Okay. And what about within the tank pit?
 4 A Within the tank pit, it's depressed
 5 somewhat. Like I say, it's not consistent. It's
 6 unlevel because there's a low spot on one side.
 7 Q But a portion of that is below grade?
 8 A It is.
 9 Q Okay. So the portion that is below grade,
 10 is that what you're referring to as the man-made
 11 depression?
 12 A Correct.
 13 Q Okay. And meaning that if the secondary
 14 containment were to fail, that would not -- the
 15 man-made depression would still be there?
 16 A Correct.
 17 Q Okay. And why is that?
 18 A There's a difference of about two feet
 19 average, if you look at averages, that's below that
 20 grade. So even though the top portion of the wall you
 21 make magically disappear, then there would still be a
 22 very large bathtub there in that man-made depression.
 23 Q That's below grade?
 24 A Below grade.
 25 Q So, in other words, it cannot fail?

1 A Right.
 2 Q Okay. And do you recall that there came a
 3 time where there was a SPCC plan that Ms. Casey had
 4 drafted and then presented to you for collaboration
 5 for this site?
 6 A Yes.
 7 Q Okay. And what was your role in working,
 8 you know, working with her on the SPCC plan?
 9 A Mainly drainage, so a portion of that is a
 10 discussion about drainage and where any spills might
 11 go on property. If we have spills on property, then
 12 we want to know where that material would flow. So we
 13 were concerned about the general site conditions,
 14 general topography, and so she asked me to do that.
 15 Q Okay. Did you -- let me ask you to turn to
 16 one of the exhibits, CX-17, in the binder before you.
 17 Let me know if you see that, CX-17, the binder that
 18 has No. 17 in it?
 19 A Okay.
 20 Q And if you could flip to page 29?
 21 A Yes.
 22 Q Do you see a Engineer -- Professional
 23 Engineering Stamp on that page?
 24 A I do.
 25 Q Do you recognize that?

1 A That's my signature.
 2 Q That's your signature, and also is that your
 3 stamp?
 4 A It is.
 5 Q As valid at that time?
 6 A Correct.
 7 Q Okay. And that you reviewed this report and
 8 signed it and made the attestation that's indicated
 9 above in this Section 5.1.2?
 10 A Correct.
 11 Q Okay. You may be familiar that there's been
 12 some question raised about the adequacy of this
 13 attestation, in particular that there are two things
 14 that are not actually spelled out directly under
 15 5.1.2, one being that you had reviewed the Fletcher
 16 report and, two, that the plan was adequate for the
 17 facility. Have you been told that that criticism has
 18 been levied at this report?
 19 A You had mentioned it to me in the last
 20 couple days. That's all.
 21 Q Okay, that's fine. Do you have -- are you
 22 able to share with everybody here whether you, when
 23 you signed this, whether you had reviewed the Fletcher
 24 report and intended it to be part of this document?
 25 A Yes, I had reviewed it, and it is intended

1 to be part of the report. The Fletcher report is
2 appended to this, so I would assume that it is
3 intended to be included. There is text interior here
4 in the report that refers to the Fletcher report in a
5 couple of, three different places, in the text.

6 Q Can you show us one or two of those spots?

7 A Sure. One of the first references is under
8 our Section 5.3.1 entitled "Bulk Storage Container."

9 Q Let me just stop you. I apologize, Mr.
10 Delano. Are you looking at CX-17, page 42 of 131 or
11 maybe page 41?

12 A Yeah, 41 is the title, and then the text is
13 on page 42.

14 Q Okay. And where on 42 are you looking?

15 A There's a subparagraph A that says "Tank
16 Construction."

17 Q And what does that say?

18 A And then that goes on to say, "All tank
19 construction information is provided in the Integrity
20 Testing Program for bulk storage containers written by
21 Fletcher Consultants, Inc., located in Appendix E."

22 Q Okay. And did you say there was another
23 reference that you had spotted in your re-review of
24 this report?

25 A I think there's a couple. Then, on page 44,

1 under 5.3.3, Inspections and Recordkeeping, there are
2 a couple of references to Appendix E in that first
3 paragraph and then Appendix D at the very bottom of
4 the page.

5 Q Okay. That's on page?

6 A Forty-four.

7 Q CX-17, page 44?

8 A Correct.

9 Q Okay.

10 A And then, on CX-17, page 45, under
11 Inspections and Tests, there's another paragraph where
12 there's a reference to Fletcher Consultants in
13 Appendix E.

14 Q And that's under Section 5.3.3(b), correct?

15 A B as in boy, correct.

16 Q Okay. And I think I asked you this, but was
17 it also your intention that this report be deemed
18 adequate for the facility at the time it was issued?

19 A Yes.

20 Q Okay. Let me ask you to -- let me ask you
21 if there came a time that Ms. Casey asked you to
22 become involved in an analysis of whether a facility
23 response plan under the regulations was required for
24 the VSS West Sacramento plan?

25 A Yes, she did. She had been in some

1 conversations with I think both Randy and some others
2 and indicated that we might have to do an FRP study
3 for the facility here at VSS.

4 Q Okay. And did you -- by you, I mean WHF --
5 ultimately prepare a document that was entitled
6 Substantial Harm Criteria in 2015?

7 A Correct, we did.

8 Q Okay. And you participated in the
9 preparation of that document?

10 A I did.

11 Q Okay. Let's take a -- let's turn to that
12 and take a look at that, and I think we've had that
13 before, referenced by other witnesses. But it's CX-
14 23, and it's pages 1 through 41. And just, if you
15 would, take a look at the first page of that once you
16 have it before you.

17 A What was the page number?

18 Q You have CX-23?

19 A Yes, I do.

20 Q Okay. Well, first, just take a quick peek
21 at page 1.

22 A Sure.

23 Q Okay. Is that, where it says "Prepared by
24 A. Lee Delano, PE and Kari L. Casey," is that correct?

25 A That's correct.

1 Q It was prepared by both of you?

2 A Yes.

3 Q Okay. And it's dated June 23, 2015, you see
4 that?

5 A Correct.

6 Q Okay. So now, if you would, turn to page 5
7 at Section 2.1.1.

8 A Yes.

9 Q And can you take a look at Table 1 and just
10 briefly describe for us what Table 1 is intended to
11 reflect in terms of information?

12 A Table 1 is to reflect that there was a
13 volume that we calculated that was part of the
14 man-made depression inside of the containment walls,
15 and the volume was 1,400,000, approximately 60 percent
16 of the tank, of the total gross tank volume.

17 Q Okay. That, where you mentioned man-made
18 depression just a moment ago, is that the same area
19 that you described for us earlier that has the
20 man-made depression surrounding the tanks that was at
21 or below grade?

22 A That's correct.

23 Q Okay. So at or below grade is 1.4 million
24 or close to it?

25 A Yes.

1 Q As reflected here?
 2 A Yes.
 3 Q Okay.
 4 A That was consistent, by the way, with the
 5 details shown by H&A. They had a detail of the wall
 6 that seemed to be consistent with that.
 7 Q Okay. And there was a reference above, in
 8 that same Section 2.1.1, about the 2.38 million gallon
 9 tank being a vaulted tank. What does vaulted mean in
 10 that context? It's on the first line.
 11 A That it's set inside a secondary
 12 containment.
 13 Q In this case, meaning the man-made
 14 depression plus the concrete walls?
 15 MR. HELMLINGER: Objection.
 16 JUDGE BIRO: Overruled. Go ahead.
 17 BY MR. MCNEIL:
 18 Q So the question was, meaning the man-made
 19 depression and then the above grade concrete wall?
 20 A Correct.
 21 Q Okay. And Mr. Delano, as for the tank
 22 itself, Tank 2001 in this case, are you -- do you have
 23 any information about how that tank is constructed?
 24 A Yes. Mr. Tilford sent me some drawings I
 25 think that were from the fabricator and showed details

1 of the tank, the plates, and the steel involved in its
 2 construction.
 3 Q Okay. I'd like to ask you a question,
 4 because the question's been raised, a very legitimate
 5 one, about the various scenarios that could occur
 6 during a tank rupture. And what I'd like to do is see
 7 if you can explain for everybody how -- for example,
 8 you know, one theory is the entire contents of the
 9 tank could be empty along the vertical seam, top to
 10 bottom, in one direction. Is that something that you
 11 would consider to be realistic or reasonably
 12 realistic?
 13 MR. HELMLINGER: Objection, foundation.
 14 MR. MCNEIL: Your Honor, I'll get to that.
 15 I'll make an offer of proof on that.
 16 JUDGE BIRO: Sustained. Lay your
 17 foundation, please.
 18 MR. MCNEIL: May I ask permission to have
 19 the witness draw the tank detail on the easel for us?
 20 JUDGE BIRO: Of course.
 21 MR. MCNEIL: Okay.
 22 BY MR. MCNEIL:
 23 Q Mr. Delano, if you would, if you wouldn't
 24 mind, if you could just flip over that page, because I
 25 think we've got photos.

1 JUDGE BIRO: Do you have a marker for him?
 2 MR. MCNEIL: Is there a marker up there?
 3 Okay.
 4 THE WITNESS: So, generally, there's
 5 circular tanks. The perimeter of the tank is welded
 6 steel plates, and then, if you look at the elevation
 7 view of the tank --
 8 BY MR. MCNEIL:
 9 Q Sorry, Mr. Delano, I apologize.
 10 A Sure.
 11 Q But, if you recall, we need to have a little
 12 bit of a roadmap on the drawing, so can you give it a
 13 title?
 14 A Sure. Let's say this is 2001 tank.
 15 Q Is that -- would that be considered plan
 16 view, or what would you call that?
 17 A Yes. This would be the white view that
 18 we're seeing here on CX-1.
 19 Q Okay. Just write -- is it plan view, is
 20 that an okay term?
 21 A Sure.
 22 Q Okay.
 23 A This would be the elevation view.
 24 JUDGE BIRO: That's the bottom drawing,
 25 correct?

1 THE WITNESS: Yes. There is a steel-plated
 2 bottom, and then there is steel-plated sides, and
 3 there is a steel-plated top. The construction
 4 technique of these is that the plates are set in
 5 place. These plates each are like eight foot tall.
 6 This is way out of scale -- sorry -- and then the next
 7 plate would be set up and welded, and then the next
 8 plate would be set up and welded.
 9 BY MR. MCNEIL:
 10 Q I'm sorry, Mr. Delano. I just want to make
 11 sure the record's clear.
 12 A Sure.
 13 Q When you say the next plate and the next
 14 plate, you're now referring to these sort of
 15 rectangular block kind of drawings that you're doing
 16 within the elevation view, is that right?
 17 A That's correct. So let's label the plates
 18 A, B, C, and so, along the circumference, you'd have a
 19 plate A and then you'd have a plate B, say, and then
 20 et cetera. So, from a construction standpoint, you
 21 set the bottom plate up in place in a circular
 22 fashion, weld the circumference all together, and then
 23 you set the next set of plates on top and weld that
 24 circumference all together, and then you continue 'til
 25 the top of the tank is constructed.

1 Q Does that mean the plates are not vertically
2 aligned?

3 A That's correct. They're always offset.
4 That's a typical for tanks, is that they're offset,
5 and it's to avoid any continuity, so if there's any
6 weakness in say, this particular seam, then it
7 wouldn't carry through. So it would always have to
8 make not a smooth path.

9 Q And what would that mean for the case of a
10 catastrophic or a worst case tank failure?

11 A You would assume that it would not fail in a
12 linear fashion, that it would have to be in a jagged
13 fashion from a stress standpoint. Certainly, there
14 could be cases like corrosion or something, if you had
15 a specific line that might create that, but,
16 typically, that's not what happens. So this is just
17 the way to avoid any continuity of stress.

18 Q Are there any other details that you
19 received from the fabricator that would be relevant to
20 this discussion of initial collapse or what you would
21 expect in a worst-case failure?

22 A Sure. Part of those details include the
23 construction of the roof. And you can see the roof
24 here. It's already been installed. And it's a
25 sloping roof, and these are large steel beams that are

1 attached to the top of the tank here. And then there
2 is another structural apparatus that sits inside the
3 tank. This is a very large steel structure here. And
4 then there's actually a cone that was welded here.
5 This is all steel welded. These are pretty large
6 beams. The stand is 50 feet. I think they're --

7 Q Can you give those titles as you go through?

8 A Sure. This is a roof beam, and because of
9 the sector portion of it, so, in a plan view, you have
10 this center support, and then it's a radial
11 construction, and so it looks like a patio umbrella
12 sort of. You've got these large beams that hold up
13 this steel plate on top. So there is a welded steel
14 roof that lays on top, and then these relatively large
15 steel beams are supporting that roof structure.

16 Q And can you give just whatever you believe
17 is the best, for that center steel column that you
18 mentioned, you show there?

19 A Yeah. As I recall, it was a 12-inch column,
20 it is 12-inch diameter columns.

21 Q And what's that made of?

22 A Steel, so a steel pipe. It's not solid;
23 it's a pipe, so it's hollow.

24 Q Okay. Thank you. And then I guess, on that
25 same subject, would you mind taking a look at CX-9 --

1 I'm sorry, CX-8, and there's a Section 3.0.

2 JUDGE BIRO: What page are we on?

3 MR. MCNEIL: CX -- sorry, CX-23, page 8,
4 Section 3.0.

5 THE WITNESS: Yes.

6 BY MR. MCNEIL:

7 Q Do you see that Section 3.0?

8 A Yes.

9 Q Okay. It's not long. Do you remind reading
10 that 3.0 out loud, just the first part?

11 A "In order to perform the planning distance
12 calculation, WHF modeled the complete failure of the
13 tank whereby the entire side of the tank splits on a
14 vertical axis, and the total tank volume is lost
15 instantaneously."

16 Q Okay. So going back to what you explained
17 to us a little -- and then it goes on. What does the
18 last sentence there say?

19 A It says, "This type of failure is an
20 absolute worst-case scenario."

21 Q Okay. So going back to the diagram that --

22 MR. MCNEIL: May we mark that for
23 identification, Your Honor?

24 JUDGE BIRO: Sure.

25 MR. MCNEIL: I'd like to move it into

1 evidence if there's no objection.

2 MR. HELMLINGER: I do object.

3 MR. MCNEIL: It would, for identification,
4 it would be RX-106.

5 MR. HELMLINGER: Objection. Fundamentally,
6 it goes to foundation and relevance. I think that
7 we're clear that the regs say model worst-case
8 discharge, and his report models the worst-case
9 discharge. Fabrication standards have nothing to do
10 with the regulations.

11 JUDGE BIRO: Okay. Overruled. I'm going to
12 admit 106 into the record.

13 MR. MCNEIL: Thank you, Your Honor, and
14 I'll --

15 JUDGE BIRO: Can you mark it?

16 MR. MCNEIL: Yeah, I'll go ahead and mark
17 it.

18 (The document referred to was
19 marked for identification as
20 Respondent's Exhibit No. 106
21 and was received in
22 evidence.)

23 BY MR. MCNEIL:

24 Q So, Mr. Delano, we were looking at Section
25 3.0, and the report says that a vertical seam

1 instantaneous split would be an absolute worst-case
2 scenario. Based on what you just told us, is that --
3 would that be your testimony?

4 A Well, my testimony, but, from a personal
5 standpoint, I have difficulty with a direct failure.
6 Certainly, the regulations say that, but, from a
7 practical standpoint, it seems very, very difficult
8 for that to happen.

9 Q What would be a worst -- what do you think
10 would be a worst case -- based on the actual
11 construction, what do you think would happen in a
12 worst-case spill based on your understanding of how
13 this particular tank is constructed?

14 A Assuming there's a breach in the wall, which
15 I suppose can happen, a breach in the side wall skin,
16 I still think that the roof would be attached. There
17 might be significant deformations of the side wall or
18 the outside diameter of the tank, but it would seem
19 like the roof would be intact and would actually cause
20 interference with any flow that might happen and would
21 actually help hold the tank together, and the tank
22 itself would interfere with flow; along with the steel
23 pipe, it would cause interference with any flow. But
24 we were instructed not to consider that in the
25 analysis.

1 Q All right. So, if you assumed, as you do
2 here in 3.0, an instantaneous release of the entire
3 contents along a vertical axis, to the extent it's an
4 absolute worst-case scenario, would you agree it's a
5 very conservative one?

6 A Seems to be very, very conservative, yes.

7 Q Okay. And now, in the paragraph directly
8 below where you were just reading for us, in 3.1,
9 there's a reference to the model presented by
10 Professor Guo. Do you see that?

11 A I do.

12 Q Okay. And is that a model that was used by
13 WHF in performing its applicability analysis for this
14 tank?

15 A Yes, it was.

16 Q Okay. And in the second or third sentence,
17 I think, where it says, "These calculations are based
18 on," do you see that? I think it's the third
19 sentence?

20 A Yes, I do.

21 Q Yeah. Are those the general parameters of
22 the Guo model that were employed by your firm in
23 conducting its analysis?

24 A Yes, it was.

25 Q Okay. Can you just go through those quickly

1 for us, what those five components are, five
2 parameters?

3 A Sure. Volume of the material, which means
4 the volume of the tank, so the full 2,348,000 gallons
5 of the tank. Surface area spread, that's the area
6 that the material goes to. The thickness of the
7 material; as it flows out, you have different
8 thicknesses of the material. And an initial splash
9 radius, the distance that the material might flow to,
10 and the angle of the spill through the tank.

11 Q Okay. And with that fourth one, initial
12 splash radius, can you describe for us what, in your
13 view, that phrase means?

14 A Not very well. To tell you the honest
15 truth, Kari was primarily responsible for the model.
16 I have seen certainly her calculations, but she was
17 involved in that. And, certainly, in this case, we
18 felt that the material would be released from the
19 tank, but it would fill up -- there would be sort of
20 two phases. It would fill up our man-made depression
21 first. You have to neglect the top of the wall. And
22 then the secondary phase was that it would flow out
23 onto the property boundary itself.

24 Q Okay. And assuming the Guo model did
25 include as a parameter an initial splash radius, would

1 it be necessary in your view for one to consider and
2 apply the model developed by Mr. Xiao for this
3 applicability analysis?

4 A Certainly, we felt that this was adequate
5 and would satisfy the requirement.

6 Q And the Guo model is, correct me if I'm
7 wrong, is that published?

8 A I believe it is. I think it's available. I
9 think we downloaded it and used it, so I think it's
10 available to the public.

11 Q Okay. Turning back to page -- still in CX-
12 23 -- turning back to page 5 in your section, Onsite
13 Storage, 2.1.2, so this is CX-23, page 5, continuing
14 on to page 6, can you just describe for us this
15 section, Onsite Storage, what the intent of this
16 paragraph and the calculations following in Table 2,
17 what function they were supposed to serve as part of
18 your analysis?

19 A We were trying to indicate that the onsite
20 topography would allow additional storage of material.
21 Those catch basins to the north are normally closed
22 off; that is, they're sealed from immediate storm
23 drain, but, if there is any material that would flow
24 away from the secondary containment, there is volume
25 available in the storm drain depressions, and so we

1 consider those man-made depressions of a certain
 2 volume. And so we calculated that based on our
 3 topography. And so the catch basins themselves seemed
 4 to have a storage of about 230,000 gallons. And then
 5 the railroad spur to the west also is a depressed
 6 area, and we felt that that area could also retain
 7 287,000, almost 288,000, gallons of material.
 8 Q Okay. So you considered the railroad
 9 spur -- again, the railroad spur contains, if I
 10 understand, a segment that is below grade?
 11 A That's correct. It is, yes.
 12 Q Okay. So you didn't count anything above
 13 grade, but you counted grade or below?
 14 A That's right, depressed areas.
 15 Q Okay. All right. And is there any sort of
 16 calculation in your report or --
 17 A Yeah, we tried to show that in some of the
 18 appendices.
 19 Q Can you show us, direct us to which one
 20 you're --
 21 A Sure. At page 31.
 22 Q Thirty-one of 41 in the CX-23 series?
 23 A Correct. We tried to make a little
 24 depiction of the area. There's a little colored
 25 section there. The red filled-in circle is to

1 represent the tank. The blue area, there's a little
 2 rectangular blue area, that's to represent the
 3 railroad area. And then the orange area, the storm
 4 drain, the catch basins are not shown here on this
 5 little diagram, but that orange area represents the
 6 parking area and the areas out onto the site, but it
 7 does not include that area where the buildings are
 8 over on the right-hand of the picture CX-1.
 9 Q Okay. And does this page 31 actually
 10 cross-reference or show the back-up for the
 11 calculations -- or the, sorry, the volumetric
 12 containment, onsite man-made depression containment
 13 numbers that we looked at a moment ago in the text?
 14 A Yes. On the sheet, this was a copy of an
 15 Excel spreadsheet. You can see in the middle, bottom
 16 middle of the page, there's a railroad subtotal, and
 17 so that 287,000-plus gallons is shown. And then at
 18 the bottom of the page and center left is the three
 19 catch basin areas that are shown, and then with a
 20 total of some 234,000 gallons.
 21 Q Okay. Sorry. Is the railroad spur the one
 22 that says "additional volume at railroad spur"?
 23 A Where do you see that?
 24 Q Center, about --
 25 A Right, yeah, just below that, you'll see it.

1 It says "Railroad subtotal, 287,000."
 2 Q Right. By the way, Mr. Delano, you've seen
 3 Mr. Michellin's report from August of 2016?
 4 A I have.
 5 Q Do you recall the first time that report was
 6 supplied to WHF, approximately?
 7 A Seems like we were reviewing that in 2018.
 8 What date exactly, I don't recall.
 9 Q Okay. To your knowledge, had you received a
 10 copy of it in 2016 or even in 2017?
 11 A Not that I recall.
 12 Q And then going back to page 6 of CX-23,
 13 there is a section that's called Natural Barrier for
 14 Sheet Flow. Do you see that?
 15 A I do.
 16 Q And there's a, about two-thirds of the way
 17 down, there's a sentence that reads, "In addition, a
 18 man-made berm has been constructed on the southern
 19 property boundary that consists of continuous berm
 20 constructed of K-rail and earthen berms for the
 21 protection of the channel." Do you see that sentence?
 22 A I do.
 23 Q Have you seen firsthand the K-rails that are
 24 referenced here?
 25 A I have.

1 Q Can you describe for everybody your
 2 observations of, you know, what they looked like,
 3 their height or stead and so forth?
 4 A Sure. K-rails typically are concrete,
 5 precast concrete curbs, essentially. The curbs are
 6 approximately three feet high. There's probably
 7 different standards, but, typically, they're about
 8 three feet. They are typically used for highway
 9 traffic diversions; that is, they use it for traffic
 10 control so you don't have interference between
 11 traffic, and so they're typically used for the
 12 diversion of large trucks. So they're rather heavy,
 13 and I think what I saw in one publication was each
 14 20-foot section weighs four tons, I think. They're
 15 quite heavy.
 16 Q Okay. And then, when you say "K-rail and
 17 earthen berms" in that, two lines up from the bottom.
 18 A Yes.
 19 Q What's the earthen berms part of that refer
 20 to?
 21 A There's several areas along that south
 22 boundary that VSS uses to store bulk materials, that
 23 is, sand and gravels. It varies a little bit, so we
 24 didn't put any value on them as far as height and
 25 width and that sort of thing. We just wanted to

1 indicate that there was additional materials there
2 that add to the whole stability of the bank.

3 Q Okay. And then the next section, 2.2, which
4 is entitled Viscosity of Asphalt Cement, did you have
5 occasion to look at the viscosity of asphalt cement as
6 part of your review?

7 A I have, and it seems as though we tried to
8 look at viscosities at 260 degrees. That seems to be
9 the specification for the temperature of the material
10 inside Tank 2001. And it appears that that viscosity
11 is about 10 times that of water. And I think
12 previously someone had mentioned motor oil. That's
13 probably about the viscosity at 260 degrees, something
14 in that magnitude.

15 Q Would that affect the -- we were talking a
16 moment ago about initial splash, meaning the, you
17 know, the initial deposit of material in the event of
18 a catastrophic rupture or failure -- how would
19 viscosity, if at all, come into play there?

20 A Yeah, I think there's certainly a general
21 flow of material. It seems like splash is sort of a
22 misnomer. It certainly does flow, and there's
23 certainly momentum because of the potential energy of
24 the material. It's a 40-foot tank; it's a pretty
25 significant sized tank. So, when you fail it and you

1 it still stays in the circular containment.

2 Q All right. And Mr. Michellin talked about
3 momentum, gravity and momentum being part of the
4 analysis of what would happen. If the height is
5 different, if it's, you know, as you're saying, on the
6 order of, because of the man-made depression, on the
7 order of 16 feet as opposed to 40 feet, does that have
8 an impact on momentum?

9 A Yeah, momentum is mass times velocity. It
10 seems like that velocity would be changed
11 significantly.

12 Q Mass times velocity, what do you mean?

13 A That's the definition of momentum, mass
14 times velocity, from a physics standpoint.

15 Q So what does mass represent?

16 A Mass would be the weight of the material.

17 Q The weight?

18 A The weight of the material is the mass,
19 yeah.

20 Q And so you're saying at 16 feet, effectively
21 16 feet, the weight would be less than 40 feet?

22 A Correct, a lot less potential energy there
23 to push the material around, yeah.

24 Q So would that impact the ability of the
25 material ultimately then to overlap any of the

1 have that much material, it certainly is flowing.
2 Whether it's splashing or not, I don't know, but I
3 guess that's a term that's already been used.

4 Q Well, it has been used, but it doesn't have
5 to be your term, if there's a term that you would be
6 more comfortable with.

7 A Yeah, I'd rather say oozing, but that hasn't
8 been used, and gout isn't used, that term.

9 Q The 40-foot height you mentioned a moment
10 ago, that's the tank height in its existing state,
11 correct?

12 A That's the maximum height of the tank. The
13 maximum constructed shell height of the tank is 40
14 feet.

15 Q If you were to follow your analysis that
16 approximately 1,400,000 gallons were to be retained in
17 the man-made depression, could you give us a corollary
18 differentiation of what that would equal in terms of
19 height of the tank?

20 A Yeah. Assuming that the tank is rather
21 intact, there could be a split somewhere, but it's
22 rather in that same circular shape, then the height of
23 the material after the storage in the man-made
24 depression is some 950,000 gallons. It amounts to
25 about 16 feet, just a little over 16 feet in height if

1 features on site?

2 A Yeah, that's our view, and that was sort of
3 our conclusion, that because of all of those factors
4 that it would be very difficult for that material to
5 go into the channel.

6 Q And then turning for a moment if you would
7 to the Viscous Flow Model Conclusions. That's Section
8 3.4, and that's CX-23 at page 11. And I think this is
9 further to what you -- first bullet point -- I think
10 this is further to what you were just speaking to a
11 moment ago. But, to give it more context, you've got
12 a statement here that says, "This means that a wave
13 height of .57 would not overtop the natural grade, let
14 alone the man-made berm on the southern boundary that
15 is constructed to a height of three feet above grade
16 level." Is that basically what you were saying a
17 moment ago?

18 A Correct.

19 Q Okay. Can you tell us how you derived
20 this -- the wave height of .57, is that something
21 that's using the Professor Guo parameters to
22 calculate?

23 A Yeah, and, essentially, that's phase two of
24 that; that is, you fill up the man-made depression
25 first. Then there's an additional flow beyond the

1 man-made depression, so you have a wave height of .57.
2 Q Okay. And then below that, in the next
3 bullet point, you mention in the report about, just
4 maybe a little bit more than halfway down, do you see
5 a sentence that says, "The model represents the most
6 conservative estimate of asphalt flow emanating from
7 the site." Do you see that?

8 A Yes.

9 Q Okay. And then you go on to say, "Because
10 we assume, one, that there is a complete tank failure
11 resulting in instantaneous loss of the entire shelf
12 capacity." Is that what you testified to earlier when
13 you were talking about the way the tank was
14 constructed and the amount of momentum and those sort
15 of things?

16 A Correct. That is correct.

17 Q Okay. And then you say, "Point 2: The
18 man-made depression fills instantaneously and does not
19 impact the wave height; i.e., slow down the material."
20 What do you mean by Point 2 there?

21 A Well, generally, the man-made depression is
22 filled with 60 percent of material first, and then the
23 wave heights can continue after that.

24 Q Okay. But what about this part where you
25 say you're assuming that the amount that goes into the

1 man-made depression won't slow down the material
2 thereafter. See that in the parenthetical?

3 A Right.

4 Q What did you mean there?

5 A Well, there's still a flow of material and
6 there's still material coming out of the tank, but you
7 have to fill up the depression first.

8 Q Okay. And then take a look if you would at
9 the next page, page 12 of 41, 4.2, "dispense through
10 the storm drain to navigable waters." And can you
11 tell us basically what you were -- how you approached
12 this analysis and what you concluded? Section 4.2?

13 A Yes. The --

14 Q Feel free if you want to kind of glance at
15 it to refresh your recollection.

16 A Sure. So what we did was we tried to look
17 at the material on site, and like I said, we didn't
18 use any of the site volume off to the right. There is
19 another containment structure off to the right. We
20 didn't use that. So we assumed that the material
21 would flow out into the street, that is, the City of
22 Sacramento, or West Sacramento, and then travel along
23 the street way. The street is sort of depressed from
24 this rounding land, this is the developed lands, and
25 that it would have to travel to the street. And then,

1 from the street, it would probably go into a drain
2 that we didn't have any control to. But, at that
3 point, the material would have to be somewhat cooled
4 and would be going slower. And so then we tried to
5 assign some --

6 Q Sorry. How far is the street from the tank,
7 about, just best estimate?

8 A Three hundred feet.

9 Q Okay. So go ahead, continue.

10 A And then we tried to do some sort of
11 analysis in the pipe; that is, we assumed the material
12 would go in the pipe and then flow in the pipe, and
13 then we tried to calculate a distance of flow and then
14 a time of -- it would become so solid that it would
15 have to slow down. I mean, there's a viscous issue
16 there. I'm not sure we applied that. Probably, we
17 tried to. So we came up with a distance that it might
18 flow inside the pipe. But, looking at the length from
19 there, from the site to the channel via the storm
20 drain is about 2500 feet, and we felt that it might
21 flow 900 feet and would probably plug up the pipe. It
22 would probably cool to a consistency, it would just
23 solidify inside the tank, inside the pipe.

24 Q Okay. And so, based on your best estimate,
25 best calculation, best application of the Guo model,

1 it wouldn't reach the channel, either through the
2 storm drain or to the south via overland flow?

3 A Right. Yes, that's correct.

4 Q And you feel pretty comfortable with that
5 analysis as you sit here today?

6 A Yes.

7 MR. MCNEIL: Okay. Nothing further, Your
8 Honor.

9 JUDGE BIRO: Would you like to take a
10 10-minute break?

11 MR. HELMLINGER: I think that would be
12 great.

13 JUDGE BIRO: Okay. We'll stand in recess
14 until 10:35.

15 (Whereupon, a brief recess was taken.)

16 JUDGE BIRO: Please be seated. Madam
17 Reporter, we're going to go back on the record.

18 Proceed.

19 CROSS-EXAMINATION

20 BY MR. HELMLINGER:

21 Q Good morning, Mr. Delano. I want to
22 apologize up front. I had a friend in high school who
23 was Mr. Delano. If I happen to mispronounce that, I
24 apologize for that. But it's Delano, correct?

25 A Yes.

1 Q Thank you.

2 A Thank you.

3 Q Your engineering emphasis in college you

4 mentioned was structural engineering, is that correct?

5 A Correct.

6 Q Not hydrologic or hydraulic engineering?

7 A Correct.

8 Q You said you were the engineer on staff.

9 Are you the only PE?

10 A Correct.

11 Q And is there somebody within your office who

12 does legal or regulatory review for you, or is that

13 done by you?

14 A Ms. Casey and I would be the two point

15 people.

16 Q And you mentioned you did this FRP project

17 with Ms. Casey, and she testified the same. I believe

18 it was her testimony this was about her only FRP she's

19 worked on. Is that the same for you?

20 A That's correct.

21 Q You have reviewed the FRP regulations at 40

22 CFR Part 112?

23 A Somewhat, yes.

24 Q And you're familiar with Table C or, I'm

25 sorry, Appendix C?

1 A I've read some of them. I couldn't tell you

2 offhand.

3 Q But you've done a fair bit of SPCC work,

4 that's correct?

5 A Yes.

6 Q All right. So, with that as a context, you

7 agree, do you not, that the regulations have kind of a

8 prescriptive bent toward format? The SPCC plan in

9 your experience needs to look a particular way, is

10 that right?

11 A Correct.

12 Q And you understand the importance of that

13 format is for responders, inspectors to be able to

14 review it quickly, as need be?

15 A Okay.

16 Q You agree?

17 A Okay.

18 Q I'm sorry if I'm not clear on that. Okay,

19 you agree with my statement, or okay on saying the

20 statement?

21 A I'm not sure about the inspectors and their

22 purpose.

23 Q But, for responders, certainly, the format

24 is important for them?

25 A Sure, yes.

1 Q It sort of lets you know where to look?

2 A Yes, it would be.

3 Q Right.

4 THE COURT REPORTER: Excuse me, counsel,

5 could you speak into the microphone? Thank you.

6 BY MR. HELMLINGER:

7 Q Turn to CX-18 if you would. Turn to page

8 39. Down toward the bottom of the page, that is your

9 signature and PE stamp, is that correct?

10 JUDGE BIRO: I'm sorry, where is it that

11 you're in?

12 BY MR. HELMLINGER:

13 Q PE, Professional Engineer stamp.

14 A Yes, it is.

15 Q Could you read for me the date on that PE

16 stamp?

17 A I think it says "Expires 9/30/15."

18 Q Then, below your signature, three lines

19 below that, there's a date with a signature.

20 A Yeah.

21 Q What is that date?

22 A 10/30/14, I think is the date of the report.

23 Q Thank you. Have you had in your experience

24 an opportunity to be at a response of asphaltic

25 cement, Mr. Delano?

1 A Do what?

2 Q Have you had the experience of being at a

3 response to a release of asphalt cement?

4 A No, I have not.

5 Q You understand it's typically stored about

6 250, 260 degrees?

7 A Yes.

8 Q So I know we talked a little bit about what

9 you think might be more probable, but you seemed to do

10 your report based on a worst-case discharge as a full

11 instantaneous release of the tank? We agree on that?

12 A Yes.

13 Q So whether we agree or disagree on what's

14 realistic, I think we do agree on what the regulations

15 require you to do, is that right?

16 A That's correct.

17 Q You understand that even with a well-

18 designed structure, accidents can happen. Is that

19 true?

20 A That is true.

21 Q All right. You're familiar with issues with

22 construction of the Bay Bridge, for example? Despite

23 billions of dollars and lots of time, they still had

24 problems with the footings?

25 A Yes.

1 Q Do you recall that incident? And I'm sure
2 you've seen the new stories about the Millennium
3 Tower. Despite millions of dollars and lots of
4 engineering, there's still problems.
5 A Which tower?
6 Q The Millennium Tower here in San Francisco.
7 Have you seen those news reports?
8 A Oh, yeah. Yes, I have.
9 Q So you're familiar that despite millions of
10 dollars and lots of engineering --
11 A Another foundation issue, yes.
12 Q And the Transbay Terminal, similarly,
13 despite millions of dollars and lots of engineering,
14 there are widely regarded reports of structural
15 problems. Are you familiar with that?
16 A I'm not familiar with that project.
17 Q You've not seen the news reports about the
18 Transbay Terminal?
19 A No.
20 Q You understand that California obviously is
21 an earthquake zone?
22 A There are earthquake faults in California,
23 yes.
24 Q Right. And I think it's your testimony even
25 that corrosion perhaps could cause a -- might be a

1 cause for a more vertical failure within a tank?
2 A I'm sure it could, yes.
3 Q So there's lots of causes?
4 A Yes.
5 Q I'm going to have you turn to CX-9, page 4
6 of 19.
7 A CX-9?
8 Q 9, yes, please. Same binder.
9 A Yeah, okay.
10 Q Page 4 of CX-9.
11 A Page 4. Photographs?
12 Q Yes.
13 A Photographs?
14 Q Yes.
15 A Okay.
16 Q The bottom half of that page is an
17 illustration marked Photo No. 8. Do you see that?
18 A Photo 8, yes.
19 Q Is that a view generally southeast from the
20 VSS facility?
21 A Apparently.
22 Q And does that comport with your recollection
23 of the view from southeast of the facility towards the
24 Sacramento River Deep Water Ship Channel?
25 A I don't recollect the chain link fence, but,

1 if you say that's the direction, okay, sure.
2 Q And the structure that represents is
3 concrete; at the bottom of that, is that the K-rail
4 you were discussing?
5 A Apparently, yes.
6 Q And if there was any berm or obstruction
7 between that K-rail and the water, you would see it in
8 that photo then? Is that fair to say?
9 A Yes.
10 Q So you did a lot of displacement
11 calculations or volume calculations for how much
12 material could be contained within the facility. In
13 those calculations, you -- as I've looked at the math,
14 it looks like you have taken a, correctly, a
15 displacement reduction in volume for the second large
16 tank in the secondary containment area, full storage.
17 Is that right?
18 A Yes.
19 Q At least as we've looked at the numbers, it
20 doesn't look like you took a displacement amount for
21 the truck ramp into the secondary containment
22 facility. Do you have a recollection of that?
23 A I think we took some shots on that facility,
24 so I think it would have been there.
25 Q Is it stated in your report?

1 A I don't believe so.
2 Q Can I assume that something that's not
3 stated in your report wasn't considered in any great
4 detail?
5 A It could be.
6 Q So your report doesn't discuss, for example,
7 FRP regs and how it would apply to half-mile distance
8 to water, so can I assume that you didn't consider
9 that?
10 MR. MCNEIL: Objection, misstates the prior
11 testimony.
12 JUDGE BIRO: Overruled, but go ahead.
13 THE WITNESS: The question again, please?
14 BY MR. HELMLINGER:
15 Q Your report does not mention the FRP rule
16 and its half-mile consideration for a facility close
17 to water, such as the Sacramento River Deep Water Ship
18 Channel, so am I correct that you didn't consider
19 that?
20 A Not at the time. We did consider the total
21 distance, which I think is what we put in. This was
22 the substantial harm report, right?
23 Q Yes, CX-23.
24 A Yes.
25 Q Sorry if I hadn't been clear on that. And

1 so, similarly, your substantial harm report does some
 2 fair mathematics around the storm drain and distance
 3 but doesn't appear to consider the FRP regulations and
 4 where it makes the assumption that discharge to storm
 5 drain enters nearby navigable water that it discharges
 6 to. So am I correct that you didn't consider that?
 7 A I don't totally understand. We did allow
 8 the material to flow into a storm drain in the street
 9 and we tried to calculate the flow of the material in
 10 the storm drain.
 11 Q Right. And so you calculated the flow of
 12 the material in the storm drain at the street. Did
 13 you calculate the flow of the material from storm
 14 drains within the facility?
 15 A No.
 16 Q Your report also doesn't mention the area
 17 contingency plan, so may I assume that you didn't
 18 consider that?
 19 A Correct.
 20 Q Your report does talk about your opinions on
 21 the quality of the retaining wall and secondary
 22 containment barrier, but it doesn't mention any
 23 particular engineering or diagnostic analysis. Am I
 24 correct to assume that there was none?
 25 A There was none done at that time.

1 Q Have you since?
 2 A We since have done that, yes.
 3 Q Have those been provided to the
 4 Environmental Protection Agency?
 5 A No. It wasn't requested as far as I know.
 6 Q Have you had the opportunity to use the Guo
 7 model other than this one instance?
 8 A No.
 9 Q Do you consider yourself familiar with the
 10 Guo model?
 11 A No.
 12 Q In your Table 4 of your Substantial Harm
 13 Report, CX-23, in fact, if you could turn to that, if
 14 you would?
 15 A Table 4, what page?
 16 Q My page is 8, but I know that's different
 17 here, so give me a half second. Ten from behind, I
 18 bet it's page 10.
 19 A I'm looking at it.
 20 Q Okay. So, as you applied the Guo model,
 21 one, two, three, four, five, six, seven, eight lines
 22 down the table, Table 4. "Initial radius of travel,
 23 R0." Do you see that?
 24 A Yes, I do.
 25 Q So you applied 50, I take it, feet, feet

1 units, for your initial radius of travel, is that
 2 right?
 3 A Okay.
 4 Q And that 50 feet radius of travel is
 5 essentially from the center line of the tank to the
 6 wall of the tank, is that right?
 7 A I'm not clear. I didn't run this model.
 8 Ms. Casey did.
 9 Q Okay. But you reviewed it?
 10 A I did.
 11 Q And it's your PE stamp that would go on the
 12 facility's SPCC fine, is that right?
 13 A I did.
 14 Q The spill angle, you see below that line?
 15 A I do.
 16 Q Three hundred sixty degrees?
 17 A Yes.
 18 Q Am I correct that that's assuming release of
 19 the entire contents of the tank instantaneously in all
 20 directions?
 21 A Again, I didn't run this model. I couldn't
 22 answer that properly on the specifics of the model.
 23 Q As we have basically tried to review this
 24 table with the Guo model, we concluded that the V
 25 figure that's used in the Guo model -- I have it in

1 front of me; I can read any part of it you'd like to
 2 if you like -- V is where you calibrate the viscosity.
 3 And it looks like your V, viscosity, of the material
 4 was represented as .003 cubic feet per second. Do you
 5 have an opinion on whether our math is correct there?
 6 A No, I would have no opinion.
 7 Q And if you turn to your Table 5 -- I'm
 8 sorry, your Table 2 -- Table 3, page 8, I believe.
 9 Table 3, page 8, of CX-23, at that range, let's just
 10 say the Guo model uses that viscosity as a specific
 11 example for asphalt within a temperature range of 140
 12 to 180 degrees. Do you have an opinion on whether
 13 that's correct?
 14 A I have no real opinion. I'm not familiar
 15 with the material.
 16 Q Sure. So, using that viscosity and that
 17 temperature range, your Table 3 would suggest that
 18 that viscosity is equivalent to peanut butter, is that
 19 right?
 20 A I don't know.
 21 Q That's there on Table 3 on page 8 of CX-23,
 22 do you see that?
 23 A I see that.
 24 Q A temperature at 140, reading across the
 25 table, said a comparable flow, it says peanut butter?

1 A Okay.

2 Q And do you see the second row of that table,

3 the temperature at 260 degrees?

4 A Okay.

5 Q You see that the comparable for that is corn

6 syrup?

7 A Yeah. Okay.

8 Q Which I believe was your testimony earlier.

9 A Okay.

10 Q That, for you, "this material is like corn

11 syrup or mineral oil."

12 A Yes. Yes.

13 Q So the secondary containment wall, there was

14 testimony, give or take some inches, four feet tall

15 for simple mathematics. If it means more to you to be

16 more particular, I'm happy to be, but let's assume

17 it's four feet tall. We heard testimony the tanks are

18 40 feet tall. So the tanks are 10 times the height of

19 the containment wall, is that right?

20 A Correct.

21 Q And your modeling, am I correct, suggests

22 that a 100 percent release of 2 million gallons of

23 corn syrup from 10 times the height of the wall is not

24 going to splash over that wall, is that right?

25 A Correct.

1 Q And you did not run any calculations as if

2 the release were on the smaller range, let's say 180

3 degrees, is that right?

4 A I don't believe so.

5 Q Or 90 degrees, is that right?

6 A That is correct.

7 Q And, similarly, not 45 or 40 degrees?

8 A Correct.

9 Q So the Guo model I'll represent to you

10 suggests guessing at R0 the radius described. Do you

11 have an opinion whether I'm correct about that?

12 A I don't know.

13 MR. HELMLINGER: For the record, I'll put a

14 citation at page 4 of the Guo report, third paragraph

15 down.

16 BY MR. HELMLINGER:

17 Q And read the scenario studies "began with a

18 specified angle spill and a guessed distance of

19 spread, i.e., the value of R0," in Equation 2. So I'm

20 correct you have no information for me?

21 JUDGE BIRO: Mr. McNeil?

22 MR. MCNEIL: Objection, Your Honor.

23 JUDGE BIRO: What are you objecting to?

24 MR. MCNEIL: I apologize, but I couldn't

25 hear if Mr. Helmlinger was referring to the Guo report

1 itself, which is not a marked exhibit.

2 JUDGE BIRO: Oh, so what are we referring

3 to?

4 MR. HELMLINGER: It is the Guo report

5 itself, which is not a marked exhibit, but, clearly,

6 it's instrumental here. How R0 is applied, I think

7 he's testified he doesn't know a lot about it, and so

8 I need to give him some context to ask him a specific

9 question.

10 MR. MCNEIL: I object then because --

11 JUDGE BIRO: Excuse me?

12 MR. MCNEIL: I object then because -- I

13 don't have an objection to the experts referring to

14 the Guo model to the extent that either one, either

15 expert, but the Guo model itself has not been

16 identified by either party, and I don't even know if

17 the working copy we have is the same one. It's not

18 in, as far I understand, the prehearing orders; it's

19 not in this case. So I would object to a reference

20 from that and any cross-examination from the report

21 itself as opposed to one of the expert's reports where

22 they refer to it.

23 JUDGE BIRO: I think it's an appropriate

24 cross-examination. Overruled.

25 //

1 BY MR. HELMLINGER:

2 Q So you were in the courtroom on Friday when

3 Ms. Casey was testifying, is that right?

4 A I was here, yes.

5 Q I believe it was her testimony that the 271

6 was a guess at splash radius. Do you recall that

7 testimony?

8 A Yes.

9 Q And the 271 is listed in Table 4 as final

10 distance of travel, or R. Do you see that?

11 A Yes.

12 MR. MCNEIL: Objection, Your Honor. I

13 apologize, but that misstates Ms. Casey's testimony.

14 She said it was an approximated property boundary

15 distance.

16 JUDGE BIRO: Sustained.

17 BY MR. HELMLINGER:

18 Q So the Guo model as you applied it, you're

19 applying it to the uncontained spill volume of 948,000

20 gallons of asphaltic cement, is that right?

21 A Yes.

22 Q So your assumption removes from the equation

23 1,400,000 gallons of asphaltic cement because it's

24 instantly contained in the containment structure, is

25 that correct?

1 A Correct.
 2 MR. HELMLINGER: No further questions.
 3 JUDGE BIRO: Any redirect?
 4 MR. MCNEIL: Your Honor, just one.
 5 REDIRECT EXAMINATION
 6 BY MR. MCNEIL:
 7 Q Mr. Delano, just one question. I want to
 8 clarify something you said on direct about your
 9 engineering license. You said it has been in effect
 10 since --
 11 MR. MCNEIL: I forgot, sorry.
 12 JUDGE BIRO: 1971.
 13 BY MR. MCNEIL:
 14 Q 1971, is that correct?
 15 A '73.
 16 JUDGE BIRO: '73.
 17 BY MR. MCNEIL:
 18 Q 1973, okay.
 19 A Correct.
 20 Q It's been in full force and effect that
 21 entire time?
 22 A Yes. We're required to renew our license
 23 every two years in the State of California, and so
 24 I've consistently done that throughout that period.
 25 Q And has it lapsed during that period?

1 A Never.
 2 Q Has it been -- have you been the subject of
 3 any disciplinary proceedings where it's been suspended
 4 or revoked?
 5 A No.
 6 Q Okay.
 7 A What we're required to do is put the date of
 8 our current expiration date on each stamp, so each two
 9 years that stamp is updated, and so we, accordingly,
 10 write a different date on the stamp as we renew our
 11 license.
 12 Q If there was a document that had an expired
 13 date in this case, that doesn't -- in other words,
 14 that doesn't mean your license was, in fact, expired
 15 at that time?
 16 A Yeah, if it's an old document, and as you
 17 see, the document was stamped and signed during the
 18 period of active license, yes.
 19 MR. MCNEIL: Okay. Nothing further.
 20 RECROSS EXAMINATION
 21 BY MR. HELMLINGER:
 22 Q Mr. Delano, I take it we're referring to CX-
 23 18, where I had you read the date of your PE stamp, is
 24 that right?
 25 A Okay. Yes.

1 Q That the date there is the date that you
 2 signed the document, is that right?
 3 A Yeah, I think there's a couple of dates.
 4 And what we try to do is have that date of signature,
 5 so I have to put in my expiration date, so that's on
 6 there on the stamp itself. And then there's usually a
 7 date of the document that I'm signing. So we try to
 8 make that about the same date. Sometimes there's a
 9 cover sheet date, might be a day or two different.
 10 Q Sure. I can appreciate that. And I'd like
 11 you to turn to page 1 on CX-18.
 12 A 18?
 13 Q The same document, CX-18, page 1.
 14 A Okay, yes.
 15 Q I'll represent this is how the document with
 16 that PE stamp was provided to the United States.
 17 Could you read for me where it says "Current revision
 18 date"?
 19 A January of 2016.
 20 JUDGE BIRO: Okay. Can I ask you a few
 21 questions?
 22 THE WITNESS: Certainly.
 23 JUDGE BIRO: I'll talk louder. You said you
 24 didn't consider the area contingency plan, is that
 25 right?

1 THE WITNESS: Yes.
 2 JUDGE BIRO: Can you tell me why you didn't
 3 consider that, the area contingency plan?
 4 THE WITNESS: No, I can't, no.
 5 JUDGE BIRO: Okay. And in the appendix that
 6 you use, Appendix C, in connection with the FRPs, they
 7 have a different calculation. Did you do that
 8 calculation?
 9 THE WITNESS: No. Ms. Casey did that
 10 calculation.
 11 JUDGE BIRO: Can you tell me a little bit
 12 more about these tanks? How are they heated?
 13 THE WITNESS: As I understand it, and I'm
 14 not totally familiar with the process, is that there
 15 is steam generated and there's steam injected within
 16 the tanks. There are heat exchangers within the tank
 17 that maintain temperature. And then there are design
 18 temperatures associated with those heat exchangers,
 19 and so the material goes in and out of the tanks
 20 through the piping. Besides that, I don't know much
 21 about the process and piping. Mr. Tilford tried to
 22 send me some information about that. I'm not really
 23 that familiar with it.
 24 JUDGE BIRO: Are the tanks pressurized?
 25 THE WITNESS: No, no, not pressurized.

1 They're open vented. There are vents on the roof, so,
2 no, they are not pressurized.

3 JUDGE BIRO: And so the heat exchangers --
4 and, I'm sorry, what did you say, how they were
5 heated?

6 THE WITNESS: I think with steam, but --

7 JUDGE BIRO: Steam. And how is that
8 generated? Where is that generated?

9 THE WITNESS: There's some facilities
10 between the secondary containment wall and the
11 railroad. There are a set of tanks there, and so
12 there's oil tanks there, and so I think they create
13 the steam, rotate the materials through the piping.
14 There's a series of pipes that are on the north side
15 of both tanks, and so not only do they transport the
16 oil from the railroad, then they use that to transport
17 the hot material to keep it in the heat exchangers.

18 JUDGE BIRO: Okay. Thank you. I have no
19 further questions.

20 Mr. McNeil, did my questions generate any
21 questions for you?

22 MR. MCNEIL: No, Your Honor.

23 JUDGE BIRO: Okay. Mr. Helmlinger?

24 MR. HELMLINGER: No, Your Honor.

25 JUDGE BIRO: Thank you very much.

1 JUDGE BIRO: Do you want to reserve Mr.
2 Delano to be able to come back?

3 MR. MCNEIL: Yes, please, thank you, Your
4 Honor.

5 JUDGE BIRO: Okay. Thank you. It's 11:07.
6 Would you like to call your next witness or take a
7 break? A five-minute break. Okay. We'll stand in
8 recess 'til 11:15.

9 (Whereupon, a brief recess was taken.)

10 JUDGE BIRO: Please be seated. Mr. McNeil,
11 would you call your next witness?

12 MR. MCNEIL: Thank you, Your Honor.

13 Respondent calls Michael Sears from Yolo County.

14 THE COURT REPORTER: Please stand and raise
15 your right hand.

16 Whereupon,

17 MICHAEL SEARS

18 having been duly sworn, was called as a
19 witness and was examined and testified as follows:

20 THE COURT REPORTER: Thank you. Please have
21 a seat. And for the record, would you please state
22 and spell your first and last name?

23 THE WITNESS: Michael Sears, M-I-C-H-A-E-L,
24 S-E-A-R-S.

25 THE COURT REPORTER: Thank you.

1 JUDGE BIRO: Please proceed.

2 DIRECT EXAMINATION

3 BY MR. MCNEIL:

4 Q Mr. Sears, good morning. Thank you for
5 attending this morning. I understand you were and
6 perhaps still are employed by Yolo County, is that
7 correct?

8 A Yes, I'm still employed.

9 Q You are still. And what's your -- what part
10 of the county -- which county agency are you with?

11 A It's Environmental Health.

12 Q Environmental Health?

13 A Yes.

14 Q Okay. And what's your title?

15 A Hazardous Materials Specialist.

16 Q Okay. And how long have you been so
17 employed?

18 A Thirteen years next month.

19 Q Okay. In that same position?

20 A Same position, yes.

21 Q Okay. Thank you. During the 13 years that
22 you -- let me ask you first, is the county considered
23 what's referred to as a CUPA? Are you familiar with
24 that term?

25 A Yes. Our agency is a CUPA.

1 Q Your agency is a CUPA?

2 A For that jurisdiction, yes.

3 Q Okay. And what, just to remind everybody,
4 what does CUPA stand for again?

5 A Certified Unified Program Agency.

6 Q And what does that mean in your experience?

7 A It means instead of having multiple agencies
8 conduct different inspections at different times, one
9 agency goes out and conducts all of those inspections.

10 Q Okay. Thank you. And during the course of
11 your employment, have you had occasion to visit or
12 inspect the VSS facility in West Sacramento?

13 A Yes.

14 Q Okay. On how many occasions have you been
15 to the facility?

16 A I've done three routine inspections, one
17 follow-up, and I responded to two releases.

18 Q Okay. So five or six times you've been
19 there?

20 A Yes.

21 Q Okay. And the City of West Sacramento is
22 within Yolo County, is that correct?

23 A It's a city agency within Yolo County, yes.

24 Q Yeah. I'm sorry. I was asking whether the
25 City of West Sacramento is within the County of Yolo?

1 A Yes, it is.
 2 Q Okay. Because there's also Sacramento
 3 County, which Sacramento is in, right?
 4 A Mm-hmm.
 5 Q Okay. So this is West Sacramento?
 6 A That's true.
 7 Q In a different county?
 8 A That's right.
 9 Q Okay. Do you recall -- it's a number of
 10 years back, of course, but that VSS had prepared --
 11 well, first of all, are you familiar with a Spill
 12 Prevention, Control and Countermeasure plan?
 13 A I am.
 14 Q Sometimes referred to as an SPCC plan?
 15 A Yes.
 16 Q Okay. And what's your general experience or
 17 familiarity with those plans?
 18 A I routinely review them as part of my
 19 routine inspection of a facility that falls under that
 20 program.
 21 Q Okay. Do you recall that VSS had an SPCC
 22 plan that was in about the 2012 period of time,
 23 prepared by a firm called Condor Earth Technologies?
 24 A I do.
 25 Q You do?

1 A Yes, I reviewed that plan.
 2 Q You did review that, okay. Did you review
 3 that plan and do you recall if you may have noticed --
 4 noted some deficiencies with the plan?
 5 A There were deficiencies.
 6 Q Okay. And did you communicate those to VSS?
 7 A I did.
 8 Q All right. And did you interface with any
 9 individuals at VSS or at Condor in following up with
 10 those, with the deficiencies that you had noted?
 11 A Yes, I did.
 12 Q Okay. And who were those individuals?
 13 A One of them worked for Condor. I believe it
 14 was the PE who wrote and certified that plan. I don't
 15 remember his name right now.
 16 Q Okay.
 17 A And also management of the facility.
 18 Q Okay. And do you remember who that was?
 19 A I don't. There were three or four people
 20 there I was communicating with at the time, and
 21 they've had personal changes since then. There's a
 22 Randy Tilford down there who I was instructed to only
 23 communicate with him, but that was before that. So
 24 there were several people I was dealing with there.
 25 Q Okay. Does the name Pat McNairy ring a

1 bell?
 2 A Yeah, it sounds familiar.
 3 Q Or Jeff Nowlin?
 4 A Jeff Nowlin definitely sounds familiar.
 5 Q Okay. And Randy Tilford?
 6 A Mm-hmm.
 7 Q Okay. And at Condor, does either Robert Job
 8 or Wesley Greenwood ring a bell?
 9 A Yeah, maybe. I mean, there's so many people
 10 there that I talk to. I collect business cards. I
 11 have them back in the office. They sound familiar,
 12 but I don't remember specifically.
 13 Q Okay. Let me ask you to -- so there should
 14 be binders there with various exhibit designations and
 15 there should be some that start with RX. Do you see
 16 those binders?
 17 A What would the RX be?
 18 Q RX-41. Yeah, if you see that. It's a
 19 two-page document, RX-41.
 20 JUDGE BIRO: In Volume 2 of 5.
 21 THE WITNESS: So RX-2, you say?
 22 BY MR. MCNEIL:
 23 Q RX-41.
 24 A RX-41. Okay. Email from Michael Sears to
 25 Randy Tilford.

1 Q Right. What's the date on that?
 2 A 5/9/2012.
 3 Q Okay, great, that's it. And could you go to
 4 page 2 of that document and tell me at the top of the
 5 page if you see as part of the email thread an email
 6 that bears your sender information?
 7 A Page 2. What are you looking for again?
 8 Q Well, at the top of page 2, do you see part
 9 of the email thread that starts off, "Dear VSS
 10 Emultech"? RX-41, page 2 of 2.
 11 A Yes.
 12 Q Okay. Do you see at the top where it says,
 13 "Dear VSS Emultech"?
 14 A Yes, I see it.
 15 Q Okay. Now does that bear your sender
 16 information?
 17 A Yes.
 18 Q Okay. Is this an email that you sent to Mr.
 19 Tilford -- if you look at the bottom of the previous
 20 page, you'll see that it appears to be an email dated
 21 May 8, 2012, at 4:38 p.m. Do you see that?
 22 A Yep, I see it.
 23 Q Okay. Do you have any reason to believe
 24 this is not an actual email that you sent?
 25 A No.

1 Q Okay. Does it have a signature to it there
2 above your name?
3 A Yes.
4 Q It looks to me like that's an electronically
5 generated signature. Is that true?
6 A It is.
7 Q Okay. But is that your electronically
8 generated signature?
9 A Yes. That's how it was set up.
10 Q Okay. And right above the -- or, sorry,
11 right below where it says "VSS Emultech," there's a
12 reference to a Notice of Violation and a Certification
13 of Return to Compliance. Do you see that?
14 A I see it.
15 Q Okay. And now I'd like to ask you if you
16 could look at RX-40, which should be the very
17 preceding exhibit. which should be an April 6, 2012,
18 letter report from the Condor Earth Technologies firm.
19 A Yeah.
20 Q Do you have that?
21 A Yes.
22 Q Okay. And if you flip a couple of pages in
23 to page 3 of 45, do you see the face page for the SPCC
24 plan for VSS Emultech?
25 A Yes.

1 Q Okay. If I might ask you, Mr. Sears, to
2 just sort of go through the document sufficiently to,
3 and I'll ask you the question, whether this appears to
4 be the SPCC plan that you reviewed for this facility
5 around this time? Take your time.
6 A That's really impossible for me to
7 determine. It has the right time frame, but my
8 experience with VSS is sometimes they have more than
9 one SPCC plan at the same time.
10 MR. MCNEIL: Your Honor, move to strike as
11 nonresponsive.
12 JUDGE BIRO: Sustained.
13 BY MR. MCNEIL:
14 Q And then go back if you would, Mr. Sears,
15 please, to RX-41. And this is the same email thread
16 we were looking at a minute ago. And if you would go
17 up to the top, the very first email at the top of page
18 1, which appears to bear the date and time of May 2 --
19 sorry, May 9, 2012, 10:30 a.m.
20 A Yeah.
21 Q And is this an email that you sent to Mr.
22 Tilford?
23 A Yes.
24 Q Okay. And could you read for me, please,
25 the first sentence of the second paragraph?

1 A "County agencies have only recently" --
2 Q Sorry, a little bit slower so the reporter
3 can --
4 A Oh, sure.
5 Q And maybe a little bit louder?
6 A Okay.
7 Q Thank you.
8 A Sure. "County agencies have only recently
9 begun to inspect SPCC plans, so it is common to find
10 such large numbers of discrepancies in a plan. Plan
11 content and implementation was not looked at before
12 this time. The revised SPCC plan is much better than
13 the one I originally reviewed for this facility."
14 Q And do you have any reason to believe that
15 the SPCC plan that you're talking about in May of 2012
16 is not the one we looked at a minute ago by Condor for
17 April of 2012?
18 A You lost me a little bit. One more time,
19 please?
20 Q Do you have any reason to -- when you talk
21 about this SPCC plan that is a little bit better than
22 the last one --
23 A Yeah.
24 Q -- okay, do you have any reason to think
25 that you're talking about something other than the

1 Condor plan that we looked at that's dated April of
2 2012?
3 A I do not.
4 Q Okay. So, when you say county agencies have
5 only recently begun to inspect SPCC plans, what did
6 you mean in 2012 when you wrote that?
7 A Well, the legislation that they passed in
8 2011 gave the counties the authority and
9 responsibility to review the SPCC plans. Before that
10 time, it belonged to the state. So it was a new
11 program for us. We were learning the rules. We just
12 got certified to do the inspections.
13 Q Okay. And did you advise VSS of that, that
14 you were there, that you had that authority under the
15 statute?
16 A I did.
17 Q Okay. And when you say, "It is common to
18 find such large numbers of discrepancies in a plan,"
19 what was your experience or what was behind your
20 making that statement?
21 A The other facilities I was inspecting during
22 that time period, viewing their SPCC plans, they also
23 had lots of discrepancies in their plans. And the
24 facilities didn't seem used to us, used to anyone
25 reviewing their plans. I could tell it was new for

1 them as well.

2 Q And then, when you say "The revised SPCC

3 plan is much better than the one I originally reviewed

4 for the facility," you're talking about the VSS

5 faculty?

6 A That's right.

7 Q You're telling Mr. Tilford that?

8 A Mm-hmm.

9 Q Okay. And going back to -- sorry -- going

10 to RX-42, which should be the very next one,

11 hopefully, in your binder, this appears to be an email

12 from you to Mr. Tilford dated May 30, 2012. Looks

13 like you wrote it at 8 a.m. You see that?

14 A Yes, I see it.

15 Q Okay. And you appear to be transmitting

16 some information that you had gleaned from a Mr. Reich

17 at the U.S. EPA. Do you see that?

18 A I see it.

19 Q Who is Mr. Reich?

20 A Peter Reich.

21 Q Reich? Okay. Who is he?

22 A He worked for and he still worked for the

23 federal EPA with the SPCC Plan Program.

24 Q Okay. And below, right below the midpoint,

25 it looks like Mr. Reich had sent you an email the

1 preceding morning, May 29, 2012, at 11:14 a.m. Do you

2 see that?

3 A Yes.

4 Q And is that an email you received from Mr.

5 Reich?

6 A Yes.

7 Q And you then passed along to Mr. Tilford?

8 A That's right.

9 Q Okay. And then below that, if we go to the

10 next page, it looks like there's an email from you to

11 Mr. Reich from May 9, 2012, 1:05 p.m. You see that?

12 A Yes.

13 Q It looks like you're posing some requests

14 for information or guidance to Mr. Reich. Is that

15 generally the case?

16 A Yes, I was asking him for some

17 interpretation on some of the rules.

18 Q What was the reason for you to be reaching

19 out to Mr. Reich in this fashion?

20 A Again, the program was new to us. This set

21 of rules was new to my agency, and I wanted guidance

22 on interpretation of some of these rules that we were

23 enforcing.

24 Q Okay. And that was based on your SPCC plan

25 of VSS?

1 A Right.

2 Q And some question about the interpretation

3 of the SPCC portion, some of the components of the

4 plan, is that right?

5 A Some of the required components in the plan

6 that the plan was required to have, yes.

7 Q Okay. And in your email to Mr. Tilford back

8 on the top of page 1, you say here, "Mr. Randy

9 Tilford, here is the response to my questions to Peter

10 Reich of the U.S. EPA. Please see the below

11 correspondence." Do you see that?

12 A Yes, I see it.

13 Q Okay. And then you go on to say, "An

14 important thing to remember is that Yolo County

15 Environmental Health is the regulatory agency charged

16 with the responsibility and authority to enforce the

17 APSA regulations." Do you see that?

18 A I see it.

19 Q Okay. What are the APSA regulations?

20 A That's the Aboveground Petroleum Storage Act

21 regulations, the health and safety code sections, and

22 when I do the SPCC plan review, I'm referring to

23 those, which largely refer to 40 CFR Part 12, Federal

24 SPCC plan rules, but it also contains some other

25 things, some exemptions and such.

1 Q Do you recall ever advising Mr. Tilford or

2 anybody else at VSS that you did not have authority to

3 inspect them for SPCC violations?

4 A No.

5 Q And then down below, Mr. Reich refers to

6 some details in the second paragraph, some details

7 about Section 112.7(b). Do you see that -- or third

8 paragraph, I should say?

9 A I see it.

10 Q And if you go, if you take a look at RX-47,

11 should be a couple exhibits thereafter, you'll see RX-

12 47, page 1 of 20. Let me know when you have that.

13 A I have it.

14 Q Okay. You have there -- it's an email

15 thread, but toward the bottom, do you see an email

16 from you to Mr. Tilford of June 4, 2012, 9:51 a.m.?

17 A Yes.

18 Q Okay. And you discuss in this email, the

19 first paragraph you discuss the APSA inspection, and

20 then, in the second paragraph, you talk about the SPCC

21 plan inspection. And in the first paragraph, you say

22 the date of correction is June 1, 2012. Did you tell

23 Mr. Tilford that, as of June 1, 2012, there were any

24 outstanding violations with the facility's SPCC plan,

25 or did you consider those corrected as well?

1 A All of the site violations were considered
 2 corrected.
 3 Q Okay. And if you could please turn to --
 4 now we're going to look to the binders that are CX,
 5 the CX series, but we're only going to go to 4, so you
 6 should hopefully be able to find CX-4. Do you have
 7 that in front of you?
 8 A Yes, I do.
 9 Q Okay. Have you ever seen this document
 10 before?
 11 A Which CX are we looking at?
 12 Q CX-4. By all means, please thumb through
 13 it, see if you recognize having seen it before.
 14 A I don't believe I have.
 15 Q Okay. You don't think you have?
 16 A Uh-uh.
 17 MR. MCNEIL: Okay. Nothing further, Your
 18 Honor.
 19 MS. SUGERMAN: Can we have five minutes,
 20 please?
 21 JUDGE BIRO: We'll stand in recess five
 22 minutes.
 23 (Whereupon, a brief recess was taken.)
 24 //
 25 //

1 CROSS-EXAMINATION
 2 BY MS. SUGERMAN:
 3 Q Good morning, Mr. Sears. Thank you for your
 4 time today. Just to confirm, you don't work for the
 5 Environmental Protection Agency, is that correct?
 6 A That's correct.
 7 Q And you don't have any sort of federal
 8 inspector credentials, is that correct?
 9 A That's correct.
 10 Q And you testified that the program you're
 11 implementing is a state program under a state law, the
 12 Aboveground Petroleum Storage Act, is that correct?
 13 A That's correct.
 14 Q And when you talk -- when you testified
 15 earlier about SPCC compliance, you were talking about
 16 specifically SPCC compliance with that state law, is
 17 that correct?
 18 A That's correct.
 19 Q Would you be making any determinations about
 20 compliance with the federal law?
 21 A Indirectly, because APSA refers largely to
 22 federal law.
 23 Q But if you were to find a difference
 24 between -- if you were to find what you considered a
 25 deficiency in an SPCC plan and it happened to be the

1 same requirement in both the state law and the federal
 2 law, you would not be making a determination as to
 3 compliance with the federal law, is that correct?
 4 A That's correct.
 5 Q And you're aware, are you not, that the
 6 federal SPCC, the federal oil pollution prevention
 7 regulations, are not delegated to the state? Are you
 8 familiar with that? I can clarify if that's --
 9 A Yeah. I guess, yes.
 10 Q Yes, you're familiar that it's not
 11 delegated?
 12 A Well, to my knowledge, yes, I suppose. The
 13 APSA rules refer to the federal rule except for when
 14 it contradicts the federal rule.
 15 Q So, in that way, though, APSA is
 16 incorporating or refers to the federal regulations,
 17 but when you are inspecting, you are still simply
 18 implementing the state requirements, correct?
 19 A That's correct.
 20 Q When you do your CUPA inspections, you
 21 wouldn't consider them exhaustive or comprehensive to
 22 the point of being absolute, would you? For example,
 23 it's quite possible that after you complete your
 24 inspection there could be violations you did not see
 25 or you didn't notice?

1 A That's true.
 2 Q And when you inspected the VSS facility in
 3 2012, you were fairly new at applying the APSA rules,
 4 is that correct?
 5 A That's correct.
 6 Q I'm looking at the exhibit. You don't need
 7 to turn to them, but you testified regarding Exhibit
 8 RX-42 and RX-47. You can look at them if you would
 9 like to, but in both of those, you were very clear
 10 that you were doing an APSA inspection and you were
 11 referring to APSA deficiencies, is that correct?
 12 MR. MCNEIL: Objection, Your Honor. That
 13 misstates the prior testimony. He said APSA and SPCC.
 14 JUDGE BIRO: I think she's referring to the
 15 exhibits, and the exhibits refer to APSA.
 16 MR. MCNEIL: Well, with due respect, Your
 17 Honor, I think 47 talks about SPCC. I would ask that
 18 she rephrase the question or show him an exhibit.
 19 MS. SUGERMAN: I can clarify the question.
 20 BY MS. SUGERMAN:
 21 Q When you refer to compliance with SPCC -- or
 22 I'm going to backtrack. The APSA statute, the APSA
 23 program that you were implementing requires facilities
 24 to have an SPCC plan, isn't that correct?
 25 A That's true.

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1 Q And it uses that exact language; it uses the
 2 Spill Prevention, Control and Countermeasures plan
 3 description; it's the same words?
 4 A Yes.
 5 Q And it refers to the federal regulations
 6 that detail Spill Prevention, Control and
 7 Countermeasure requirements, is that correct?
 8 A Yes.
 9 Q So, when you say SPCC, you're not
 10 necessarily saying federal SPCC requirements; you're
 11 saying that SPCC, as the APSA, incorporates it?
 12 A That's correct.
 13 Q And you're aware, aren't you, that there are
 14 differences between what APSA requires and what the
 15 federal program requires?
 16 A Yes.
 17 Q For example, are you aware that the APSA
 18 does not regulate heated materials, but the federal
 19 program does regulate heated materials?
 20 A Yes.
 21 Q So, for example, would APSA regulate the two
 22 large 2.4 million gallon tanks of heated asphalt
 23 cement at issue in this case?
 24 A No.
 25 Q Is it your experience that VSS may have

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1 multiple SPCC plans at any one time?
 2 A Yes.
 3 Q And have you -- strike that. One moment,
 4 please.
 5 (Pause.)
 6 MS. SUGERMAN: I have no more questions.
 7 JUDGE BIRO: Any redirect?
 8 MR. MCNEIL: No, Your Honor.
 9 JUDGE BIRO: Okay. I don't have any
 10 questions. Thank you, Mr. Sears.
 11 THE WITNESS: Thank you.
 12 JUDGE BIRO: Do you want to reserve the
 13 right to recall Mr. Sears?
 14 MR. MCNEIL: No, Your Honor. He may be
 15 excused from our standpoint.
 16 JUDGE BIRO: Okay. Thank you, Mr. Sears.
 17 THE WITNESS: Thank you.
 18 (Witness excused.)
 19 JUDGE BIRO: It's almost noon. Would you
 20 like to break for lunch?
 21 MR. MCNEIL: That would be fine with us,
 22 Your Honor.
 23 MR. HELMLINGER: That sounds fine. Thank
 24 you.
 25 JUDGE BIRO: Okay. We'll stand in recess

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1 until 1?
 2 MR. MCNEIL: Yes, Your Honor.
 3 JUDGE BIRO: Okay. Thank you.
 4 (Whereupon, at 11:50 a.m., the hearing in
 5 the above-entitled matter recessed, to reconvene at
 6 1:00 p.m. this same day, Monday, May 20, 2019.)
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1 AFTERNOON SESSION
 2 (1:00 p.m.)
 3 JUDGE BIRO: Please be seated. We're going
 4 back on the record.
 5 Mr. McNeil, would you like to call your next
 6 witness?
 7 MR. MCNEIL: We would, Your Honor, we just
 8 have one more witness, but, with your permission, we'd
 9 like to recall very briefly Mr. Delano before he's
 10 excused.
 11 JUDGE BIRO: Okay.
 12 MR. MCNEIL: Subject to any further cross.
 13 Mr. Delano, please have a seat.
 14 Whereupon,
 15 ART LEE DELANO
 16 having been previously duly sworn, was
 17 recalled as a witness herein and was examined and
 18 testified further as follows:
 19 REDIRECT EXAMINATION
 20 BY MR. MCNEIL:
 21 Q Just very briefly, to your left is the RX
 22 binders?
 23 A Yes.
 24 Q Could you turn to RX-96.
 25 A Yes.

1 Q Page 40.
 2 A Yes, I'm at page 40.
 3 Q Okay. Does that show your stamp and
 4 signature with an expiration date of September 30,
 5 2017?
 6 A It does.
 7 Q Okay. And that's attached to one of the VSS
 8 plans?
 9 A Yes.
 10 Q Was that, in fact, in effect when the
 11 January 15, 2016, plan was done?
 12 A Yes. Those are two-year stamps, yes.
 13 Q Okay. So it would have been in effect from
 14 October 1, 2015, to September 30, 2017?
 15 A That's correct.
 16 Q Okay. And one other question. You were
 17 asked a series of questions earlier about whether you
 18 reviewed certain things, legal requirements and the
 19 model and the area contingency plan. Did you
 20 understand those questions to mean whether you
 21 reviewed those as opposed to whether WHF reviewed
 22 those?
 23 MR. HELMLINGER: Objection, leading.
 24 JUDGE BIRO: Sustained.
 25 //

1 BY MR. MCNEIL:
 2 Q Did you have an understanding when you were
 3 asked the word "you" who those questions were
 4 referring to?
 5 A To me personally.
 6 MR. MCNEIL: Okay. Nothing further, Your
 7 Honor. Thank you.
 8 MR. HELMLINGER: I have no questions, Your
 9 Honor.
 10 JUDGE BIRO: Okay. Thank you.
 11 (Witness excused.)
 12 JUDGE BIRO: Okay, Mr. McNeil, would you
 13 like to call your next witness?
 14 MR. MCNEIL: Yes. With permission, my
 15 co-counsel, Mr. Ludwig, will call the witness.
 16 JUDGE BIRO: Okay.
 17 MR. MCNEIL: Thank you.
 18 MR. LUDWIG: Respondent would like to next
 19 call Mr. Craig Fletcher, Your Honor.
 20 JUDGE BIRO: Mr. Fletcher, would you please
 21 take the stand and remain standing until the court
 22 reporter can swear you in.
 23 THE COURT REPORTER: Please raise your right
 24 hand.
 25 //

1 Whereupon,
 2 CRAIG FLETCHER
 3 having been duly sworn, was called as a
 4 witness and was examined and testified as follows:
 5 THE COURT REPORTER: Thank you. Please have
 6 a seat. And would you please state and spell your
 7 first and last name for the record?
 8 THE WITNESS: Yes. My name is Craig
 9 Fletcher, C-R-A-I-G, F-L-E-T-C-H-E-R.
 10 THE COURT REPORTER: Thank you.
 11 JUDGE BIRO: Please be seated.
 12 DIRECT EXAMINATION
 13 BY MR. LUDWIG:
 14 Q Good afternoon, Mr. Fletcher. Thank you for
 15 coming today. Could you please tell us where you're
 16 currently employed?
 17 A I'm the Principal and Chief Executive
 18 Officer of Fletcher Consultants, a California
 19 corporation.
 20 Q And what are your responsibilities in this
 21 position?
 22 A I'm responsible for the preparation of many
 23 environmental reports, including spill prevention
 24 plans, as well as doing other environmental compliance
 25 related to matters such as Resource Conservation and

1 Recovery Act permits, RCRA, as well as other water
 2 quality and site investigation type responsibilities.
 3 We also do tank inspections and certifications.
 4 Q Thank you. When you say spill prevention
 5 plans, you're referring to Spill Prevention, Control
 6 and Countermeasure plans, sometimes called SPCC plans?
 7 A Correct.
 8 Q So, if I say SPCC, that's what you'll
 9 understand me to be referring to?
 10 A Yes.
 11 Q Thank you. So, going to your background a
 12 bit, where did you attend college?
 13 A I got my undergraduate degree at the
 14 University of Illinois in Urbana-Champaign.
 15 Q And when did you graduate?
 16 A That was 1982.
 17 Q What was your degree in?
 18 A It was a Bachelor of Science in geology.
 19 Q Do you have any graduate degrees, Mr.
 20 Fletcher?
 21 A Yes. I have a Master's of Administration
 22 from the University of California-Davis with a
 23 concentration in natural resource and environmental
 24 management.
 25 Q How about any current professional

1 certifications?

2 A I am a registered, California registered

3 geologist, also a California registered

4 hydrogeologist, and I'm also a Steel Tank Institute

5 certified inspector.

6 Q Could you go just one by one and describe

7 what each of those certifications entails?

8 A Sure.

9 Q Or what they mean?

10 A Yeah. The Registered Geologist and the

11 Certified Hydrogeologist are professional licenses

12 granted by the State of California to allow me to sign

13 off on various documents, including those that require

14 geologic interpretations and hydrogeologic

15 interpretations based on requirements in various

16 regulations. The Steel Tank Institute certification

17 is a authorization from the Steel Tank Institute to

18 conduct certified external and internal inspections of

19 aboveground storage tanks, consistent with the SP001

20 inspection standard.

21 Q And what did you have to do to obtain each

22 of these certifications?

23 A For the first two, the registered geologist

24 and certified hydrogeologist, those required education

25 and training, as well as working under a qualified

1 professional, and eventually taking examinations and

2 passing those, between the geologist and certified

3 hydrogeologist. For the Certified Tank Inspector

4 Program, that involves having requisite background and

5 experience in inspecting tanks, as well as taking a

6 class in terms of a five-day class, passing

7 examinations, as well as passing some medical related

8 requirements.

9 Q Thank you. Mr. Fletcher, are you familiar

10 with the Oil Prevention -- Oil Pollution Prevention

11 regulations that are contained in 40 CFR Section 112?

12 A Yes, I am.

13 Q How often do you deal with these

14 regulations?

15 A On a daily basis.

16 Q Before joining FCI, founding FCI, what did

17 you do?

18 A From 1992 until 2002, I worked for Pacific

19 Gas & Electric Company. In that capacity, I was an

20 environmental coordinator, a principal environmental

21 coordinator, as well as a utility program manager.

22 Q Could you just briefly describe what you did

23 in each of those positions when you were at PG&E?

24 A Sure. I started my career at PG&E as an

25 environmental coordinator at the Pittsburgh Power

1 Plant, which is a large thermal power plant. That

2 facility had a large National Pollutant Discharge

3 Elimination System, NPDES, permit, as well as it had a

4 Resource Conservation and Recovery Act, RCRA, permit,

5 and 19 aboveground storage tanks.

6 THE COURT REPORTER: Excuse me, could you

7 slow down, please.

8 THE WITNESS: I'm sorry. Do you want me to

9 go back to it?

10 THE COURT REPORTER: As well as it had

11 resource?

12 THE WITNESS: It had Resource Conservation

13 and Recovery Act, RCRA, permit. It also had 19

14 aboveground storage tanks, and it was subject to both

15 the SPCC and the Oil Spill regulations associated with

16 that, including being a facility that required a

17 Facility Response Plan.

18 BY MR. LUDWIG:

19 Q Thank you, Mr. Fletcher. I frequently have

20 the same fast-speaking problems. So were you involved

21 in SPCC plans at all when you were at PG&E?

22 A Yes. In those instances, we, of course,

23 dealt with those at the power plant I worked at.

24 Subsequent to working at the power -- after working at

25 the power plant, I moved to San Francisco, where I

1 provided technical support in areas of water quality,

2 remediation matters, as well as just overall general

3 compliance in the environmental context of power

4 generation. The last position I had at PG&E involved

5 working as the Utility Environmental Program Manager,

6 which was dealt through a broad variety of different

7 types of environmental programs, including everything

8 from endangered species to SPCC to a wide variety of

9 other matters associated with environmental issues at

10 the utility.

11 Q Thank you. Do you have any teaching

12 experience in the field of tank inspections, Mr.

13 Fletcher?

14 A I do. I've been a contract instructor for

15 the Steel Tank Institute, and that class that I teach

16 is the five-day long Steel Tank Institute SP001 Tank

17 Inspection Standard certification, which trains

18 inspectors to become certified inspectors.

19 Q How many people teach the course for the STI

20 SP001 class that you just described?

21 A There are only two of us.

22 Q So you're one of two?

23 A One of two in the U.S., and this is a

24 national program, although the class does have

25 individuals from all over the world that attend.

1 Q In your capacity of teaching, do you ever
 2 train federal, state, or local inspectors?
 3 A Yes. In addition to training that class, I
 4 also train state and local inspectors on the
 5 principles of AST inspection, including classes for
 6 the Certified Unified Program agencies.
 7 Q And just for the record, when you say AST,
 8 you're referring to Aboveground Storage Tanks?
 9 A Correct.
 10 Q In addition to your teaching experience, do
 11 you have any committee appointments related to ASTs or
 12 Aboveground Storage Tanks?
 13 A Yes. In 2013, I was appointed by the
 14 California State Fire Marshal to the Aboveground
 15 Petroleum Storage Act, APSA, Advisory Committee, and
 16 in that capacity, I serve as a technical resource for
 17 them.
 18 Q Thank you.
 19 MR. LUDWIG: At this time, I would ask Your
 20 Honor to qualify Mr. Fletcher as an expert in the
 21 field of aboveground storage tanks.
 22 MS. SUGERMAN: I have no objections.
 23 JUDGE BIRO: So qualified.
 24 MR. LUDWIG: Thank you, Your Honor.
 25 //

1 BY MR. LUDWIG:
 2 Q Mr. Fletcher, if we could now spend a little
 3 time just getting some background of the industry
 4 standards for inspecting tanks. Could you just
 5 briefly describe what are the industry standards for
 6 inspecting aboveground storage tanks?
 7 A There are two major industry standards for
 8 inspecting aboveground storage tanks. For shop
 9 fabricated and smaller field erected tanks, as well as
 10 portable containers, that standard would be the Steel
 11 Tank Institute SP001 inspection standard. Another
 12 standard that's widely used is the American Petroleum
 13 Institute, API, Standard 653. That's geared a bit
 14 more toward larger field erected tanks, but it can
 15 also be used for smaller tanks as well.
 16 Q So, just to confirm, the SP001 standard is
 17 used for, generally used for smaller tanks?
 18 A Yes. That's restricted to tanks that are 30
 19 feet in diameter and 50 feet tall, but it's primarily
 20 used for soft fabricated tanks.
 21 Q And the API 653, by contrast, is more
 22 generally used for larger tanks?
 23 A Yes, but it can also be used for smaller
 24 tanks as well.
 25 Q Mr. Fletcher, when did you become involved

1 in this case?
 2 A I first was retained by the basic resources
 3 in 2014.
 4 Q And for what purpose?
 5 A I was asked to prepare an inspection program
 6 for them based on the industry standards for their
 7 facility in West Sacramento.
 8 Q And what did you specifically do for VSS,
 9 the Respondent in this case?
 10 A Well, first, I had visited the site to
 11 determine what the inventory was at their facility,
 12 including the different types of tanks, what products
 13 they held, and other aspects of the facility. Based
 14 on that information, we went ahead and developed a
 15 series of periodic checklists for them; that would be
 16 a monthly and in some cases annual inspection
 17 checklists, as well as developed a program for the
 18 facility to conduct more what are known as formal
 19 inspections, which would be external or internal
 20 inspections. Those are conducted by certified or
 21 authorized inspectors.
 22 Q So what was the purpose of the Tank
 23 Integrity Inspection Program that you developed for
 24 VSS?
 25 A The purpose of that was essentially to

1 conform with the requirements in 40 CFR 112.8(c)(6),
 2 which is the integrity testing requirements that bulk
 3 storage containers are required to be inspected to.
 4 Q Do you have any understanding whether the
 5 program that you developed through them was intended
 6 to become part of their SPCC plan?
 7 A Yes, that would be typically included and,
 8 as I understand it, was included in their SPCC plan.
 9 Q In your initial dealings with VSS, can you
 10 please describe your impression of their attitude or
 11 the company's attitude towards compliance with tank
 12 integrity testing?
 13 A Well, I would say certainly, if they reached
 14 out to our firm, and we're a little bit different than
 15 others, but we focus a lot on tank integrity
 16 assessments and integrity matters. So, in that
 17 regard, my impression was they were very eager to
 18 conform with the requirements of the standard and
 19 definitely wanted to remain compliant with the
 20 requirements.
 21 Q And what did you do to develop the integrity
 22 testing program for VSS?
 23 A Specifically, we identified each of the
 24 tanks on the actual facility, and then we determined
 25 based on the characteristics of the tank that that

1 would be the design of the tank and the style of
2 construction, as well as the liquids that they held,
3 and finding a little bit more about the specific
4 gravity of those systems. From that, we developed the
5 inspection program and determined which inspection
6 standard would be more appropriate for that individual
7 tank. So, for some tanks, we selected the SP001
8 program; other tanks, we elected to recommend the API
9 653 inspection.

10 Q And how did you determine the applicable
11 industry standard, SP001 versus API 653, for each
12 tank?

13 A We did that by looking at the applicable
14 requirements in each standard. So, for example, in
15 the SP001 standard and the version that we were using
16 at the time that we did the initial program
17 development was September 2011 version. There's since
18 been a more recent published version. So, in that
19 case, that standard does not cover things like riveted
20 tanks, of which there were some at the facility. It
21 also did not cover tanks that are heated to elevated
22 temperatures. It also did not cover tanks that may
23 hold liquids that have a specific gravity greater than
24 1, like some asphalt emulsions may be.

25 Q Could you please turn to RX-9, which has

1 already been admitted into evidence. I think one of
2 the binders may have fallen, so I want to make sure
3 that we have everything up there.

4 A You said RX-9?

5 Q RX-9, correct.

6 A And this starts with a letter from Snell &
7 Wilmer?

8 Q Correct. If you turn to the following page,
9 it might be more familiar with this document. Do you
10 know what this document is, Mr. Fletcher?

11 A Yes. This is the transmittal of our
12 integrity testing program for the VSS facility in West
13 Sacramento that we prepared.

14 Q And how about the pages that follow it?

15 A This is the actual inspection program
16 content and the rationale behind it. It also includes
17 some guidance for the facility to conduct the
18 inspections.

19 Q Did you prepare this document?

20 A Yes, I did.

21 Q Could you please summarize the tank
22 integrity testing program that's contained in RX-9
23 that you developed for the VSS facility?

24 A Sure. So, specifically, what we did was,
25 depending upon the individual tank construction and

1 other features, we identified whether it would fall
2 under the API 653 inspection standard or whether it
3 was field constructed or shop fabricated. Along with
4 that, based on this information, we went through the
5 inspection checklists that are provided in the
6 respective standards and tailored those for the
7 facility. Now these would be the routine inspections
8 that would be done by the facility. Later on in that
9 document, we also lay out an inspection program that
10 talks specifically about formal certified inspections
11 for the plant.

12 Q So let's break those down. You mentioned
13 periodic inspections. How often are those performed?

14 A Those are typically performed monthly.

15 Q And who's to perform those inspections?

16 A Those are conducted typically by trained
17 facility staff.

18 Q And what do these types of inspections
19 typically involve?

20 A They're primarily visual inspections,
21 because normally the people that work at facilities
22 are the ones that are most familiar with their tank
23 systems and their operation.

24 Q And then moving on to the other hand, formal
25 inspections. How often are formal inspections

1 typically performed?

2 A Formal inspections, the frequency of formal
3 inspections varies by the type of tank, the
4 configuration and the actual standard used.
5 Typically, these are not constructed -- conducted
6 rather all that frequently; typically on a five- to
7 20-year cycle, depending upon the actual specific
8 standard and the actual equipment or tank that we're
9 looking at.

10 Q And who's to perform these formal
11 inspections?

12 A These are conducted by authorized or trained
13 inspectors from either API or SP001, so these are
14 individuals who have been through the training and
15 have passed examinations to conduct these types of
16 inspections.

17 Q And can you just briefly describe how a sort
18 of periodic routine inspection that's supposed to be
19 done every month differs from the more formal
20 inspections that are done on that five- to 20-year
21 cycle?

22 A Sure. From the visual side, the inspections
23 that a certified inspector would do are more detailed,
24 and they're really trained to look at more specific
25 features on the tank, particularly in areas of the

1 tank that we know from experience might be more
 2 important to the integrity of the tank. The periodic
 3 inspection would be more of a general discussion or
 4 review of the tank features themselves, including the
 5 shell and foundation, other matters like that.
 6 Sometimes, in many inspections, actually,
 7 especially if the tank is single walled, as part of
 8 the certified inspection, that would be the less
 9 frequent ones, ultrasonic thickness testing may be
 10 used, along with other techniques. But, primarily,
 11 the big difference is that the visual inspections
 12 conducted by the certified inspector are more detailed
 13 and based on experience and training.
 14 Q And is there a difference in the work
 15 product from a formal inspection versus a periodic
 16 inspection?
 17 A Yes. A formal inspection is typically
 18 prepared and a written report is submitted to the
 19 client describing what the outcome of the inspection
 20 was.
 21 Q And how about a periodic inspection, if you
 22 know?
 23 A A period inspection would be filled out on a
 24 form that the facility would have and would routinely
 25 keep in their records.

1 Q And there are multiple types of formal
 2 inspections, right?
 3 A Yes. There are both external inspections,
 4 which are the ones that are conducted while a tank is
 5 in operation. That's essentially checking the outside
 6 of the tank and perhaps doing some ultrasonic
 7 thickness testing if the tank is set up to do that.
 8 An internal inspection, on the other hand, is more
 9 involved. That requires taking the tank completely
 10 out of service and removing all of the product from
 11 the tank and making it safe for entry into the tank
 12 for the inspector to go in and actually take a look at
 13 what the internal condition of the tank is.
 14 Q Could you please just describe in general
 15 terms what an external formal inspection would entail?
 16 A Yes. In this instance, we could probably
 17 talk about the API 653 standard a little bit more.
 18 That will typically include a summary of the
 19 inspection that's done by the actual inspector. It'll
 20 also include a more detailed inspection checklist that
 21 the inspection company develops. That would also
 22 incorporate those components from Annex C of API 653,
 23 which is a checklist that API provides for certified
 24 inspections. It'll also typically include stuff like
 25 a settlement survey, where the actual consultant or

1 tank inspector will do a survey to see if there's been
 2 a -- do an elevation survey, if you will, of the tank.
 3 Often, these will include some calculations perhaps
 4 regarding stuff such as seismic considerations. It'll
 5 also typically include, for an API 650 style tank,
 6 it'll actually include some of the ultrasonic
 7 thickness test results.
 8 Q And can you contrast that with an internal
 9 inspection?
 10 A Yes. The internal inspection comprises most
 11 of those components, but the part that an internal
 12 inspection is really valuable for is evaluating the
 13 bottom plate of the tank. That's the part where the
 14 tank bottom sits on the soil or foundation, and that
 15 requires additional evaluations typically. And they
 16 use a device called a magnetic flux leakage tool.
 17 That's designed to check for any sort of
 18 discontinuities beneath the base plate itself. That's
 19 typically followed up by ultrasonic thickness testing
 20 in that regard. They'll also do a close visual
 21 inspection of the wells and various other features
 22 inside the tank.
 23 Q Mr. Fletcher, can you please turn to CX-17,
 24 which has already been admitted into evidence. CX-17,
 25 it's in the white binders.

1 A Oh, sorry. Okay. I'm there.
 2 Q Do you know what this document is, Mr.
 3 Fletcher?
 4 A This is essentially a consolidated plan
 5 involving hazardous materials, environmental
 6 compliance, and contingency business plans for the
 7 facility.
 8 THE COURT REPORTER: Excuse me. Can you
 9 please slow down?
 10 THE WITNESS: I'm sorry.
 11 THE COURT REPORTER: Hazardous materials
 12 and?
 13 THE WITNESS: Hazardous materials,
 14 environmental compliance, and contingency business
 15 plans. This meets requirements for a number of
 16 different components for the facility in terms of
 17 environmental compliance, including the Spill
 18 Prevention, Control and Countermeasures plan.
 19 BY MR. LUDWIG:
 20 Q Thank you. Could you please turn to page 45
 21 of this document?
 22 A Okay.
 23 Q And would you mind reading into the record
 24 the sentence under subsection (b), Inspections and
 25 Tests, 40 CFR 112.8(c)(6)?

1 A That was number B, correct?

2 Q Yes, yes, subsection B.

3 A This reads, "Tank testing and inspection

4 protocols for the facility have been prepared by

5 Fletcher Consultants, Inc. (Integrity Testing Program

6 for bulk storage containers written by Fletcher

7 Consultants, Inc.) and is located in Appendix E."

8 Q Would you mind turning to page 98 of this

9 same document, please? Mr. Fletcher, is what follows

10 for the next 30 pages or so the report that you

11 prepared and what we've been discussing so far?

12 A Yes, it does.

13 Q Thank you. Now, in talking about preparing

14 this report, what was the first step that you took in

15 preparing the report, the Integrity Testing Program --

16 sorry?

17 A Well, as I explained earlier, that talks

18 about getting the tank inventory at the facility,

19 determining appropriate inspection standard based on

20 the tank design and contents, as well as other factors

21 as well.

22 Q Did you visit the site in gathering that

23 information?

24 A I did.

25 Q And do you recall when about you visited the

1 site?

2 A That would have been sometime in the summer

3 of 2014 or maybe a little bit in the spring or summer

4 of 2014.

5 Q Okay. Now, if I can trouble you to turn to

6 RX-2, which will be back in one of the black binders,

7 and if you could turn to page 55 when you're at the

8 correct tab, that would be terrific.

9 A Yes, I'm there.

10 Q Do you know what this document is, Mr.

11 Fletcher?

12 A I do. This is the bulk storage container

13 inspection fact sheet prepared by the Environmental

14 Protection Agency.

15 Q And have you reviewed this document before?

16 A Yes, I have.

17 Q Can you please turn to page 58, just a

18 couple pages after? Do you see the paragraph, "When

19 no or only partial baseline information"?

20 A Yes, I do.

21 Q Would you mind reading that paragraph into

22 the record, Mr. Fletcher?

23 A Sure.

24 JUDGE BIRO: We don't need to read a whole

25 paragraph.

1 MR. LUDWIG: Oh, okay. Apologies, Your

2 Honor.

3 BY MR. LUDWIG:

4 Q Mr. Fletcher, would you mind reviewing that

5 paragraph if you're unfamiliar with it?

6 A I'm familiar with it.

7 Q How, if at all, do you use the information

8 contained in this EPA fact sheet and specifically this

9 paragraph in preparing the Integrity Program for VSS?

10 A We used this document as part of the

11 compilation of that, because it does do a -- this

12 paragraph in particular talks about the actual phasing

13 in of the baseline information conducted by the

14 certified inspections. So we set up the program so

15 that the facility can do the formal external

16 inspections and then do the internal inspections on

17 one-quarter of the inventory that were in active

18 service in subsequent years, much following like as

19 described in this paragraph.

20 Q And when does this paragraph set as a

21 deadline for the completion of those baseline

22 inspections?

23 A This one talks about --

24 THE COURT REPORTER: I'm sorry. Could you

25 repeat that question?

1 JUDGE BIRO: Okay. Look, I'm really happy

2 to accommodate you taking a duplicate record in this

3 proceeding, but we cannot keep stopping to

4 accommodate. Please go on.

5 MR. LUDWIG: Of course, Your Honor,

6 apologies.

7 BY MR. LUDWIG:

8 Q When does this paragraph set as a deadline

9 for the initial baseline inspections for the tanks to

10 be completed?

11 A This uses the five-year cycle of a typical

12 SPCC plan.

13 Q And at the end of that paragraph, it

14 references November 10, 2016, is that correct?

15 A Yes, it does.

16 Q Mr. Fletcher, after completing your

17 assessment, what did you do with the information that

18 you received?

19 A I prepared the Integrity Testing Program and

20 transmitted that to the facility.

21 Q And what approach did you suggest for the

22 facility in the program that you developed?

23 A Well, the good thing about using this sort

24 of phased approach is it helps to facilities -- we did

25 not specify which specific tanks would be required to

1 be inspected, and what we used is a quarter of the
2 inventory that's in active service each year that --
3 we didn't get that specific. We left enough
4 flexibility for that process so the facility can adapt
5 their operations so they wouldn't need to take every
6 single tank out of service at the same time. And that
7 phased approach also allows sort of lessons learned as
8 you go through that year-over-year basis. You can
9 learn a lot from the tanks you may internally inspect
10 in the first year. That will give you typically clues
11 to what to expect from other tanks as you go into
12 subsequent years, and that's good for planning
13 purposes.

14 Q Thank you. Would you mind turning to page 6
15 of 29 of RX-9?

16 JUDGE BIRO: Did you say RX-29?

17 MR. LUDWIG: RX-9.

18 JUDGE BIRO: Oh, RX-9.

19 THE WITNESS: I'm there.

20 BY MR. LUDWIG:

21 Q Okay. And is this the schedule that you
22 just -- the so-called phased approach that you just
23 explained?

24 A Yes, it is.

25 Q And what, if any, flexibility did this

1 timeline allow in order to remain compliant with the
2 industry standards that we've been discussing?

3 A Well, this certainly provides the baseline
4 information. And the flexibility, it also provides
5 this for the facility, because, based on facility
6 needs, they can select which tanks they would need to
7 start doing the internal inspections on based on this.

8 Q So, after you finished preparing your report
9 and you presented it to the facility, what were the
10 next steps that were taken by the facility after the
11 report was developed?

12 A In 2015, I believe it was 10 certified
13 external inspections were conducted by Powers
14 Engineering. I worked with Powers Engineering to get
15 those reports developed.

16 Q To the best of your knowledge, did Powers
17 conduct a formal external inspection of Tanks 835,
18 836, 837, 838, 849, 852, 865, 880, 882, and 883 in or
19 around February 2015?

20 A Yes.

21 Q And did Powers prepare reports of these tank
22 inspections?

23 A Yes, they did.

24 Q Have you reviewed these reports?

25 A Yes, I have.

1 Q Were you involved at all in their
2 preparation?

3 A I reviewed them, the drafts of those
4 reports, for consistency with the standard as well as
5 for accuracy.

6 Q After those -- when, if at all, did your
7 role with VSSI's inspection program come to an end?

8 A That came to an end around May 2015, the end
9 of May 2015.

10 Q Is that after those initial 10 reports were
11 completed?

12 A That's correct.

13 Q When was the next time that you were
14 contacted by VSS?

15 A In early 2019.

16 Q And for what purpose?

17 A That was to come back to the facility,
18 provide services, and basically take a look at what
19 had been done since the last time that we had
20 submitted the Integrity Testing Program.

21 Q Okay. And what did you learn from your
22 renewed involvement with VSS based on any -- well, did
23 you revisit the facility?

24 A Yes, I did. I revisited it on April 19 --
25 16th rather, sorry.

1 Q And what did you learn from your visit to
2 the facility?

3 A Well, the visit to the facility revealed
4 there were a number of changes at the site, including
5 the replacement of about nine tanks that were formerly
6 there, of course, when I first inspected it. I also
7 learned that there had been additional certified
8 external inspections conducted in 2016, along with
9 several internal inspections that were conducted.

10 Q Did you notice whether any tanks had been
11 taken out of service?

12 A It appeared that some tanks had been taken
13 out of service. That can be difficult to confirm
14 conclusively. Several tanks I observed that were
15 empty and were essentially open, they appeared to have
16 been in the stages of either getting ready for or in
17 preparation for internal inspections or related type
18 of evaluations.

19 Q Okay. Let's take a look at one of the
20 reports. Would you mind turning to RX-54, please?

21 A Yes, I'm there.

22 Q What is this document, Mr. Fletcher?

23 A This is an API 653 external tank inspection
24 of Tank 817 at the VSS Emultech facility, West
25 Sacramento, California.

1 Q What type of tank is Tank 817?
2 A This tank is a vertical cylindrical
3 insulated tank that was likely constructed to the API
4 12 standard, 12C, which is a predecessor to the API
5 650 construction standard.

6 Q And just to clarify, the standards that you
7 just referenced are construction standards, not tank
8 inspection standards, correct?

9 A That's right. That can be a little
10 confusing for some people. There are construction
11 standards for tanks, how they're built and how they're
12 to be designed, and then there are inspection
13 standards. So the construction standard for field
14 fabricated tanks is largely API 650, not to be
15 confused with API 653, and then the typical shop
16 fabricated construction standard would be UL 142,
17 Underwriter Labs 142.

18 Q Thank you. So what is your expert opinion,
19 Mr. Fletcher, about whether the external tank
20 inspection detailed in RX-54 satisfies the applicable
21 industry standard API 653 for tank integrity testing?

22 A I believe this fulfills the requirements for
23 tank integrity testing for certified external
24 inspections for this tank. It has a number of
25 features to it that are part of the API 653 inspection

1 requirements, including the summary and action items
2 or required actions to be taken, along with basic
3 information about the tank. It includes a settlement
4 survey, a shell thickness calculation, including -- it
5 also provides what's known as a shell rollout. That's
6 a depiction of the tank plates, if you will, in terms
7 of where the fittings go on the tank. It also
8 includes some venting calculations, as well as the API
9 653 inspection checklist, which comes out of the
10 standard in Annex C. It also includes photographs, as
11 well as some nondestructive evaluation, which will be
12 ultrasonic thickness testing.

13 Q And does the report appear comprehensive in
14 relation to API 653?

15 A Yes, it does.

16 Q To save some time, Mr. Fletcher, have you
17 reviewed other external tank inspection reports that
18 Powers has prepared for VSS?

19 A Yes, I have reviewed them all.

20 Q And have you reviewed the reports that are
21 contained in RX-55 through RX-64, as well as RX-66?
22 You can take a minute to look if you need to refresh
23 yourself.

24 A Yes, I have reviewed these.

25 Q Okay. And what is your expert opinion about

1 whether the external tank inspection reports detailed
2 in those exhibits satisfies the industry standard for
3 tank integrity testing?

4 A It's my opinion those certified external
5 inspections meet the standard for tank integrity
6 testing.

7 Q Is that based on the same reasons that you
8 just elaborated on for RX-54?

9 A Yes, the content and scope of the
10 inspection.

11 Q And you mentioned before that you had
12 reviewed reports, 10 additional reports that were done
13 in 2015. In your opinion, do those inspection reports
14 that you had previously reviewed comply with the
15 industry standard?

16 A Yes, they do.

17 Q Again, for the same reasons that you
18 elaborated on with respect to RX-54?

19 A That's correct.

20 Q Mr. Fletcher, have you reviewed external
21 tank inspection reports for Tanks 2001 and 2002, the
22 two large white tanks that are depicted in CX-1?

23 A Yes, I have.

24 Q Okay. And what is your opinion about whether
25 those reports for Tanks 2001 and 2002 satisfy the

1 industry standard for tank integrity testing?

2 A They do, Because these are relatively new
3 tanks, some were actually -- one was actually done
4 before the five-year certification. These are
5 insulated tanks, so access to the shell itself for
6 doing ultrasonic thickness testing is somewhat
7 limited, but the scope of those reports appears
8 consistent with what is in these reports here.

9 Q Mr. Fletcher, to the best of your knowledge,
10 have all tanks at the VSS facility either received a
11 formal external inspection or been replaced?

12 A To my knowledge, yes, they've all -- all of
13 the tanks at the facility have either been replaced or
14 have had a formal external inspection conducted.

15 Q Thank you. And what is the effect, by the
16 way, of replacing the tank in regards to tank
17 integrity testing?

18 A Well, that basically resets the clock in
19 terms of what inspection standard would be used. So,
20 for example, at this facility, they replaced some of
21 the tanks with UL 142 designed tanks that you may
22 recall is a shop fabricated silo tank design. And
23 with that approach, we would typically modify the
24 inspection program to reflect the use of that standard
25 in lieu of API 653 going forward, but it does reset

1 the clock, if you will.
 2 Q So I've reset the clock and can even reset
 3 the standard as required?
 4 A Correct.
 5 Q Thank you. Now let's go through an example
 6 of an internal tank inspection report. Can you please
 7 turn to RX-68?
 8 A Okay.
 9 Q What is this document, Mr. Fletcher?
 10 A This is an API 653 out of service internal
 11 tank inspection and suitability for service evaluation
 12 for Tank 882 at the VSS West Sacramento facility.
 13 Q What type of tank is Tank 882?
 14 A This is a vertical cylindrical tank. I
 15 believe it's known as a field erected tank.
 16 Q Mr. Fletcher, what is your expert opinion
 17 about whether the internal tank inspection report for
 18 Tank 882 detailed in RX-68 meets the industry standard
 19 for tank integrity testing?
 20 A I believe this fulfills the requirements for
 21 internal inspection for integrity testing purposes.
 22 Q Could you briefly just elaborate on why you
 23 believe that is?
 24 A It has -- the components in an internal
 25 inspection, as I mentioned before, have to do with

1 evaluation of the bottom plate of the tank, as well as
 2 other interior features of the tank. In this case,
 3 they have evaluated that using magnetic flux leakage
 4 equipment, along with ultrasonic thickness testing,
 5 and they've also done a 100 percent visual inspection
 6 of the tank bottom plate and various features on the
 7 inside of the tank. They've also done additional work
 8 associated with other aspects of the inspection,
 9 including the Annex C forms and API 653 that pertain
 10 to internal inspections. So, in that regard, this
 11 appears to be consistent with the standard.
 12 Q And does this report appear to be
 13 comprehensive in relation to the industry standard,
 14 API 653?
 15 A Yes, it does.
 16 Q And have you reviewed the other internal
 17 tank inspection reports contained in RX-65 and 67?
 18 A The answer is yes.
 19 Q And what is your opinion about whether the
 20 internal tank inspection reports contained in these
 21 exhibits meets the applicable industry standard?
 22 A These also meet the applicable industry
 23 standard. Like any inspection, there are certain
 24 aspects where you may not be able to see certain
 25 things. And let me give you an example of that. In a

1 normal tank inspection, you may be requested to
 2 evaluate the roof of the tank. If there is no safe
 3 access allowed up to the roof, you're not going to be
 4 able to include that in your actual assessment. In
 5 this case, these have the same components as the other
 6 inspections. There were a few places where the
 7 inspector could not fully evaluate the entirety of the
 8 inside of the tank, but, nevertheless, the approach is
 9 similar in context in terms of what the inspection
 10 standard calls for.
 11 Q So the methodology was --
 12 A The methodology is similar.
 13 Q Understood. Okay. And is your reasoning
 14 behind why these reports have followed API 653 the
 15 same as that you outlined -- that you described with
 16 relation to RX-68?
 17 A Yes. It follows the same format, has the
 18 same content, it has the same inspection materials and
 19 the same types of components that you would typically
 20 see in an internal inspection.
 21 Q Okay. Could you please turn to RX-96 now?
 22 A Okay, I've got it.
 23 Q Have you seen this document before, Mr.
 24 Fletcher?
 25 A Yes, I have.

1 Q What is this document?
 2 A This is very similar to the previous
 3 document in 2014. This is the combined plan of the
 4 VSS facility, including the SPCC plan.
 5 Q Could you please turn to page 96 of 163 of
 6 this document -- I'm sorry, page 95.
 7 A Okay.
 8 Q What is Appendix C to the 2017 combined
 9 plan?
 10 A This is the written schedule integrity
 11 testing program that we had prepared for the facility
 12 back in 2014.
 13 Q So it remained incorporated into this
 14 document?
 15 A Yes, it did.
 16 Q Now can you please turn back to page 57 of
 17 163 of this same document?
 18 A Okay.
 19 Q Can you please take a look at the paragraph
 20 under Subsection B, Inspections and Tests, the
 21 sentence starting or the paragraph starting with "Tank
 22 testing and inspection protocols."
 23 A Okay.
 24 Q What does this paragraph describe, Mr.
 25 Fletcher?

1 A This paragraph reflects that the integrity
2 testing program was modified to reflect the
3 installation of, it appears to be six new tanks, along
4 with the introduction of Tank 2002, and this
5 identifies the inspection standard as SP001 for Tanks
6 819, 821, 822, 835, 836, and 837.

7 Q And does the paragraph above also indicate
8 that certain tanks were placed out of service?

9 A Yes, it does.

10 Q Mr. Fletcher, in your opinion, is it or is
11 it not standard in the industry for an SPCC plan's
12 tank inspection schedule to be modified based on tanks
13 being replaced or placed out of service?

14 A Yes, it should.

15 Q Based on your -- you mentioned an April 2019
16 visit to the VSS facility -- based on that visit,
17 what, if anything -- or strike that. Did your visit
18 to the VSS facility in April 2019 confirm what is
19 contained in this May 2017 combined plan?

20 A Yes, I saw that these tanks had been
21 replaced.

22 Q And based on that same visit, did you notice
23 anything else that had changed about the facility
24 since the 2017 plan?

25 A Yes. There was an additional tank, I

1 believe. I think two or three tanks had also been
2 replaced at the facility.

3 Q Does it sound correct that Tanks 833, 834,
4 and 878 were also replaced?

5 A That's correct.

6 Q Mr. Fletcher, in your opinion, is there any
7 reason to inspect a tank that is going to be replaced?

8 A If an owner was confident in replacing a
9 tank in a short term, there really wouldn't be any
10 specific reason to conduct an integrity -- a formal
11 external inspection if you knew that the tank was
12 going to be removed from the site in the short term.
13 It would be sort of similar to like if I had a car
14 that I knew was going to go to the junkyard; I would
15 not pay a mechanic to have him come through and tell
16 me that I had bald tires and the engine was bad. So
17 that's kind of the analogy in that regard.

18 Q And what effect, if any, did VSS's changes
19 to the facility have on the tank inspection schedule
20 that you had initially prepared in 2014?

21 A Certainly, the addition of -- the
22 replacement of these tanks changes the integrity
23 testing program to align these more with the shop
24 fabricated tank standard, so that's -- certainly,
25 that's a big change. That's a big investment for the

1 facility. And I did note that they had completed
2 essentially the certified external inspections of all
3 the tanks at the facility, save for those that were
4 out of service. And I think that's probably the bulk
5 of the differences that I came across.

6 MR. LUDWIG: Much appreciated. The Court's
7 indulgence for just a moment.

8 (Pause.)

9 MR. LUDWIG: I have no further questions at
10 this time, Your Honor.

11 MS. SUGERMAN: May I have 10 minutes,
12 please?

13 JUDGE BIRO: Yes, you may. We'll stand in
14 recess until 2:00.

15 (Whereupon, a brief recess was taken.)

16 JUDGE BIRO: Please be seated. We're going
17 back on the record.

18 Ms. Sugerman?

19 MS. SUGERMAN: Thank you.

20 CROSS-EXAMINATION

21 BY MS. SUGERMAN:

22 Q I just have a few questions. I would like
23 to start at CX-18, page 95. And will you just remind
24 me, what was the date you were first hired to work
25 with VSS?

1 A I believe that was in early 2014.

2 Q In 2014. Okay. And if you look at the text
3 and just below. So this is, for the record, this is a
4 copy of your report, do you agree?

5 A Yes.

6 Q Okay. And just below the heading that says
7 Formal Certified Inspections, can you read that first
8 sentence into the record, please?

9 A Yes. "The ASTs at the facility have not
10 been formally inspected either internally or
11 externally since their construction at the site."

12 Q And do you have a general sense of how old
13 the majority of the tanks are at the facility, and if
14 not, I will direct you to some exhibits, but do you
15 know off the top of your head?

16 A Generally, most of the tanks at the site
17 were fairly old. Some of the tanks that had riveted
18 construction would have probably dated to the 1940s,
19 and then some of the other tanks, based on their
20 construction style and the reports that I've read,
21 suggest they're probably from the '50s, something in
22 that time frame. Riveting as a tank construction
23 technique was pretty much eliminated with the advent
24 of stick welding techniques following World War II.

25 Q Thank you. And in your experience as an

1 inspector, what's the intent of the API and the STI
2 standards? What's the reason they want you to inspect
3 these every five or 10 years?

4 A That's for determining whether these tanks
5 are suitable for continued service until the next
6 inspection.

7 Q And did you understand the importance of the
8 tank testing and inspection when you were hired to
9 write these reports -- I mean, to give them the
10 schedule?

11 A I certainly understand the requirements for
12 that and the rationale behind it and why you would do
13 that work, yes.

14 Q And as part of that, you testified to your
15 familiarity with 40 CFR Part 112. Are you familiar
16 with the recordkeeping requirements in those
17 regulations?

18 A Yes, the requirement to keep records for
19 three years? Is that what you're referring to?

20 Q Yes, the permit, yes. Okay. I'd like to
21 turn you back to RX-50, and if you'll turn to page 4.
22 This was text that you went over with counsel earlier.
23 And at the bottom of the same paragraph that begins
24 "When no or only partial baseline information is
25 available," if you'll look to the second to the last

1 to have the external inspections completed by the end
2 of the 2014-2015 winter season.

3 Q So, if they had followed this schedule, they
4 might have been done in time for the end of the
5 five-year SPCC cycle. Do you know whether they
6 followed this schedule?

7 A I believe they were behind somewhat on this
8 schedule, but that is a facility question.

9 Q Now I also found counsel speaking a little
10 bit quickly, so I may not have followed this, but he
11 provided, I believe, a list of 10 tanks that were
12 inspected in 2015, and I thought I heard in that list
13 865 and 882, and I'll just confirm with counsel that
14 that's what I heard? Or, Mr. Fletcher, if you have
15 these memorized, which 10 tanks were in 2015?

16 MR. LUDWIG: 865 and 882 were among the
17 tanks that were in that list I gave.

18 MS. SUGERMAN: Okay. BY MS. SUGERMAN:

19 Q Can we turn to RX-66, please.

20 A You said 66?

21 Q Yes, 66. Can you describe this document for
22 me?

23 A Yes. This is an API 653 external tank
24 inspection and suitability for service evaluation for
25 Tank 865.

1 sentence there, it gives this example of the five-year
2 cycle to get a baseline down. Do you agree?

3 A Yes.

4 Q And that five-year cycle is tied to when the
5 SPCC plan was last amended. Do you agree with that?

6 A Mm-hmm.

7 Q So, in this example, when you were hired in
8 2014, VSSI had a 2012 SPCC plan on the books, and one
9 purpose of this fact sheet is to discuss when these
10 tank requirements came into place. So, from the 2012,
11 the last amendment, what would have been the end of
12 VSSI's five-year SPCC cycle?

13 A I did not have -- I don't know the exact
14 date of their SPCC plan at the time that we did this
15 work, but, if it was in fact 2012, it would be five
16 years after that.

17 Q Okay. And I should have suggested you kept
18 open the copy of your report. If you'll go back to
19 CX-18, CX-18, page 96, please. So, given that you
20 found that many of these things seem to have never had
21 baseline established, was it your intent with this
22 program, the schedule you set out, to try and get them
23 to get these tanks inspected as soon as possible
24 without disrupting their operations too much?

25 A Yes. With the way this was set up, this was

1 Q Do you see in the middle of the page there's
2 sort of a table bar that says when the inspection
3 occurred?

4 A Yes.

5 Q And what date does that show?

6 A This shows the tank was inspected in June
7 2016.

8 Q 2016. And then please turn to RX-68. Tell
9 me which tank it looked -- describe that one for me.

10 A This is an out-of-service internal tank
11 inspection for Emulsion Tank 882.

12 Q And the date on that one?

13 A January 2018 -- oh, I take that back. Let
14 me just confirm. Yeah, I believe that is January
15 2018.

16 Q You testified that there were -- was it an
17 external or an internal tank inspection for Tank 2001?
18 Do you recall?

19 A That would have been an external inspection.

20 Q Do you recall when you -- so you didn't do
21 the inspections, correct? You just scanned reports?

22 A Correct.

23 Q Do you recall when you might have seen that
24 report?

25 A I believe that was relatively recently.

1 Maybe -- I think that was in 2019 if I'm not mistaken.
 2 Q And if that tank went into service in 2012,
 3 under the industry standards, when should the first
 4 external certified inspection have occurred?
 5 A Five years after the initial service date.
 6 Q So 2017, does that sound right?
 7 A Yes.
 8 Q I believe you testified to the range of
 9 inspections, so I think you described one as periodic
 10 inspections, is that correct? And are those -- those
 11 are -- can those be performed by facility personnel?
 12 A Yes. Those are designed to be performed by
 13 facility personnel.
 14 Q Do they generally include visual inspection?
 15 A Yes.
 16 Q And can they conduct visual inspections of
 17 the insulated tanks generally?
 18 A You're talking about the periodic
 19 inspections done by facility staff?
 20 Q Correct.
 21 A They may be able to look at aspects of the
 22 exterior of the tank depending upon the condition of
 23 the insulation, but, in many cases, that obscures the
 24 tank surface itself. But, nevertheless, there still
 25 are other items they can check on the tank to

1 determine, or at least visually check, some aspects of
 2 integrity.
 3 Q Is it true that for insulated tanks, some of
 4 the insulation would need to be removed to do an
 5 adequate visual inspection?
 6 A Not necessarily for the periodic
 7 inspections. For the external inspections, it
 8 would -- traditionally, you would remove some of the
 9 insulation to be able to collect on a single wall
 10 vertical tank or have access ports to be able to do
 11 some ultrasonic thickness testing of the tank shell.
 12 Q And in your opinion, we have discussed the
 13 requirements and the regulations for maintaining the
 14 proper records, and you testified to your schedule
 15 here that was supposed to start in the 2014-2015
 16 winter season. In 2014 and before any of the 2015
 17 inspections were completed, did VSSI have adequate
 18 documentation for the tank inspections, prior to
 19 beginning their tank inspections essentially?
 20 A In other words, prior to our engagement of
 21 the facility, did they -- were they doing inspections
 22 consistent with industry standard?
 23 Q Correct.
 24 A I don't know that.
 25 Q When you were hired to do your work at the

1 facility, did you ask initially for any records
 2 relating to historical tank inspections?
 3 A I saw some routine inspections. Whether
 4 those were comprehensive or met the industry standard,
 5 I can't say. We develop our inspection protocols
 6 based on SP001 and API 653 and the guidance associated
 7 with those.
 8 Q So, in your expert report, when you wrote
 9 that the facilities have not been formally inspected,
 10 either internally or externally, was that not
 11 referring to the API or the STI standards?
 12 A Can you refer me to that?
 13 Q Yes, CX-18, page 95.
 14 A That was CX-18?
 15 Q CX-18, page 95.
 16 A And what section, what paragraph was that?
 17 Q So it's the first, it's that bold heading in
 18 the middle that says Formal Certified Inspections.
 19 A Yes, that is correct. They have not been
 20 formally inspected prior to the work that was first
 21 conducted in 2015, and this takes into account
 22 practical and operating conditions, and this is
 23 designed to bring them into conformance within five
 24 years.
 25 Q Were you involved at all in determining what

1 records would be submitted to EPA?
 2 A No.
 3 Q Give me one second, please. I think we
 4 discussed this, but do you recall the report date for
 5 a Tank 2001 external inspection?
 6 A I saw that report I believe it was sometime
 7 in 2019.
 8 Q Would you be able to give us some estimated
 9 numbers for the cost of hiring you for this initial
 10 report that gave them a schedule for compliance?
 11 A This was a fairly comprehensive work
 12 package. This is not something that is commonly done,
 13 although we do this for our SPCC plan clients, where
 14 we provide detailed inspection checklists that are
 15 based on industry standards, including guidance. I
 16 would say something on the order of 10- to 15,000.
 17 Q And do you know the cost of, for example,
 18 one of the Powers Engineering external tank
 19 inspections, including the report?
 20 A Those are probably, for an external
 21 inspection, I would say the cost of those were
 22 probably \$2,000, to round numbers.
 23 Q Do you know does the tank of an internal --
 24 does the cost of an internal inspection vary?
 25 A An internal inspection itself,

1 notwithstanding the cost of preparing the tank for
 2 getting -- doing -- performing the internal
 3 inspection, is a bit more than that, probably 3- to
 4 4,000, something like that.
 5 MS. SUGERMAN: Thank you. That's all my
 6 questions.
 7 JUDGE BIRO: Redirect?
 8 MR. LUDWIG: Just a few.
 9 REDIRECT EXAMINATION
 10 BY MR. LUDWIG:
 11 Q Mr. Fletcher, you looked at a report in RX-
 12 66 for Tank 865 just a couple minutes ago. Do you
 13 recall that?
 14 A Yes. Can you give me that reference number
 15 again?
 16 Q Sure, RX-66.
 17 A Yes.
 18 Q And that report was dated 2016, correct?
 19 A Correct.
 20 Q Do you have any recollection about whether
 21 Tank 865 was inspected twice?
 22 A I believe it was inspected twice.
 23 Q Once in 2015 and then once in 2016?
 24 A That's correct.
 25 Q Okay. And is a tank -- again, the external

1 inspection -- inconsistent with it being out of
 2 service?
 3 A An external inspection can be done on a tank
 4 in service or out of service.
 5 Q And my last question to you is, is it common
 6 for tank inspections to be out of date in your
 7 professional experience or be behind schedule?
 8 A I would say yes, because the challenge has
 9 been in the industry, is there are literally hundreds
 10 of thousands of tanks in the United States that were
 11 installed before the advent of the requirement to
 12 perform inspections consistent with an industry
 13 standard, which became in effect in the 2010-2011 time
 14 frame. So, throughout the United States, there are a
 15 number of tanks under either API 653 or SP001 that are
 16 greater than five to 20 years old. So the industry's
 17 in sort of a state of catch-up, if you will, so that's
 18 kind of the state of the practice.
 19 MR. LUDWIG: No further questions, Your
 20 Honor.
 21 MS. SUGERMAN: No further questions.
 22 JUDGE BIRO: Thank you, Mr. Fletcher.
 23 THE WITNESS: None?
 24 (Witness excused.)
 25 JUDGE BIRO: Okay, Mr. McNeil, any further

1 witnesses?
 2 MR. MCNEIL: Respondent rests.
 3 JUDGE BIRO: Okay. Thank you.
 4 Does the Agency have any rebuttal witnesses
 5 it wishes to call in this proceeding?
 6 MR. HELMLINGER: No, the Agency rests.
 7 JUDGE BIRO: Okay. We don't normally do
 8 closing arguments because we have post-hearing briefs
 9 that we allow people to submit when we have all the
 10 evidence together with the transcript. Andrea's going
 11 to go over a list with you of all the exhibits that we
 12 believe have been admitted into the record, and now is
 13 the time to raise an issue.
 14 MS. SUGERMAN: I do believe there was some
 15 issue with some exhibit?
 16 JUDGE BIRO: Okay.
 17 MS. SUGERMAN: Oh, there it is.
 18 JUDGE BIRO: Some issue that -- there's some
 19 exhibit that you think was admitted that wasn't.
 20 Otherwise, we're going to go with this set of exhibits
 21 and no others. Okay?
 22 MS. PRIEST: Okay. For Complainant's
 23 exhibits, we have CX-1, CX-2, CX-4, CX-5, CX-6, CX-7,
 24 CX-8, CX-9, CX-10, CX-12, CX-13, CX-15, CX-16, CX-17,
 25 CX-18, CX-19, CX-20, CX-22, CX-24, CX-25, CX-26, CX-

1 33, CX-34, CX-35, CX-36, CX-45, CX-46, CX-47, CX-48,
 2 pages 10 through 23, CX-50, CX-52, CX-53, CX-55.
 3 MR. HELMLINGER: Actually, I stipulated to a
 4 broader range there, but some weren't discussed in
 5 testimony, and so, in your counting, you skipped a
 6 couple.
 7 MS. PRIEST: Okay. Judge Biro, do you have
 8 the stipulated Complainant's exhibit?
 9 MR. LUDWIG: I have that handy if it would
 10 be helpful.
 11 MR. HELMLINGER: I believe we had stipulated
 12 to 1 through 48.
 13 MS. PRIEST: 1 through 48.
 14 MR. HELMLINGER: 52 through 54, and there
 15 were a few additions that we had just made through
 16 testimony, CX-55.
 17 MS. PRIEST: Okay. So you're saying we have
 18 CX -- by stipulation, CX-1 through 48, CX-52 through
 19 54, and then in addition to the ones I previously
 20 listed?
 21 MR. HELMLINGER: And 55, which you did list.
 22 MS. PRIEST: Yes.
 23 JUDGE BIRO: Okay. Did you get CX-105?
 24 MS. PRIEST: That's actually RX.
 25 MR. LUDWIG: RX.

1 JUDGE BIRO: RX, okay.
 2 MS. PRIEST: For Respondent's exhibits, we
 3 have RX-1 through 24, RX-29, RX-32, RX-37 through 43,
 4 RX-45 through 101, and RX-104 through 106. Is there
 5 anything missing from that?
 6 MR. LUDWIG: We'll stipulate. That's what I
 7 have as well.
 8 MR. HELMLINGER: That's what I have too.
 9 MR. MCNEIL: So can you just once more list
 10 the RX?
 11 MS. PRIEST: Yes. Respondent's exhibits are
 12 RX-1 through 24, RX-29, RX-32, RX-37 through 43, RX-45
 13 through 101, RX-104 through 106.
 14 MR. MCNEIL: That's what I have.
 15 JUDGE BIRO: Okay. Those are the only
 16 exhibits we consider until we do the post-hearing
 17 brief. When we get the transcript in two to four
 18 weeks, we'll send out a post-hearing order. It will
 19 give you an opportunity to conform the transcript to
 20 the testimony if you feel there's a need to do that.
 21 Before you submit a motion to conform, you must meet
 22 and agree to the greatest extent possible on any
 23 changes to the transcript so that there should be very
 24 few disputes on changes to be made.
 25 It will also set out in the post-hearing

REPORTER'S CERTIFICATE

DOCKET NO.: OPA-09-2018-00002
 CASE TITLE: VSS International, Inc.
 HEARING DATE: May 20, 2019
 LOCATION: San Francisco, California

I hereby certify that the proceedings and evidence are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the U.S. Environmental Protection Agency, Office of Administrative Law Judges.

Date: May 20, 2019

Gigi Lastra
 Official Reporter
 Heritage Reporting Corporation
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 1220 L Street, N.W.
 Washington, D.C. 20005-4018

1 order the dates for the submission of briefs. We
 2 usually do them in series so that the Agency will
 3 submit its initial brief and then the Respondent, and
 4 then the Agency will have an additional brief if it
 5 wants, and the Respondent can do an additional brief.
 6 Or we can do them simultaneously if you think that's
 7 more valuable, whatever you'd like. You know, if you
 8 really have a strong position on that, you should
 9 notify us as soon as possible.
 10 Once we get the briefs, we have the
 11 transcripts, we'll start writing our decision. It
 12 takes six to 12 months to get our decision out. We'll
 13 send it to you in the mail. If you're not happy with
 14 the decision, anybody's not happy with the decision,
 15 you can appeal to the Environmental Appeals Board, and
 16 they'll take it under consideration. Thank you very
 17 much.
 18 MR. LUDWIG: Thank you, Your Honor.
 19 JUDGE BIRO: Off the record.
 20 (Whereupon, at 2:26 p.m., the hearing in the
 21 above-entitled matter was adjourned.)
 22 //
 23 //
 24 //

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