

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

CEP REGULAR MEETING  
SONGS Decommissioning Update and Dry Cask Storage  
Defense-In-Depth  
Via Skype, Thursday, August 20, 2020

TRANSCRIPT OF MEETING  
August 20, 2020

Reported by:  
Denise Herft, CSR #12983  
Assignment #4222680  
Pages 1 - 143

1 SAN ONOFRE DECOMMISSIONING  
2 COMMUNITY ENGAGEMENT PANEL MEETING  
3 STATE OF CALIFORNIA, COUNTY OF ORANGE  
4  
5  
6  
7  
8

9 Transcript of video-recorded meeting,  
10 taken via Skype commencing at 5:30 p.m., Thursday,  
11 August 20, 2020.  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

1 COMMUNITY ENGAGEMENT PANEL MEMBERS:  
2 CEP CHAIRMAN - DR. DAVID G. VICTOR  
UNIVERSITY of CALIFORNIA, SAN DIEGO  
3  
VICE CHAIRMAN - DAN STETSON  
4 THE NICHOLAS ENDOWMENT  
5 CEP SECRETARY - MARTHA McNICHOLAS  
CAPISTRANO UNIFIED SCHOOL DISTRICT BOARD OF  
6 TRUSTEES  
7 HON. JOHN TAYLOR  
SAN JUAN CAPISTRANO CITY COUNCIL  
8  
HON. PAUL WYATT  
9 CITY of DANA POINT  
10 DONNA BOSTON  
ORANGE COUNTY SHERIFF'S DEPARTMENT  
11  
RICH HAYDON  
12 CALIFORNIA STATE PARKS  
13 GARRY BROWN  
ORANGE COUNTY COASTKEEPER  
14  
CAPTAIN MEL VERNON  
15 SAN LUIS REY BAND of MISSION INDIANS  
16 MARNI MAGDA  
SIERRA CLUB, ANGELES CHAPTER  
17  
TED QUINN  
18 AMERICAN NUCLEAR SOCIETY  
19 KATHY WARD  
20 DOUG BAUDER  
RANDALL GRANAAS  
21 ROSS QUAM  
KELLI GALLION-SHOLLER  
22 MANUEL CAMARGO  
23  
24  
25

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

PUBLIC COMMENT PERIOD

PAGE LINE

92 11

1 Via Skype, Thursday, August 20, 2020

2  
3  
4 CHAIRMAN DAVID VICTOR: Thank you very  
5 much. Thanks to all of you. It's the end of  
6 August. For many of you it's the week before the  
7 kids go back to school, plus we're competing with  
8 Joe Biden and the Democratic National Convention,  
9 so I'm grateful for those of you who joined us  
10 tonight.

11 This is the quarterly meeting, third  
12 quarterly meeting of the community engagement  
13 panel. I'm David Victor and the chairman of the  
14 panel. This meeting is being recorded, and as is  
15 our custom, we put copies of the recordings up on  
16 songscommunity.com so there's a full record of all  
17 of our meetings, questions and discussions and so  
18 on and today is August 20, 2020.

19 Normally when we meet in person we have a  
20 moment of safety telling you about the exits. I  
21 can't tell you anything about the exits where  
22 you're sitting, probably in your houses, but I  
23 will say to continue to follow scientist's  
24 guidance with regard to COVID-19 and in particular  
25 the role of masks and social distancing. We in

1 the state have a lot more to do on that front, the  
2 country as well.

3 I want to thank all the CEP members and  
4 the public for joining us tonight. Before we move  
5 on, I want to make a brief comment about Gene  
6 Stone, a former CEP member, who I heard over the  
7 last day or two was not well and may be joining us  
8 at home by video. Gene has played an enormously  
9 helpful role to this panel and to our communities  
10 as we deal with the closure of the San Onofre  
11 plant, among many other things, he was really the  
12 person at the center of the very successful effort  
13 to get a good community facing, realtime  
14 monitoring program for the radiological conditions  
15 that are around the boundary of the site. I  
16 believe there's only one other plant -- one other  
17 decommissioning plant in the United States that  
18 has that kind of program, and it's really part of  
19 one the many things that is now emerging here in  
20 San Onofre on how to do responsible  
21 decommissioning.

22 We had a text exchange today. Gene said  
23 a lot of interesting things in that. I just want  
24 to draw out three points that he meat. One is  
25 that it's so important for all of the members of

1 the community to work together on topics of  
2 paramount central community importance, and I  
3 think particularly the removal of spent waste has  
4 now emerged as item 1 on that. Second thing he  
5 said is it's really important to have active  
6 efforts to continue to hold the community together  
7 because we're not always agreeing, and, we're,  
8 frankly, we're not always together rowing in the  
9 same direction and it seems like a very important  
10 point.

11 And the third thing he said was, David,  
12 whatever you say about me tonight, just make it  
13 short. So there you go. I want to thank you,  
14 Gene, for being such a great citizen, for good  
15 humor and a friend, so thank you. Thank you very  
16 much.

17 This meeting is -- we're holding  
18 virtually and it's complicated, and I appreciate  
19 everyone's perseverance with the technology. We  
20 want to maintain the engagement process even  
21 during difficult times. So we posted the meeting  
22 materials well in advance a week ago on  
23 songscommunity.com. The instructions are on the  
24 website. There's a variety of different  
25 click-throughs on the website that gets you

1 directly to the page and pages with information  
2 about how you can dial in, how you can ask a  
3 question.

4           Manuel, I want to thank you. You're  
5 going to be advancing the slides remotely during  
6 tonight's conversation. I want to remind  
7 everybody that the role of the community  
8 engagement panel is a two-way conduit between  
9 Edison and the operator, and its contractors of  
10 the site, and the various communities that are  
11 affected by the decommissioning process and the  
12 idea as it has always been that information flows  
13 both ways and we help all of us do a better job.

14           We put up on the screen the agenda for  
15 tonight's meeting. And is it up on the screen?

16           MR. CAMARGO: Yes, David, do you see it  
17 now? There is a slight delay with Skype. Do you  
18 see the agenda?

19           CHAIRMAN DAVID VICTOR: Okay. If you  
20 tell me the agenda is up there, then I'm going to  
21 continue on and operate as if the agenda is up  
22 there. I can see it on the slides here, but I  
23 can't see it on my screen, but I may be pushing  
24 the wrong button. Let me continue on here.

25           To say we got a lot of topics to cover



1 during the meeting tonight. We're going to be  
2 getting a big picture update. We cut that short  
3 last time on where we are with the site including  
4 relevant recent milestones. We're going to have  
5 an update on defense-in-depth term that actually  
6 we Gene Stone helped us sharpen. Defense-in-depth  
7 around the canister system has been a paramount of  
8 attention during the coastal decommissioning  
9 process, and so we're going to give an update on  
10 that. And every quarter, every year, at least one  
11 of our quarterly meetings is going to have a big  
12 focus on those kinds of issues.

13 We're going to have an update on the  
14 dismantlement milestones and liquid batch releases  
15 that have been in the news a lot. We're going to  
16 have some information and update on the artificial  
17 reef, the world's largest artificial kelp reef,  
18 and then we're going to have preliminary  
19 discussion of some issues around the strategic  
20 plan regarding moving the spent fuel off site from  
21 San Onofre. That's going to be followed by the  
22 normal public comment period.

23 So next slide, please.

24 So we're going to -- Doug Bauder and I  
25 are going to lead some additional opening

1     comments, and then pause for a moment after that  
2     and see if there are any comments or updates that  
3     other members of the CEP would like to make so  
4     going to the next slide, please.

5             I want to thank Gerry Kern. He has been  
6     serving on the CEP representing Oceanside since  
7     the formation of the CEP in 2014. He was also  
8     secretary to the CEP, enormous contributions from  
9     Gerry. I want to thank him tremendously for his  
10    service.

11            And also welcome Rob Howard, who is the  
12    new Oceanside representative for the CEP. Rob was  
13    an operator at SONGS up until early this month  
14    actually. He's president of the utility workers  
15    Union of America Local 246 on Representative  
16    Levin's task force. We'll talk about  
17    Representative Levin's task force in just a  
18    moment, and he's running for mayor for Oceanside  
19    as well. So enormous public service and knowledge  
20    about the plant.

21            I want to also congratulate Martha  
22    McNicholas who has agreed to take on the role of  
23    CEP secretary, so thank you very much, Martha, for  
24    agreeing to do that and maybe when we're done with  
25    this initial comments here, I'll pause for a

1 moment and see if there's anything that Rob or  
2 Martha would like to say.

3 I'd also like to mention that Dan Stetson  
4 and Martha are going to reviewing comments and  
5 facilitating discussion during the public comment  
6 period, so thank you very much for doing that as  
7 you always do.

8 I want to pause for a moment here and see  
9 you can take off your microphone and I'll see if  
10 you have taken off either Rob or Martha, if  
11 there's anything you would like to say right now.

12 ROB HOWARD: This is Rob, I just want to  
13 say thank you for the opportunity, but also with  
14 the comments you made for Mr. Stone are incredibly  
15 critical and I got to experience that when you  
16 have a difficult topics, such as this one, it is  
17 really important that people work together. We  
18 don't have to agree on a hundred percent of the  
19 things, but if we stay focused on what our goals  
20 are, but that's how we reach success.

21 Again, looking forward to working with  
22 the committee.

23 CHAIRMAN DAVID VICTOR: Thank you very  
24 much, Rob.

25 Let me give the floor now to Martha

1 McNicholas.

2 MARTHA MCNICHOLAS: Thank you, David. I  
3 am glad to be part of this organization. I've  
4 been on the CEP for several years. I just  
5 realized now that I have to listen more carefully  
6 than I usually do and actually take notes and  
7 remember names, so I'm apologizing in advance and  
8 even as an engineer I have been technically  
9 challenged in some of these remote things, so  
10 again, I apologize, I'm glad to participate and  
11 glad to contribute, thank you.

12 CHAIRMAN DAVID VICTOR: Excellent, thank  
13 you very much.

14 I teach via Zoom and I find myself  
15 constantly bewildered by all the different  
16 platforms. Very happy for the technology to work  
17 most of the time. Thank you both Rob and Martha.

18 So I want to go now to the mention that  
19 up on the screen here for the public comments and  
20 facilitated dialog period that if you would like  
21 to make a comment or ask a question or both, you  
22 can go to that link up on the site there. It's  
23 also if you're on songscommunity.com and go to the  
24 meeting page, you'll find the link there as well.  
25 The link is now on lots of different places on the

1 materials circulating in advance of this meeting.  
2 Go there, put in your information, and you'll be  
3 put on the list realtime, and then I'll call on  
4 you later in the meeting.

5 So I want to go now to Doug Bauder for  
6 some opening comments from Doug.

7 Doug, the floor is yours.

8 DOUG BAUDER: Thank you, David. Good  
9 evening and thanks for the opportunity.

10 Just playing off of, you know, what you  
11 talked about earlier regarding social distancing  
12 and use of masks and the like, we're very much  
13 focused on safety here at the station and much of  
14 that does include a response to COVID-19, to the  
15 pandemic, and I also want to mention that it would  
16 be great I know it will happen sometime in the  
17 future, I don't know when that we will be able to  
18 meet in person again. I think there's many  
19 advantages to that so we'll do our best here  
20 tonight.

21 I have some presenters from San Onofre  
22 that are very eager to share context tonight, so  
23 thanks for the ability to do that.

24 Just talking briefly about the COVID-19  
25 update for San Onofre, we have had actually only

1 one positive case at San Onofre. It's a contract  
2 worker. We announced that to several media  
3 outlets back on June 30th. I will say that we've  
4 done follow-up activities for suspected cases.  
5 They are actually called "presumed positive" when  
6 somebody is symptomatic. We've done additional  
7 quarantining for workers and some other work to  
8 ensure there has been no spread at San Onofre, and  
9 I can say that with emphasis, there has been no --  
10 (due to technical difficulties, there is no  
11 transcription for 1 minute and 48 seconds.)

12 CHAIRMAN DAVID VICTOR: -- I want to  
13 mention that on July 23rd the CEP had a CEP only  
14 meeting by Skype to have some discussions about  
15 the agenda and some prearranged discussions about  
16 topics that should be put on the agenda and  
17 discussed with the larger community potential  
18 agenda topics and in particular a lot of attention  
19 around what is fundamentally a political problem  
20 which is how we get the spent fuel moved off site  
21 and so the CEP would like to put more -- (due to  
22 technical difficulties, there is no transcription  
23 for 3 minutes and 5 seconds) -- information about  
24 what the provisions are regarding protection of  
25 the ISFSI and the site has become an ISFSI-only

1 site, and so that letter is enormously response to  
2 that, so thank you very much.

3 Second item in terms of general updates  
4 is the community advisory board. You may  
5 remember, some of you participated, the Nuclear  
6 Regulatory Commission did a road show around the  
7 country, asked lots of community advisory boards,  
8 which all have different names and different value  
9 principals, asked them what they were doing, what  
10 best practices are, they wrote a big report. I  
11 have no confidence the report is going to change  
12 anything, but it's a lot of information about  
13 what's going on in the different communities and  
14 the different panels, so that is on  
15 songscommunity.com, and it's also on the NRC's  
16 website.

17 We contributed a lot to that process so  
18 that report is now out. I want to pause for a  
19 moment and ask Dan if he wanted to say anything  
20 with regard to Mike Levin's task force which  
21 reported out to earlier this summer.

22 Dan, the floor is yours.

23 VICE CHAIRMAN STETSON: Good evening,  
24 David. Thank you.

25 Yes, Congressman Levin recently released

1 the findings of his nuclear task force. I was on  
2 the task force along with three other community  
3 members. It could be expected that the first  
4 group of participants there were areas of  
5 agreement and also many areas of significant  
6 disagreement.

7 Ultimately the task force made 30 policy  
8 recommendations. One particular takeaway that I  
9 think is especially relevant to this group is  
10 SONGS is no longer operational for a whole host of  
11 reasons. Congressman Levin did commit to  
12 aggressively pursue legislation that would direct  
13 the Department of Energy to prioritize accepting  
14 the recommendations of SONGS.

15 The full report is available on  
16 Congressman Levin's website. Judge Kramer is also  
17 on the task force, but I don't see him on the list  
18 of participants, David, so we may need to have him  
19 check in later.

20 CHAIRMAN DAVID VICTOR: He's not able to  
21 join us tonight but let me pause for a moment  
22 since we're directly on this topic and see if any  
23 of the other CEP members who were on the task  
24 force would like to comment on the task force and  
25 the next steps.



1 Marni Magda?

2 MS. MAGDA: Sorry, I wasn't -- I didn't  
3 mean to respond.

4 CHAIRMAN DAVID VICTOR: Okay. I saw your  
5 microphone off or on, actually, I wanted to make  
6 sure if you want to speak so anyone else want to  
7 comment about the task force?

8 Okay. I'm not seeing any other  
9 microphones so we'll move on. I want to say one  
10 thing I was on the task force, a lot of respect  
11 for what Congressman Levin is doing in Washington.  
12 His office and I, he and I talk periodically. I  
13 was very encouraged during the rollout of the task  
14 force and in his webinar with Surfrider, among  
15 other places, that he emphasized in particular a  
16 topic that gets a little less attention in the  
17 task force report itself, should the importance of  
18 a strategy for moving a spent fuel off site in a  
19 responsible way and in particular the importance  
20 of interim storage. I think that's important that  
21 he's been unwavering in his support, along with  
22 Diane Feinstein and Scott Peters and others. He's  
23 been unwavering in support for that in Washington,  
24 and that's going to be very important for us when  
25 we come back to this topic at our quarterly

1 meeting later this year.

2 I wanted to go through a couple slides.  
3 Go to slide 9 please, Manuel.

4 I want to just show you I think four  
5 slides of some pictures. I was in the  
6 neighborhood of Clive, Utah. Utah is a big state  
7 and the neighborhood is very large. Within four  
8 hours I was in the neighborhood and dropped in for  
9 a visit at the end of last month and took a bunch  
10 of photographs, and I wanted to just show you what  
11 I saw there, which is important for us, because  
12 almost all of the waste, not the spent fuel,  
13 almost all of the waste, certainly almost all of  
14 it by volume and weight from the site, San Onofre  
15 site will be going mainly by rail car --

16 MR. CAMARGO: David, sorry, technical  
17 issue. Do you see the slide from Energy  
18 Solutions, is that up now?

19 CHAIRMAN DAVID VICTOR: I'm working on  
20 the slide deck. My computer is not showing any of  
21 the slides. Is it up?

22 MR. CAMARGO: It looks like it is on my  
23 screen.

24 MR. GURAGAIN: Manuel, this is Sanjay,  
25 you need to start sharing, we don't see anything.

1 MR. CAMARGO: Okay.

2 CHAIRMAN DAVID VICTOR: So is it up now?

3 MR. CAMARGO: Not yet. How about now?

4 MR. BAUDER: It looks like it's loading  
5 now, Manuel, we'll see.

6 CHAIRMAN DAVID VICTOR: I think we see  
7 your desktop now.

8 MR. CAMARGO: That's not what I see on my  
9 screen. I did share. Should I start over?

10 CHAIRMAN DAVID VICTOR: I would stop the  
11 sharing and share the window.

12 MR. CAMARGO: Okay.

13 CHAIRMAN DAVID VICTOR: Folks, please  
14 bear with us. Sorry about that.

15 MARTHA McNICHOLAS: Maybe I can add a  
16 little bit while we're waiting?

17 CHAIRMAN DAVID VICTOR: Okay.

18 MR. CAMARGO: Is that okay now?

19 Sorry, Martha. Go ahead.

20 MS. McNICHOLAS: Last night at the  
21 Capistrano Unified School Board Meeting we did  
22 approve, without comment and without rejection,  
23 any negative comments, the subordinate agreement  
24 and transfer agreement in support of radiological  
25 emergency planning and response activities for

1 SONGS. So there are some people in our school  
2 board that have been in the past very negative but  
3 it was very positive and cooperative, and also I  
4 was -- to school district received some funding so  
5 I just wanted to add that.

6 CHAIRMAN DAVID VICTOR: Thank you very  
7 much for that, Martha.

8 I want to suggest if there are other CEP  
9 members who have updates that are of general  
10 interest to the community, we should do that right  
11 now. I've got four slides that are related to  
12 Clive, Utah that will show up on the screen at  
13 some point maybe, then I'll be done with the  
14 updates, and then we're going to go in to the next  
15 segment of the meeting.

16 If you want the floor, members of the  
17 CEP, turn your microphone on, I'll see that it's  
18 on and see if there are any comments that people  
19 would like to make.

20 Okay. I don't see any microphones that  
21 are on.

22 Manuel, do we have a --

23 MR. CAMARGO: Lorraine is going to try to  
24 share, David. My system is fighting with me.

25 CHAIRMAN DAVID VICTOR: Okay. Sanjay,

1 can we tell the system to stop fighting with  
2 Manuel. Great. Thank you very much.

3 If we can move onto slide 9, please,  
4 Lorraine. That's slide 49. That's 50.

5 MR. CAMARGO: Lorraine, if you can enter  
6 the number 9 and enter, that will take you to  
7 slide 9.

8 CHAIRMAN DAVID VICTOR: Okay. Great.  
9 Thank you very much.

10 Manuel, are we seeing the slide now? I  
11 can see them up on my screen.

12 MR. CAMARGO: I'm seeing it on my screen,  
13 David.

14 CHAIRMAN DAVID VICTOR: Okay.

15 MR. CAMARGO: The rail car?

16 CHAIRMAN DAVID VICTOR: One of those  
17 moments where I thought my brain was going crazy  
18 and turns out that I just couldn't see. None of  
19 us could see it.

20 I want to show you four slides. I was in  
21 the neighborhood of Clive, Utah. It turns out it  
22 was very hot in Clive, Utah in the middle of the  
23 summer, it's 108 degrees at 2:45 in the afternoon  
24 the day that I was visiting. Show you four  
25 images. First is the rail cars. 99 percent of

1 the waste on the San Onofre site will be moving by  
2 rail. It will be moving by two kinds of rail  
3 cars. The ones shown here are normal side cars,  
4 which are high side cars and they all have a lid.  
5 You see the white lids on top of these rail cars,  
6 and they're covered for transportation.

7 High side cars are useful for high volume  
8 waste, but they quickly become overloaded so you  
9 can only use half the size of the car. So most of  
10 the waste, which will be rubblized concrete and  
11 steel and things like that will be only in lower  
12 side cars that have lids on top of them and they  
13 go into a building, and they're dumped outside  
14 down right in the building.

15 So the box stays on the car, flips over,  
16 dumps the material out, flips back and they wash  
17 the car and right there onsite, and then it goes  
18 back to usually in this case back to San Onofre.  
19 One of the things that's striking when you arrive  
20 is you see rail track everywhere. It's a gigantic  
21 site, and there are ten parallel rail sidings  
22 there, an very large part of the site is taken  
23 over by rail.

24 Next slide, slide 10, please. A lot of  
25 the rail shows up big and needs to be small, and

1 the way big is turned into a small is with a  
2 shredder. This has got to be an OSHA nightmare.  
3 So this takes very large pieces of steel and they  
4 run it only at night, partly because they use so  
5 much electricity has its own substation and power  
6 points are lower in Utah at night than they are  
7 during the day, and also because it's really  
8 dangerous because stuff comes flying out of the  
9 shredder periodically.

10 Nobody is allowed to be near the shredder  
11 during its operations. This takes large pieces of  
12 steel, brings them down to four inches or less,  
13 and then that is used in the site, put around  
14 larger material so you have a compact ultimately  
15 pile or layers of debris that are then in tuned  
16 inside clay-lined pits and then covered.

17 And I want to show you the last two  
18 images are of those pits. Slide 11, please.

19 So the site was built initially as a  
20 place to store the waste from a super fund site  
21 near Clive, Utah. That's not where the San Onofre  
22 material is being stored. That's a totally  
23 different place, but the site was officially  
24 opened by a company for that purpose, was very  
25 effective for that purpose. They're now in the

1 business of storing low level radiological waste.

2 The standard strategy is you excavate out  
3 pit, and then you put large components that need  
4 to be stored in place first, and then you fill in  
5 around them. To give you a sense of scale. A lot  
6 of you have seen pictures of the reactor pressure  
7 vessel from unit 1 that left San Onofre I think in  
8 the beginning of July, and then went on a long  
9 road trip to Clive, Utah, basically the opposite  
10 of what I did, and it arrived a week or so before,  
11 ten days before I was there and that was a  
12 gigantic component. That's shown in this picture  
13 here circled in the red. It gives you some sense  
14 of the scale.

15 Around that they'll fill in debris and so  
16 on and put layers of clay on top, and then  
17 ultimately fill it up to a mound. And you can see  
18 the mound behind it, the white behind it is the  
19 top of an adjacent mound that is then sealed.

20 All of these have a French drain system,  
21 in effect, underneath them with tubes that collect  
22 any water that might accumulate and allow you to  
23 sample that. Pictures of those tubes are shown on  
24 the left-hand image here. Lots of SONGS  
25 tremendous attention to ground water control.



1     Aquifer in the area is the highly saline Aquifer  
2     that's relatively deep.   Some of the water from  
3     the Aquifer is pumped out and it's used for dust  
4     control and fresh water is trucked, huge number of  
5     trucks every day.   Last slide, slide 12, please.

6             And this is a schematic section view of  
7     what ultimately one of these mounds looks like.  
8     I've got some other pictures.   If anyone wants to  
9     see more, I'm happy to share those with you.

10            You show the excavated site.   These black  
11     tubes on the left and the right.   Those are the  
12     French drain systems, the sumps.   And then in the  
13     middle are layers of waste compacted and disposed,  
14     and then on top is an engineered cover, which is a  
15     series of filters, soil, clay, and then rip-rap on  
16     top of that.

17            It's a pretty impressive site.   I thought  
18     it was important to go visit at some point, get a  
19     sense of where the ultimate location is going to  
20     be for these materials and we welcome any comments  
21     or conversations about that.

22            Before we go on to the next segment of  
23     the meeting, I want to pause and see if any  
24     members of the CEP have any comments or questions  
25     before I give the floor back to Doug Bauder.

1           Okay. So next on our agenda is we're  
2 going to have an update on the big picture at the  
3 site, updates on the calendar so schedule.

4           So, Doug Bauder, the floor is yours.

5           DOUG BAUDER: Thank you, David, I  
6 appreciate it.

7           Manuel, if you would just advance the  
8 slide to 14, that would be great.

9           Okay. So this slide describes our  
10 decommissioning principles. We talked about this  
11 at many meetings: Safety, stewardship, and  
12 agreement. First I want to talk to about safety  
13 briefly. Our prime contractor here, SONGS  
14 Decommissioning Solutions not too long ago passed  
15 1 million safe work hours at SONGS. We greatly  
16 appreciate that. We're continuing to focus on  
17 safety.

18           We want to make sure the deconstruction  
19 project generally the removal of above grade  
20 structures started earlier this year, conduct it  
21 in a safe manner.

22           And then we want to continue, and we're  
23 going to continue maintaining defense-in-depth as  
24 it relates to onsite storage or the nuclear fuel.  
25 You'll hear later in the meeting when Randall

1 discusses our demonstrator repair method that was  
2 actually used as part of our inspection and  
3 maintenance plan, which was approved by the  
4 Coastal Commission on the 16th of July.

5 And then third, we're taking action to  
6 get the fuel relocated off site. As David  
7 mentioned, the strategic plan you'll hear about  
8 some of the plan later tonight by Manuel. You'll  
9 hear more details on it at most likely the fourth  
10 quarter CEP meeting as we continue to develop the  
11 plan, and it's on schedule to be produced and  
12 released early next year. Next slide, please.

13 Thank you, Manuel.

14 Just to talk a little about some of the  
15 work and the big picture of things, I want to  
16 spend a little bit of time talking about our --  
17 actually our ISFSI standalone organization. So we  
18 did have some significant milestones since the  
19 last meeting. We completed fuel transfer. All  
20 the fuel has been safely stored as of August  
21 the 7th, that is 73 Holtec canisters safely  
22 stored.

23 We did achieve our inspection and  
24 maintenance program approval, as I mentioned on  
25 July 16th, and we established a standalone ISFSI

1 organization. I'm sure there may be some  
2 questions about that, so just to discuss some  
3 details about it, it has a separate fencing and  
4 boundary system at the station. It's segregated  
5 from our dismantlement work. So that work during  
6 the dismantlement phase cannot disturb the systems  
7 in the dry fuel storage installation.

8 It has a separate staff. It includes  
9 staff to maintain the fuel in a safe condition,  
10 separate personnel to run NRC required programs in  
11 that standalone organization, and a separate and  
12 dedicated security organization.

13 So the sole purpose of the ISFSI-only  
14 organization is safe storage of the nuclear fuel,  
15 and we intend to keep it that way throughout the  
16 decommissioning activities at the station. We are  
17 shifting our focus more towards decommissioning,  
18 and we'll talk a little bit more about those key  
19 activities as we move forward. One thing I do  
20 want to mention, and we'll talk about this some  
21 more is some of the key work taking place is  
22 focused on work inside the containment domes. The  
23 large structures, the most evident structures you  
24 see as you drive past the station or looking at  
25 the station from Route 5.

1           The next slide, please.

2           Okay. I want to mention our quarterly  
3 update. We do these -- committed to do these once  
4 a quarter. We released the last tri-fold in  
5 mid-July. We also post that information online at  
6 songscommunity.com. A link is here. If you reach  
7 out to NUCOM, we can provide that link to you  
8 directly if you ask about it.

9           We call it quarterly update for mid-July  
10 seen and unseen. The reason we say that is  
11 because you can see the station, there's some seen  
12 activities, and they're referring to the contain  
13 domes, the most visible structures at the station.  
14 And then unseen is the important work taking place  
15 inside those domes, and that will primarily be  
16 important decommissioning work over the next year  
17 or so.

18           If you think about the importance of this  
19 work, some of this is going to involve safe  
20 removal of some higher level radioactivity,  
21 radioactive components of the station, and we're  
22 highly focused on completing that work safely.  
23 Seen and unseen is a good theme because you will  
24 see some activities around the domes taking place.  
25 We're going to enlarge the openings to move the

1 equipment and components in and through the  
2 containment domes, and unseen is the important  
3 work inside.

4 And the update we provided we mentioned  
5 that the asbestos removal to make safe work  
6 conditions for our workers has been completed in  
7 the containment domes and continues to some other  
8 areas in the station. So we'll continue to  
9 quarterly updates throughout the decommissioning  
10 project.

11 I will once again encourage you to look  
12 at Songscommunity.com. We post in the Need to  
13 Know section important decommissioning work.

14 With that, I'll hand the floor over to  
15 Randall to talk about dry cask defense-in-depth.

16 CHAIRMAN DAVID VICTOR: Let me just pause  
17 for a moment, Doug, and see if there are any  
18 questions from the CEP about what you just said.

19 I don't see any but I want to ask one  
20 which is a question we actually had in advance  
21 about this standalone ISFSI organization. It's an  
22 organizationally separate, but it's run by Edison,  
23 it's your organization. It's not a new corporate  
24 form or a public institution or something like  
25 that, it's -- you run it, and it's overseen by the

1 NRC and follows the rules that are set for ISFSIs,  
2 right?

3 DOUG BAUDER: Right. I did see the  
4 question, David, and it's run by Edison; it's  
5 regulated by the NRC. It follows what other  
6 decommissioning stations have done and continue to  
7 do around the country, and actually when we're  
8 completed safely removing the above structures on  
9 the station, what you will see left if you take a  
10 topographical look at the station, will be the  
11 switch yard, the ISFSI only or the dry fuel  
12 storage installation, and basically an access road  
13 to get to those areas at the station, and I guess  
14 finally the sea walkway and the wall will be it.

15 We're very focused on keeping that  
16 organization separate and protected while we do  
17 the decommissioning work.

18 CHAIRMAN DAVID VICTOR: Okay. That  
19 question came from Alice McNally, for the record,  
20 from the community, and I think we should make  
21 sure we can reach out to her, and I think if she's  
22 asking questions about how local office holders,  
23 city representatives, and activists groups, and so  
24 on get involved in organization sounds like they  
25 get involved through the CEP, they get involved

1 through the NRC oversight process, the norm. This  
2 is as folks got involved with you during the  
3 broader decommissioning of the site. Thank you  
4 very much.

5 I think we're giving the floor now to  
6 Randall Granaas who is going to talk about the  
7 defense-in-depth, which is the idea that there are  
8 layers of defense, of monitoring and response all  
9 around ensuring the integrity of the spent fuel  
10 while that spent fuel remains at the site.

11 So, Randall, the floor is yours.

12 RANDALL GRANAAS: All right. Good  
13 evening, everyone. My name is Randall Granaas,  
14 fuel and ISFSI engineer.

15 Next slide, please.

16 That seems to be a photo of our Songs  
17 UMAX ISFSI.

18 Next slide, please.

19 Tonight I'll be discussing dry cask  
20 storage defense-in-depth, in particular  
21 maintenance, inspection, and remediation.

22 Next slide, please.

23 So as you've already heard, SONGS  
24 inspection and maintenance program or IMP, which  
25 was recently approved by the California Coastal



1 Commission. Implementation of the IMP during the  
2 initial 20-year licensing period exceeds NRC  
3 requirements based on a credible aging mechanisms.  
4 The NRC does not require canister inspections for  
5 the first 20 years after loading a canister.

6 The IMP is a comprehensive program to  
7 monitor Holtec canisters, ensuring the canisters  
8 remain ready for onsite or offsite transfer. And  
9 canister degradation, if it were to occur, is slow  
10 developing. The IMP ensures early detection.

11 The IMP includes the metallic overlay  
12 repair method, which is ready to deploy in the  
13 unlikely event it is needed.

14 Next slide, please.

15 So how did SCE qualify the metallic  
16 overlay process? First, we referenced military  
17 standard 3021 which qualifies the cold spray  
18 process for military applications. Cold spray  
19 being synonymous with metallic overlay. Military  
20 standard 3021 references ASTM standards for  
21 adhesion and porosity, and SCE's qualification for  
22 metallic overlay also includes a hardness  
23 requirement.

24 Metallic overlay has been used for  
25 several military applications, such as B-1

1 aircraft hydraulic lines, and Apache helicopter  
2 mast supports.

3 We demonstrated the process using a  
4 canister mock-up at the vendor facility and via  
5 in-situ simulator repair on our heated test  
6 canister.

7 Test coupons are used to validate the  
8 process as working before and after the repair.  
9 Test coupons simulate a piece of the canister.  
10 They're made of the same material as the canister  
11 and have the same curvature. Later in the  
12 presentation there's a photo of a test coupon.  
13 The simulated repair on the heated canister will  
14 be inspected along with the test canister and  
15 providing an excellent opportunity to observe long  
16 term performance of the repair.

17 Finally, an independent engineering  
18 consultant, LPI, review the metallic overlay  
19 process in concluding the process can effectively  
20 mitigate stress corrosion cracking on a dry  
21 storage canister.

22 Next slide, please.

23 The IMP includes inspection of the entire  
24 system, the concrete and the storage module.  
25 Every five years two canisters will be inspected.

1 Since eight canisters were inspected in 2019, the  
2 next inspection of canisters loaded with fuel will  
3 occur in 2024. The test canister will be  
4 inspected every two and a half years starting in  
5 2022.

6 The heated test canister's leading  
7 indicator for corrosion as a storage module outlet  
8 air temperature is set below the coolest outlet  
9 air temperature for a module loaded with a fuel,  
10 and the test canister is stored in a module in the  
11 row closest to the ocean. And data from the ISFSI  
12 radiation monitoring system is sent to three  
13 offset agencies.

14 Next slide, please.

15 This photo shows the heated test canister  
16 before it was placed in a storage module. What  
17 looks like a cross in the photo are the canister's  
18 circumferential and longitudinal wells, and that's  
19 a focus area during inspection.

20 Next slide, please.

21 These photos show the inspection we're  
22 about to deploy inside a storage module, and the  
23 camera mounted on the robot can view the canister  
24 shell with the exception of the bottom one-inch of  
25 the base plate which is occluded by the pedestal

1 upon which the NPC rests. The three-inch thick  
2 base plate itself is not critical, but the base  
3 plate to shell weld is. We can't see the base  
4 plate to the shell weld. It's not occluded by the  
5 pedestal.

6 Next slide, please.

7 So SCE has lead the industry in  
8 developing metallic overlay as a canister  
9 mitigation and repair technology. The rest of the  
10 industry is active as well. EPRI has a three-year  
11 project initiated this year to evaluate five  
12 different repair methods as listed on this slide.  
13 The most suitable of these five methods will be  
14 balance selected for remote deployment using a  
15 robot and demonstrated at two different dry  
16 storage facilities.

17 The DOE is also looking at additive  
18 friction stir welding, and the challenge here is  
19 miniaturizing the technology such that it can be  
20 deployed on a robot within the tight confines of a  
21 storage module.

22 The industry currently rates cold spray  
23 or metallic overlay as the highest among  
24 perspective canister repair methods. That said,  
25 SCE will be monitoring these initiatives as well

1 as future initiatives. It's possible one of these  
2 methods could turn out to be a good alternative to  
3 metallic overlay, and we're not going to know  
4 until the research and development is complete.

5 ASME code case N-860 has been approved by  
6 the board of codes and standards and submitted for  
7 publication, and the IMP is largely modeled on  
8 this Code Case. And the task group, which SCE is  
9 a member, is moving onto adding a mitigation and  
10 repair sections of the Code Case. SCE does  
11 believe that the metallic overlay will be included  
12 in the Code Case as an ASME approved repair  
13 method.

14 Next slide, please.

15 Maintenance will be performed on the  
16 ISFSI structures as dictated by periodic  
17 inspections. The temperature and radiation  
18 monitoring systems will be periodically checked to  
19 ensure they're operating properly, and canister  
20 maintenance, if necessary, will be performed as  
21 dictated by the inspection results, and this could  
22 include application of metallic overlay.

23 Next slide, please.

24 The photo on the left shows the robot  
25 with the metallic overlay spray nozzle applying a

1 simulated repair to a test coupon at the vendor's  
2 facility, and the photo on the right shows the  
3 test coupon with the completed repair.

4 Next slide, please.

5 The video is the metallic overlay process  
6 if you can view that, Lorraine. I don't hear any  
7 sound myself. Let's see. Does anybody else hear  
8 sound?

9 CHAIRMAN DAVID VICTOR: Nope.

10 RANDALL GRANAAS: I know the video is  
11 playing but no sound. I guess we'll have to let  
12 it go because -- I can try to narrate. There it  
13 is August 2019, and there's the test coupon. And  
14 that would be the deployment at the site when we  
15 operated it and did the test repair on our test  
16 canister, and that's back at South Dakota. Looks  
17 like it's playing over again.

18 CHAIRMAN DAVID VICTOR: Okay. Why don't  
19 we stop the video. Courtesy of TikTok here.

20 RANDALL GRANAAS: Yeah, yeah, so  
21 basically you can see it doing the spraying  
22 process, it applies the spray, the robot moves and  
23 the arm moves, and that's how we get the spray,  
24 and this is all program to get the proper  
25 thickness. I think that's probably enough, unless

1 Lorraine thinks it's going to play better, I can  
2 move onto the next slide.

3 CHAIRMAN DAVID VICTOR: Why don't we move  
4 onto the next slide, and we can come back to this  
5 if there's time, but let's keep going.

6 RANDALL GRANAAS: All right. So the MPC  
7 and ISFSI system inspection results will be  
8 reported to the California Coastal Commission  
9 every five years. Radiation monitoring data is  
10 reported to state and federal officials and that  
11 will publish monthly, and all of this information  
12 will be available at [songscommunity.com](http://songscommunity.com). That's  
13 all I have. Thank you for your time.

14 CHAIRMAN DAVID VICTOR: Thank you very  
15 much, Randall. I want to pause and see if there's  
16 some questions about this. This is an ongoing  
17 topic. I do think that two comments while people  
18 are writing their questions, one comment is I  
19 think it will be good to have an update as soon as  
20 you have the first inspection. This is much more  
21 aggressive inspection program than I think has  
22 been done anywhere else and I believe never done  
23 on canisters before the 20-year initial licensing  
24 period, so it would be good to know. I assume  
25 you're not going to find anything in that regard.

1           The other comment I make is the coolest  
2     canister, just for context of everyone, the  
3     chemical processes that run -- that lead to stress  
4     corrosion cracking, which is the biggest concern  
5     those processes run better at cold temperatures.  
6     The reason the test canisters are at the Oceanside  
7     at the site in the coolest location is the same  
8     reason that when the Nuclear Regulatory Commission  
9     goes and requires inspection of a canister for a  
10    re-licensing of ISFSI, they go to the coolest  
11    canister, because that's the canary in the coal  
12    mine, if you like, and that's why you're doing it  
13    with the coolest canisters.

14           I have a couple questions but before we  
15    go to that, I want to see if others. Looks like  
16    Martha McNicholas would like the floor.

17           So, Martha, the floor is yours.

18           MARTHA MCNICHOLAS: Yes, Randall a couple  
19    of things, what you mentioned on other potential  
20    repair research, EPRI and the DOE, those are  
21    really -- those are separate activities not being  
22    conducted by SCE, we're just kind of being aware  
23    of other things that are going on; is that true?  
24    Is that the way I understand it?

25           RANDALL GRANAAS: Well, not only are we



1     aware of it, but we co-chair one of the  
2     subcommittees in EPRI ON repair mitigation, so  
3     we're very involved in it, but we're not --  
4     there's research made being, being implemented by  
5     other organizations such as EPRI or Department of  
6     Energy or universities, right. We're definitely  
7     part of the committee, and we're well aware of  
8     what they're working on.

9             MARTHA MCNICHOLAS:   Okay.   So we're  
10    intimately involved but we aren't actually doing  
11    that research.  They're doing the research in what  
12    could be very valuable to us if we need it?

13            RANDALL GRANAAS:   Correct.  
14    Defense-in-depth, we may have another opportunity,  
15    another method as well, yes.

16            MARTHA MCNICHOLAS:   Right.  The other  
17    thing and I did ask some questions ahead of time  
18    on the metallic overlay, the terminology "coupon"  
19    really got to me.  I don't think of that as -- I'm  
20    thinking what, what are you talking about, coupon,  
21    but as basically as test sample.

22            RANDALL GRANAAS:   It is.

23            MARTHA MCNICHOLAS:   And so this is  
24    actually spraying a metallic -- maybe you can  
25    explain a little bit more to me.  I just got

1 through painting some kitchen cabinets with a  
2 sprayer, and that's kind of what I'm thinking of.  
3 I don't think that's anything like spraying  
4 kitchen cabinets.

5 RANDALL GRANAAS: Well, it's not and let  
6 me read the description that's actually out of a  
7 DOE report from last year. And cold spray is a  
8 solid phase deposition process where particles are  
9 accelerated to supersonic velocities and impact  
10 the substrate -- a substrate would be the canister  
11 of course -- and the impact energy is sufficient  
12 to plastically deform the material at the  
13 interface and produce mechanical interlock and  
14 metallurgic bond and the heating is minimal.

15 So that material is more than spray  
16 paint. You can't get it off if you want -- that's  
17 what we do the adhesion test for. When we do the  
18 adhesion test this really high tech glue they use  
19 which fails at 10,000 PSI, that's fails, not the  
20 bond between the metallic overlay and the  
21 substrate.

22 MARTHA MCNICHOLAS: Okay.

23 RANDALL GRANT: It's on there real good.

24 MARTHA MCNICHOLAS: It's more at a  
25 molecular level than -- all right. I think I

1 understand it now. The supersonic spray sounds a  
2 lot more important.

3 RANDALL GRANAAS: It's a pretty  
4 sophisticated operation.

5 MARTHA MCNICHOLAS: Not like my spray  
6 gun. Okay, thank you.

7 RANDALL GRANAAS: You're welcome.

8 CHAIRMAN DAVID VICTOR: That's not to  
9 disparage your spray gun. When I first heard  
10 coupon a long time ago when we were talking about  
11 the stress corrosion cracking study I thought I  
12 was going to get 2 for 1 Doritos. Apparently it  
13 was the term in the industry for those sample  
14 piece of metal.

15 Looks like Dan Stetson would like the  
16 floor.

17 Dan, the floor is yours, then John  
18 Taylor.

19 Dan.

20 VICE CHAIRMAN STETSON: Thanks, David.  
21 Just out of curiosity, how do you heat the  
22 canister and what temperature do you -- is it  
23 heated from the outside or the inside? How do you  
24 heat it? In what temperature -- do you reduce the  
25 temperature over time so it mimics the temperature

1 of the other canisters?

2 RANDALL GRANAAS: So we put in a series  
3 of -- a set of heater elements inside that  
4 canister, and I could send you photos later of it,  
5 and but it's huge set of electrical heaters that  
6 we put inside the canisters and we seal the lid.  
7 And we can control that externally, the wires  
8 coming out of it, and we look at the temperature  
9 coming out of the exhaust flute, and we make  
10 that -- we use that and we measure that and  
11 compare it to, say, all the other canisters,  
12 there's 73 of them out there, and we find the  
13 lowest temperature out of 73, and we set that  
14 temperature to be lower. And we suggest as the  
15 fuel decays, then we will adjust the temperature  
16 on the test canister lower.

17 VICE CHAIRMAN STETSON: Thank you.

18 RANDALL GRANAAS: You're welcome.

19 CHAIRMAN DAVID VICTOR: Thank you.

20 I think John Taylor wanted the floor.

21 John?

22 JOHN TAYLOR: Yes, Randall, I had a  
23 question: When the canisters come out of the  
24 cooling pool and they're placed in -- they're  
25 pressurized, I understand with helium --

1                   RANDALL GRANAAS:   Correct.

2                   JOHN TAYLOR:   Does the repair process  
3   allow for that pressurization to hold back or  
4   contain the pressure or is that even an issue?

5                   RANDALL GRANAAS:   They're pressurized at  
6   about 45 PSI, they're actually at a higher  
7   temperature when we pressurize them, so we correct  
8   that, at about 290 degrees Fahrenheit they're  
9   pressurized at about 60, 65 PSIG.   What our goal  
10   is we're not going to get a through-wall crack.  
11   We will fix this before it's through-wall so the  
12   helium isn't going to come out.

13                  I do know that the spray, the DOE had  
14   this in their report that they issued last year,  
15   they repaired a pipe with a 1000-pound per square  
16   inch leak and they applied the spray, and they  
17   were able to seal it.   But, again, we don't want  
18   to get there.   We want to find the degradation  
19   first and mitigate it before it actually goes  
20   through the wall of the canister.

21                  JOHN TAYLOR:   Thank you.

22                  RANDALL GRANAAS:   You're welcome.

23                  CHAIRMAN DAVID VICTOR:   Thank you very  
24   much.   Any other questions?   I'm not seeing any,  
25   so let me ask my three questions very quickly, by

1 the way, Randall, if we learn more about actual  
2 applications of this like the 1,000 PSI inside  
3 service repair, it could be great to learn about  
4 this those, this is less science fiction and more  
5 reality. I didn't know about the applications on  
6 the Apache rotor and the B-1.

7 So three quick questions, I'll just ask  
8 all three right now and let you know answer them,  
9 one is you're going to be inspecting every two and  
10 a half years, there's been a lot of concern about  
11 damage to the canisters when they were loaded and  
12 so on, is there any damage to the canisters during  
13 the inspection process? Is there a tradeoff  
14 involved there?

15 Second is a while ago we heard about  
16 Russian dolls, putting one canister inside of the  
17 other. Now we've got some metallic overlay with  
18 the EPRI work, we have one or more of these five  
19 technologies in addition to the Russian dolls and  
20 metallic overlay. So what happened to the Russian  
21 dolls? Are they no longer -- people still excited  
22 about them or the Russian dolls potentially  
23 viable?

24 And the last question is about the ASME  
25 repair standard, just curious as to when you think

1 ASME will have that standard in place?

2 RANDALL GRANAAS: Okay. First question,  
3 damage, the robot actually -- not that it would  
4 damage it, the robot, the wheels stick to the  
5 inside of our divider shell, which is carbon --  
6 carbon steel, so it doesn't even touch the  
7 canister at all. So, again, it's a lightweight  
8 aluminum robot. That doesn't touch the canister  
9 there's no damage.

10 There's a rigging evolution to take the  
11 lid off, it's a 35,000 pound lid, so that's an  
12 industrial safety hazard, but otherwise, there's  
13 no hazard at all.

14 The Russian doll, that could -- we could  
15 deploy that, but we really prefer this metallic  
16 overlay. You can do many canisters rather than  
17 one. It's possible but that's not our emphasis  
18 right now on the Russian doll.

19 And then the ASME repair, hard to say,  
20 but I'm hoping it will be done as quickly -- it  
21 took five years to get the standard for  
22 inspection, so an educated guess would be five  
23 years for the repairs to be approved by ASME. We  
24 don't for certain, but that would be the best  
25 projection. ASME doesn't move fast. That whole

1 process moved very slow.

2 CHAIRMAN DAVID VICTOR: I think I'm happy  
3 when folks are setting standards that are going to  
4 be followed widely that we don't rush them so --

5 RANDALL GRANAAS: Absolutely.

6 CHAIRMAN DAVID VICTOR: Okay. Thank you  
7 very much.

8 I think we want to go back to Doug Bauder  
9 who's going to introduce the next segment of the  
10 meeting, which is the decommissioning update.  
11 Doug, the floor is yours.

12 DOUG BAUDER: Sorry. Thank you, David.  
13 A few technical difficulties.

14 I'll hand it over to Vince to talk in  
15 some detail about the decommissioning work. Also  
16 I would like to, at some future point in time,  
17 bring Bob Frasier in, our site SCS lead to talk in  
18 some more details about the work potentially at  
19 the next meeting or the meeting thereafter for  
20 now, Vince, you have the floor.

21 CHAIRMAN DAVID VICTOR: I just want to  
22 say SDS is the SONGS Decommissioning Solutions so  
23 that's the contractor that is over -- doing and  
24 overseeing the work on your behalf, you're  
25 ultimately responsible for it, but that's the



1 group, and we have an invitation after them and so  
2 we'll bring them in when the time is right. I'll  
3 look forward to that.

4 DOUG BAUDER: You bet. Thank you.

5 VINCE BILOVSKY: We can go to the next  
6 slide, and as Doug mentioned earlier, we really  
7 wanted to focus under the pandemic protocol we  
8 really wanted to focus on getting the fuel safely  
9 stored and making our transition to an ISFSI-only  
10 site. So we've been going a little slow on the  
11 decommissioning activities, but we're gradually  
12 increasing them at the site for the remainder of  
13 the project. We have made a few modest  
14 accomplishments.

15 The main items that we've been focusing  
16 on involve the preparation for the dismantlement  
17 and removal of the systems located inside the two  
18 big domes that you see on the highway, which are  
19 called the containment buildings. There's a lot  
20 of stuff inside of those buildings. It's where  
21 the central plant systems are located, you know,  
22 made up of components, piping, tanks, cabling,  
23 things like that.

24 Some of those components are pretty big  
25 like the steam generators, pressurizer, the

1 reactor coolant pumps, but the most significant  
2 large component that takes a lot of effort to  
3 remove is the reactor vessel, and that's because  
4 the reactor and especially the internal parts were  
5 activated during the operating history. So that  
6 work is done under water to protect the radiation  
7 and it's done with some pretty sophisticated  
8 equipment.

9           If you refer back to that large rail  
10 shipment that we talked about that was talked  
11 about earlier, the unit 1 pressure vessel, that  
12 was actually shipped in one piece but it was  
13 much -- it's a smaller reactor, so the reactors in  
14 units 2 and 3 are much bigger, and we're going to  
15 need to cut those up into segments. Like I was  
16 saying before, that will be done under water with  
17 specialized equipment.

18           So most of the work we've been doing  
19 lately and the work that will continue for the  
20 next few months is the preparation for cutting up  
21 and removing those reactor vessels and their  
22 internals, such as these tasks that are listed  
23 here on this slide.

24           If we could go to the next slide,  
25 Lorraine or Manuel. I'm not sure who is running

1 it right now.

2 What we see here is one of the two  
3 containment dome buildings, and it shows the  
4 current opening that can be used for bringing  
5 equipment and components in and out of the  
6 building but now that the plant isn't operating  
7 anymore, we can make that opening much bigger,  
8 which will make it easier to bring the equipment  
9 inside the tools that we need to dismantle and  
10 bring the package waste outside.

11 So if we go to the next slide and take a  
12 look at a closer, zoomed-in look at the  
13 containment building. On the left side we see the  
14 current equipment hatch opening and you can see  
15 some workers inside there. And then on the right  
16 we show where that, you know, equipment hatch is  
17 and where we can -- where we're going to make it  
18 bigger. We cut out that portion and make an  
19 larger opening there.

20 So we can go to the next slide.

21 I think here we have a high level  
22 depiction of the project schedule. The actual  
23 schedule has tens of thousands of activities in it  
24 but just looking at the big picture here, the top  
25 line item we see the main focus going on between

1 now and 2024 where we're going to be removing all  
2 the systems and components from inside the  
3 containment domes. Also, in parallel we'll be  
4 taking down other systems and structures that  
5 surround the domes, but the main path what project  
6 managers call the critical path goes through the  
7 containment buildings.

8 Then if we go down to the fifth line  
9 starting around the middle of 2025 after we have  
10 everything removed from the insides of those  
11 domes, that's when we'll actually start the  
12 demolition of those buildings. We expect that to  
13 be finished about a year or so later in 2026.

14 So let's go over the next slide. And on  
15 the last two slides here I'm going to talk about  
16 how we're going to ship the plant away. We want  
17 to use rail cars as much as we can. Rail cars are  
18 much more efficient than trucks, because we can  
19 get a lot more material at a ratio of about 6 to  
20 1. We're going to minimize the truck shipments as  
21 much as possible, and when we do make them, we'll  
22 do our best to make sure they're off peak hours so  
23 we don't negatively impact the traffic.

24 Go ahead on to the last slide. We'll  
25 talk about a little bit about low-level

1 radiological waste shipments. See here a picture  
2 of the unit 1 reactor pressure vessel that left  
3 San Onofre on May 25th and arrived in Utah on  
4 July 14th. That's the same component that David  
5 showed in one of his slides when he made his visit  
6 there to Clive.

7           When it comes to low-level waste, there  
8 are four classifications: Class A is the lowest.  
9 It's the most benign and then class B and C get  
10 progressively more radioactive. The highest  
11 radio -- the highest activity waste among the low  
12 level classifications is called greater than class  
13 C.

14           There's a link at the bottom of this  
15 slide that provides details on how that  
16 classification is determined it. I'll warn you  
17 it's pretty complicated. For our purposes, for  
18 the decommissioning of San Onofre, I'll say that  
19 nearly all of the waste falls in that lowest level  
20 category, the class A. There's going to be about  
21 285,000 tons of it. All of that will go to Clive,  
22 Utah just like the unit 1 reactor pressure vessel  
23 did and almost all of it by rail.

24           There will be a small amount of the class  
25 B and C waste, and they go by truck to a facility

1 in Texas, but that should only be about six or  
2 eight trucks worth total, very small amount.

3 Last, we'll also have a small amount of  
4 greater than class C waste. This waste comes from  
5 internal structures of the reactor that were  
6 closest to the fuel during operation. For the  
7 greater than class C waste, we treat it the same  
8 way as spent fuel, so that's stored on the ISFSI  
9 pad.

10 We're going to have 12 canisters for it  
11 total, for both units combined. There's already  
12 one canister of greater than class C waste that's  
13 out on the pad right now that we have from the  
14 unit 1 decommissioning.

15 That's what I have for today. There will  
16 be plenty more updates in the future meetings, and  
17 I'll be happy to answer any questions.

18 CHAIRMAN DAVID VICTOR: Okay, thank you  
19 very much. I've got one but the question I just  
20 want to underscore the volume we're talking about  
21 the here. This is almost 600 million pounds of  
22 class A waste, just an extraordinary amount of  
23 material.

24 I want to see if anybody has any  
25 questions or comments from the CEP before I ask

1 mine. I don't see any so let me just ask my  
2 question which is about the schedule. One of the  
3 effects of hiring a company that's a specialist in  
4 decommissioning is that I believe almost  
5 everywhere in the country the schedules will run  
6 faster and under budget. I'm curious as to  
7 whether we should expect that here, potentially  
8 see the domes come down earlier than 2025 or 2026  
9 or if that's already built into your schedule, or  
10 how we should think about the firmness of that  
11 very important milestone which will be visible  
12 from the highway?

13 VINCE BILOVSKY: As I mentioned, the  
14 critical path goes through the -- it's removing  
15 the insides of that containment building and the  
16 reactor pressure vessel and the reactor vessel  
17 internal segmentations will take a solid two years  
18 to perform, and then you have the large component  
19 removals, some take place in parallel, some  
20 afterwards, there's a decontamination process, so  
21 that's pretty well scheduled.

22 So I think 2026 time frame is very much  
23 realistic for when we would expect to see those  
24 domes to start the demolition process.

25 CHAIRMAN DAVID VICTOR: Thank you very

1 much.

2 First I have Marni Magda, and then Martha  
3 McNicholas.

4 Marni, the floor is yours.

5 MARNI MAGDA: In your slide 16 you said  
6 some higher level radiation would need to be moved  
7 from the domes and we're now looking at that  
8 specifically, the 35 tons that's the B and C level  
9 waste that's going to Texas, has that been an  
10 approved place that it can go to, and when do you  
11 think that will ship?

12 VINCE BILOVSKY: Yes, that's an approved  
13 location. It's Waste Control Specialists, which  
14 is in St. Andrews, Texas. That is the facility  
15 that is licensed in United States to receive class  
16 B and C waste.

17 MARNI MAGDA: Thank you.

18 CHAIRMAN DAVID VICTOR: Let me just say  
19 before we go to Martha, that site, St. Andrews is  
20 one of the two sites that's an interim storage  
21 site that we've been talking a lot about. It's on  
22 the Texas side of the border, the other site is  
23 the site in Eastern New Mexico on the New Mexico  
24 site, although the two sites themselves are very  
25 close to each other. There is some discussion at



1 Clive, not about going to class C, but I think  
2 about upgrading some parts of the facility that  
3 may be a little bit of the material could go to  
4 Clive, but I think in terms overall volume, the  
5 real story is mass amount of volume going to  
6 Clive, and then small amount of volume by truck  
7 going to Texas.

8 Martha, looks like you would like the  
9 floor. Martha, the floor is yours.

10 MARTHA McNICHOLAS: Yes, thanks, Vince.  
11 This is really interesting. I'm trying to  
12 visualize cutting up a reactor vessel under water.  
13 So is there a giant swimming pool in there that  
14 we're using to cut things up? This isn't the  
15 spent fuel pool that we're now reusing to chop  
16 things up in?

17 Sorry to be so blunt on that, but I'm  
18 trying visualize this. Maybe in our next  
19 presentation can you maybe do a schematic or  
20 something to kind of help me understand how this  
21 is going to work inside the containment structure.

22 And the other thing is I want to confirm  
23 those last 125 tons will be stored in basically a  
24 Holtec canister there next to the spent fuel, is  
25 that what I understand?

1 VINCE BILOVSKY: I'll start with that,  
2 answering that question. We're actually going to  
3 the back to the first system which is the  
4 horizontal NUHOMS transnuclear system. The  
5 canisters are very similar to -- the outside of  
6 the canister has the same dimensions as the fuel  
7 canisters, but the components that -- the segments  
8 that go in there don't have the same shape as the  
9 fuel assembly. They're a little bit different on  
10 the inside, otherwise they go right into the same  
11 horizontal storage modules.

12 Going back to your original comment or  
13 initial comment, no, this is a different location.  
14 This is in containment, not in the spent fuel  
15 buildings. In containment, the cavity where the  
16 reactor vessel is has the ability to be flooded up  
17 so I wouldn't call it a swimming pool. We don't  
18 tend to do any swimming in there. We'll be doing  
19 it underwater, and it's very specialized equipment  
20 that does the cutting underneath the water.

21 MARTHA McNICHOLAS: Okay.

22 VINCE BILOVSKY: We put it into  
23 containers that are appropriate for the type of  
24 waste that go into them.

25 MARTHA McNICHOLAS: Okay, thank you. If

1 we have a chance in one of our next meetings to  
2 kind of show that schematically, I would love to  
3 see that.

4 VINCE BILOVSKY: Absolutely.

5 MARTHA McNICHOLAS: Thank you.

6 CHAIRMAN DAVID VICTOR: That would be  
7 great. I think there's also video at other sites  
8 of this being done robotically, and maybe we can  
9 get a couple of those videos and maybe figure out  
10 how to play videos as well.

11 On the video theme, the video we tried to  
12 play earlier is now posted on songscommunity.com  
13 so for those of you, you don't need to leave the  
14 meeting right now, if you want to see the video,  
15 it's on songscommunity.com and we'll figure out  
16 how to get it to play at a future meeting. It's  
17 already posted there.

18 I don't see anyone -- John Taylor, the  
19 floor is yours.

20 JOHN TAYLOR: Randall, this might not be  
21 a question for you, but in regard to the payment  
22 for this storage, is this an annual payment that  
23 San Onofre will have to or ratepayers will have to  
24 pay indefinitely, or is this a one-time fee to  
25 take the waste and store it?

1 VINCE BILOVSKY: It's captured within the  
2 decommissioning general contract we have with  
3 Songs Decommissioning Solutions.

4 JOHN TAYLOR: So then it doesn't become a  
5 hundred year payments or whatever that continues  
6 to be charged to ratepayers, that's how I read  
7 what you're saying?

8 VINCE BILOVSKY: Correct.

9 JOHN TAYLOR: Okay. Thank you.

10 CHAIRMAN DAVID VICTOR: And they own and  
11 operate the Clive site.

12 I don't see any other comments or  
13 questions. Martha, your mic is still on, did you  
14 want to say -- no, okay.

15 I want to move on now to the next  
16 segment. Dr. Eric Goldin who is radiation  
17 protection professional is going to talk about the  
18 liquid batch releases. These have gotten a lot of  
19 attention, and I've seen a lot of stuff in the  
20 media that's not connected to the radiological  
21 science. There's been some signs posted. I'm  
22 sure members of the CEP will have comments about  
23 that.

24 Let's first get a few slides and some  
25 input from Eric Goldin as to where we are with the

1 radiological science regarding these releases and  
2 what's going on with them.

3 Dr. Goldin, the floor is yours.

4 DR. ERIC GOLDIN: All right. Thank you.

5 Good evening, everyone. My name is  
6 Dr. Goldin. I'm the radiation safety specialist  
7 with over 40 years of experience, and I would like  
8 to present some factual information about the  
9 batch releases of water from the plant that is  
10 slightly contaminated with radioactivity. This is  
11 no different than what's been done at San Onofre  
12 for over 50 years and has no impact on the local  
13 environment.

14 I would like to also note that the  
15 activity levels are much less than the discharge  
16 of waste water from the typical sewage treatment  
17 plant that receives medically administered waste  
18 water from people who have received radioactivity  
19 in the treatment, for example, using iodine 131 in  
20 the diagnosis and treatment of thyroid disease.

21 If we can go to the next slide, we'll  
22 talk briefly about how the process is done.  
23 Basically the water is accumulated in very large  
24 tanks in the plant, recirculated through filters  
25 and ion exchangers to remove as much of the

1     radioactivity contaminants as possible.

2             Samples are taken and analyzed in a very  
3     sensitive instruments in the laboratory, and then  
4     a permit is written that has limits on  
5     radionuclide concentrations, calculates the  
6     estimated dose to a person who could be exposed to  
7     the radioactivity. Radiation monitor set points  
8     are developed, and all of this is reviewed by  
9     management and signed off before anything can  
10    happen.

11            Once that approval is received, then the  
12    operators can start the required pumps, discharge  
13    pumps from the tanks, and that dilution pumps in  
14    the plant and discharge the water out to sea. It  
15    goes out through the discharge conduit and enters  
16    the ocean in the diffuser section, which is over a  
17    mile off shore and at the bottom of the ocean  
18    about 50 feet below sea level and where it mixes  
19    with the rest of the ocean water, vast quantities  
20    of ocean water.

21            The next slide will show you that -- the  
22    next slide. So the radiation exposure is  
23    estimated by using the concentration of the  
24    radioactivity at the point of discharge, which is  
25    the diffusers, and is therefore, very

1 conservative. It doesn't take into account any  
2 dilution with the ocean water. The doses based on  
3 someone eating seafood that would live at the site  
4 of those diffusers and would accumulate  
5 radioactive contamination in the food, fish and  
6 crustaceans, like lobsters for example, and the  
7 assumption is people would collect that sea life  
8 and eat fairly large quantities of it through the  
9 year.

10           The radiological environmental program,  
11 the RENP program, what that does is it's a  
12 requirement by the Nuclear Regulatory Commission,  
13 and includes sampling the fish, the crustaceans,  
14 ocean bottom, ocean water, and other media in the  
15 area, kelp, for example, ocean bottom sand, and  
16 samples those media, analyzes them by a third  
17 party laboratory, and then the data from all of  
18 that sampling and analysis is reported annually to  
19 the Nuclear Regulatory Commission and the state,  
20 and those reports are publically available.

21           They are the most -- the more recent ones  
22 are on the SONGS Community website, and you can go  
23 back and research older ones that would include  
24 data from when the power plant was operating on  
25 the NRC's website. You just go to NRC.gov and

1 look for the effluent reports.

2 The estimated dose from all the 2020  
3 batch releases is 0.5 millirem, and the next slide  
4 will show you how to compare that to other sources  
5 of exposure to the average person. The average  
6 natural background for a U.S. citizen is about 310  
7 millirem, roughly 1 millirem per day. These are  
8 annual doses on the chart.

9 Everybody gets about 14 millirem per year  
10 from the natural potassium 40, which is  
11 radioactive in the human body. Most people get  
12 dental x-rays and perhaps a chest x-ray once in a  
13 while, but the average for medical exposures and  
14 dental exposures is also about 310 millirem --  
15 excuse me -- per year. A cross country roundtrip  
16 air flight is about 5 millirem, and the NRC  
17 occupational dose limit for workers is 5,000  
18 millirem.

19 The dose limit for members of the public,  
20 the EPA sets a value of 25 millirem per year, and  
21 the NRC limit is 100 millirem per year. There's  
22 slight differences in who and how those numbers  
23 apply, and that's why they're different.  
24 Basically you're talking about 25 millirem per  
25 year from the EPA, whereas compared to the total



1 for all the batch releases, and this is an upper  
2 limit estimate, is about 0.05 millirem.

3 The next slide, please.

4 This is the key question: Is it safe?  
5 The answer is yes. The last batch release, the  
6 estimated dose, and this is very conservatively  
7 calculated was 0.000722 millirem. That's assuming  
8 somebody is eating fish that lived basically at  
9 the discharge of the conduits.

10 Less than one hour on the beach yields --  
11 I say the beach but it could be anywhere  
12 outdoors -- yields 25 times more dose than that  
13 average release dose. That natural radioactive  
14 exposure is due to cosmic rays, terrestrial  
15 radiation, and radon that comes up out of the  
16 ground.

17 If you drank all 20,000 gallons, and I  
18 use the number 20,000, the average batch release  
19 is about a little over 17,000 gallons, but if some  
20 could possibly drink all 20,000 gallons from one  
21 of those batch releases, the dose would still be  
22 4,000 times less than the EPA drinking water  
23 limit. And the estimate for the entire year,  
24 again, is 0.051 millirem, compared to a natural  
25 background of about 1 millirem per day. It's very

1 small fraction.

2 The next slide draws some conclusions,  
3 and the answer is that these levels are very far  
4 below regulatory limits, which are safe levels  
5 established by the federal agencies, such as the  
6 EPA and Nuclear Regulatory Commission and well  
7 below the water board limits.

8 There are national and international  
9 scientific organizations that note that any dose  
10 less than about 10,000 millirem per year have no  
11 measurable effects in humans, and we're talking  
12 about very small fractions of 1 millirem.

13 So the conclusion is it's very safe for  
14 swimmers, surfers, the public, anybody who wants  
15 to come to the beaches near San Onofre does not  
16 need to worry about any of these batch releases,  
17 and that's all I have. Welcome to any questions.

18 CHAIRMAN DAVID VICTOR: Okay. Thank you  
19 very much, Eric. This is a perennial subject of  
20 the disconnect between risk and perception, but  
21 this is one of the most extreme cases that I've  
22 ever seen where the risks are literally a million  
23 times or more lower and very well documented and  
24 some of the public discussion is very different.

25 I just want to pause for a moment and see

1 if any member of the CEP would like to comment  
2 about this. I think Kathy Ward might want to. I  
3 don't know if Kathy is on the call today. I don't  
4 see her name. Maybe somebody else is signed in on  
5 your behalf. If so, why don't you open your mic  
6 and make your comment or, if not, if anybody else  
7 from the CEP wants to comment about this topic and  
8 about some of the public reaction to the topic,  
9 now would be a good time to do that.

10 Okay. Yes, Marni Magda.

11 MARNI MAGDA: Thank you. I just want to  
12 say that I have many friends here in Laguna Beach  
13 who kind of want to know what's going on and may  
14 be afraid with some of this advertising, so it's  
15 important that we get this out to all the members  
16 of our meeting so they know that they're safe.

17 CHAIRMAN DAVID VICTOR: I would welcome  
18 your counsel on that. I read a lot of the media  
19 coverage, and I see that some of the key pieces of  
20 information that Dr. Goldin has presented are in  
21 the media coverage. I thought the OC Register  
22 piece in this area was particularly well-balanced  
23 and informed, and a lot of other good press  
24 coverage, mainly frankly in print.

25 If there are other things, maybe some

1 information should go out in the quarterly e-mail  
2 or mailing that goes out. If you have other ideas  
3 about things that should be done, the signs that  
4 I've seen are unbelievable. I completely  
5 understand that people might be a little terrified  
6 seeing some of these signs, and I don't quite  
7 understand what is motivating folks. It doesn't  
8 seem to be connected in any way to any of the  
9 science.

10 MARNI MAGDA: Thank you. Yes, that's  
11 what has people frightened is they've seen those  
12 signs. Thank you.

13 CHAIRMAN DAVID VICTOR: I'm sure there  
14 will be public comment on this, and I know, Eric,  
15 you've got a lot going on, but if you wouldn't  
16 mind sticking with us until the end of the meeting  
17 in case there's public comment about this subject,  
18 I would welcome your responses when we get to that  
19 stage.

20 I don't see any other members of the CEP  
21 who would like to comment right now, so we'll move  
22 onto the next topic, which is the issues  
23 surrounding the Wheeler North Reef Expansion  
24 Project, and Jenny McGee is going to guide us  
25 through the slides on that.

1 Jenny, the floor is yours.

2 Jenny McGee.

3 CHAIRMAN DAVID VICTOR: I see you're  
4 online.

5 Doug, can you --

6 JENNY MCGEE: I was on mute. Can you  
7 hear me now?

8 CHAIRMAN DAVID VICTOR: Yes, loud and  
9 clear.

10 JENNY MCGEE: I was on a roll too.  
11 Thanks everyone, good evening. I'm Jenny McGee.  
12 I'm the project manager for the Wheeler North Reef  
13 Expansion Project. Wheeler North is a manmade  
14 artificial reef constructed project approximately  
15 one and a half miles off the coast of San  
16 Clemente.

17 Wheeler is a kelp reef specifically  
18 designed to support the formation of the biotic  
19 rich giant kelp forest ecosystem. I look at the  
20 ecosystem as a rain forest of the ocean. Some  
21 people can compare it to the giant Sequoias.

22 The giant kelp can grow up to two feet a  
23 day and supports a diversity of sea life. The  
24 creation of the reef on the coastline will support  
25 rich sea life teaming with biodiversity and

1 benefit local communities in recreational boating,  
2 fishing, and diving.

3 Next slide.

4 There we go. So the reef is constructed  
5 as a mitigation project to replace impacts to the  
6 giant kelp habitat associated in the operation of  
7 Songs. In 1991 technical study, impact studies  
8 revealed that SONGS cooling system concluded that  
9 adverse impacts occurred to the San Onofre kelp  
10 bed community due to the plumes that were  
11 generated during the mixing of the cooling water  
12 that was discharged through diffusers  
13 approximately one and half to two miles off shore.

14 The Coast Commission requires Edison to  
15 create an artificial reef to replace the  
16 ecological resources that were lost during the  
17 32-year operational period of SONGS. In 1998 as  
18 we constructed the experimental reef, which is  
19 shown here in yellow, the tiny little squares you  
20 see, there were modules of different types of  
21 materials and compositions.

22 After five years of studying, the most  
23 successful materials and composition was used to  
24 build out the mitigation reef, which is shown here  
25 in red. The mitigation reef was constructed in

1 2008 and consists of 150 acres of quarry rock.  
2 Once built, the reef was named after the late  
3 Dr. Wheeler North, the prominent kelp ecologist  
4 and a dedication plaque was placed at the end of  
5 the San Clemente pier.

6 The mitigation reef is studied each year  
7 by an independent team of scientists, and is held  
8 at two different types of performance standards.  
9 The first is called absolute standards. Absolute  
10 standards are tied to the mitigation losses of the  
11 San Onofre kelp bed and are measured by  
12 calculating fish standing stock, kelp area, hard  
13 substrate, and invasive species.

14 Then we have relative standards.  
15 Relative standards compare Wheeler to other  
16 natural reefs to measure the development of  
17 ecosystem and reef ecology. And what is measured  
18 for these standards include fish, alga species  
19 cease and invertebrate species. The monitoring  
20 data over nine years revealed that Wheeler is  
21 functioning very much like the other two natural  
22 reefs in the area that it's compared to, and has  
23 consistently met the relative standards each  
24 monitoring year.

25 However, Wheeler has not consistently met

1 the absolute standards. It's fallen short in  
2 meeting the required 28 tons of per year of  
3 standing fish stock and 150 acres of kelp area per  
4 year.

5 The scientists concluded that the reef,  
6 while functioning like a natural system, is too  
7 small to meet these absolute standards and SCE was  
8 required to construct an expansion of the  
9 mitigation reef.

10 In 2019 and 2020 SCE constructed phase 3  
11 shown here in green and -- phase 3 shown here in  
12 green and blue. 2019 was in green and 2020 was  
13 shown in blue here on the map known as the Wheeler  
14 North Reef Expansion Project, which totaled  
15 202 acres bringing the entire reef size to  
16 376 acres making it the largest manmade reef in  
17 the world.

18 Next slide.

19 There we go. So a little bit about  
20 during our permitting process I wanted to talk to  
21 you about our tribal consultation. So SCE as a  
22 component of the permitting and licensing process,  
23 state and federal agencies are required to  
24 evaluate the presence of tribal cultural  
25 resources. The Acjachemen nation of Juaneno band



1 of mission Indians raised concerns during this  
2 process that tribal cultural resources could  
3 remain within the project area which have been  
4 occupied 12,000 years ago prior to being inundated  
5 by post glacial rising sea levels.

6 To investigate the possibility of tribal  
7 cultural resources they request an archeological  
8 reconnaissance dive survey be conducted by a  
9 tribal representative. Although no tribal  
10 cultural resources were identified during the  
11 survey, according to the records, the tribal  
12 cultural resources was present in the vicinity of  
13 polygon 35, which you see here in the red circle.

14 The tribe requested SCE remove this  
15 portion of the project to protect the resources.  
16 SCE worked with our agency partners and our ocean  
17 engineer to reconfigure the project and expand  
18 other areas and were able to successfully  
19 eliminate the polygon and avoid impact of the  
20 tribal cultural resources.

21 At the close of the project, the tribe  
22 will also conduct a post-construction  
23 reconnaissance dive, and SCE will team with their  
24 agency partners to document the successful  
25 consultation process. It was pretty rare, so it's

1 pretty valuable.

2 Next slide.

3 All right. So during construction of the  
4 280 acre reef, three full-time marine animal  
5 monitors were on the construction vessel to  
6 prevented impacts to sea life. Monitors were  
7 responsible for identifying species observed  
8 during construction and notifying construction  
9 personnel if an animal moved into the exclusion  
10 zone. Monitors had stealth work authority, which  
11 was communicated over a dedicated radio channel to  
12 ensure the immediate response by construction  
13 teams.

14 The protocol was conducted -- this  
15 protocol was conducted to avoid collisions or harm  
16 to animals. I'll just note during our 2019  
17 construction season we had a total 17 stop work  
18 orders and we had several more in 2020, I don't  
19 have the numbers yet, but it was quite a bit more  
20 frequent, likely because we were closer to the end  
21 point preferred.

22 In the mornings it was common to see a  
23 sea lion hauled out on the rocks to rest. Shown  
24 here in the picture on the slide is a regular pup  
25 we nicknamed Rocky. He seemed to come out

1 frequently and seemed to have an infinity for the  
2 highest point on the rock.

3 Next slide.

4 In constructing the expansion reef, SCE  
5 and the Coastal Commission agreed to some changes  
6 in the way the reef is monitored and how  
7 mitigation credit is counted. Now that SONGS is  
8 in decommissioning, SCE can define the operating  
9 life of the plant, and therefore, tie in the  
10 mitigation compliance period of the reef.

11 Second, by adding the remediation reef  
12 provides a high level of confidence that SCE will  
13 consistently meet fish bio standards, so the  
14 absolute standards for fishing in kelp area are  
15 shifting away from annualized losses and instead  
16 will be mitigated based on a total losses. Credit  
17 will now be assigned based on attainment of  
18 cumulative standard in place of an annual standard  
19 that I mentioned previously.

20 Third, since Wheeler has consistently met  
21 the volume performance standards for the last ten  
22 years, demonstrating its functions very much like  
23 a natural reef scientists have determined it's  
24 appropriate to reduce monitoring to annual  
25 inspections for evaluation of relative standards.

1           And, lastly, SCE will continue to conduct  
2     the multibeam sonar surveys every five years.  
3     These surveys are done to monitor the movement of  
4     rock substrate. They are also used to calculate  
5     the percent cover of hard substrate available for  
6     kelp to colonize. This is important as giant kelp  
7     strongholds will break off and create floating  
8     reefs and this makes available for new  
9     colonization driving continuous kelp equality for  
10    success that's essential to the kelp ecology.

11           On a closing note, I would like to share  
12    that as a Dana Point local having spent a great  
13    deal of my life and career on this section of the  
14    coast line, this project will be always a  
15    highlight. Looking at the future, few terrestrial  
16    projects offer the permanence of the environmental  
17    benefits as the reef because upon meeting  
18    performance standards, all following years will  
19    yield continuous benefits to support this  
20    important and diverse habitat. This is something  
21    I could not be more prouder of. I'd be happy to  
22    take any questions.

23           CHAIRMAN DAVID VICTOR: Excellent. Thank  
24    you very much. I'm sure there will be some  
25    questions. I'm curious maybe we could go back. I

1 know Dan Stetson wants the floor.

2 If you could go back quickly to slide 44  
3 to orient all of us. Could you help us -- help  
4 those of us who are visually challenged, so I  
5 understand the colors, those are different. Phase  
6 1 is the test pieces, phase 2 is the initial  
7 build-out, and now we've got new phases, but help  
8 us understand, orient us a little bit as to what  
9 the gray is and what we're looking at. Which way  
10 is north?

11 JENNY McGEE: Sure. And I do apologize,  
12 we don't have much context for this graphic, so  
13 the gray areas is the existing hard substrate. So  
14 this is area that's available to help colonization  
15 as part of the natural formations of the  
16 coastline. You can see at the top part of the  
17 screen there's a little etching there that says  
18 "SC pier," that would indicate the landmark  
19 milestone at the San Clemente pier, which is kind  
20 of a midpoint.

21 The build-out, although we kind of tucked  
22 in some build-out in and around the first  
23 mitigation reef, most of the expansion occurred  
24 north of San Clemente pier and extends right up to  
25 about where the new outlets are there in San

1 Clemente, right there as you transition into Capo  
2 Beach.

3 CHAIRMAN DAVID VICTOR: Okay. Excellent.  
4 That's very helpful.

5 Dan Stetson the floor is yours, and I'll  
6 see if anybody else would like to comment. Dan.

7 VICE CHAIRMAN STETSON: Thanks, David.  
8 Hi Jenny.

9 JENNY McGEE: Hi.

10 VICE CHAIRMAN STETSON: I was out there  
11 on the reef yesterday with a team from Cal State  
12 Long Beach, and we were repositioning a great  
13 white shark monitoring device to check on the  
14 right sharks passing through there, and I am very  
15 excited to see the expansion of the reef and want  
16 to thank you and all team that worked on that.

17 My question is, as you note a team from  
18 UC Santa Barbara Dan Reed and Steve Schroeder from  
19 UCSB would come from the ocean institute and  
20 present the annual report on the monitoring, is  
21 that going to take place, or what's the outreach  
22 for the public in terms of the results of the  
23 monitoring?

24 JENNY McGEE: Yeah, great question, Dan,  
25 and thanks for the support and encouragement. So

1     that conference was held earlier this year. We  
2     did do a virtual platform much like this one, I  
3     want to say it was in June, yeah, but I did have  
4     that information and materials, happy to share  
5     them with you. Maybe I can, Dan, with you. We  
6     can get that to you one way or another.

7             CHAIRMAN DAVID VICTOR:  -- the CEP and  
8     put a link up on songscommunity.com.

9             JENNY McGEE:  Yeah, we'll get their  
10    information and I know it's probably available so  
11    we'll get a copy and we can post it to the  
12    website, and they also issue a report and that  
13    will continue, Dan, so as you know all the data is  
14    public knowledge, and so they were going to  
15    continue to present the annual workshops, and I  
16    look forward to seeing you maybe next year we can  
17    do it in person.

18            VICE CHAIRMAN STETSON:  That would be  
19    great.  Thank you.

20            CHAIRMAN DAVID VICTOR:  Okay.  Well, I'm  
21    also delighted your back on land after messing  
22    with the sharks, Dan, so that's good news.

23            Anybody else from the CEP like to make a  
24    comment or question about this?

25            Okay.  I think Kathy Ward was on, doesn't

1 seem to be on. So we're sorting that out. Maybe  
2 we can go to the next segment and the last major  
3 substantive segment before the break and public  
4 comment, which is an update about the strategic  
5 plan, and for that I'm going to give the floor  
6 back to Manuel Camargo.

7 Manuel, the floor is yours.

8 MR. CAMARGO: Very good, David. Thank  
9 you and thanks everybody for your attention. So  
10 just would like to provide an update where we are  
11 on the strategic plan development process. So as  
12 been discussed earlier in meeting, at this state  
13 especially when fuel transfer is completed, you  
14 know, this is one of the main themes for us, one  
15 of our main areas of focus is doing what we can to  
16 explore our opportunities to get the spent fuel  
17 offsite.

18 So if you go to slide 49, and it is  
19 Lorraine who is continuing to fill in for me given  
20 my computer glitch this evening.

21 So here on slide 49 I would just say  
22 regarding the purpose of this strategic plan, of  
23 course first and foremost, it is to explore the  
24 safe and reasonable, commercially reasonable,  
25 relocation of SONGS spent fuel to an offsite



1 facility. That would be a licensed NRC facility  
2 whether it's interim or a permanent disposal. It  
3 was prompted by a 2017 filament agreement that was  
4 in connection with the expanded ISFSI, what became  
5 the Holtec ISFSI, and then finally in terms of the  
6 purposes, it also gives us an opportunity or a  
7 platform to engage with the whole range of  
8 external stakeholders. So that's just a bit on  
9 the purpose of the strategic plan.

10 So if we move to slide 50, first, if you  
11 had heard from us before, the first bullet here  
12 relocating the spent fuel is a priority for the  
13 team here at SCE as well as our co-owners, so  
14 that's for sure. In terms of what is the plan,  
15 actually it's a little more complex than that, it  
16 winds up being sort of a plan of three different  
17 elements of what will be eventually be three  
18 different volumes.

19 The strategic plan is what we one that we  
20 talked about most about up until now and a little  
21 bit about what the plan is and is not. The plan  
22 is not like a request for proposal where you look  
23 to come out with a single winner at the end of the  
24 day, rather, the strategic plan is to explore a  
25 portfolio of alternatives that we at SCE can

1 explore and look to keep open.

2           You know, one of the things that I know  
3 we discussed here in the CEP in the past if you  
4 look at our current situation, if we have all of  
5 our eggs in one basket as a country in the Yucca  
6 mountain basket, we know that that's not serving  
7 us terribly well, so we want to make sure we have  
8 some optionality as we move forward, as well as  
9 not all about getting the spent fuel offsite.  
10 There's a portion of the plan where the -- it  
11 explores near term actions that we at SCE can take  
12 in order to make sure we as a site are prepared  
13 and that we are looking at the actions that we can  
14 take to ensure that our spent fuel is ready for  
15 pick up. That's a key piece as well.

16           The second component is a conceptual  
17 transportation plant. What does that mean,  
18 conceptual transportation plant? The challenge,  
19 of course, is that we want to take action now in  
20 the interest of readiness, but in the present  
21 there is no licensed facility to send spent fuel.  
22 So we assume with the conceptual transportation  
23 plan that the spent fuel is going to -- somewhere  
24 to the Southwest U.S., so it's not going out by  
25 the Pacific or anywhere else.

1           So that really gives us at SCE the  
2     opportunity to understand the steps, some of the  
3     timing, sort of T-minus bases, you know, what are  
4     the steps and timing associated with moving spent  
5     fuel from SCE to a storage facility that, again,  
6     is presumed to be in the Southwestern United  
7     States.

8           And then the third sort of volume or  
9     component within the plan is an action plan. So  
10    the action plan is what we at SCE will use. It  
11    will be based on findings and recommendations and  
12    the strategic plan and the conceptual  
13    transportation plan, that they boil those down to  
14    practical actions that we at SCE can take in order  
15    to leverage some of the findings and  
16    recommendations in the plan and guide the  
17    implementation of the effort over time.

18          So next on slide 51, this is a little bit  
19    more about the development of the plan. So here  
20    we do have a lot of help which is great. We have  
21    guidance being provided by the experts team. This  
22    panel has heard previously from some members of  
23    that team. Tom Isaacs in particular has  
24    participated in at least a couple of CEP meetings,  
25    but that expert team is one that we assembled, and

1 when we did so we brought in folks with a variety  
2 of expertise inciting licensing of spent fuel  
3 storage facilities as well as transportation and  
4 the other field that you see referenced here, so  
5 we pulled that team together, and they're guiding  
6 the effort.

7 Second, the other type of help that we  
8 have is from the North Wind team. The North Wind  
9 team is doing some writing and analysis, so just  
10 very simply if you want to think about it, they  
11 have pen to paper, if you will, in developing the  
12 strategic plan and conceptual transportation plan  
13 on behalf of SCE with guidance from the experts  
14 team.

15 So sort of a lot of players but we have a  
16 variety of expertise on these teams. The experts  
17 team as you know, you met Tom Isaacs, we also have  
18 support on that team from folks like former NRC  
19 chairman Allison McFarland. This panel heard from  
20 her back in the 2015 time frame. North Wind team  
21 also had some pretty strong talent, sort of the  
22 most notable name that folks might recognize is  
23 Dr. Ernie Moniz, who is the former secretary of  
24 the department of energy.

25 There's development of the plan also

1 includes stakeholder engagement. You see here  
2 reference to the website. If you go to the  
3 website songscommunity.com, on the lower part of  
4 the landing page you'll find an area dedicated to  
5 this effort. If you go to that page, you'll see  
6 there's an opportunity for any member of the  
7 public to click on it (due to technical  
8 difficulties, there is no transcription for 2  
9 minutes) -- working with others including the CEP  
10 will be very important as we look forward.

11 That's where we are as of today. Again,  
12 you'll hear more at the next CEP meeting. Let me  
13 pause there, David, to see if there's any  
14 questions from you or any other members of the  
15 CEP.

16 CHAIRMAN DAVID VICTOR: Excellent I  
17 appreciate that update. I think that's going to  
18 be super important -- (due to technical  
19 difficulties, there is no transcription for 1  
20 minute and 32 seconds) -- the action plan here is  
21 concerning what other people are going to do,  
22 what's going to happen in congress, what's going  
23 to happen in politics, whether our community to  
24 take Gene Stone's advice will stay together and  
25 stay focused on area of tremendous common

1 interest.

2           What happens in other communities, we see  
3 the politics in New Mexico becoming a bit unglued.  
4 Politics in Texas not so much right now. So I  
5 think we got to recognize that there are action  
6 plans guided by very smart people. I talked to  
7 Ernie Moniz about this in some detail. There's a  
8 terrific group people you have working on this.  
9 We have all the smarts in the world on what the  
10 best thing to do is doesn't change the fact that  
11 you're dependant upon other folks. We need to pay  
12 attention to the action plan to how we get other  
13 players in Washington to be helpful.

14           The second related comment is I think we  
15 need to look closely at the option. One looks  
16 closely at the options here there's a lot of  
17 things that could be done, a lot of places we can  
18 imagine the spent fuel going. We got to have some  
19 sense of realism. We got to come up with good  
20 chips of effort. We got a chessboard on which  
21 they're squares and things we can do. We got to  
22 figure out which squares to put most of the effort  
23 on so we don't get distracted by some shiny square  
24 over here in the corner that will be fun to think  
25 about but isn't realistic. I know that's

1 something people are still working on and figuring  
2 how to assess the realism of this and the options  
3 that will vary over time, but we got to stay  
4 focused on things that matter.

5 I wanted to see if there's any other CEP  
6 members, I don't see any comments on this topic  
7 from anyone else. And so I want to see if there's  
8 anything else the CEP members want to raise before  
9 we take a five-minute break and we go to public  
10 comment period of our meeting.

11 KATHY WARD: David, this is Council  
12 Member Ward, can you hear me?

13 CHAIRMAN DAVID VICTOR: Yes, yes, loud  
14 and clear. Thank you so much. I'm looking on my  
15 screen for your symbol and I couldn't find it.  
16 Please, the floor is yours.

17 KATHY WARD: I appreciate it.

18 Going back to the signs that were in the  
19 public right-of-way. I wanted to let the board  
20 know that was in the City of San Clemente there  
21 were signs put out that seemed to coincide with  
22 the recent water release from the plant. They  
23 were very scary and they said "Warning or caution,  
24 swim and surf at your own risk," and those were  
25 put on our beaches. And so I think that those,

1 first of all, they're not allowed by the City of  
2 San Clemente. We actually regulate all signage in  
3 our city, including temporary signs and so we will  
4 remove those. We can maybe -- I'm hearing myself  
5 echo so --

6 CHAIRMAN DAVID VICTOR: I think you need  
7 to turn down the volume on your computer.

8 KATHY WARD: On me -- okay. We will  
9 regulate those, but what I want to say to any  
10 group out there that put them out is that as they  
11 said earlier, it didn't seem to be tied to any  
12 science, and so we know that it is safe what is  
13 released from the plant, and that has been done  
14 for many, many years, and I have never heard from  
15 any residents a concern on that. If the group has  
16 a concern, please come to the city council at  
17 San Clemente, we meet twice a month, and you can  
18 say your concerns, and we will be more than happy  
19 try to educate our public if. In fact, I'm  
20 thinking of putting a link to the SONGS Community  
21 website on our website. That would be helpful  
22 where people can go and look at things and not  
23 contact SONGS.

24 I hope I say that, and I agree with  
25 David, and we have to agree that we have to get on



1 board where we are right now. Where we are right  
2 now is all the fuel is loaded into the canisters  
3 and other than the safety of the plant and keeping  
4 the canisters safe, our most important goal is to  
5 come together and try to find a way to move this  
6 waste to interim storage. That's the greatest  
7 thing that has come out of this community  
8 engagement panel since 2014 is everyone working  
9 together to figure out that we couldn't wait on  
10 the Nuclear Regulatory Committee, and we needed to  
11 find other ways, and so interim storage was one of  
12 the decisions that came, out and I think we need  
13 to be behind that.

14 I think signs warning people about  
15 radioactive water is not in keeping in where we  
16 are right now, and we need to move and work  
17 together. I hope we can do that. I'm willing in  
18 San Clemente to join any coalition and try to let  
19 that happen.

20 CHAIRMAN DAVID VICTOR: Excellent. Thank  
21 you very much for your remarks, also thank you for  
22 your offer for folks to come to your council  
23 meetings.

24 Let me suggest as one action item out of  
25 this, we need to make sure that the materials that

1 have been accumulated around the batch releases,  
2 the safety of the batch releases, empirical  
3 information around the batch releases there's one  
4 place on songscommunity.com site, maybe slash  
5 batch releases that has all that information,  
6 including links to this segment of presentation  
7 and the video from Dr. Goldin about what's going  
8 on and so people can go to one place and also so  
9 that the elected officials from the communities  
10 and other from the communities around the plant  
11 can have a place that they can point people to  
12 more factual information. Let's have that  
13 conversation but at the same time let's keep  
14 focused on what really matters here.

15 Okay. Thank you very much for that  
16 comment. Sorry for the technical glitches in  
17 getting you, Kathy, on the line here. We're going  
18 to take a five-minute break right now. It's  
19 7:25-ish right now. We'll start at 7:30 with the  
20 public comment period. I believe first on the  
21 list will be Charles Langley and then Donna  
22 Gilmore. We'll take a five-minute break right  
23 now. Thank you.

24 (Recess taken from 7:26 until 7:32.)

25 CHAIRMAN DAVID VICTOR: Manuel, should we

1 get started?

2 MR. CAMARGO: Yes, David, I think we're  
3 set.

4 CHAIRMAN DAVID VICTOR: I want to make  
5 sure Dan and Martha are back?

6 MARTHA McNICHOLAS: I'm here.

7 VICE CHAIRMAN STETSON: Yes.

8 CHAIRMAN DAVID VICTOR: Thank you.

9 In the forum is a little complicated  
10 because there's some back and forth in the forum,  
11 but I believe Charles Langley is first, and then  
12 the next comment will come from Donna Gilmore, and  
13 then Kaleen Walker. So let's open the line on  
14 Charles Langley.

15 Charles, the floor is yours.

16 Maybe, Sanjay, once the line is open, let  
17 us know that's the case.

18 MR. GURAGAIN: It's open, David.

19 CHAIRMAN DAVID VICTOR: Charles, the  
20 floor is yours.

21 Charles, the floor is yours, Charles  
22 Langley.

23 Let's go to Donna Gilmore, and we'll come  
24 back to Charles Langley. Then after Donna  
25 Gilmore, we'll hear from Kaleen Walker. Donna

1 Gilmore, and we'll go to Kaleen Walker next.

2 Donna Gilmore?

3 Sanjay, if you could open Donna's line.

4 Donna, the floor is yours.

5 This seems improbable. Are we having  
6 some other technical issue here, Sanjay?

7 MR. GURAGAIN: No, I think we're fine.

8 CHAIRMAN DAVID VICTOR: You can fit any  
9 line between two data points. So let's go to the  
10 third data point. Which is --

11 DONNA GILMORE: Hello?

12 CHAIRMAN DAVID VICTOR: Is that you,  
13 Donna?

14 DONNA GILMORE: This is me. I don't know  
15 why but there was a line through so I'm here.

16 CHAIRMAN DAVID VICTOR: Welcome. The  
17 floor is yours.

18 DONNA GILMORE: My biggest concern is  
19 about the existing NUHOMS through-wall canisters.  
20 They are already up to 17 years old, and I've been  
21 trying to get from NRC or Edison the radiation  
22 readings at those rooftop vents. I know we had  
23 some measurements earlier, and you were involved  
24 in that, David, and they got some counts from the  
25 inland air vents but for some reason no one is

1 sharing the outlet air vent measurements, and that  
2 is the only monitoring system Edison has today to  
3 let us know if canisters are leaking or having  
4 some kind of problem. None of those 17 have any  
5 other way to do that.

6 So I would like to request that that  
7 information be shared with the public, number 1,  
8 and I don't need you to talk about all these other  
9 monitoring or anything else, just the data from  
10 those vents, that's number 1. And I don't  
11 understand why the reluctance to give us those  
12 numbers. It makes the public and definitely  
13 myself suspicious that there may be failing  
14 canisters that could affect maybe the Coastal  
15 Commission giving you a permit to destroy the  
16 pools. That could be a reason to maybe not get  
17 the \$4 billion of the decommissioning funds if  
18 there's problems with the canisters.

19 Also, in terms of transport, if you have  
20 leaking canisters, you can't transport those. If  
21 a canister arrives leaking in the proposed New  
22 Mexico or Texas facility, their written plan is to  
23 return to sender. And the -- there's -- I want to  
24 know if Edison is aware of the December 2019  
25 Department of Energy Sandia Lab Technology gap

1 report. They've made number 1 priority the  
2 problem of short term through-wall cracking in  
3 these canisters. They initially didn't think it  
4 would be a short term evidence -- short term issue  
5 but that they have that information now, and they  
6 know there's no current solutions, and they state  
7 they need a way to repackage the nuclear waste.

8 I have -- on San Onofre safety I have a  
9 Swiss solution that has that report and also I  
10 think it's information on (inaudible) that manages  
11 their nuclear waste, and I highly recommend  
12 people (inaudible) that's the technology  
13 containers. And let's see, I think that -- let's  
14 see.

15 Anyway, I think that's -- repair  
16 technology, I researched repair technology. I NRC  
17 hasn't evaluated or approved it, and you have to  
18 be able to see what you're trying to repair and  
19 clean it out. It can't go around corners, it  
20 can't see hidden cracks so I -- I don't have time  
21 to go over here, but I have produced information  
22 and it's on the Coastal Commission website on San  
23 Onofre safety showing the concerns about the  
24 NUHOMS spray product that's supposedly can repair.  
25 I would like to see the copy of the ASME code you

1 referenced. It wasn't given to the Coastal  
2 Commission staff. They haven't seen what's in it,  
3 the one that they shared tonight. It wasn't in  
4 the Coastal Commission report. Thank you.

5 CHAIRMAN DAVID VICTOR: Thank you for  
6 your comments.

7 Next we'll go back to Charles Langley. I  
8 don't know if -- the timer doesn't seem to have a  
9 lot of relationship to reality. Start it at three  
10 minutes so we don't shortchange Charles.

11 Charles, can you hear me?

12 We're going to go the next to Kaleen  
13 Walker. Sanjay, if you can open Kaleen Walker's  
14 line.

15 Kaleen, the floor is yours.

16 KALEEN WALKER: Can you hear me?

17 CHAIRMAN DAVID VICTOR: Loud and clear.

18 KALEEN WALKER: Okay, good.

19 Also on that DOE Sandia Lab report that  
20 Donna just referenced, there's a technical gap.  
21 That means the gap in there (inaudible) or their  
22 technology. Edison and the NRC have continued to  
23 claim that even with the breach of canisters,  
24 there would be no radiological impact outside the  
25 defense line of the cracking. I don't know how

1 they can say that, but the DOE report has also put  
2 on top priority assessing the radiological risk  
3 due to loss of consignment due to stress corrosion  
4 cracking.

5           So I think that that's pretty serious  
6 that the DOE and Sandia Labs are looking at that  
7 as a short term problem. You can have all your  
8 talking points as public imaging but the reality  
9 is what it is. Nobody is going to want these  
10 canisters. The Holtec canisters are gouged and  
11 cracked. You cannot inspect pit corrosion. It's  
12 like a tooth, a rotting tooth. The dentist cannot  
13 look in your mouth and determine the level of the  
14 cavity.

15           They think they're going to go in -- we  
16 need a hot cell on site and get the stuff  
17 repackaged, and that's the sad truth of the  
18 matter. I'm not sure when you all are going to  
19 come to terms with it. I'm not sure if the  
20 stakeholders of Edison realize what's happening on  
21 site, but it's pretty frightening when you look at  
22 real information.

23           So, basically, I think Edison has  
24 successfully created a multibillion dollar nuclear  
25 waste storage boondoggle. It's happening at San



1 Onofre, it's happening at any other site where  
2 these canisters are being loaded. They cannot be  
3 inspected for cracks. Look at the granular  
4 structure of crack formation. You cannot repair  
5 it. I don't know how you guys got away with it  
6 convincing the Coastal Commission all of that, but  
7 I think people should be aware that the future of  
8 that waste is hot cell, should be repackaged, so  
9 they can inspect, repair, maintain, monitor.

10 There's no permanent repository. Take  
11 that off the board. (Inaudible) surface storage  
12 next foreseeable many generations. This stuff  
13 needs to be repackaged. Think about that. Thank  
14 you.

15 CHAIRMAN DAVID VICTOR: Thank you very  
16 much for your comments.

17 Next we're going to go to Nina Babiarcz.  
18 I believe Nina's line is also Charles Langley, so  
19 we're going to go Nina's line but give the floor  
20 for a few minutes to Charles Langley and then give  
21 the floor to Nina Babiarcz for a few minutes.

22 Sanjay, if you can open up to Nina  
23 Babiarcz line. Her last four digits, according to  
24 the chat here, are 4611.

25 MR. GURAGAIN: Nina, if you can press

1 star 61, you will be unmuted.

2 CHAIRMAN DAVID VICTOR: Nina, can you  
3 push star 6?

4 Okay, there we are. Your line is open.

5 NINA BABIARZ: Okay.

6 CHAIRMAN DAVID VICTOR: Is it you or  
7 Charles? I don't know who's going first.

8 NINA BABIARZ: I'm going to hand the  
9 phone to Charles first.

10 CHARLES LANGLEY: Hi. This is Charles  
11 Langley. Can you hear me?

12 CHAIRMAN DAVID VICTOR: Loud and clear.

13 CHARLES LANGLEY: My question is to  
14 Southern California Edison during the July 16,  
15 2020, Coastal Commission meeting, the commission  
16 stated that the permit may require moving the  
17 current ISFSI under the footprint of unit 1 or  
18 unit 2 due to rising sea levels or other factors.  
19 Have there been any new developments in this plan,  
20 specifically can Southern California Edison point  
21 the public to a specific document that outlines  
22 this plan with the Coastal Commission in detail?

23 I also have a separate question regarding  
24 Tom Palmisano and whether or not he's representing  
25 Edison as an employee or as a consultant? We

1 first heard he was terminated, then he reappeared  
2 presenting himself as a representative of Southern  
3 California Edison, and what I would like to know  
4 is does this mean he's an agent of Edison?

5 And finally, on the website it's not  
6 quite clear on the SONGS Community website whether  
7 public comments have to be submitted in writing,  
8 and if that could be clarified, we would  
9 appreciate it? And I will turn this over to Nina  
10 for her questions and comments.

11 CHAIRMAN DAVID VICTOR: Great. While the  
12 phone is being moved over to Nina, let me just say  
13 public comment although is remote but as it always  
14 has been, public comment can be made in this mode  
15 or they can be made in writing or they can be made  
16 in both, or by Tweet, maybe not by Tweet, I'm not  
17 sure, but any other formats is fine. We're trying  
18 to be as expansive as possible.

19 Nina Babiarez, the floor is yours. After  
20 you speak, we're going to give the floor to  
21 Allison Schlick. Nina Babiarez, the floor is  
22 yours.

23 NINA BABIARZ: Thank you, Dr. Victor.

24 Report was issued by the California State  
25 legislative analyst office this Monday warning of

1 intending hazards propagated by sea level rise  
2 exacerbated by severe storms, King tides, and El  
3 Nino events that would threaten two-thirds of  
4 California's coastline describing areas that would  
5 also include San Onofre.

6           The report also addresses how imperative  
7 it is for local and state lawmakers to begin to  
8 plan now most particularly to secure funds in  
9 order to deal with the predicted consequences. It  
10 even prompted California Coastal Commission  
11 Executive Director Jack Ainsworth to claim, quote,  
12 The key to meeting these deadlines is funding end  
13 quote, Ainsworth added, quote, there's going to be  
14 competition for that money across the United  
15 States. This is just the tip of the iceberg up  
16 and down this state with regard to rail lines.  
17 It's a huge, huge problem, unquote.

18           Considering that SONGS actually sits  
19 between the ocean and the rail line, what are  
20 Edison's plans to secure funds to move the ISFSI  
21 before 2035 if/when it may become necessary? Has  
22 Edison secured funds through the California  
23 Coastal Commission in anticipation of what no  
24 longer is a worst case scenario but a predicted  
25 one?

1           CHAIRMAN DAVID VICTOR:   Okay.   Thank you  
2   very much for your comment.   Is there anything  
3   else you would like to say?

4           NINA BABIARZ:   No, we're anxiously  
5   awaiting the answer.

6           CHAIRMAN DAVID VICTOR:   We'll get to the  
7   answers in the next segment of our show here.

8           NINA BABIARZ:   I did post two other  
9   questions that I'm assuming Dan Stetson or whoever  
10   normally addresses them at the end of the meeting  
11   will also pose.

12          CHAIRMAN DAVID VICTOR:   We see those as  
13   well.

14          NINA BABIARZ:   I could read those now?

15          CHAIRMAN DAVID VICTOR:   Sure, why don't  
16   you read those right now.

17          NINA BABIARZ:   Okay.   On page 19 it  
18   indicates that, you know, while the NRC does not  
19   regulate inspections for 20 years, shouldn't they  
20   be that NRC regulation be updated to accommodate  
21   the scratches and gouges that we now know, of  
22   course the broken shims on the SONGS cans, that  
23   the SONGS cans have experienced?

24                 And then my second question is relevant  
25   to page 29, specific to the MPC, slash, ISFSI

1 system inspection results that are supposed to be  
2 reported to the California Coastal Commission  
3 every five years after each set of inspections,  
4 unquote.

5 My question is when is the first  
6 inspection report date due to the Coastal  
7 Commission? And that would be, you know, month,  
8 date, year. What's the deadline for that first  
9 report? Thank you.

10 CHAIRMAN DAVID VICTOR: Okay. Excellent  
11 thank you very much for your comments and  
12 questions.

13 Next we're going to Allison --

14 NINA BABIARZ: Thank you, Dr. Victor.

15 CHAIRMAN DAVID VICTOR: Next we're going  
16 to Allison Schlick, and then after that I see some  
17 questions from Ray Lutz that mostly have to do  
18 with Skype, and I'm going to go to Ray after  
19 Allison and see if he wants to make a comment, but  
20 first we're going to go to Allison Schlick.

21 MR. GURAGAIN: Allison, please press star  
22 6 to unmute.

23 CHAIRMAN DAVID VICTOR: Your phone is --  
24 there we go. Allison, the floor is yours.

25 ALLISON SCHLICK: Hello. Thank you. I

1 had a few questions along, one was about the  
2 Clive, Utah facility if the -- it looks like it's  
3 already been constructed and everything, has the  
4 citing paid attention to or involved Native  
5 American historical concerns of what might be  
6 underneath and inaccessible after construction?

7 And number 2 would be about any -- my  
8 biggest question was about the reef, that haven't  
9 been asked already. I also concur with the  
10 questions and concerns of Charles Langley and Nina  
11 Babiarez and some of the others as well. I have  
12 some concerns about especially sea level rise, but  
13 I don't want to waste my time with restating  
14 Nina's questions, but I second her questions  
15 especially.

16 The reef project, I guess I'm kind of --  
17 I would like -- I submitted this one in writing  
18 during the presentation as well, so maybe you can  
19 follow up with me. But what is the -- can you  
20 cover some basics in your answer to everybody's  
21 questions about what is it that's being reefed?  
22 Is this potentially radioactive material?  
23 What's -- I guess I don't understand that whole  
24 project piece. So thank you.

25 CHAIRMAN DAVID VICTOR: Okay. Thank you

1 very much. We'll go back to Jenny on that, not  
2 just yet. We're going to right now to Ray Lutz to  
3 see if, Ray, you had a question or comment that  
4 you wanted to make.

5 So, Sanjay, if we can open -- Ray, the  
6 floor is yours, if you like it.

7 RAY LUTZ: Hello, can you hear me?

8 CHAIRMAN DAVID VICTOR: Loud and clear.

9 RAY LUTZ: Had a little trouble getting  
10 online. I tried to use the Skype thing and kept  
11 me in a lobby for many minutes, and so I kind of  
12 missed having the video of the people speaking.  
13 All I can see is slides so that's kind of a  
14 drawback to this method. So that was my comment.  
15 I appreciate the presentations tonight. Thank you  
16 very much.

17 CHAIRMAN DAVID VICTOR: Thank you very  
18 much. Let me just take your comment first. I  
19 don't see any other comments or people who want  
20 the floor. Let me just ask Manuel Camargo if  
21 there's anybody else who wants the floor. I  
22 believe we covered everybody who requested the  
23 floor.

24 Manuel, is there anybody else?

25 MR. CAMARGO: No, not that I can see.



1           GEORGE ALLEN: Yes, is there request for  
2 additional comment?

3           CHAIRMAN DAVID VICTOR: Who is that?

4           GEORGE ALLEN: This is George Allen. I'm  
5 a San Clemente resident, and I've been listening  
6 to the presentation, but I'm a deplorable worker  
7 who has to dress out for protection for asbestos  
8 exposure, also I have to wear protective clothing  
9 for contamination exposure at San Onofre. I've  
10 been hearing people talk about things that are not  
11 quantifiable that are way out in the future, like  
12 Levin talks about a 25 to 35 trillion dollar cost  
13 for climate exposure. He also talks about a  
14 50-mile radius that says there's a deadly  
15 contamination exposure 50 miles out, 5 million  
16 people, and I think that is a deplorable  
17 statement, because the radiation exposure is at  
18 the site boundary. How do you guys listen to a  
19 person Levin who exaggerates the risk of radiation  
20 exposure when the expert like Eric Goldin has  
21 stated it is less than 1 millirem per person at  
22 all these releases, it's not even -- it's not even  
23 measurable? How do you guys continue to listen to  
24 people that are exaggerating the risk beyond what  
25 is truth?

1           CHAIRMAN DAVID VICTOR:   Okay.   Thank you  
2   very much for your comment.   I want to -- I think  
3   the comment period is --

4           MR. CAMARGO:   David, I think there is a  
5   Debbie Kinsinger.

6           Have we heard from Debbie?

7           CHAIRMAN DAVID VICTOR:   I don't think so.  
8   I don't see her on the Excel file.   Debbie  
9   Kinsinger, let me see whether you -- Debbie  
10   Kinsinger, the floor is yours.   Debbie, the floor  
11   is yours.   You've been muted.

12           Sanjay, looks like Debbie's line is open;  
13   is that correct?

14           MR. GURAGAIN:   Her line is open.

15           CHAIRMAN DAVID VICTOR:   Debbie, can you  
16   hear us?

17           Let's come back to Debbie in a moment.   I  
18   want to say two things:   First, on the platform I  
19   take that as an action item, Ray.   I think people  
20   who are operating through the Skype app are only  
21   seeing the main feed, and therefore, no video of  
22   the talking heads as well.   Let's see if there's a  
23   way for us to pin the people to the feed as well  
24   as the slides.   Seems like a very good point.  
25   Some of these are limitations on the different

1 platforms. I use Zoom when I'm teaching, which is  
2 fantastic, but people have a lot of concerns about  
3 security of Zoom. I think people who are running  
4 nuclear plants are understandably risk averse.

5 I wanted to comment on the question of  
6 why are we listening to so many voices. I think  
7 we have an obligation in a democracy to listen to  
8 all voices. We also have an obligation to look at  
9 facts and data and have discussions and so on. I  
10 really appreciate the intensity of the comments  
11 and also concerns about what's real and what's not  
12 real, and the voracity of the some of the claims  
13 have been made.

14 I appreciate those comments, but that's  
15 why this panel exists to have a very wide ranging  
16 reviews that reflect what the community is  
17 thinking about.

18 I want to go back to Debbie Kinsinger to  
19 see if you can hear us and if you would like to  
20 make a comment?

21 I can't hear you. So I'm going to go to  
22 Dan and to Martha to -- why don't we close the  
23 public comment period, let's go to Dan and Martha.  
24 If someone has put into comment -- put into the --  
25 here we go, we have -- okay, so we have comments

1 from Debbie Kinsinger in the chat box. Debbie, we  
2 can't hear you. We can unmute your microphone and  
3 I believe we have unmuted your microphone. Is  
4 that true, Sanjay?

5 MR. GURAGAIN: That is true.

6 CHAIRMAN DAVID VICTOR: Debbie, can you  
7 hear us at all?

8 Okay. Let me suggest that, Debbie, if  
9 you could put your comments in the chat box, I  
10 make sure those get into the conversation. Okay.  
11 Excellent, thank you very much. Sorry. Maybe  
12 offline we can figure out what the problem is so  
13 we don't have this problem again.

14 I'm going to give the floor back now to  
15 Dan and Martha who will lead the conversation  
16 about the public comment period.

17 VICE CHAIRMAN STETSON: Martha, would  
18 like to go first?

19 MARTHA McNICHOLAS: Sure. There's a  
20 couple things that I heard a couple times that I  
21 don't know much about either. I'll start with the  
22 temperature monitoring at the outlet vents, and  
23 the different between the monitoring inlet or  
24 outlet, and have we made that information public?  
25 I guess that would be a Doug question.

1 DOUG BAUDER: I'm going to start to  
2 answer and then hand it off to Jerry Stephenson  
3 who I think is online on our engineering team.

4 So we do routine monitoring on the TN  
5 system. Typically we'll monitor the doors. It's  
6 a horizontal system and then the doors will  
7 provide a good data for us on the radiation  
8 readings of the system. There is no reason to  
9 think that there would be any sort of containment  
10 boundary issue with the canisters. So there's no  
11 real technical reason to monitor the outlet vents  
12 if there was a radiation leak. The leak would not  
13 follow the air pathway. It would be an x-ray  
14 style leak. It would follow -- it would go  
15 straight. It wouldn't go through a vent. If  
16 there was a canister integrity issue like that, we  
17 would detect it with normal readings.

18 I do want to hand it over to Jerry who I  
19 know is online and who will also take part in this  
20 answer.

21 Jerry, go ahead.

22 CHAIRMAN DAVID VICTOR: While you're  
23 going over there, can we de-share the screen so  
24 that we're not ghosts talking in the ether?  
25 Maybe, Lorraine, stop presenting and we'll be able

1 to see the video.

2           Excellent, thank you very much.

3           JERRY STEPHENSON: I can see you the  
4 whole time, David. Can you hear me?

5           CHAIRMAN DAVID VICTOR: Now I can hear  
6 you, yes.

7           JERRY STEPHENSON: We do routine  
8 monitoring of all of the ISFSI. There has been no  
9 elevated rates like was mentioned. There are --  
10 they are -- some vary from location to location  
11 because every canister is not the same. There's  
12 different fuel loads and different batches in each  
13 one of them.

14           I know it's kind of intuitive to think  
15 that should there be a leak, it's going to quickly  
16 come out the outlet like smoke. Radiation isn't  
17 like smoke. Streaming radiation travels in a  
18 straight line. A plume of radiation like would  
19 come out of a vent stack in an operating plant  
20 accident, which is not what we have here, we do  
21 not have an operating plant, a plume of radiation  
22 we treat that like the wind.

23           In this case the tight crack that you  
24 would have from a postulated defect in a canister,  
25 which we're going to be inspecting and looking for

1 those, but suppose you do postulate a tight crack  
2 in a canister like everybody wants us to address,  
3 there's not going to be any radiation plume coming  
4 out that crack that -- to migrate out the outlet  
5 air vent. So, you know, there's no technical  
6 reason, no benefit to monitoring the outlet vents.

7 MARTHA McNICHOLAS: Thank you.

8 Dan.

9 VICE CHAIRMAN STETSON: Thank you. In  
10 fact, I remember walking and measuring the  
11 radiation with Gene Stone, and David, you were  
12 there for a while as we walked to measure the  
13 radiation out of each and every one of the Ureva  
14 canisters a couple years ago.

15 Anyway, I want to move on to Charles  
16 Langley. He had a couple questions and -- which  
17 he read, I'll read it back. My question is to  
18 Southern California Edison during July 16, 2020,  
19 Coastal Commission meeting the commission stated  
20 that the permit may require moving the current  
21 ISFSI onto the foot print of unit 1 or unit 2 due  
22 to rising sea level or other factors. Have there  
23 been any new developments in this plan? Also, can  
24 Southern California Edison point the public to a  
25 specific public document that outlines this plan

1 with the Coastal Commission in detail and his  
2 other question is -- relates to Tom Palmisano, is  
3 currently an employee or acting as an consultant?

4 DOUG BAUDER: Dan, I appreciate the two  
5 questions. Let me answer one at a time. First  
6 I'll work my way backwards. Tom Palmisano is a  
7 consultant for Edison. He was a consultant for us  
8 when he presented to the Coastal Commission, very  
9 knowledgeable. He understands our systems here  
10 and has helped us out in that regard.

11 In looking at the online question from  
12 Charles, Tom was not fired. Tom retired from the  
13 company and he's doing consulting work, not just  
14 for us, but other companies as well.

15 Regarding the sea level rise situation  
16 and the 2015 Coastal Development Report for the  
17 Holtec system, in that report which was approved  
18 October 6th of 2015 and extends through October 6  
19 of 2035, Edison, we are required no later than six  
20 months prior to the end of that period, that would  
21 be October 6th of 2035, to submit in our  
22 application our estimate of coastal hazards that  
23 would extend through 2051.

24 As part of our permitting process for the  
25 coastal development permit for the site



1 decommissioning work, we also look at coastal sea  
2 level rise, and as to the California State Lands  
3 Commission made a commitment to monitor sea level  
4 rise and submit reports annually, which we are  
5 doing.

6 We also did studies on potential sea  
7 level rise and looked out through 2035 and beyond  
8 on to 2051, and we have a worst case bounding  
9 analysis called H++ that we are willing to share  
10 at a future meeting that would be bounding  
11 analysis and would keep in safe conditions through  
12 2035 and potentially beyond 2035, we would need to  
13 recess.

14 So that report that we do at sea level  
15 monitoring, which we check quarterly is submitted  
16 annually to the California State Lands Commission.  
17 We're on the front end of it obviously since our  
18 Lands Commission permit was approved in March of  
19 last year so we're still working through that.

20 We have no reason to think right now that  
21 sea level rise will challenge the Holtec system in  
22 any way to address any challenge to its safety.  
23 However, as part of the 2015 Coastal Development  
24 permit, which we have a link to on our  
25 songscommunity.com website, you can feel free to

1 look at that and note that as part of the permit,  
2 we are required to allocate a higher elevation  
3 site on SONGS' current easement property to  
4 relocate the fuel, if needed, if we do see that I  
5 divergence in sea level rise between 2035 and  
6 2051. And, in fact, when we decommission units 2  
7 and 3 to a level grade roughly at 30 feet  
8 elevation, we will have a higher level ground  
9 position to relocate the fuel if we would need to  
10 do that. That's actually part of the Coastal  
11 Development permit or approval that was obtained  
12 back in October of 2015.

13 I know it may seem complicated as you tie  
14 things together, if you need more information than  
15 that, you can send us a note or we can provide the  
16 detail on how the permit structure lays out at the  
17 next meeting.

18 CHAIRMAN DAVID VICTOR: I think -- if I  
19 can jump in on this, I think whenever the time is  
20 right, we got a lot of stuff on our agenda in the  
21 near future, but at some reasonable time, it would  
22 be good idea to look at what H++ means, because  
23 that's a lot of sea level rise in H++. It doesn't  
24 show up in the next 15 years, 20 years, but it's  
25 an exponential growth, but that's a whole lot of

1 sea level rise and very significant implications  
2 in the out years. Back to you.

3 MARTHA McNICHOLAS: Can I just confirm on  
4 that, so as part of the California Lands  
5 Commission permit, you do have to look at moving  
6 the canisters to a higher location in anticipation  
7 of sea level rise, but there's no specific plan at  
8 this point, is that an accurate assessment?

9 DOUG BAUDER: I would say so, maybe it's  
10 a little convoluted how the permitting is tied  
11 together. As part of the 2015 Coastal Development  
12 permit for the Holtec system, we committed to  
13 reviewing sea level rise as it may affect the  
14 location of the Holtec storage system by 2035 so  
15 that when we would resubmit for a permit renewal  
16 in 2035, we would look beyond 2035 to 2051 and be  
17 assured we have levels of safety for or against  
18 sea level rise.

19 As David mentioned, the H++ study does  
20 diverge beyond 2035. We'll be more educated about  
21 sea level rise as we approach the permit  
22 reapplication period, because we'll have all the  
23 data between now and then. And every quarter  
24 we're checking our sea level conditions and then  
25 submitting that annual report to State Lands

1           The requirement to do the monitoring and  
2     submit the reporting to California State Lands was  
3     for the decommissioning equipment environmental  
4     impact report and that approval was obtained in  
5     March of last year. The two are tied together in  
6     that way. We don't have any plans right now to  
7     relocate the system on site, but I will tell you  
8     if we're educated through the sea level conditions  
9     as we go over through the next decade, that would  
10    cause us to reassess potentially and look at that  
11    as an option, which once again, leans toward  
12    making sure we achieved decommissioning the site  
13    to a level grade in units 2 and 3 which is at a  
14    higher elevation in case we do need that option,  
15    we would have it ready.

16           MARTHA MCNICHOLAS: Personally, if we are  
17    going to move it, I would rather move it a lot  
18    farther away like, you know, Texas but thank you.

19           DOUG BAUDER: Yeah, me too.

20           MARTHA MCNICHOLAS: Okay, okay. I guess  
21    my turn again, one of the questions a couple  
22    things focused on the metallic overlay process,  
23    which I'm very fascinated myself, and the question  
24    was has this process been approved by the NRC and,  
25    if not, does -- do we plan to seek that approval?

1 And I'm not sure that would be you, Doug, or maybe  
2 Randall?

3 DOUG BAUDER: So I'll start this and  
4 maybe ask Randall to fill in around the edges on  
5 it. So we know it's a solid process. It's been  
6 used by the military, and Randall discussed  
7 through that. We -- regarding the NRC, the NRC  
8 witnessed our in-situ testing here at the site in  
9 our test canister environment, so they're very  
10 comfortable with our ability to perform it.

11 If we were required to use it, if we  
12 inspected a canister and found a defect that we  
13 decided to apply the overlay to, we would do it  
14 and then we would write what's called a 72.48  
15 evaluation under the part 72 license and evaluate  
16 the safety of that repair that we would have  
17 needed to do. The NRC would then inspect that  
18 72.48 process to ensure that it met all the  
19 requirements and rigor needed for the actual  
20 repair.

21 What Randall was referring to was not the  
22 NRC process, per se, but more the ASME code  
23 process, which can take years to work through  
24 because the ASME code committee reviews things  
25 carefully and methodically.

1           So I don't know, Randall, if you have any  
2 more to information to add beyond what I said,  
3 please fill in.

4           RANDALL GRANAAS: So what Doug said is  
5 all accurate. And what we would like to see the  
6 NRC typically because ASME is so thorough, once  
7 ASME approves a process, they'll issue a reg guide  
8 endorsing that ASME code case, and that would be  
9 our goal is for when they finish endorse cold  
10 spray, and the NRC will turn around and say -- the  
11 NRC will probably participate in this process as  
12 well. They get involved in the ASME code case  
13 with the task group.

14           So that would be our goal would be the  
15 NRC to endorse after the ASME code case is  
16 approved.

17           MARTHA MCNICHOLAS: Okay. Dan?

18           VICE CHAIRMAN STETSON: Okay. Thank you.  
19 I would like to go back to Donna's question and  
20 just to make sure that we understand when Jean,  
21 David and I were measuring the radiation we  
22 weren't doing it either of the vents. As you  
23 know, there's a vent, there's a base, and then  
24 there's the main door itself and then there's the  
25 exit vent way up high, so we were measuring

1 through the door itself.

2 So the question that Donna was asking is,  
3 have you actually seen and evaluated the DOE  
4 Sandia gap report, and do you have any input based  
5 on that report?

6 DOUG BAUDER: Actually, I'm going to let  
7 Randall address that one. I will say we do  
8 routine surveys, some up on top and some at the  
9 door so we know there's no radiation issue with  
10 the horizontal storage system.

11 Randall, go ahead.

12 RANDALL GRANAAS: I'm not sure if I  
13 understand the question completely, so I'll follow  
14 up a moment.

15 But I will say I was just up on the roof  
16 in January, and you lean right over and you look  
17 at the exhaust vents and of course the dose rates  
18 up there are normal, right, they're the same as  
19 anywhere else on the module.

20 And I think the other question was  
21 whether or not we monitored the gap report,  
22 absolutely. That's why we were in the extended  
23 storage collaboration program with EPRI and we  
24 engage in all the industry meetings, and we're  
25 aware of that gap report.

1           The thing about the CISCC being moved to  
2     the number 1, and we talked about this at the last  
3     meeting, it's not because all of a sudden there  
4     was new research saying that the chloride induced  
5     stress corrosion cracking was much worse than ever  
6     thought, nothing has changed. The thing is they  
7     have to do these tests, and these tests that they  
8     do for corrosion take a long time, and once that  
9     occurred to them, they said, well, we got to start  
10    now, and they moved it to number 1.

11           Again, it's not because there's a reason  
12    to think that it's progressing faster than they  
13    thought or more prevalent, because we still  
14    haven't identified it. Hopefully that answers the  
15    question.

16           VICE CHAIRMAN STETSON: Back to you,  
17    Martha.

18           MARTHA MCNICHOLAS: Okay. I think that  
19    questions about -- well, we'll start with the one  
20    from Allison about the Clive, Utah facility and  
21    whether it's licensed or not or was there concern  
22    for Native American historical or archeological  
23    sites that might have been interrupted?

24           And I know, David, you have been there,  
25    my understanding it was licensed and operating,



1 and it has been operating for a while, so can you  
2 confirm that for Allison and anyone else who might  
3 be concerned.

4 CHAIRMAN DAVID VICTOR: Yes, it's been  
5 operating for decades under two owners. The  
6 current owner bought it 15, 20 years ago, I can't  
7 remember exactly, and operates it now as nuclear  
8 waste site. It was previously was RCRA site, so a  
9 super fund site. It's actually an industrial  
10 area. Clive, Utah is out -- I won't say in the  
11 middle of nowhere because if you're in Clive,  
12 you're somewhere, but there's an incinerator  
13 there. It's a former lake bed of Lake Bonneville  
14 a long time ago.

15 I don't know about the citing process  
16 concerning Native American artifacts, but I can  
17 ask them.

18 MARTHA McNICHOLAS: Okay, so it's nothing  
19 new, and we're not the first ones there?

20 CHAIRMAN DAVID VICTOR: No, we're very  
21 much not the first ones there. So in addition to  
22 the RCRA sites, there's one or two mounds that are  
23 RCRA materials. Zion, which is a plant in north  
24 of Chicago has been sending all of their -- Zion  
25 is essentially decommissioned now, not

1 essentially, all of their material has gone to  
2 Zion, could have gone to Clive. It's been used  
3 extensively, and we very much not the first in  
4 line.

5 MARTHA McNICHOLAS: Can I ask another  
6 one? Is Jenny still on the line, or did she have  
7 to leave?

8 CHAIRMAN DAVID VICTOR: She's still here.

9 MARTHA McNICHOLAS: Okay, because that  
10 was another question maybe about describing the  
11 reef and the reason for the reef and the concern  
12 that there might be radiological material in the  
13 reef, and I think Jenny did a real good job of  
14 explaining the reason for it in the first place.  
15 Maybe she can give another recap of that, because  
16 I think there was people that didn't understand  
17 that.

18 CHAIRMAN DAVID VICTOR: Tell us what  
19 you're growing there.

20 Jenny McGEE: So essentially the reef  
21 program is compensation project and it's  
22 compensation for the environment impacts to a  
23 kelp -- to kelp reef during operation of SONGS.  
24 Kelp is essentially seaweed. And so what the reef  
25 consists of is the same quarry rock that you see

1 used to construct harbors, like Dana Point Harbor,  
2 you see those little along jetties that's go out,  
3 big rocks that are piled together. It's the same  
4 rock, and essentially the rock is laid on the  
5 ocean floor and the kelp attaches to the rock and  
6 grows amazingly fast and creates a forest like  
7 habitat for fish.

8 It's kind of like if somebody spilled  
9 coffee on your shirt, and then they replaced it by  
10 buying you three or four new shirts. Kind of a  
11 similar analogy.

12 MARTHA McNICHOLAS: I like analogies.  
13 Thank you. Thanks, Jenny.

14 Dan, back to you.

15 VICE CHAIRMAN STETSON: Okay. Thank you.  
16 There's a question from Steve Rogers, and it is a  
17 how do you actually detect the leak, if we have  
18 the canisters in the ISFSI and one of them  
19 develops a leak, how are you actually going to  
20 determine that one of them is leaking?

21 DOUG BAUDER: So I'll start this one  
22 again, this is Doug, and then I'll hand it off  
23 potentially to Jerry or even Randall. First of  
24 all, the propagation of a leak would be very slow,  
25 and we know that through years and data already on

1 stored canisters. And what we do or what we're  
2 doing is an inspection and maintenance program for  
3 the Holtec system, and we'll be inspecting the TM  
4 system, the Areva system as well where we actually  
5 will be able to robotically do some surface  
6 inspections in those canisters.

7 We would see some sort of a surface  
8 defect before a leak would go through wall on a  
9 canister. If a leak did go through wall and we  
10 didn't know it, essentially, you could postulate  
11 that over a long period of time the helium would  
12 leak out, that's what would happen. There  
13 wouldn't be much else that would occur with the  
14 canister. The fuel was stored in symmetrical fuel  
15 rods. It's uranium off site pallets, which could  
16 withstand super high temperatures, but that's  
17 effectively what would happen.

18 The helium itself that would potentially  
19 leak out would not be radioactive. We know that  
20 because when we do the canister preparations, the  
21 seal welding and the evacuation and the helium  
22 dry, we actually check the filters that the helium  
23 passes through during the drying process, and we  
24 get essentially no radioactive readings, so we  
25 know that's a clean environment of helium in the

1 canister.

2 With that, I'll turn it over to I think  
3 Randall to address maybe a little more technical  
4 detail.

5 RANDALL GRANAAS: Let's see what else I  
6 can add here. So as Doug said, when he inspect  
7 the canister, we're looking for precursors,  
8 whether it's a rust stains or pitting, and we  
9 would identify the crack before it becomes too  
10 significant. If it did leak out, as Doug  
11 suggests, the helium might come out, but with a  
12 microscopic cracking like this, any material  
13 coming out is very unlikely for a little crack  
14 like this. I say little crack, I should say  
15 small, microscopic crack.

16 And I don't think there's anything else I  
17 want to add.

18 DOUG BAUDER: I appreciate it, Randall.

19 VICE CHAIRMAN STETSON: Okay, thank you.  
20 Go ahead, Martha.

21 MARTHA McNICHOLAS: Okay. One of the  
22 questions I think this is Nina that asked, if we  
23 were required to send out inspection reports to  
24 the Coastal Commission, when would the first  
25 report be due to the Coastal Commission?

1 DOUG BAUDER: This is Doug again, I'll  
2 take that. First a little bit of history, in 2019  
3 we inspected eight of the Holtec canisters. That  
4 data was supplied to the Nuclear Regulatory  
5 Commission and used as part of our inspection and  
6 maintenance process, that was approved recently on  
7 July 16th.

8 In 2022 we inspected the test canisters,  
9 Randall covered, that test canister gets inspected  
10 every two and a half year, and in 2024 we will  
11 inspect a test canister and to multipurpose  
12 canisters on the Holtec system. I believe the  
13 reporting requirement is every five years to the  
14 Coastal Commission as part of the inspection and  
15 maintenance program, and Randall tells me that  
16 that report is required to be submitted 180 days  
17 from when our inspection is complete for each  
18 interval.

19 MARTHA McNICHOLAS: One of them has  
20 already been submitted?

21 DOUG BAUDER: What we submitted is the  
22 inspection and maintenance plan --

23 MARTHA McNICHOLAS: Oh, okay.

24 DOUG BAUDER: -- right at the end of  
25 March and that plan was reviewed by the Coastal

1 Commission's third party expert engineering firm.  
2 Some comments were resolved, a few recommendations  
3 were made to improve the program, and then, of  
4 course, it was approved by the Commission itself  
5 on July 16th.

6 MARTHA McNICHOLAS: Thank you.

7 VICE CHAIRMAN STETSON: Thank you. Just  
8 following up on the question so, again, from  
9 Kaleen should there be a helium release, you're  
10 saying the release of helium, which you're saying  
11 which we know is an inert gas would not be a  
12 problem or dangerous; is that accurate?

13 DOUG BAUDER: That's accurate.

14 Vice CHAIRMAN STETSON: Okay. Thank you.  
15 I want to go to question from Nina again, and this  
16 relates to the question if it's necessary to move  
17 the ISFSI, what is Southern California Edison done  
18 to secure funds if that's move is necessary?

19 DOUG BAUDER: Okay. So it might be a  
20 multipart answer here, first of all, we wouldn't  
21 go -- I think what was mentioned was going to the  
22 Coastal Commission for funding, that would not be  
23 the case. The Coastal Commission would regulate  
24 our activities appropriately if we did need to  
25 move the -- I'll say to move the Holtec system to

1 a different position on the site.

2 If we had to do that, we would do that  
3 out of consideration for safety, and I can tell  
4 you little else would matter. We have a pretty  
5 robust decommissioning fund. We have a car route  
6 in that fund for handling and storing our nuclear  
7 fuel. It's known and we're one of the sites that  
8 participated in this as well, that we seek relief  
9 from the Department of Energy for storing and  
10 maintaining our fuel and many other sites around  
11 the country do that as well just like us, and so  
12 we continue to do that, because the Department of  
13 Energy has not met its obligation under the Waste  
14 Policy Act to start moving fuel by 1998, and here  
15 we are 22 years later.

16 If we had to move the fuel on San Onofre  
17 property, we would do it out of consideration for  
18 safety, and that would be the first priority.  
19 After that, we would very likely fund it out of  
20 existing funds we have in the decommissioning fund  
21 for fuel, and then we might potentially seek  
22 relief for that movement and for that additional  
23 structures and systems and personnel needed to  
24 safely monitor the fuel, just like we're doing  
25 right now in the dry fuel system.



1           But we would not seek relief from the  
2       Coastal Commission for funds. That would not be  
3       required.

4           VICE CHAIRMAN STETSON: Got it. Okay,  
5       thank you.

6           Martha?

7           MARTHA McNICHOLAS: I'm trying to  
8       understand the question that Debbie Kinsinger  
9       submitted in the chat room so I'll read it: "Why  
10      did the EA for decommissioning the plant not take  
11      into consideration the removal, storage, and  
12      transport of the spent fuel? Potential  
13      significant effects should have been evaluated."

14          And I guess I don't know what EA means.

15          CHAIRMAN DAVID VICTOR: That's the  
16      environmental assessment.

17          MARTHA McNICHOLAS: Okay. So I'm not  
18      sure -- like I said, I'm not sure I understand  
19      that.

20          DOUG BAUDER: Let me at least take a try  
21      at it. The environmental assessment was part of  
22      the environment impact report and was submitted  
23      initially to the California State Lands Commission  
24      and then ultimately approved by the Coastal  
25      Commission. As part of that overall structure, we

1 did not include the fuel or the fuel storage  
2 because that falls under NRC rules and regulations  
3 for us and all the rest of the nuclear plants, and  
4 although we can say it falls under federal  
5 preemption, we do make the commissions aware of  
6 what we're planning to do with the fuel and aware  
7 of how the decommissioning efforts will not affect  
8 the safe storage of the fuel, and so we received  
9 questions around fuel storage and fuel transport,  
10 and I will tell you the Coastal Commission is very  
11 keen on our ability to be able to transport the  
12 fuel in the future, which is absolutely a  
13 necessity and actually very much integrated with  
14 our strategic plan to make sure we're ready when  
15 the DOE can transport or there's some other  
16 interim solution, we can transport it.

17 That's where you see the Coastal  
18 Commission very involved in the state of the fuel  
19 being ready for transport, because obviously it's  
20 here on the coast, and we want to get it safely  
21 shipped.

22 MARTHA McNICHOLAS: I understand the  
23 question now, because the environmental assessment  
24 was just for decommissioning as a -- I did look at  
25 it as a dismantlement of the structure and not the

1 part of the spent fuel storage. I understand the  
2 question now, and thank you for the answer.

3 RANDALL GRANAAS: This is Randall, and I  
4 can add a piece of information to it too. The NRC  
5 does their own environmental impact reviews for  
6 all their actions, licensing actions, so it's a  
7 separate process.

8 MARTHA McNICHOLAS: And I think that's  
9 all the key questions I had, unless, Dan, you  
10 caught some other ones?

11 VICE CHAIRMAN STETSON: I see two more  
12 than I'm happy to address, one has to do with,  
13 Doug, maybe you can help us, from Nina again,  
14 which agency approved the permit as we reference  
15 to the releases, NRC or San Diego Regional Water  
16 Quality Control Board, who actually oversees the  
17 discharges?

18 DOUG BAUDER: Once again, a two-part  
19 answer. The Nuclear Regulatory Commission  
20 regulates and oversees through inspections the  
21 radiological components of our discharge. We also  
22 have a National Pollutant Elimination System  
23 Discharge permit from the San Diego Regional Water  
24 Quality Control Board, and that's a mouthful, that  
25 permit is an overarching structure that has to do

1 with all types of releases we make from the plant,  
2 whether it's a rain water that collects in a sump  
3 and then we discharge that rain water after  
4 sampling, or whatever the case may be.

5 So think about it as Nuclear Regulatory  
6 Commission oversees any regulatory aspects  
7 ensuring that the discharges are safe from a  
8 radiological perspective and the NPESD permit  
9 envelopes everything else.

10 VICE CHAIRMAN STETSON: Okay, thank you.  
11 And one final question, it has to do with AECOM  
12 possibly withdrawing from the decommissioning  
13 project in San Onofre, what's the status of that,  
14 and is another company going to be taking over  
15 their contract?

16 DOUG BAUDER: Yeah, so I'm not at liberty  
17 to discuss any contractual changes that may be  
18 occurring with Songs Decommissioning Solutions,  
19 the joint venture company at San Onofre. I will  
20 tell you if a change were to occur, if AECOM were  
21 to move out of the project, we would ensure that  
22 through our reasonable control over the contract  
23 requirements that the resulting entity was solid  
24 financially and will continue to carry out safe  
25 decommissioning of the station.

1           And if such a structural change were to  
2       occur, at the next appropriate meeting, I will be  
3       happy to brief the group here and answer any  
4       questions you may have.

5           VICE CHAIRMAN STETSON:   Thank you, Doug.  
6           David, I think that does it.

7           CHAIRMAN DAVID VICTOR:   Thank you very  
8       much, Dan.   If I can just press on one issue, two  
9       issues very quickly; one, we did have a question  
10      from Nina about whether the NRC needs to update  
11      its inspection requirements concerning the  
12      canisters that have been scratched, it's my  
13      understanding that the HD video shot of all those  
14      canisters was shared with the NRC, the analysis at  
15      least was shared with the NRC, and the NRC has not  
16      opined that they want to change the inspection  
17      protocol.

18           Is that correct, Doug, or is there some  
19      additional answer to Nina's question that we need?

20           DOUG BAUDER:   In short, David, I think  
21      what you said is correct as part of our fuel  
22      transfer operations restart I'll say, last year in  
23      July, prior to that the NRC did extensive  
24      inspections on our robotic camera inspections and  
25      observed, for the most part in the field, reviewed

1 all the data and did their own supporting  
2 calculations on our analysis.

3 So the NRC is not indicated that they  
4 would want to observe any more inspections or  
5 change of frequencies or requirements or  
6 maintenance inspection program. I would  
7 anticipate that when we enter various phases of  
8 the inspection and maintenance program of the  
9 Holtec system, the NRC will witness some of those  
10 inspections that we make, as they inspect many  
11 other things that we do.

12 CHAIRMAN DAVID VICTOR: If this were any  
13 other plant the issue would arise after 20 years  
14 when they had to reliance the canister system for  
15 the ISFSI, and there have been no inspections done  
16 and instead you would have done all these interim  
17 inspections, so thank you.

18 One other I want to press this is for  
19 Randall, I think, so you were on the roof in  
20 January of the transnuclear TN system, and you  
21 have a bunch of data saying the measurements there  
22 are normal. I'm hearing some people, Donna,  
23 Kaleen, others asking why we can't see those data.  
24 I completely understand the physical logic, the  
25 physics logic here which is the concern is

1 radiation, the line of sight phenomenon not  
2 carried in the air vents, so there's kind of a  
3 disconnect there over the laws of physics. But  
4 are the data from the roof and the exhaust vents  
5 there and kind of available and easily, you know,  
6 released, or is this one of those questions where  
7 hasn't been done with certain kind of calibrations  
8 and you don't want to release it? Help us  
9 understand what's going on here. It seems like a  
10 tempest that doesn't need to be a tempest.

11 RANDALL GRANAAS: Doug, this is where you  
12 want to speak, but we could get some readings, we  
13 can do it any time we want, we can have someone  
14 come out there and film it, and we can provide  
15 them. I'm speaking for Doug, so I got to be  
16 careful, right. There's nothing to hide. It's  
17 going to be normal just like we did recently we  
18 did for the UMax systems where we took out a meter  
19 and bring your own, right?

20 CHAIRMAN DAVID VICTOR: Can I say before  
21 Dan says we were out there, yes, we were out  
22 there, first of all, I didn't bring a ladder, Gene  
23 was with us, I did build a Geiger counter for the  
24 purpose of it, which had readings that were  
25 normal, although I will say the GPS on the Geiger

1 counter seemed a little bit inaccurate since it  
2 believed we were out swimming with the sharks the  
3 entire time and not actually on land. So I hope  
4 you have a more accurate system than the one we  
5 had.

6 Doug, help us understand what to do about  
7 this issue.

8 DOUG BAUDER: I think, David, the thing  
9 to do here is, and I appreciate what Randall said,  
10 is just go measure the outlet vents, film it,  
11 bring a third party expert in to witness it, and  
12 it's done. There's no physical reason to think  
13 there's an issue. There hasn't been an issue in  
14 the past and, essentially, it seems -- I agree  
15 with you. It seems like we're making a big deal  
16 and we don't need to be. And there's absolutely  
17 nothing to hide here.

18 And so it seems like just go do. And  
19 think we'll go do it, and we'll publish the  
20 information to the website, and if we want to  
21 discuss it at the next meeting, we can do that as  
22 well.

23 CHAIRMAN DAVID VICTOR: I don't want to  
24 create an extra expense and drama here, and I  
25 don't understand the laws of physics that create a



1 concern here, but let's get the data and then if  
2 folks continue to not believe that, let's have  
3 somebody explain to us who doesn't believe the  
4 analysis what laws of physics leads you to think  
5 that the world is operating, you know, spinning  
6 the opposite direction or whatever is going on  
7 that leads you to think that's inappropriate.  
8 That would be helpful.

9 I want to just say that if anyone thinks  
10 that any of the answers tonight were not -- this  
11 is the first time in a long time that I think we  
12 answered all the questions raised, and then some  
13 in the questions submitted in advance and online,  
14 if anyone believes answers have not been  
15 responsive and complete, let us know so we get  
16 more complete and responsive answers.

17 I have had a lot of questions come in on  
18 technology questions, and I'm not the IT  
19 department, but I will connect you to the IT  
20 department to help figure out the technical  
21 issues, which is a work in progress.

22 I want to pause just for a moment and  
23 see, before we go to close here, if any of the  
24 members of the CEP would like the floor to make  
25 any additional comments or raise questions

1       tonight.

2               I'm not seeing anybody opening their mic.  
3       So I want to ask first Dan and Martha -- oh, Paul  
4       Wyatt, the floor is yours.

5               PAUL WYATT:   Just briefly, and this is  
6       sort of a follow-up to Council Member Kathy Ward's  
7       comments from San Clemente too, to get data out  
8       there I think the cities along the coast, Dana  
9       point, San Clemente and others, can link to the  
10      some of the reports tonight.   One of my express  
11      concerns all along is to get this data where  
12      people who are concerned can find the real science  
13      backed data to read, as opposed to looking at  
14      signs that are put on the beach or social media.

15              I think we got a couple of good reports  
16      on the reef and on the discharge the -- the  
17      discharge that we can link to our city sites.   I  
18      would encourage all the members, all the coastal  
19      cities along here to link to those and have it  
20      placed on their city websites and others where  
21      this data can be easily referenced, and we can get  
22      that it out to our community.   I appreciate the  
23      reports we got tonight and the usefulness.

24              MARTHA McNICHOLAS:   I'm going to tag onto  
25      that and say both Eric's presentation and Jenny's

1 if those could be extracted from the PowerPoint  
2 and posted separately as reef and discharge both  
3 for cities and SONGS Community, I think that might  
4 be easier for the public to get through than  
5 trying to filter through the agenda to find it.

6 CHAIRMAN DAVID VICTOR: I think that's a  
7 very astute comment, both the comments from Paul  
8 and Martha, because we have a huge amount of  
9 material now, this is unlike 2014. This is a  
10 massive amount of information, and actually the  
11 information is getting harder to access because  
12 there's so much of it. This topic of the  
13 discharge is getting a lot of attention and will  
14 continue, ditto on the reef. We should pull out  
15 the topic pages.

16 I want to see if there are any other  
17 comments that the members of the CEP want to make.  
18 I don't see any others, so I want to give the  
19 floor first to Doug, and then I'll say a couple  
20 words at the end.

21 Doug, the floor is yours.

22 DOUG BAUDER: Okay. Thanks, David.  
23 Look, as a representative for Edison here, we  
24 appreciate the opportunity. We always want to  
25 feel accountable to the CEP to answer questions

1 that you may have and to feel accountable to the  
2 community. I really want to appreciate the SONGS  
3 presenters tonight. All of you, Jenny in  
4 particular and Dr. Goldin regarding the batch  
5 releases, this has been very helpful I think for  
6 the CEP and for me and hopefully for the  
7 communities as well. Once again, it's that  
8 accountability. We do want to feel accountable.

9 I do want to mention it seems that, again  
10 maybe for a CEP meeting the questions start  
11 flowing in through our SONGS Nucom website, the  
12 community website, I want mention that if you got  
13 questions, technical questions, other questions  
14 around issues, we have a hotline, we have the link  
15 to the website, you can submit those any time, and  
16 will be as responsive as we can to answer them.

17 We have not been able to hold public  
18 tours since the start of the pandemic. We're  
19 hoping one day to change that. And that in past  
20 has been a mechanism for us to give information to  
21 people, take people around and show them what  
22 we're about here. We want to be responsive.  
23 That's the message that I have, and I hope to  
24 continue to did that.

25 And I'm looking forward to the fourth

1 quarter meeting. We can talk in some more detail  
2 about the strategic plan and a little more detail  
3 about the actual decommissioning work. Thanks,  
4 Dave.

5 CHAIRMAN DAVID VICTOR: Excellent. Thank  
6 you, Doug. I want to echo your thanks to the  
7 Edison team for the presentations. These are  
8 enormously informative. These are topics that a  
9 lot of people are concerned about. And I think  
10 accountability to the CEP is not quite right, it's  
11 accountability to the communities, and we're  
12 trying as the CEP to organize community thought  
13 and questions and listen to a wide range of voices  
14 and help get responsive answers, and I appreciate  
15 what you've done tonight.

16 I want to say that you had a big  
17 milestone this summer in finishing the fuel  
18 transfers and emptying the spent fuel pools,  
19 filling up the ISFSI, at least with spent fuel,  
20 there will be a few more canisters with components  
21 from the reactors.

22 The strategic of the game shifts now, and  
23 the meeting that we're having in the fourth  
24 quarter is really, really important. It's the  
25 next frontier, and we've got to figure out how to

1 organize ourselves to move the spent fuel and  
2 strategically what we need to do, what's  
3 important, what's not important, how to adjust our  
4 strategy over time, and I really look forward to  
5 that discussion. It's not going to be easy. We  
6 really need to think about who else we need in the  
7 room, if not in the fourth quarter meeting, in  
8 other meetings, so we can engage with people who  
9 actually have the capacity to change things  
10 including in Washington, insofar as changing  
11 anything in Washington is possible these days.

12 So I really appreciate everyone spending  
13 time with us this evening, and I look forward to  
14 seeing you in the fourth quarter, and please do  
15 keep any questions coming as you think of them,  
16 and I certainly will commit, and I know the rest  
17 of the CEP leadership and membership commits to  
18 being as responsive as possible as this unfolds.  
19 Thank you and be safe.

20 (WHEREUPON THE PROCEEDINGS WAS ADJOURNED  
21 AT 8:40 P.M.)

22 (CERTIFICATE OF COURT OFFICER ATTACHED ON  
23 FOLLOWING PAGE HEREOF.)  
24  
25

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

CERTIFICATE  
OF  
CERTIFIED SHORTHAND REPORTER

I, the undersigned, Certified Shorthand Reporter of the State of California do hereby certify:

That the foregoing proceedings were taken before me at the time and place therein set forth; that a verbatim record of the proceedings was made by me using machine shorthand which was thereafter transcribed under my direction; further, that the foregoing is an accurate transcription thereof.

I further certify that I am neither financially interested in the action nor a relative of employee of any attorney of any of the parties.

IN WITNESS WHEREOF, I have this date subscribed my name  
this 9th day of September, 2020.



Certificate Number 12983

<b>0</b>	<b>17,000</b> 65:19	<b>2051</b> 112:23 113:8	<b>5</b>
<b>0.000722</b> 65:7	<b>180</b> 126:16	114:6 115:16	<b>5</b> 14:23 28:25
<b>0.05</b> 65:2	<b>19</b> 5:24 13:14,24	<b>22</b> 128:15	64:16 105:15
<b>0.051</b> 65:24	101:17	<b>23rd</b> 14:13	<b>5,000</b> 64:17
<b>0.5</b> 64:3	<b>1991</b> 70:7	<b>246</b> 10:15	<b>50</b> 21:4 61:12
<b>1</b>	<b>1998</b> 70:17 128:14	<b>25</b> 64:20,24 65:12	62:18 81:10
<b>1</b> 1:24 7:4 14:11	<b>2</b>	105:12	105:14,15
24:7 26:15 33:25	<b>2</b> 43:12 50:14 77:6	<b>25th</b> 53:3	<b>51</b> 83:18
43:12 46:6 50:11	85:8 98:18 103:7	<b>28</b> 72:2	<b>5:3o</b> 2:10
52:20 53:2,22	111:21 114:6	<b>280</b> 74:4	<b>6</b>
54:14 64:7 65:25	116:13	<b>285,000</b> 53:21	<b>6</b> 52:19 98:3
66:12 77:6 85:19	<b>20</b> 1:9,18 2:11 5:1	<b>29</b> 101:25	102:22 112:18
93:7,10 94:1	5:18 33:2,5 39:23	<b>290</b> 45:8	<b>60</b> 45:9
98:17 105:21	101:19 114:24	<b>2:45</b> 21:23	<b>600</b> 54:21
111:21 120:2,10	121:6 134:13	<b>3</b>	<b>61</b> 98:1
<b>1,000</b> 46:2	<b>20,000</b> 65:17,18,20	<b>3</b> 14:23 50:14	<b>65</b> 45:9
<b>10</b> 22:24	<b>2008</b> 71:1	72:10,11 114:7	<b>6th</b> 112:18,21
<b>10,000</b> 42:19 66:10	<b>2014</b> 10:7 89:8	116:13	<b>7</b>
<b>100</b> 64:21	139:9	<b>30</b> 16:7 114:7	<b>72</b> 117:15
<b>1000</b> 45:15	<b>2015</b> 84:20 112:16	<b>3021</b> 33:17,20	<b>72.48</b> 117:14,18
<b>108</b> 21:23	112:18 113:23	<b>30th</b> 14:3	<b>73</b> 27:21 44:12,13
<b>11</b> 4:3 23:18	114:12 115:11	<b>310</b> 64:6,14	<b>7:25</b> 90:19
<b>12</b> 25:5 54:10	<b>2017</b> 81:3	<b>32</b> 70:17 85:20	<b>7:26</b> 90:24
<b>12,000</b> 73:4	<b>2019</b> 35:1 38:13	<b>35</b> 56:8 73:13	<b>7:30</b> 90:19
<b>125</b> 57:23	72:10,12 74:16	105:12	<b>7:32</b> 90:24
<b>12983</b> 1:22 143:25	93:24 126:2	<b>35,000</b> 47:11	<b>7th</b> 27:21
<b>131</b> 61:19	<b>202</b> 72:15	<b>376</b> 72:16	<b>8</b>
<b>14</b> 26:8 64:9	<b>2020</b> 1:9,18 2:11	<b>4</b>	<b>860</b> 37:5
<b>143</b> 1:24	5:1,18 64:2 72:10	<b>4</b> 93:17	<b>8:40</b> 142:21
<b>14th</b> 53:4	72:12 74:18 98:15	<b>4,000</b> 65:22	<b>9</b>
<b>15</b> 114:24 121:6	111:18 143:20	<b>40</b> 61:7 64:10	<b>9</b> 18:3 21:3,6,7
<b>150</b> 71:1 72:3	<b>2022</b> 35:5 126:8	<b>4222680</b> 1:23	<b>92</b> 4:3
<b>15014</b> 143:24	<b>2024</b> 35:3 52:1	<b>44</b> 77:2	<b>99</b> 21:25
<b>16</b> 56:5 98:14	126:10	<b>45</b> 45:6	<b>9th</b> 143:20
111:18	<b>2025</b> 52:9 55:8	<b>4611</b> 97:24	<b>a</b>
<b>16th</b> 27:4,25 126:7	<b>2026</b> 52:13 55:8,22	<b>48</b> 14:11	<b>ability</b> 13:23 58:16
127:5	<b>2035</b> 100:21	<b>49</b> 21:4 80:18,21	117:10 130:11
<b>17</b> 74:17 92:20	112:19,21 113:7		<b>able</b> 13:17 16:20
93:4	113:12,12 114:5		45:17 73:18 94:18
	115:14,16,16,20		



[able - annual]

<p>109:25 124:5 130:11 140:17 <b>absolute</b> 71:9,9 72:1,7 75:14 <b>absolutely</b> 48:5 59:4 119:22 130:12 136:16 <b>accelerated</b> 42:9 <b>accepting</b> 16:13 <b>access</b> 31:12 139:11 <b>accident</b> 110:20 <b>accommodate</b> 101:20 <b>accomplishments</b> 49:14 <b>account</b> 63:1 <b>accountability</b> 140:8 141:10,11 <b>accountable</b> 139:25 140:1,8 <b>accumulate</b> 24:22 63:4 <b>accumulated</b> 61:23 90:1 <b>accurate</b> 115:8 118:5 127:12,13 136:4 143:13 <b>achieve</b> 27:23 <b>achieved</b> 116:12 <b>acjachemen</b> 72:25 <b>acre</b> 74:4 <b>acres</b> 71:1 72:3,15 72:16 <b>act</b> 128:14 <b>acting</b> 112:3 <b>action</b> 27:5 82:19 83:9,10 85:20 86:5,12 89:24 106:19 143:15</p>	<p><b>actions</b> 82:11,13 83:14 131:6,6 <b>activated</b> 50:5 <b>active</b> 7:5 36:10 <b>activists</b> 31:23 <b>activities</b> 14:4 19:25 28:16,19 29:12,24 40:21 49:11 51:23 127:24 <b>activity</b> 53:11 61:15 <b>actual</b> 46:1 51:22 117:19 141:3 <b>add</b> 19:15 20:5 118:2 125:6,17 131:4 <b>added</b> 100:13 <b>adding</b> 37:9 75:11 <b>addition</b> 46:19 121:21 <b>additional</b> 9:25 14:6 105:2 128:22 133:19 137:25 <b>additive</b> 36:17 <b>address</b> 111:2 113:22 119:7 125:3 131:12 <b>addresses</b> 100:6 101:10 <b>adhesion</b> 33:21 42:17,18 <b>adjacent</b> 24:19 <b>adjourned</b> 142:20 <b>adjust</b> 44:15 142:3 <b>administered</b> 61:17 <b>advance</b> 7:22 12:7 13:1 26:7 30:20 137:13</p>	<p><b>advancing</b> 8:5 <b>advantages</b> 13:19 <b>adverse</b> 70:9 <b>advertising</b> 67:14 <b>advice</b> 85:24 <b>advisory</b> 15:4,7 <b>aecom</b> 132:11,20 <b>affect</b> 93:14 115:13 130:7 <b>afraid</b> 67:14 <b>afternoon</b> 21:23 <b>agencies</b> 35:13 66:5 72:23 <b>agency</b> 73:16,24 131:14 <b>agenda</b> 8:14,18,20 8:21 14:15,16,18 26:1 114:20 139:5 <b>agent</b> 99:4 <b>aggressive</b> 39:21 <b>aggressively</b> 16:12 <b>aging</b> 33:3 <b>ago</b> 7:22 26:14 43:10 46:15 73:4 111:14 121:6,14 <b>agree</b> 11:18 88:24 88:25 136:14 <b>agreed</b> 10:22 75:5 <b>agreeing</b> 7:7 10:24 <b>agreement</b> 16:5 19:23,24 26:12 81:3 <b>ahead</b> 19:19 41:17 52:24 109:21 119:11 125:20 <b>ainsworth</b> 100:11 100:13 <b>air</b> 35:8,9 64:16 92:25 93:1 109:13 111:5 135:2</p>	<p><b>aircraft</b> 34:1 <b>alga</b> 71:18 <b>alice</b> 31:19 <b>allen</b> 105:1,4,4 <b>allison</b> 84:19 99:21 102:13,16 102:19,20,21,24 102:25 120:20 121:2 <b>allocate</b> 114:2 <b>allow</b> 24:22 45:3 <b>allowed</b> 23:10 88:1 <b>alternative</b> 37:2 <b>alternatives</b> 81:25 <b>aluminum</b> 47:8 <b>amazingly</b> 123:6 <b>america</b> 10:15 <b>american</b> 3:18 103:5 120:22 121:16 <b>amount</b> 53:24 54:2,3,22 57:5,6 139:8,10 <b>analogies</b> 123:12 <b>analogy</b> 123:11 <b>analysis</b> 63:18 84:9 113:9,11 133:14 134:2 137:4 <b>analyst</b> 99:25 <b>analyzed</b> 62:2 <b>analyzes</b> 63:16 <b>andrews</b> 56:14,19 <b>angeles</b> 3:16 <b>animal</b> 74:4,9 <b>animals</b> 74:16 <b>announced</b> 14:2 <b>annual</b> 59:22 64:8 75:18,24 78:20 79:15 115:25</p>
--	---	--	--

<b>annualized</b> 75:15 <b>annually</b> 63:18 113:4,16 <b>answer</b> 46:8 54:17 65:5 66:3 101:5 103:20 109:2,20 112:5 127:20 131:2,19 133:3,19 139:25 140:16 <b>answered</b> 137:12 <b>answering</b> 58:2 <b>answers</b> 101:7 120:14 137:10,14 137:16 141:14 <b>anticipate</b> 134:7 <b>anticipation</b> 100:23 115:6 <b>anxiously</b> 101:4 <b>anybody</b> 38:7 54:24 66:14 67:6 78:6 79:23 104:21 104:24 138:2 <b>anymore</b> 51:7 <b>anyway</b> 94:15 111:15 <b>apache</b> 34:1 46:6 <b>apologize</b> 12:10 77:11 <b>apologizing</b> 12:7 <b>app</b> 106:20 <b>apparently</b> 43:12 <b>application</b> 37:22 112:22 <b>applications</b> 33:18 33:25 46:2,5 <b>applied</b> 45:16 <b>applies</b> 38:22 <b>apply</b> 64:23 117:13 <b>applying</b> 37:25	<b>appreciate</b> 7:18 26:6,16 85:17 87:17 99:9 104:15 107:10,14 112:4 125:18 136:9 138:22 139:24 140:2 141:14 142:12 <b>approach</b> 115:21 <b>appropriate</b> 58:23 75:24 133:2 <b>appropriately</b> 127:24 <b>approval</b> 27:24 62:11 114:11 116:4,25 <b>approve</b> 19:22 <b>approved</b> 27:3 32:25 37:5,12 47:23 56:10,12 94:17 112:17 113:18 116:24 118:16 126:6 127:4 129:24 131:14 <b>approves</b> 118:7 <b>approximately</b> 69:14 70:13 <b>aquifer</b> 25:1,1,3 <b>archeological</b> 73:7 120:22 <b>area</b> 25:1 35:19 63:15 67:22 71:12 71:22 72:3 73:3 75:14 77:14 85:4 85:25 121:10 <b>areas</b> 16:4,5 30:8 31:13 73:18 77:13 80:15 100:4 <b>areva</b> 124:4	<b>arm</b> 38:23 <b>arrive</b> 22:19 <b>arrived</b> 24:10 53:3 <b>arrives</b> 93:21 <b>artifacts</b> 121:16 <b>artificial</b> 9:16,17 69:14 70:15 <b>asbestos</b> 30:5 105:7 <b>asked</b> 15:7,9 103:9 125:22 <b>asking</b> 31:22 119:2 134:23 <b>asme</b> 37:5,12 46:24 47:1,19,23 47:25 94:25 117:22,24 118:6,7 118:8,12,15 <b>aspects</b> 132:6 <b>assembled</b> 83:25 <b>assembly</b> 58:9 <b>assess</b> 87:2 <b>assessing</b> 96:2 <b>assessment</b> 115:8 129:16,21 130:23 <b>assigned</b> 75:17 <b>assignment</b> 1:23 <b>associated</b> 70:6 83:4 <b>assume</b> 39:24 82:22 <b>assuming</b> 65:7 101:9 <b>assumption</b> 63:7 <b>assured</b> 115:17 <b>astm</b> 33:20 <b>astute</b> 139:7 <b>attached</b> 142:22 <b>attaches</b> 123:5 <b>attainment</b> 75:17	<b>attention</b> 9:8 14:18 17:16 24:25 60:19 80:9 86:12 103:4 139:13 <b>attorney</b> 143:16 <b>august</b> 1:9,18 2:11 5:1,6,18 27:20 38:13 <b>authority</b> 74:10 <b>available</b> 16:15 39:12 63:20 76:5 76:8 77:14 79:10 135:5 <b>average</b> 64:5,5,13 65:13,18 <b>averse</b> 107:4 <b>avoid</b> 73:19 74:15 <b>awaiting</b> 101:5 <b>aware</b> 40:22 41:1 41:7 93:24 97:7 119:25 130:5,6  <b>b</b>  <b>b</b> 33:25 46:6 53:9 53:25 56:8,16 <b>babiarz</b> 97:17,21 97:23 98:5,8 99:19,21,23 101:4 101:8,14,17 102:14 103:11 <b>back</b> 5:7 14:3 17:25 22:16,18,18 25:25 38:16 39:4 45:3 48:8 50:9 58:3,12 63:23 76:25 77:2 79:21 80:6 84:20 87:18 91:5,10,24 95:7 104:1 106:17 107:18 108:14 111:17 114:12 115:2 118:19
---	--	---	--

<p>120:16 123:14  <b>backed</b> 138:13  <b>background</b> 64:6  65:25  <b>backwards</b> 112:6  <b>balance</b> 36:14  <b>balanced</b> 67:22  <b>band</b> 3:15 72:25  <b>barbara</b> 78:18  <b>base</b> 35:25 36:2,2  36:3 118:23  <b>based</b> 33:3 63:2  75:16,17 83:11  119:4  <b>bases</b> 83:3  <b>basically</b> 24:9  31:12 38:21 41:21  57:23 61:23 64:24  65:8 96:23  <b>basics</b> 103:20  <b>basket</b> 82:5,6  <b>batch</b> 9:14 60:18  61:9 64:3 65:1,5  65:18,21 66:16  90:1,2,3,5 140:4  <b>batches</b> 110:12  <b>bauder</b> 3:20 9:24  13:5,8 19:4 25:25  26:4,5 31:3 48:8  48:12 49:4 109:1  112:4 115:9  116:19 117:3  119:6 123:21  125:18 126:1,21  126:24 127:13,19  129:20 131:18  132:16 133:20  136:8 139:22  <b>beach</b> 65:10,11  67:12 78:2,12  138:14</p>	<p><b>beaches</b> 66:15  87:25  <b>bear</b> 19:14  <b>becoming</b> 86:3  <b>bed</b> 70:10 71:11  121:13  <b>beginning</b> 24:8  <b>behalf</b> 48:24 67:5  84:13  <b>believe</b> 6:16 37:11  39:22 55:4 90:20  91:11 97:18  104:22 108:3  126:12 137:2,3  <b>believed</b> 136:2  <b>believes</b> 137:14  <b>benefit</b> 70:1 111:6  <b>benefits</b> 76:17,19  <b>benign</b> 53:9  <b>best</b> 13:19 15:10  47:24 52:22 86:10  <b>bet</b> 49:4  <b>better</b> 8:13 39:1  40:5  <b>bewildered</b> 12:15  <b>beyond</b> 105:24  113:7,12 115:16  115:20 118:2  <b>biden</b> 5:8  <b>big</b> 9:2,11 15:10  18:6 22:25 23:1  26:2 27:15 49:18  49:24 51:24 123:3  136:15 141:16  <b>bigger</b> 50:14 51:7  51:18  <b>biggest</b> 40:4 92:18  103:8  <b>billion</b> 93:17  <b>bilovsky</b> 49:5  55:13 56:12 58:1</p>	<p>58:22 59:4 60:1,8  <b>bio</b> 75:13  <b>biodiversity</b> 69:25  <b>biotic</b> 69:18  <b>bit</b> 19:16 27:16  28:18 41:25 52:25  57:3 58:9 72:19  74:19 77:8 81:8  81:21 83:18 86:3  126:2 136:1  <b>black</b> 25:10  <b>blue</b> 72:12,13  <b>blunt</b> 57:17  <b>board</b> 3:5 15:4  19:21 20:2 37:6  66:7 87:19 89:1  97:11 131:16,24  <b>boards</b> 15:7  <b>boating</b> 70:1  <b>bob</b> 48:17  <b>body</b> 64:11  <b>boil</b> 83:13  <b>bond</b> 42:14,20  <b>bonneville</b> 121:13  <b>boondoggle</b> 96:25  <b>border</b> 56:22  <b>boston</b> 3:10  <b>bottom</b> 35:24  53:14 62:17 63:14  63:15  <b>bought</b> 121:6  <b>boundary</b> 6:15  28:4 105:18  109:10  <b>bounding</b> 113:8  113:10  <b>box</b> 22:15 108:1,9  <b>brain</b> 21:17  <b>breach</b> 95:23  <b>break</b> 76:7 80:3  87:9 90:18,22</p>	<p><b>brief</b> 6:5 133:3  <b>briefly</b> 13:24  26:13 61:22 138:5  <b>bring</b> 48:17 49:2  51:8,10 135:19,22  136:11  <b>bringing</b> 51:4  72:15  <b>brings</b> 23:12  <b>broader</b> 32:3  <b>broken</b> 101:22  <b>brought</b> 84:1  <b>brown</b> 3:13  <b>budget</b> 55:6  <b>build</b> 70:24 77:7  77:21,22 135:23  <b>building</b> 22:13,14  51:6,13 55:15  <b>buildings</b> 49:19,20  51:3 52:7,12  58:15  <b>built</b> 23:19 55:9  71:2  <b>bullet</b> 81:11  <b>bunch</b> 18:9 134:21  <b>business</b> 24:1  <b>button</b> 8:24  <b>buying</b> 123:10</p>
			<p><b>c</b></p>
			<p><b>c</b> 53:9,13,25 54:4,7  54:12 56:8,16  57:1  <b>cabinets</b> 42:1,4  <b>cabling</b> 49:22  <b>cal</b> 78:11  <b>calculate</b> 76:4  <b>calculated</b> 65:7  <b>calculates</b> 62:5  <b>calculating</b> 71:12  <b>calculations</b> 134:2</p>

[calendar - changes]

<p><b>calendar</b> 26:3</p> <p><b>calibrations</b> 135:7</p> <p><b>california</b> 2:3 3:2 3:12 32:25 39:8 98:14,20 99:3,24 100:10,22 102:2 111:18,24 113:2 113:16 115:4 116:2 127:17 129:23 143:6</p> <p><b>california's</b> 100:4</p> <p><b>call</b> 13:3 29:9 52:6 58:17 67:3</p> <p><b>called</b> 14:5 49:19 53:12 71:9 113:9 117:14</p> <p><b>camargo</b> 3:22 8:16 18:16,22 19:1,3,8 19:12,18 20:23 21:5,12,15 80:6,8 91:2 104:20,25 106:4</p> <p><b>camera</b> 35:23 133:24</p> <p><b>canary</b> 40:11</p> <p><b>canister</b> 9:7 33:4,5 33:9 34:4,6,9,10 34:13,14,21 35:3 35:10,15,23 36:8 36:24 37:19 38:16 40:2,9,11 42:10 43:22 44:4,16 45:20 46:16 47:7 47:8 54:12 57:24 58:6 93:21 109:16 110:11,24 111:2 117:9,12 124:9,14 124:20 125:1,7 126:9,11 134:14</p> <p><b>canister's</b> 35:6,17</p>	<p><b>canisters</b> 27:21 33:7,7 34:25 35:1 35:2 39:23 40:6 40:13 44:1,6,11,23 46:11,12 47:16 54:10 58:5,7 89:2 89:4 92:19 93:3 93:14,18,20 94:3 95:23 96:10,10 97:2 109:10 111:14 115:6 123:18 124:1,6 126:3,8,12 133:12 133:14 141:20</p> <p><b>cans</b> 101:22,23</p> <p><b>capacity</b> 142:9</p> <p><b>capistrano</b> 3:5,7 19:21</p> <p><b>capo</b> 78:1</p> <p><b>captain</b> 3:14</p> <p><b>captured</b> 60:1</p> <p><b>car</b> 18:15 21:15 22:9,15,17 128:5</p> <p><b>carbon</b> 47:5,6</p> <p><b>career</b> 76:13</p> <p><b>careful</b> 135:16</p> <p><b>carefully</b> 12:5 117:25</p> <p><b>carried</b> 135:2</p> <p><b>carry</b> 132:24</p> <p><b>cars</b> 21:25 22:3,3 22:4,5,7,12 52:17 52:17</p> <p><b>case</b> 14:1 22:18 37:5,8,10,12 68:17 91:17 100:24 110:23 113:8 116:14 118:8,12 118:15 127:23 132:4</p>	<p><b>cases</b> 14:4 66:21</p> <p><b>cask</b> 1:7 30:15 32:19</p> <p><b>category</b> 53:20</p> <p><b>caught</b> 131:10</p> <p><b>cause</b> 116:10</p> <p><b>caution</b> 87:23</p> <p><b>cavit</b> 58:15</p> <p><b>cavity</b> 96:14</p> <p><b>cease</b> 71:19</p> <p><b>cell</b> 96:16 97:8</p> <p><b>center</b> 6:12</p> <p><b>central</b> 7:2 49:21</p> <p><b>cep</b> 1:6 3:2,5 6:3,6 10:3,6,7,8,12,23 12:4 14:13,13,21 16:23 20:8,17 25:24 27:10 30:18 31:25 54:25 60:22 67:1,7 68:20 79:7 79:23 82:3 83:24 85:9,12,15 87:5,8 137:24 139:17,25 140:6,10 141:10 141:12 142:17</p> <p><b>certain</b> 47:24 135:7</p> <p><b>certainly</b> 18:13 142:16</p> <p><b>certificate</b> 142:22 143:1,25</p> <p><b>certified</b> 143:3,5</p> <p><b>certify</b> 143:7,14</p> <p><b>chair</b> 41:1</p> <p><b>chairman</b> 3:2,3 5:4,13 8:19 11:23 12:12 14:12 15:23 16:20 17:4 18:19 19:2,6,10,13,17 20:6,25 21:8,14,16 30:16 31:18 38:9</p>	<p>38:18 39:3,14 43:8,20 44:17,19 45:23 48:2,6,21 54:18 55:25 56:18 59:6 60:10 66:18 67:17 68:13 69:3 69:8 76:23 78:3,7 78:10 79:7,18,20 84:19 85:16 87:13 88:6 89:20 90:25 91:4,7,8,19 92:8 92:12,16 95:5,17 97:15 98:2,6,12 99:11 101:1,6,12 101:15 102:10,15 102:23 103:25 104:8,17 105:3 106:1,7,15 108:6 108:17 109:22 110:5 111:9 114:18 118:18 120:16 121:4,20 122:8,18 123:15 125:19 127:7,14 129:4,15 131:11 132:10 133:5,7 134:12 135:20 136:23 139:6 141:5</p> <p><b>challenge</b> 36:18 82:18 113:21,22</p> <p><b>challenged</b> 12:9 77:4</p> <p><b>chance</b> 59:1</p> <p><b>change</b> 15:11 86:10 132:20 133:1,16 134:5 140:19 142:9</p> <p><b>changed</b> 120:6</p> <p><b>changes</b> 75:5 132:17</p>
---	--	---	--

[changing - commission]

<p><b>changing</b> 142:10</p> <p><b>channel</b> 74:11</p> <p><b>chapter</b> 3:16</p> <p><b>charged</b> 60:6</p> <p><b>charles</b> 90:21</p> <p>91:11,14,15,19,21</p> <p>91:21,24 95:7,10</p> <p>95:11 97:18,20</p> <p>98:7,9,10,10,13</p> <p>103:10 111:15</p> <p>112:12</p> <p><b>chart</b> 64:8</p> <p><b>chat</b> 97:24 108:1,9</p> <p>129:9</p> <p><b>check</b> 16:19 78:13</p> <p>113:15 124:22</p> <p><b>checked</b> 37:18</p> <p><b>checking</b> 115:24</p> <p><b>chemical</b> 40:3</p> <p><b>chessboard</b> 86:20</p> <p><b>chest</b> 64:12</p> <p><b>chicago</b> 121:24</p> <p><b>chips</b> 86:20</p> <p><b>chloride</b> 120:4</p> <p><b>chop</b> 57:15</p> <p><b>circle</b> 73:13</p> <p><b>circled</b> 24:13</p> <p><b>circulating</b> 13:1</p> <p><b>circumferential</b></p> <p>35:18</p> <p><b>ciscc</b> 120:1</p> <p><b>cities</b> 138:8,19</p> <p>139:3</p> <p><b>citing</b> 103:4</p> <p>121:15</p> <p><b>citizen</b> 7:14 64:6</p> <p><b>city</b> 3:7,9 31:23</p> <p>87:20 88:1,3,16</p> <p>138:17,20</p> <p><b>claim</b> 95:23</p> <p>100:11</p>	<p><b>claims</b> 107:12</p> <p><b>clarified</b> 99:8</p> <p><b>class</b> 53:8,9,12,20</p> <p>53:24 54:4,7,12,22</p> <p>56:15 57:1</p> <p><b>classification</b></p> <p>53:16</p> <p><b>classifications</b></p> <p>53:8,12</p> <p><b>clay</b> 23:16 24:16</p> <p>25:15</p> <p><b>clean</b> 94:19 124:25</p> <p><b>clear</b> 69:9 87:14</p> <p>95:17 98:12 99:6</p> <p>104:8</p> <p><b>clemente</b> 69:16</p> <p>71:5 77:19,24</p> <p>78:1 87:20 88:2</p> <p>88:17 89:18 105:5</p> <p>138:7,9</p> <p><b>click</b> 7:25 85:7</p> <p><b>climate</b> 105:13</p> <p><b>clive</b> 18:6 20:12</p> <p>21:21,22 23:21</p> <p>24:9 53:6,21 57:1</p> <p>57:4,6 60:11</p> <p>103:2 120:20</p> <p>121:10,11 122:2</p> <p><b>close</b> 56:25 73:21</p> <p>107:22 137:23</p> <p><b>closely</b> 86:15,16</p> <p><b>closer</b> 51:12 74:20</p> <p><b>closest</b> 35:11 54:6</p> <p><b>closing</b> 76:11</p> <p><b>closure</b> 6:10</p> <p><b>clothing</b> 105:8</p> <p><b>club</b> 3:16</p> <p><b>coal</b> 40:11</p> <p><b>coalition</b> 89:18</p> <p><b>coast</b> 69:15 70:14</p> <p>76:14 130:20</p>	<p>138:8</p> <p><b>coastal</b> 9:8 27:4</p> <p>32:25 39:8 75:5</p> <p>93:14 94:22 95:1</p> <p>95:4 97:6 98:15</p> <p>98:22 100:10,23</p> <p>102:2,6 111:19</p> <p>112:1,8,16,22,25</p> <p>113:1,23 114:10</p> <p>115:11 125:24,25</p> <p>126:14,25 127:22</p> <p>127:23 129:2,24</p> <p>130:10,17 138:18</p> <p><b>coastkeeper</b> 3:13</p> <p><b>coastline</b> 69:24</p> <p>77:16 100:4</p> <p><b>code</b> 37:5,8,10,12</p> <p>94:25 117:22,24</p> <p>118:8,12,15</p> <p><b>codes</b> 37:6</p> <p><b>coffee</b> 123:9</p> <p><b>coincide</b> 87:21</p> <p><b>cold</b> 33:17,18</p> <p>36:22 40:5 42:7</p> <p>118:9</p> <p><b>collaboration</b></p> <p>119:23</p> <p><b>collect</b> 24:21 63:7</p> <p><b>collects</b> 132:2</p> <p><b>collisions</b> 74:15</p> <p><b>colonization</b> 76:9</p> <p>77:14</p> <p><b>colonize</b> 76:6</p> <p><b>colors</b> 77:5</p> <p><b>combined</b> 54:11</p> <p><b>come</b> 17:25 39:4</p> <p>44:23 45:12 55:8</p> <p>66:15 74:25 78:19</p> <p>81:23 86:19 88:16</p> <p>89:5,7,22 91:12,23</p> <p>96:19 106:17</p>	<p>110:16,19 125:11</p> <p>135:14 137:17</p> <p><b>comes</b> 23:8 53:7</p> <p>54:4 65:15</p> <p><b>comfortable</b></p> <p>117:10</p> <p><b>coming</b> 44:8,9</p> <p>111:3 125:13</p> <p>142:15</p> <p><b>commencing</b> 2:10</p> <p><b>comment</b> 4:1 6:5</p> <p>9:22 11:5 12:21</p> <p>16:24 17:7 19:22</p> <p>39:18 40:1 58:12</p> <p>58:13 67:1,6,7</p> <p>68:14,17,21 78:6</p> <p>79:24 80:4 86:14</p> <p>87:10 90:16,20</p> <p>91:12 99:13,14</p> <p>101:2 102:19</p> <p>104:3,14,18 105:2</p> <p>106:2,3 107:5,20</p> <p>107:23,24 108:16</p> <p>139:7</p> <p><b>comments</b> 10:1,2</p> <p>10:25 11:4,14</p> <p>12:19 13:6 19:23</p> <p>20:18 25:20,24</p> <p>39:17 54:25 60:12</p> <p>60:22 87:6 95:6</p> <p>97:16 99:7,10</p> <p>102:11 104:19</p> <p>107:10,14,25</p> <p>108:9 127:2</p> <p>137:25 138:7</p> <p>139:7,17</p> <p><b>commercially</b></p> <p>80:24</p> <p><b>commission</b> 15:6</p> <p>27:4 33:1 39:8</p> <p>40:8 63:12,19</p>
--	---	--	--

[commission - construction]

66:6 70:14 75:5 93:15 94:22 95:2 95:4 97:6 98:15 98:15,22 100:10 100:23 102:2,7 111:19,19 112:1,8 113:3,16,18 115:5 125:24,25 126:5 126:14 127:4,22 127:23 129:2,23 129:25 130:10,18 131:19 132:6 <b>commission's</b> 127:1 <b>commissions</b> 130:5 <b>commit</b> 16:11 142:16 <b>commitment</b> 113:3 <b>commits</b> 142:17 <b>committed</b> 29:3 115:12 <b>committee</b> 11:22 41:7 89:10 117:24 <b>common</b> 74:22 85:25 <b>communicated</b> 74:11 <b>communities</b> 6:9 8:10 15:13 70:1 86:2 90:9,10 140:7 141:11 <b>community</b> 2:2 3:1 5:12 6:13 7:1 7:2,6 8:7 14:17 15:4,7 16:2 20:10 31:20 63:22 70:10 85:23 88:20 89:7 99:6 107:16 138:22 139:3	140:2,12 141:12 <b>compact</b> 23:14 <b>compacted</b> 25:13 <b>companies</b> 112:14 <b>company</b> 23:24 55:3 112:13 132:14,19 <b>compare</b> 44:11 64:4 69:21 71:15 <b>compared</b> 64:25 65:24 71:22 <b>compensation</b> 122:21,22 <b>competing</b> 5:7 <b>competition</b> 100:14 <b>complete</b> 37:4 126:17 137:15,16 <b>completed</b> 27:19 30:6 31:8 38:3 80:13 <b>completely</b> 68:4 119:13 134:24 <b>completing</b> 29:22 <b>complex</b> 81:15 <b>compliance</b> 75:10 <b>complicated</b> 7:18 53:17 91:9 114:13 <b>component</b> 24:12 50:2 53:4 55:18 72:22 82:16 83:9 <b>components</b> 24:3 29:21 30:1 49:22 49:24 51:5 52:2 58:7 131:21 141:20 <b>composition</b> 70:23 <b>compositions</b> 70:21 <b>comprehensive</b> 33:6	<b>computer</b> 18:20 80:20 88:7 <b>concentration</b> 62:23 <b>concentrations</b> 62:5 <b>conceptual</b> 82:16 82:18,22 83:12 84:12 <b>concern</b> 40:4 46:10 88:15,16 92:18 120:21 122:11 134:25 137:1 <b>concerned</b> 121:3 138:12 141:9 <b>concerning</b> 85:21 121:16 133:11 <b>concerns</b> 73:1 88:18 94:23 103:5 103:10,12 107:2 107:11 138:11 <b>concluded</b> 70:8 72:5 <b>concluding</b> 34:19 <b>conclusion</b> 66:13 <b>conclusions</b> 66:2 <b>concrete</b> 22:10 34:24 <b>concur</b> 103:9 <b>condition</b> 28:9 <b>conditions</b> 6:14 30:6 113:11 115:24 116:8 <b>conduct</b> 26:20 73:22 76:1 <b>conducted</b> 40:22 73:8 74:14,15 <b>conduit</b> 8:8 62:15 <b>conduits</b> 65:9	<b>conference</b> 79:1 <b>confidence</b> 15:11 75:12 <b>confines</b> 36:20 <b>confirm</b> 57:22 115:3 121:2 <b>congratulate</b> 10:21 <b>congress</b> 85:22 <b>congressman</b> 15:25 16:11,16 17:11 <b>connect</b> 137:19 <b>connected</b> 60:20 68:8 <b>connection</b> 81:4 <b>consequences</b> 100:9 <b>conservative</b> 63:1 <b>conservatively</b> 65:6 <b>consideration</b> 128:3,17 129:11 <b>considering</b> 100:18 <b>consignment</b> 96:3 <b>consistently</b> 71:23 71:25 75:13,20 <b>consists</b> 71:1 122:25 <b>constantly</b> 12:15 <b>construct</b> 72:8 123:1 <b>constructed</b> 69:14 70:4,18,25 72:10 103:3 <b>constructing</b> 75:4 <b>construction</b> 73:22 74:3,5,8,8 74:12,17 103:6
---	---	---	--

<b>consultant</b> 34:18 98:25 112:3,7,7 <b>consultation</b> 72:21 73:25 <b>consulting</b> 112:13 <b>contact</b> 88:23 <b>contain</b> 29:12 45:4 <b>containers</b> 58:23 94:13 <b>containment</b> 28:22 30:2,7 49:19 51:3,13 52:3,7 55:15 57:21 58:14,15 109:9 <b>contaminants</b> 62:1 <b>contaminated</b> 61:10 <b>contamination</b> 63:5 105:9,15 <b>context</b> 13:22 40:2 77:12 <b>continue</b> 5:23 7:6 8:21,24 26:22,23 27:10 30:8 31:6 50:19 76:1 79:13 79:15 105:23 128:12 132:24 137:2 139:14 140:24 <b>continued</b> 95:22 <b>continues</b> 30:7 60:5 <b>continuing</b> 26:16 80:19 <b>continuous</b> 76:9 76:19 <b>contract</b> 14:1 60:2 132:15,22 <b>contractor</b> 26:13 48:23	<b>contractors</b> 8:9 <b>contractual</b> 132:17 <b>contribute</b> 12:11 <b>contributed</b> 15:17 <b>contributions</b> 10:8 <b>control</b> 24:25 25:4 44:7 56:13 131:16 131:24 132:22 <b>convention</b> 5:8 <b>conversation</b> 8:6 90:13 108:10,15 <b>conversations</b> 25:21 <b>convincing</b> 97:6 <b>convoluted</b> 115:10 <b>coolant</b> 50:1 <b>coolest</b> 35:8 40:1,7 40:10,13 <b>cooling</b> 44:24 70:8 70:11 <b>cooperative</b> 20:3 <b>copies</b> 5:15 <b>copy</b> 79:11 94:25 <b>corner</b> 86:24 <b>corners</b> 94:19 <b>corporate</b> 30:23 <b>correct</b> 41:13 45:1 45:7 60:8 106:13 133:18,21 <b>corrosion</b> 34:20 35:7 40:4 43:11 96:3,11 120:5,8 <b>cosmic</b> 65:14 <b>cost</b> 105:12 <b>council</b> 3:7 87:11 88:16 89:22 138:6 <b>counsel</b> 67:18 <b>counted</b> 75:7 <b>counter</b> 135:23 136:1	<b>country</b> 6:2 15:7 31:7 55:5 64:15 82:5 128:11 <b>counts</b> 92:24 <b>county</b> 2:3 3:10,13 <b>couple</b> 18:2 40:14 40:18 59:9 83:24 108:20,20 111:14 111:16 116:21 138:15 139:19 <b>coupon</b> 34:12 38:1 38:3,13 41:18,20 43:10 <b>coupons</b> 34:7,9 <b>course</b> 42:11 80:23 82:19 101:22 119:17 127:4 <b>court</b> 142:22 <b>courtesy</b> 38:19 <b>cover</b> 8:25 25:14 76:5 103:20 <b>coverage</b> 67:19,21 67:24 <b>covered</b> 22:6 23:16 104:22 126:9 <b>covid</b> 5:24 13:14 13:24 <b>crack</b> 45:10 97:4 110:23 111:1,4 125:9,13,14,15 <b>cracked</b> 96:11 <b>cracking</b> 34:20 40:4 43:11 94:2 95:25 96:4 120:5 125:12 <b>cracks</b> 94:20 97:3 <b>crazy</b> 21:17 <b>create</b> 70:15 76:7 136:24,25	<b>created</b> 96:24 <b>creates</b> 123:6 <b>creation</b> 69:24 <b>credible</b> 33:3 <b>credit</b> 75:7,16 <b>critical</b> 11:15 36:2 52:6 55:14 <b>cross</b> 35:17 64:15 <b>crustaceans</b> 63:6 63:13 <b>csr</b> 1:22 <b>cultural</b> 72:24 73:2,7,10,12,20 <b>cumulative</b> 75:18 <b>curiosity</b> 43:21 <b>curious</b> 46:25 55:6 76:25 <b>current</b> 51:4,14 82:4 94:6 98:17 111:20 114:3 121:6 <b>currently</b> 36:22 112:3 <b>curvature</b> 34:11 <b>custom</b> 5:15 <b>cut</b> 9:2 50:15 51:18 57:14 <b>cutting</b> 50:20 57:12 58:20
<b>d</b>			
<b>dakota</b> 38:16 <b>damage</b> 46:11,12 47:3,4,9 <b>dan</b> 3:3 11:3 15:19 15:22 43:15,17,19 77:1 78:5,6,18,24 79:5,13,22 91:5 101:9 107:22,23 108:15 111:8 112:4 118:17 123:14 131:9			

[dan - details]

<p>133:8 135:21 138:3 <b>dana</b> 3:9 76:12 123:1 138:8 <b>dangerous</b> 23:8 127:12 <b>data</b> 35:11 39:9 63:17,24 71:20 79:13 92:9,10 93:9 107:9 109:7 115:23 123:25 126:4 134:1,21,23 135:4 137:1 138:7 138:11,13,21 <b>date</b> 102:6,8 143:18 <b>dave</b> 141:4 <b>david</b> 3:2 5:4,13 7:11 8:16,19 11:23 12:2,12 13:8 14:12 15:24 16:18,20 17:4 18:16,19 19:2,6,10 19:13,17 20:6,24 20:25 21:8,13,14 21:16 26:5 27:6 30:16 31:4,18 38:9,18 39:3,14 43:8,20 44:19 45:23 48:2,6,12,21 53:4 54:18 55:25 56:18 59:6 60:10 66:18 67:17 68:13 69:3,8 76:23 78:3 78:7 79:7,20 80:8 85:13,16 87:11,13 88:6,25 89:20 90:25 91:2,4,8,18 91:19 92:8,12,16 92:24 95:5,17 97:15 98:2,6,12</p>	<p>99:11 101:1,6,12 101:15 102:10,15 102:23 103:25 104:8,17 105:3 106:1,4,7,15 108:6 109:22 110:4,5 111:11 114:18 115:19 118:21 120:24 121:4,20 122:8,18 129:15 133:6,7,20 134:12 135:20 136:8,23 139:6,22 141:5 <b>day</b> 6:7 21:24 23:7 25:5 64:7 65:25 69:23 81:24 140:19 143:20 <b>days</b> 24:11 126:16 142:11 <b>de</b> 109:23 <b>deadline</b> 102:8 <b>deadlines</b> 100:12 <b>deadly</b> 105:14 <b>deal</b> 6:10 76:13 100:9 136:15 <b>debbie</b> 106:5,6,8,9 106:10,15,17 107:18 108:1,1,6,8 129:8 <b>debbie's</b> 106:12 <b>debris</b> 23:15 24:15 <b>decade</b> 116:9 <b>decades</b> 121:5 <b>decays</b> 44:15 <b>december</b> 93:24 <b>decided</b> 117:13 <b>decisions</b> 89:12 <b>deck</b> 18:20 <b>decommission</b> 114:6</p>	<p><b>decommissioned</b> 121:25 <b>decommissioning</b> 1:7 2:1 6:17,21 8:11 9:8 26:10,14 28:16,17 29:16 30:9,13 31:6,17 32:3 48:10,15,22 49:11 53:18 54:14 55:4 60:2,3 75:8 93:17 113:1 116:3 116:12 128:5,20 129:10 130:7,24 132:12,18,25 141:3 <b>deconstruction</b> 26:18 <b>decontamination</b> 55:20 <b>dedicated</b> 28:12 74:11 85:4 <b>dedication</b> 71:4 <b>deep</b> 25:2 <b>defect</b> 110:24 117:12 124:8 <b>defense</b> 1:8 9:5,6 26:23 30:15 32:7 32:8,20 41:14 95:25 <b>define</b> 75:8 <b>definitely</b> 41:6 93:12 <b>deform</b> 42:12 <b>degradation</b> 33:9 45:18 <b>degrees</b> 21:23 45:8 <b>delay</b> 8:17 <b>delighted</b> 79:21 <b>democracy</b> 107:7 <b>democratic</b> 5:8</p>	<p><b>demolition</b> 52:12 55:24 <b>demonstrated</b> 34:3 36:15 <b>demonstrating</b> 75:22 <b>demonstrator</b> 27:1 <b>denise</b> 1:22 <b>dental</b> 64:12,14 <b>dentist</b> 96:12 <b>department</b> 3:10 16:13 41:5 84:24 93:25 128:9,12 137:19,20 <b>dependant</b> 86:11 <b>depiction</b> 51:22 <b>deplorable</b> 105:6 105:16 <b>deploy</b> 33:12 35:22 47:15 <b>deployed</b> 36:20 <b>deployment</b> 36:14 38:14 <b>deposition</b> 42:8 <b>depth</b> 1:8 9:5,6 26:23 30:15 32:7 32:20 41:14 <b>describes</b> 26:9 <b>describing</b> 100:4 122:10 <b>description</b> 42:6 <b>designed</b> 69:18 <b>desktop</b> 19:7 <b>destroy</b> 93:15 <b>detail</b> 48:15 86:7 98:22 112:1 114:16 125:4 141:1,2 <b>details</b> 27:9 28:3 48:18 53:15</p>
--	---	---	--



[detect - draw]

<b>detect</b> 109:17 123:17 <b>detection</b> 33:10 <b>determine</b> 96:13 123:20 <b>determined</b> 53:16 75:23 <b>develop</b> 27:10 <b>developed</b> 62:8 <b>developing</b> 33:10 36:8 84:11 <b>development</b> 37:4 71:16 80:11 83:19 84:25 112:16,25 113:23 114:11 115:11 <b>developments</b> 98:19 111:23 <b>develops</b> 123:19 <b>device</b> 78:13 <b>diagnosis</b> 61:20 <b>dial</b> 8:2 <b>dialog</b> 12:20 <b>diane</b> 17:22 <b>dictated</b> 37:16,21 <b>diego</b> 3:2 131:15 131:23 <b>differences</b> 64:22 <b>different</b> 7:24 12:15,25 15:8,8,13 15:14 23:23 36:12 36:15 58:9,13 61:11 64:23 66:24 70:20 71:8 77:5 81:16,18 106:25 108:23 110:12,12 128:1 <b>difficult</b> 7:21 11:16 <b>difficulties</b> 14:10 14:22 48:13 85:8	85:19 <b>diffuser</b> 62:16 <b>diffusers</b> 62:25 63:4 70:12 <b>digits</b> 97:23 <b>dilution</b> 62:13 63:2 <b>dimensions</b> 58:6 <b>direct</b> 16:12 <b>direction</b> 7:9 137:6 143:12 <b>directly</b> 8:1 16:22 29:8 <b>director</b> 100:11 <b>disagreement</b> 16:6 <b>discharge</b> 61:15 62:12,14,15,24 65:9 131:21,23 132:3 138:16,17 139:2,13 <b>discharged</b> 70:12 <b>discharges</b> 131:17 132:7 <b>disconnect</b> 66:20 135:3 <b>discuss</b> 28:2 132:17 136:21 <b>discussed</b> 14:17 80:12 82:3 117:6 <b>discusses</b> 27:1 <b>discussing</b> 32:19 <b>discussion</b> 9:19 11:5 56:25 66:24 142:5 <b>discussions</b> 5:17 14:14,15 107:9 <b>disease</b> 61:20 <b>dismantle</b> 51:9 <b>dismantlement</b> 9:14 28:5,6 49:16 130:25	<b>disparage</b> 43:9 <b>disposal</b> 81:2 <b>disposed</b> 25:13 <b>distancing</b> 5:25 13:11 <b>distracted</b> 86:23 <b>district</b> 3:5 20:4 <b>disturb</b> 28:6 <b>ditto</b> 139:14 <b>dive</b> 73:8,23 <b>diverge</b> 115:20 <b>divergence</b> 114:5 <b>diverse</b> 76:20 <b>diversity</b> 69:23 <b>divider</b> 47:5 <b>diving</b> 70:2 <b>document</b> 73:24 98:21 111:25 <b>documented</b> 66:23 <b>doe</b> 36:17 40:20 42:7 45:13 95:19 96:1,6 119:3 130:15 <b>doing</b> 11:6 15:9 17:11 38:21 40:12 41:10,11 48:23 50:18 58:18 80:15 84:9 112:13 113:5 118:22 124:2 128:24 <b>doll</b> 47:14,18 <b>dollar</b> 96:24 105:12 <b>dolls</b> 46:16,19,21 46:22 <b>dome</b> 51:3 <b>domes</b> 28:22 29:13 29:15,24 30:2,7 49:18 52:3,5,11 55:8,24 56:7	<b>donna</b> 3:10 90:21 91:12,23,24,25 92:2,4,11,13,14,18 95:20 119:2 134:22 <b>donna's</b> 92:3 118:19 <b>door</b> 118:24 119:1 119:9 <b>doors</b> 109:5,6 <b>doritos</b> 43:12 <b>dose</b> 62:6 64:2,17 64:19 65:6,12,13 65:21 66:9 119:17 <b>doses</b> 63:2 64:8 <b>doug</b> 3:20 9:24 13:5,6,7,8 25:25 26:4,5 30:17 31:3 48:8,11,12 49:4,6 69:5 108:25 109:1 112:4 115:9 116:19 117:1,3 118:4 119:6 123:21,22 125:6 125:10,18 126:1,1 126:21,24 127:13 127:19 129:20 131:13,18 132:16 133:5,18,20 135:11,15 136:6,8 139:19,21,22 141:6 <b>dr</b> 3:2 60:16 61:3 61:4,6 67:20 71:3 84:23 90:7 99:23 102:14 140:4 <b>drain</b> 24:20 25:12 <b>drama</b> 136:24 <b>drank</b> 65:17 <b>draw</b> 6:24
---	---	---	---

[drawback - especially]

<b>drawback</b> 104:14 <b>draws</b> 66:2 <b>dress</b> 105:7 <b>drink</b> 65:20 <b>drinking</b> 65:22 <b>drive</b> 28:24 <b>driving</b> 76:9 <b>dropped</b> 18:8 <b>dry</b> 1:7 28:7 30:15 31:11 32:19 34:20 36:15 124:22 128:25 <b>drying</b> 124:23 <b>due</b> 14:10,21 65:14 70:10 85:7 85:18 96:3,3 98:18 102:6 111:21 125:25 <b>dumped</b> 22:13 <b>dumps</b> 22:16 <b>dust</b> 25:3	<b>echo</b> 88:5 141:6 <b>ecological</b> 70:16 <b>ecologist</b> 71:3 <b>ecology</b> 71:17 76:10 <b>ecosystem</b> 69:19 69:20 71:17 <b>edges</b> 117:4 <b>edison</b> 8:9 30:22 31:4 70:14 92:21 93:2,24 95:22 96:20,23 98:14,20 98:25 99:3,4 100:22 111:18,24 112:7,19 127:17 139:23 141:7 <b>edison's</b> 100:20 <b>educate</b> 88:19 <b>educated</b> 47:22 115:20 116:8 <b>effect</b> 24:21 <b>effective</b> 23:25 <b>effectively</b> 34:19 124:17 <b>effects</b> 55:3 66:11 129:13 <b>efficient</b> 52:18 <b>effluent</b> 64:1 <b>effort</b> 6:12 50:2 83:17 84:6 85:5 86:20,22 <b>efforts</b> 7:6 130:7 <b>eggs</b> 82:5 <b>eight</b> 35:1 54:2 126:3 <b>either</b> 11:10 108:21 118:22 <b>el</b> 100:2 <b>elected</b> 90:9 <b>electrical</b> 44:5	<b>electricity</b> 23:5 <b>elements</b> 44:3 81:17 <b>elevated</b> 110:9 <b>elevation</b> 114:2,8 116:14 <b>eliminate</b> 73:19 <b>elimination</b> 131:22 <b>emerged</b> 7:4 <b>emergency</b> 19:25 <b>emerging</b> 6:19 <b>emphasis</b> 14:9 47:17 <b>emphasized</b> 17:15 <b>empirical</b> 90:2 <b>employee</b> 98:25 112:3 143:16 <b>emptying</b> 141:18 <b>encourage</b> 30:11 138:18 <b>encouraged</b> 17:13 <b>encouragement</b> 78:25 <b>endorse</b> 118:9,15 <b>endorsing</b> 118:8 <b>endowment</b> 3:4 <b>energy</b> 16:13 18:17 41:6 42:11 84:24 93:25 128:9 128:13 <b>engage</b> 81:7 119:24 142:8 <b>engagement</b> 2:2 3:1 5:12 7:20 8:8 85:1 89:8 <b>engineer</b> 12:8 32:14 73:17 <b>engineered</b> 25:14 <b>engineering</b> 34:17 109:3 127:1	<b>enlarge</b> 29:25 <b>enormous</b> 10:8,19 <b>enormously</b> 6:8 15:1 141:8 <b>ensure</b> 14:8 37:19 74:12 82:14 117:18 132:21 <b>ensures</b> 33:10 <b>ensuring</b> 32:9 33:7 132:7 <b>enter</b> 21:5,6 134:7 <b>enters</b> 62:15 <b>entire</b> 34:23 65:23 72:15 136:3 <b>entity</b> 132:23 <b>envelopes</b> 132:9 <b>environment</b> 61:13 117:9 122:22 124:25 129:22 <b>environmental</b> 63:10 76:16 116:3 129:16,21 130:23 131:5 <b>epa</b> 64:20,25 65:22 66:6 <b>epri</b> 36:10 40:20 41:2,5 46:18 119:23 <b>equality</b> 76:9 <b>equipment</b> 30:1 50:8,17 51:5,8,14 51:16 58:19 116:3 <b>eric</b> 60:16,25 61:4 66:19 68:14 105:20 <b>eric's</b> 138:25 <b>ernie</b> 84:23 86:7 <b>especially</b> 16:9 50:4 80:13 103:12 103:15
<b>e</b>			
<b>e</b> 68:1 <b>ea</b> 129:10,14 <b>eager</b> 13:22 <b>earlier</b> 13:11 15:21 26:20 49:6 50:11 55:8 59:12 79:1 80:12 88:11 92:23 <b>early</b> 10:13 27:12 33:10 <b>easement</b> 114:3 <b>easier</b> 51:8 139:4 <b>easily</b> 135:5 138:21 <b>eastern</b> 56:23 <b>easy</b> 142:5 <b>eat</b> 63:8 <b>eating</b> 63:3 65:8			

[essential - figure]

<b>essential</b> 76:10 <b>essentially</b> 121:25 122:1,20,24 123:4 124:10,24 136:14 <b>established</b> 27:25 66:5 <b>estimate</b> 65:2,23 112:22 <b>estimated</b> 62:6,23 64:2 65:6 <b>etching</b> 77:17 <b>ether</b> 109:24 <b>evacuation</b> 124:21 <b>evaluate</b> 36:11 72:24 117:15 <b>evaluated</b> 94:17 119:3 129:13 <b>evaluation</b> 75:25 117:15 <b>evening</b> 13:9 15:23 32:13 61:5 69:11 80:20 142:13 <b>event</b> 33:13 <b>events</b> 100:3 <b>eventually</b> 81:17 <b>everybody</b> 8:7 64:9 80:9 104:22 111:2 <b>everybody's</b> 103:20 <b>everyone's</b> 7:19 <b>evidence</b> 94:4 <b>evident</b> 28:23 <b>evolution</b> 47:10 <b>exacerbated</b> 100:2 <b>exactly</b> 121:7 <b>exaggerates</b> 105:19 <b>exaggerating</b> 105:24	<b>example</b> 61:19 63:6,15 <b>excavate</b> 24:2 <b>excavated</b> 25:10 <b>exceeds</b> 33:2 <b>excel</b> 106:8 <b>excellent</b> 12:12 34:15 76:23 78:3 85:16 89:20 102:10 108:11 110:2 141:5 <b>exception</b> 35:24 <b>exchange</b> 6:22 <b>exchangers</b> 61:25 <b>excited</b> 46:21 78:15 <b>exclusion</b> 74:9 <b>excuse</b> 64:15 <b>executive</b> 100:11 <b>exhaust</b> 44:9 119:17 135:4 <b>existing</b> 77:13 92:19 128:20 <b>exists</b> 107:15 <b>exit</b> 118:25 <b>exits</b> 5:20,21 <b>expand</b> 73:17 <b>expanded</b> 81:4 <b>expansion</b> 68:23 69:13 72:8,14 75:4 77:23 78:15 <b>expansive</b> 99:18 <b>expect</b> 52:12 55:7 55:23 <b>expected</b> 16:3 <b>expense</b> 136:24 <b>experience</b> 11:15 61:7 <b>experienced</b> 101:23	<b>experimental</b> 70:18 <b>expert</b> 83:25 105:20 127:1 136:11 <b>expertise</b> 84:2,16 <b>experts</b> 83:21 84:13,16 <b>explain</b> 41:25 137:3 <b>explaining</b> 122:14 <b>explore</b> 80:16,23 81:24 82:1 <b>explores</b> 82:11 <b>exponential</b> 114:25 <b>exposed</b> 62:6 <b>exposure</b> 62:22 64:5 65:14 105:8 105:9,13,15,17,20 <b>exposures</b> 64:13 64:14 <b>express</b> 138:10 <b>extend</b> 112:23 <b>extended</b> 119:22 <b>extends</b> 77:24 112:18 <b>extensive</b> 133:23 <b>extensively</b> 122:3 <b>external</b> 81:8 <b>externally</b> 44:7 <b>extra</b> 136:24 <b>extracted</b> 139:1 <b>extraordinary</b> 54:22 <b>extreme</b> 66:21  <b>f</b>  <b>facilitated</b> 12:20 <b>facilitating</b> 11:5 <b>facilities</b> 36:16 84:3	<b>facility</b> 34:4 38:2 53:25 56:14 57:2 81:1,1 82:21 83:5 93:22 103:2 120:20 <b>facing</b> 6:13 <b>fact</b> 86:10 88:19 111:10 114:6 <b>factors</b> 98:18 111:22 <b>facts</b> 107:9 <b>factual</b> 61:8 90:12 <b>fahrenheit</b> 45:8 <b>failing</b> 93:13 <b>fails</b> 42:19,19 <b>fairly</b> 63:8 <b>fallen</b> 72:1 <b>falls</b> 53:19 130:2,4 <b>fantastic</b> 107:2 <b>far</b> 66:3 <b>farther</b> 116:18 <b>fascinated</b> 116:23 <b>fast</b> 47:25 123:6 <b>faster</b> 55:6 120:12 <b>federal</b> 39:10 66:5 72:23 130:4 <b>fee</b> 59:24 <b>feed</b> 106:21,23 <b>feel</b> 113:25 139:25 140:1,8 <b>feet</b> 62:18 69:22 114:7 <b>feinstein</b> 17:22 <b>fencing</b> 28:3 <b>fiction</b> 46:4 <b>field</b> 84:4 133:25 <b>fifth</b> 52:8 <b>fighting</b> 20:24 21:1 <b>figure</b> 59:9,15 86:22 89:9 108:12
---	---	---	---

[figure - fuel]

<p>137:20 141:25</p> <p><b>figuring</b> 87:1</p> <p><b>filament</b> 81:3</p> <p><b>file</b> 106:8</p> <p><b>fill</b> 24:4,15,17 80:19 117:4 118:3</p> <p><b>filling</b> 141:19</p> <p><b>film</b> 135:14 136:10</p> <p><b>filter</b> 139:5</p> <p><b>filters</b> 25:15 61:24 124:22</p> <p><b>final</b> 132:11</p> <p><b>finally</b> 31:14 34:17 81:5 99:5</p> <p><b>financially</b> 132:24 143:15</p> <p><b>find</b> 12:14,24 39:25 44:12 45:18 85:4 87:15 89:5 89:11 138:12 139:5</p> <p><b>findings</b> 16:1 83:11,15</p> <p><b>fine</b> 92:7 99:17</p> <p><b>finish</b> 118:9</p> <p><b>finished</b> 52:13</p> <p><b>finishing</b> 141:17</p> <p><b>fired</b> 112:12</p> <p><b>firm</b> 127:1</p> <p><b>firmness</b> 55:10</p> <p><b>first</b> 16:3 21:25 24:4 26:12 33:5 33:16 39:20 43:9 45:19 47:2 56:2 58:3 60:24 71:9 77:22 80:23 81:10 81:11 88:1 90:20 91:11 98:7,9 99:1 102:5,8,20 104:18 106:18 108:18 112:5 121:19,21</p>	<p>122:3,14 123:23 125:24 126:2 127:20 128:18 135:22 137:11 138:3 139:19</p> <p><b>fish</b> 63:5,13 65:8 71:12,18 72:3 75:13 123:7</p> <p><b>fishing</b> 70:2 75:14</p> <p><b>fit</b> 92:8</p> <p><b>five</b> 34:25 36:11 36:13 39:9 46:18 47:21,22 70:22 76:2 87:9 90:18 90:22 102:3 126:13</p> <p><b>fix</b> 45:11</p> <p><b>flight</b> 64:16</p> <p><b>flips</b> 22:15,16</p> <p><b>floating</b> 76:7</p> <p><b>flooded</b> 58:16</p> <p><b>floor</b> 11:25 13:7 15:22 20:16 25:25 26:4 30:14 32:5 32:11 40:16,17 43:16,17 44:20 48:11,20 56:4 57:9,9 59:19 61:3 69:1 77:1 78:5 80:5,7 87:16 91:15,20,21 92:4 92:17 95:15 97:19 97:21 99:19,20,21 102:24 104:6,20 104:21,23 106:10 106:10 108:14 123:5 137:24 138:4 139:19,21</p> <p><b>flowing</b> 140:11</p> <p><b>flows</b> 8:12</p>	<p><b>flute</b> 44:9</p> <p><b>flying</b> 23:8</p> <p><b>focus</b> 9:12 26:16 28:17 35:19 49:7 49:8 51:25 80:15</p> <p><b>focused</b> 11:19 13:13 28:22 29:22 31:15 85:25 87:4 90:14 116:22</p> <p><b>focusing</b> 49:15</p> <p><b>fold</b> 29:4</p> <p><b>folks</b> 19:13 32:2 48:3 68:7 84:1,18 84:22 86:11 89:22 137:2</p> <p><b>follow</b> 5:23 14:4 103:19 109:13,14 119:13 138:6</p> <p><b>followed</b> 9:21 48:4</p> <p><b>following</b> 76:18 127:8 142:23</p> <p><b>follows</b> 31:1,5</p> <p><b>food</b> 63:5</p> <p><b>foot</b> 111:21</p> <p><b>footprint</b> 98:17</p> <p><b>force</b> 10:16,17 15:20 16:1,2,7,17 16:24,24 17:7,10 17:14,17</p> <p><b>foregoing</b> 143:8 143:13</p> <p><b>foremost</b> 80:23</p> <p><b>foreseeable</b> 97:12</p> <p><b>forest</b> 69:19,20 123:6</p> <p><b>form</b> 30:24</p> <p><b>formation</b> 10:7 69:18 97:4</p> <p><b>formations</b> 77:15</p> <p><b>formats</b> 99:17</p>	<p><b>former</b> 6:6 84:18 84:23 121:13</p> <p><b>forth</b> 91:10 143:9</p> <p><b>forum</b> 91:9,10</p> <p><b>forward</b> 11:21 28:19 49:3 79:16 82:8 85:10 140:25 142:4,13</p> <p><b>found</b> 117:12</p> <p><b>four</b> 18:4,7 20:11 21:20,24 23:12 53:8 97:23 123:10</p> <p><b>fourth</b> 27:9 140:25 141:23 142:7,14</p> <p><b>fraction</b> 66:1</p> <p><b>fractions</b> 66:12</p> <p><b>frame</b> 55:22 84:20</p> <p><b>frankly</b> 7:8 67:24</p> <p><b>frasier</b> 48:17</p> <p><b>free</b> 113:25</p> <p><b>french</b> 24:20 25:12</p> <p><b>frequencies</b> 134:5</p> <p><b>frequent</b> 74:20</p> <p><b>frequently</b> 75:1</p> <p><b>fresh</b> 25:4</p> <p><b>friction</b> 36:18</p> <p><b>friend</b> 7:15</p> <p><b>friends</b> 67:12</p> <p><b>frightened</b> 68:11</p> <p><b>frightening</b> 96:21</p> <p><b>front</b> 6:1 113:17</p> <p><b>frontier</b> 141:25</p> <p><b>fuel</b> 9:20 14:20 17:18 18:12 26:24 27:6,19,20 28:7,9 28:14 31:11 32:9 32:10,14 35:2,9 44:15 49:8 54:6,8 57:15,24 58:6,9,14 80:13,16,25 81:12</p>
---	--	--	--

82:9,14,21,23 83:5 84:2 86:18 89:2 110:12 114:4,9 124:14,14 128:7 128:10,14,16,21 128:24,25 129:12 130:1,1,6,8,9,12 130:18 131:1 133:21 141:17,18 141:19 142:1 <b>full</b> 5:16 16:15 74:4 <b>fun</b> 86:24 <b>functioning</b> 71:21 72:6 <b>functions</b> 75:22 <b>fund</b> 23:20 121:9 128:5,6,19,20 <b>fundamentally</b> 14:19 <b>funding</b> 20:4 100:12 127:22 <b>funds</b> 93:17 100:8 100:20,22 127:18 128:20 129:2 <b>further</b> 143:12,14 <b>future</b> 13:17 37:1 48:16 54:16 59:16 76:15 97:7 105:11 113:10 114:21 130:12	<b>gas</b> 127:11 <b>geiger</b> 135:23,25 <b>gene</b> 6:5,8,22 7:14 9:6 85:24 111:11 135:22 <b>general</b> 15:3 20:9 60:2 <b>generally</b> 26:19 <b>generated</b> 70:11 <b>generations</b> 97:12 <b>generators</b> 49:25 <b>george</b> 105:1,4,4 <b>gerry</b> 10:5,9 <b>getting</b> 9:2 49:8 82:9 90:17 104:9 139:11,13 <b>ghosts</b> 109:24 <b>giant</b> 57:13 69:19 69:21,22 70:6 76:6 <b>gigantic</b> 22:20 24:12 <b>gilmore</b> 90:22 91:12,23,25 92:1,2 92:11,14,18 <b>give</b> 9:9 11:25 24:5 25:25 80:5 93:11 97:19,20 99:20 108:14 122:15 139:18 140:20 <b>given</b> 80:19 95:1 <b>gives</b> 24:13 81:6 83:1 <b>giving</b> 32:5 93:15 <b>glacial</b> 73:5 <b>glad</b> 12:3,10,11 <b>glitch</b> 80:20 <b>glitches</b> 90:16 <b>glue</b> 42:18 <b>go</b> 5:7 7:13 12:18 12:22,23 13:2,5	18:2,3 19:19 20:14 22:13 25:18 25:22 38:12 40:10 40:15 48:8 49:5 50:24 51:11,20 52:8,14,24 53:21 53:25 56:10,19 57:3 58:8,10,24 61:21 63:22,25 68:1 70:4 72:19 76:25 77:2 80:2 80:18 85:2,5 87:9 88:22 90:8 91:23 92:1,9 94:19,21 95:7,12 96:15 97:17,19 102:20 102:24 104:1 107:18,21,23,25 108:18 109:14,15 109:21 116:9 118:19 119:11 123:2 124:8,9 125:20 127:15,21 136:10,18,19 137:23 <b>goal</b> 45:9 89:4 118:9,14 <b>goals</b> 11:19 <b>goes</b> 22:17 40:9 45:19 52:6 55:14 62:15 68:2 <b>going</b> 8:5,20 9:1,4 9:9,11,13,15,18,21 9:24,25 10:4 11:4 15:11,13 17:24 18:15 20:14,23 21:17 25:19 26:2 26:23 29:19,25 32:6 37:3 39:1,5 39:25 40:23 43:12 45:10,12 46:9	48:3,9 49:10 50:14 51:17,25 52:1,15,16,20 53:20 54:10 56:9 57:1,5,7,21 58:2 58:12 60:17 61:2 67:13 68:15,24 78:21 79:14 80:5 82:23,24 85:17,21 85:22,22 86:18 87:18 90:7,17 95:12 96:9,15,18 97:17,19 98:7,8 99:20 100:13 102:13,15,18,18 102:20 104:2 107:21 108:14 109:1,23 110:15 110:25 111:3 116:17 119:6 123:19 127:21 132:14 135:9,17 137:6 138:24 142:5 <b>goldin</b> 60:16,25 61:3,4,6 67:20 90:7 105:20 140:4 <b>good</b> 6:13 7:14 13:8 15:23 29:23 32:12 37:2 39:19 39:24 42:23 61:5 67:9,23 69:11 79:22 80:8 86:19 95:18 106:24 109:7 114:22 122:13 138:15 <b>gotten</b> 60:18 <b>gouged</b> 96:10 <b>gouges</b> 101:21 <b>gps</b> 135:25
<b>g</b>			
<b>g</b> 3:2 <b>gallion</b> 3:21 <b>gallons</b> 65:17,19 65:20 <b>game</b> 141:22 <b>gap</b> 93:25 95:20 95:21 119:4,21,25 <b>garry</b> 3:13			

<b>grade</b> 26:19 114:7 116:13	<b>guidance</b> 5:24 83:21 84:13	<b>harder</b> 139:11	141:14
<b>gradually</b> 49:11	<b>guide</b> 68:24 83:16 118:7	<b>hardness</b> 33:22	<b>helped</b> 9:6 112:10
<b>granaas</b> 3:20 32:6 32:12,13 38:10,20 39:6 40:25 41:13 41:22 42:5 43:3,7 44:2,18 45:1,5,22 47:2 48:5 118:4 119:12 125:5 131:3 135:11	<b>guided</b> 86:6	<b>harm</b> 74:15	<b>helpful</b> 6:9 78:4 86:13 88:21 137:8 140:5
<b>grant</b> 42:23	<b>guiding</b> 84:5	<b>hatch</b> 51:14,16	<b>hereof</b> 142:23
<b>granular</b> 97:3	<b>gun</b> 43:6,9	<b>hailed</b> 74:23	<b>herft</b> 1:22
<b>graphic</b> 77:12	<b>guragain</b> 18:24 91:18 92:7 97:25 102:21 106:14 108:5	<b>haydon</b> 3:11	<b>hi</b> 78:8,9 98:10
<b>grateful</b> 5:9	<b>guys</b> 97:5 105:18 105:23	<b>hazard</b> 47:12,13	<b>hidden</b> 94:20
<b>gray</b> 77:9,13	<b>h</b>	<b>hazards</b> 100:1 112:22	<b>hide</b> 135:16 136:17
<b>great</b> 7:14 13:16 21:2,8 26:8 46:3 59:7 76:12 78:12 78:24 79:19 83:20 99:11	<b>h</b> 113:9 114:22,23 115:19	<b>hd</b> 133:13	<b>high</b> 22:4,7,7 42:18 51:21 75:12 118:25 124:16
<b>greater</b> 53:12 54:4 54:7,12	<b>habitat</b> 70:6 76:20 123:7	<b>heads</b> 106:22	<b>higher</b> 29:20 45:6 56:6 114:2,8 115:6 116:14
<b>greatest</b> 89:6	<b>half</b> 22:9 35:4 46:10 69:15 70:13 126:10	<b>hear</b> 26:25 27:7,9 38:6,7 69:7 85:12 87:12 91:25 95:11 95:16 98:11 104:7 106:16 107:19,21 108:2,7 110:4,5	<b>highest</b> 36:23 53:10,11 75:2
<b>greatly</b> 26:15	<b>hand</b> 24:24 30:14 48:14 98:8 109:2 109:18 123:22	<b>heard</b> 6:6 32:23 43:9 46:15 81:11 83:22 84:19 88:14 99:1 106:6 108:20	<b>highlight</b> 76:15
<b>green</b> 72:11,12,12	<b>handling</b> 128:6	<b>hearing</b> 88:4 105:10 134:22	<b>highly</b> 25:1 29:22 94:11
<b>ground</b> 24:25 65:16 114:8	<b>happen</b> 13:16 62:10 85:22,23 89:19 124:12,17	<b>heat</b> 43:21,24	<b>highway</b> 49:18 55:12
<b>group</b> 16:4,9 37:8 49:1 86:8 88:10 88:15 118:13 133:3	<b>happened</b> 46:20	<b>heated</b> 34:5,13 35:6,15 43:23	<b>hiring</b> 55:3
<b>groups</b> 31:23	<b>happening</b> 96:20 96:25 97:1	<b>heater</b> 44:3	<b>historical</b> 103:5 120:22
<b>grow</b> 69:22	<b>happens</b> 86:2	<b>heaters</b> 44:5	<b>history</b> 50:5 126:2
<b>growing</b> 122:19	<b>happy</b> 12:16 25:9 48:2 54:17 76:21 79:4 88:18 131:12 133:3	<b>heating</b> 42:14	<b>hold</b> 7:6 45:3 140:17
<b>grows</b> 123:6	<b>harbor</b> 123:1	<b>held</b> 71:7 79:1	<b>holders</b> 31:22
<b>growth</b> 114:25	<b>harbors</b> 123:1	<b>helicopter</b> 34:1	<b>holding</b> 7:17
<b>guess</b> 31:13 38:11 47:22 103:16,23 108:25 116:20 129:14	<b>hard</b> 47:19 71:12 76:5 77:13	<b>helium</b> 44:25 45:12 124:11,18 124:21,22,25 125:11 127:9,10	<b>holtec</b> 27:21 33:7 57:24 81:5 96:10 112:17 113:21 115:12,14 124:3 126:3,12 127:25 134:9
		<b>hello</b> 92:11 102:25 104:7	<b>home</b> 6:8
		<b>help</b> 8:13 57:20 77:3,3,7 83:20 84:7 131:13 135:8 136:6 137:20	<b>hon</b> 3:7,8

[hope - inspections]

<p><b>hope</b> 88:24 89:17 136:3 140:23 <b>hopefully</b> 120:14 140:6 <b>hoping</b> 47:20 140:19 <b>horizontal</b> 58:4,11 109:6 119:10 <b>host</b> 16:10 <b>hot</b> 21:22 96:16 97:8 <b>hotline</b> 140:14 <b>hour</b> 65:10 <b>hours</b> 18:8 26:15 52:22 <b>houses</b> 5:22 <b>howard</b> 10:11 11:12 <b>huge</b> 25:4 44:5 100:17,17 139:8 <b>human</b> 64:11 <b>humans</b> 66:11 <b>humor</b> 7:15 <b>hundred</b> 11:18 60:5 <b>hydraulic</b> 34:1</p>	<p><b>immediate</b> 74:12 <b>imp</b> 32:24 33:1,6 33:10,11 34:23 37:7 <b>impact</b> 42:9,11 52:23 61:12 70:7 73:19 95:24 116:4 129:22 131:5 <b>impacts</b> 70:5,9 74:6 122:22 <b>imperative</b> 100:6 <b>implementation</b> 33:1 83:17 <b>implemented</b> 41:4 <b>implications</b> 115:1 <b>importance</b> 7:2 17:17,19 29:18 <b>important</b> 6:25 7:5,9 11:17 17:20 17:24 18:11 25:18 29:14,16 30:2,13 43:2 55:11 67:15 76:6,20 85:10,18 89:4 141:24 142:3 142:3 <b>impressive</b> 25:17 <b>improbable</b> 92:5 <b>improve</b> 127:3 <b>inaccessible</b> 103:6 <b>inaccurate</b> 136:1 <b>inappropriate</b> 137:7 <b>inaudible</b> 94:10,12 95:21 97:11 <b>inch</b> 35:24 36:1 45:16 <b>inches</b> 23:12 <b>incinerator</b> 121:12 <b>inciting</b> 84:2 <b>include</b> 13:14 37:22 63:23 71:18</p>	<p>100:5 130:1 <b>included</b> 37:11 <b>includes</b> 28:8 33:11,22 34:23 63:13 85:1 <b>including</b> 9:3 85:9 88:3 90:6 142:10 <b>increasing</b> 49:12 <b>incredibly</b> 11:14 <b>indefinitely</b> 59:24 <b>independent</b> 34:17 71:7 <b>indians</b> 3:15 73:1 <b>indicate</b> 77:18 <b>indicated</b> 134:3 <b>indicates</b> 101:18 <b>indicator</b> 35:7 <b>induced</b> 120:4 <b>industrial</b> 47:12 121:9 <b>industry</b> 36:7,10 36:22 43:13 119:24 <b>inert</b> 127:11 <b>infinity</b> 75:1 <b>information</b> 8:1 8:12 9:16 13:2 14:23 15:12 29:5 39:11 61:8 67:20 68:1 79:4,10 90:3 90:5,12 93:7 94:5 94:10,21 96:22 108:24 114:14 118:2 131:4 136:20 139:10,11 140:20 <b>informative</b> 141:8 <b>informed</b> 67:23 <b>initial</b> 10:25 33:2 39:23 58:13 77:6</p>	<p><b>initially</b> 23:19 94:3 129:23 <b>initiated</b> 36:11 <b>initiatives</b> 36:25 37:1 <b>inland</b> 92:25 <b>inlet</b> 108:23 <b>input</b> 60:25 119:4 <b>inside</b> 23:16 28:22 29:15 30:3 35:22 43:23 44:3,6 46:2 46:16 47:5 49:17 49:20 51:9,15 52:2 57:21 58:10 <b>insides</b> 52:10 55:15 <b>insofar</b> 142:10 <b>inspect</b> 96:11 97:9 117:17 125:6 126:11 134:10 <b>inspected</b> 34:14,25 35:1,4 97:3 117:12 126:3,8,9 <b>inspecting</b> 46:9 110:25 124:3 <b>inspection</b> 27:2,23 32:21,24 34:23 35:2,19,21 37:21 39:7,20,21 40:9 46:13 47:22 102:1 102:6 124:2 125:23 126:5,14 126:17,22 133:11 133:16 134:6,8 <b>inspections</b> 33:4 37:17 75:25 101:19 102:3 124:6 131:20 133:24,24 134:4 134:10,15,17</p>
<b>i</b>			
<p><b>iceberg</b> 100:15 <b>idea</b> 8:12 32:7 114:22 <b>ideas</b> 68:2 <b>identified</b> 73:10 120:14 <b>identify</b> 125:9 <b>identifying</b> 74:7 <b>image</b> 24:24 <b>images</b> 21:25 23:18 <b>imagine</b> 86:18 <b>imaging</b> 96:8</p>			

[installation - know]

<b>installation</b> 28:7 31:12 <b>institute</b> 78:19 <b>institution</b> 30:24 <b>instructions</b> 7:23 <b>instruments</b> 62:3 <b>integrated</b> 130:13 <b>integrity</b> 32:9 109:16 <b>intend</b> 28:15 <b>intending</b> 100:1 <b>intensity</b> 107:10 <b>interest</b> 20:10 82:20 86:1 <b>interested</b> 143:15 <b>interesting</b> 6:23 57:11 <b>interface</b> 42:13 <b>interim</b> 17:20 56:20 81:2 89:6 89:11 130:16 134:16 <b>interlock</b> 42:13 <b>internal</b> 50:4 54:5 55:17 <b>internals</b> 50:22 <b>international</b> 66:8 <b>interrupted</b> 120:23 <b>interval</b> 126:18 <b>intimately</b> 41:10 <b>introduce</b> 48:9 <b>intuitive</b> 110:14 <b>inundated</b> 73:4 <b>invasive</b> 71:13 <b>invertebrate</b> 71:19 <b>investigate</b> 73:6 <b>invitation</b> 49:1 <b>involve</b> 29:19 49:16	<b>involved</b> 31:24,25 31:25 32:2 41:3 41:10 46:14 92:23 103:4 118:12 130:18 <b>iodine</b> 61:19 <b>ion</b> 61:25 <b>isaacs</b> 83:23 84:17 <b>isfsi</b> 14:25,25 27:17,25 28:13 30:21 31:11 32:14 32:17 35:11 37:16 39:7 40:10 49:9 54:8 81:4,5 98:17 100:20 101:25 110:8 111:21 123:18 127:17 134:15 141:19 <b>isfsis</b> 31:1 <b>ish</b> 90:19 <b>issue</b> 18:17 45:4 79:12 92:6 94:4 109:10,16 118:7 119:9 133:8 134:13 136:7,13 136:13 <b>issued</b> 45:14 99:24 <b>issues</b> 9:12,19 68:22 133:9 137:21 140:14 <b>item</b> 7:4 15:3 51:25 89:24 106:19 <b>items</b> 49:15	78:8,9,24 79:9 104:1 122:6,13,20 123:13 140:3 <b>jenny's</b> 138:25 <b>jerry</b> 109:2,18,21 110:3,7 123:23 <b>jetties</b> 123:2 <b>job</b> 8:13 122:13 <b>joe</b> 5:8 <b>john</b> 3:7 43:17 44:20,21,22 45:2 45:21 59:18,20 60:4,9 <b>join</b> 16:21 89:18 <b>joined</b> 5:9 <b>joining</b> 6:4,7 <b>joint</b> 132:19 <b>juan</b> 3:7 <b>juaneno</b> 72:25 <b>judge</b> 16:16 <b>july</b> 14:13 24:8 27:4,25 29:5,9 53:4 98:14 111:18 126:7 127:5 133:23 <b>jump</b> 114:19 <b>june</b> 14:3 79:3	<b>kelli</b> 3:21 <b>kelp</b> 9:17 63:15 69:17,19,22 70:6,9 71:3,11,12 72:3 75:14 76:6,6,9,10 77:14 122:23,23 122:24 123:5 <b>kept</b> 104:10 <b>kern</b> 10:5 <b>key</b> 28:18,21 65:4 67:19 82:15 100:12 131:9 <b>kids</b> 5:7 <b>kind</b> 6:18 40:22 42:2 57:20 59:2 67:13 77:19,21 93:4 103:16 104:11,13 110:14 123:8,10 135:2,5,7 <b>kinds</b> 9:12 22:2 <b>king</b> 100:2 <b>kinsinger</b> 106:5,9 106:10 107:18 108:1 129:8 <b>kitchen</b> 42:1,4 <b>know</b> 13:10,16,17 30:13 37:3 38:10 39:24 45:13 46:5 46:8 49:21 51:16 67:3,13,16 68:14 77:1 79:10,13 80:14 82:2,2,6 83:3 84:17 86:25 87:20 88:12 91:17 92:14,22 93:3,24 94:6 95:8,25 97:5 98:7 99:3 101:18 101:21 102:7 108:21 109:19 110:14 111:5 114:13 116:18
		<b>k</b>	
		<b>kaleen</b> 91:13,25 92:1 95:12,13,15 95:16,18 127:9 134:23 <b>kathy</b> 3:19 67:2,3 79:25 87:11,17 88:8 90:17 138:6 <b>keen</b> 130:11 <b>keep</b> 28:15 39:5 82:1 90:13 113:11 142:15 <b>keeping</b> 31:15 89:3,15	
	<b>jack</b> 100:11 <b>january</b> 119:16 134:20 <b>jean</b> 118:20 <b>jenny</b> 68:24 69:1,2 69:6,10,11 77:11		



117:5 118:1,23 119:9 120:24 121:15 123:25 124:10,19,25 127:11 129:14 135:5 137:5,15 142:16 <b>knowledge</b> 10:19 79:14 <b>knowledgeable</b> 112:9 <b>known</b> 72:13 128:7 <b>kramer</b> 16:16	<b>largest</b> 9:17 72:16 <b>lastly</b> 76:1 <b>late</b> 71:2 <b>lately</b> 50:19 <b>lawmakers</b> 100:7 <b>laws</b> 135:3 136:25 137:4 <b>layers</b> 23:15 24:16 25:13 32:8 <b>lays</b> 114:16 <b>lead</b> 9:25 36:7 40:3 48:17 108:15 <b>leadership</b> 142:17 <b>leading</b> 35:6 <b>leads</b> 137:4,7 <b>leak</b> 45:16 109:12 109:12,14 110:15 123:17,19,24 124:8,9,12,19 125:10 <b>leaking</b> 93:3,20,21 123:20 <b>lean</b> 119:16 <b>leans</b> 116:11 <b>learn</b> 46:1,3 <b>leave</b> 59:13 122:7 <b>left</b> 24:7,24 25:11 31:9 37:24 51:13 53:2 <b>legislation</b> 16:12 <b>legislative</b> 99:25 <b>letter</b> 15:1 <b>level</b> 24:1 29:20 42:25 51:21 52:25 53:7,12,19 56:6,8 62:18 75:12 96:13 100:1 103:12 111:22 112:15 113:2,3,7,14,21 114:5,7,8,23 115:1 115:7,13,18,21,24	116:8,13 <b>levels</b> 61:15 66:3,4 73:5 98:18 115:17 <b>leverage</b> 83:15 <b>levin</b> 15:25 16:11 17:11 105:12,19 <b>levin's</b> 10:16,17 15:20 16:16 <b>liberty</b> 132:16 <b>license</b> 117:15 <b>licensed</b> 56:15 81:1 82:21 120:21 120:25 <b>licensing</b> 33:2 39:23 40:10 72:22 84:2 131:6 <b>lid</b> 22:4 44:6 47:11 47:11 <b>lids</b> 22:5,12 <b>life</b> 63:7 69:23,25 74:6 75:9 76:13 <b>lightweight</b> 47:7 <b>limit</b> 64:17,19,21 65:2,23 <b>limitations</b> 106:25 <b>limits</b> 62:4 66:4,7 <b>line</b> 4:2 51:25 52:8 76:14 90:17 91:13 91:16 92:3,9,15 95:14,25 97:18,19 97:23 98:4 100:19 106:12,14 110:18 122:4,6 135:1 <b>lined</b> 23:16 <b>lines</b> 34:1 100:16 <b>link</b> 12:22,24,25 29:6,7 53:14 79:8 88:20 113:24 138:9,17,19 140:14	<b>links</b> 90:6 <b>lion</b> 74:23 <b>liquid</b> 9:14 60:18 <b>list</b> 13:3 16:17 90:21 <b>listed</b> 36:12 50:22 <b>listen</b> 12:5 105:18 105:23 107:7 141:13 <b>listening</b> 105:5 107:6 <b>literally</b> 66:22 <b>little</b> 17:16 19:16 27:14,16 28:18 41:25 49:10 52:25 57:3 58:9 65:19 68:5 70:19 72:19 77:8,17 81:15,20 83:18 91:9 104:9 115:10 123:2 125:3,13,14 126:2 128:4 136:1 141:2 <b>live</b> 63:3 <b>lived</b> 65:8 <b>loaded</b> 35:2,9 46:11 89:2 97:2 <b>loading</b> 19:4 33:5 <b>loads</b> 110:12 <b>lobby</b> 104:11 <b>lobsters</b> 63:6 <b>local</b> 10:15 31:22 61:12 70:1 76:12 100:7 <b>located</b> 49:17,21 <b>location</b> 25:19 40:7 56:13 58:13 110:10,10 115:6 115:14 <b>logic</b> 134:24,25 <b>long</b> 24:8 26:14 34:15 43:10 78:12
<b>l</b>			
<b>lab</b> 93:25 95:19 <b>laboratory</b> 62:3 63:17 <b>labs</b> 96:6 <b>ladder</b> 135:22 <b>laguna</b> 67:12 <b>laid</b> 123:4 <b>lake</b> 121:13,13 <b>land</b> 79:21 136:3 <b>landing</b> 85:4 <b>landmark</b> 77:18 <b>lands</b> 113:2,16,18 115:4,25 116:2 129:23 <b>langley</b> 90:21 91:11,14,22,24 95:7 97:18,20 98:10,11,13 103:10 111:16 <b>large</b> 18:7 22:22 23:3,11 24:3 28:23 50:2,9 55:18 61:23 63:8 <b>largely</b> 37:7 <b>larger</b> 14:17 23:14 51:19			

120:8 121:14 124:11 137:11 <b>longer</b> 16:10 46:21 100:24 <b>longitudinal</b> 35:18 <b>look</b> 30:11 31:10 44:8 49:3 51:12 51:12 64:1 69:19 79:16 81:22 82:1 82:4 85:10 86:15 88:22 96:13,21 97:3 107:8 113:1 114:1,22 115:5,16 116:10 119:16 130:24 139:23 142:4,13 <b>looked</b> 113:7 <b>looking</b> 11:21 28:24 36:17 51:24 56:7 76:15 77:9 82:13 87:14 96:6 110:25 112:11 125:7 138:13 140:25 <b>looks</b> 18:22 19:4 25:7 35:17 38:16 40:15 43:15 57:8 86:15 103:2 106:12 <b>lorraine</b> 20:23 21:4,5 38:6 39:1 50:25 80:19 109:25 <b>loss</b> 96:3 <b>losses</b> 71:10 75:15 75:16 <b>lost</b> 70:16 <b>lot</b> 6:1,23 8:25 9:15 14:18 15:12 15:17 17:10 22:24 24:5 43:2 46:10	49:19 50:2 52:19 56:21 60:18,19 67:18,23 68:15 83:20 84:15 86:16 86:17 95:9 107:2 114:20,23,25 116:17 137:17 139:13 141:9 <b>lots</b> 12:25 15:7 24:24 <b>loud</b> 69:8 87:13 95:17 98:12 104:8 <b>love</b> 59:2 <b>low</b> 24:1 52:25 53:7,11 <b>lower</b> 22:11 23:6 44:14,16 66:23 85:3 <b>lowest</b> 44:13 53:8 53:19 <b>lpi</b> 34:18 <b>luis</b> 3:15 <b>lutz</b> 102:17 104:2 104:7,9  <b>m</b>  <b>machine</b> 143:11 <b>magda</b> 3:16 17:1,2 56:2,5,17 67:10,11 68:10 <b>mail</b> 68:1 <b>mailing</b> 68:2 <b>main</b> 49:15 51:25 52:5 80:14,15 106:21 118:24 <b>maintain</b> 7:20 28:9 97:9 <b>maintaining</b> 26:23 128:10 <b>maintenance</b> 27:3 27:24 32:21,24 37:15,20 124:2	126:6,15,22 134:6 134:8 <b>major</b> 80:2 <b>making</b> 49:9 72:16 116:12 136:15 <b>management</b> 62:9 <b>manager</b> 69:12 <b>managers</b> 52:6 <b>manages</b> 94:10 <b>manmade</b> 69:13 72:16 <b>manner</b> 26:21 <b>manuel</b> 3:22 8:4 18:3,24 19:5 20:22 21:2,10 26:7 27:8,13 50:25 80:6,7 90:25 104:20,24 <b>map</b> 72:13 <b>march</b> 113:18 116:5 126:25 <b>marine</b> 74:4 <b>marni</b> 3:16 17:1 56:2,4,5,17 67:10 67:11 68:10 <b>martha</b> 3:5 10:21 10:23 11:2,4,10,25 12:2,17 19:15,19 20:7 40:16,17,18 41:9,16,23 42:22 42:24 43:5 56:2 56:19 57:8,9,10 58:21,25 59:5 60:13 91:5,6 107:22,23 108:15 108:17,19 111:7 115:3 116:16,20 118:17 120:17,18 121:18 122:5,9 123:12 125:20,21 126:19,23 127:6	129:6,7,17 130:22 131:8 138:3,24 139:8 <b>masks</b> 5:25 13:12 <b>mass</b> 57:5 <b>massive</b> 139:10 <b>mast</b> 34:2 <b>material</b> 22:16 23:14,22 34:10 42:12,15 52:19 54:23 57:3 103:22 122:1,12 125:12 139:9 <b>materials</b> 7:22 13:1 25:20 70:21 70:23 79:4 89:25 121:23 <b>matter</b> 87:4 96:18 128:4 <b>matters</b> 90:14 <b>mayor</b> 10:18 <b>mcfarland</b> 84:19 <b>mcgee</b> 68:24 69:2 69:6,10,11 77:11 78:9,24 79:9 122:20 <b>mcnally</b> 31:19 <b>mcnicholas</b> 3:5 10:22 12:1,2 19:15,20 40:16,18 41:9,16,23 42:22 42:24 43:5 56:3 57:10 58:21,25 59:5 91:6 108:19 111:7 115:3 116:16,20 118:17 120:18 121:18 122:5,9 123:12 125:21 126:19,23 127:6 129:7,17 130:22 131:8
---	---	--	--

<p>138:24  <b>mean</b> 17:3 82:17  99:4  <b>means</b> 95:21  114:22 129:14  <b>measurable</b> 66:11  105:23  <b>measure</b> 44:10  71:16 111:12  136:10  <b>measured</b> 71:11  71:17  <b>measurements</b>  92:23 93:1 134:21  <b>measuring</b> 111:10  118:21,25  <b>meat</b> 6:24  <b>mechanical</b> 42:13  <b>mechanism</b>  140:20  <b>mechanisms</b> 33:3  <b>media</b> 14:2 60:20  63:14,16 67:18,21  138:14  <b>medical</b> 64:13  <b>medically</b> 61:17  <b>meet</b> 5:19 13:18  72:7 75:13 88:17  <b>meeting</b> 1:6,17 2:2  2:9 5:11,12,14  7:17,21 8:15 9:1  12:24 13:1,4  14:14 18:1 19:21  20:15 25:23 26:25  27:10,19 48:10,19  48:19 59:14,16  67:16 68:16 72:2  76:17 80:12 85:12  87:10 98:15  100:12 101:10  111:19 113:10</p>	<p>114:17 120:3  133:2 136:21  140:10 141:1,23  142:7  <b>meetings</b> 5:17  9:11 26:11 54:16  59:1 83:24 89:23  119:24 142:8  <b>mel</b> 3:14  <b>member</b> 6:6 37:9  67:1 85:6 87:12  138:6  <b>members</b> 3:1 6:3  6:25 10:3 16:3,23  20:9,16 25:24  60:22 64:19 67:15  68:20 83:22 85:14  87:6,8 137:24  138:18 139:17  <b>membership</b>  142:17  <b>mention</b> 11:3  12:18 13:15 14:13  28:20 29:2 140:9  140:12  <b>mentioned</b> 27:7,24  30:4 40:19 49:6  55:13 75:19 110:9  115:19 127:21  <b>message</b> 140:23  <b>messing</b> 79:21  <b>met</b> 71:23,25  75:20 84:17  117:18 128:13  <b>metal</b> 43:14  <b>metallic</b> 33:11,15  33:19,22,24 34:18  36:8,23 37:3,11,22  37:25 38:5 41:18  41:24 42:20 46:17  46:20 47:15</p>	<p>116:22  <b>metallurgic</b> 42:14  <b>meter</b> 135:18  <b>method</b> 27:1 33:12  37:13 41:15  104:14  <b>methodically</b>  117:25  <b>methods</b> 36:12,13  36:24 37:2  <b>mexico</b> 56:23,23  86:3 93:22  <b>mic</b> 60:13 67:5  138:2  <b>microphone</b> 11:9  17:5 20:17 108:2  108:3  <b>microphones</b> 17:9  20:20  <b>microscopic</b>  125:12,15  <b>mid</b> 29:5,9  <b>middle</b> 21:22  25:13 52:9 121:11  <b>midpoint</b> 77:20  <b>migrate</b> 111:4  <b>mike</b> 15:20  <b>mile</b> 62:17 105:14  <b>miles</b> 69:15 70:13  105:15  <b>milestone</b> 55:11  77:19 141:17  <b>milestones</b> 9:4,14  27:18  <b>military</b> 33:16,18  33:19,25 117:6  <b>million</b> 26:15  54:21 66:22  105:15  <b>millirem</b> 64:3,7,7  64:9,14,16,18,20</p>	<p>64:21,24 65:2,7,24  65:25 66:10,12  105:21  <b>mimics</b> 43:25  <b>mind</b> 68:16  <b>mine</b> 40:12 55:1  <b>miniaturizing</b>  36:19  <b>minimal</b> 42:14  <b>minimize</b> 52:20  <b>minus</b> 83:3  <b>minute</b> 14:11  85:20 87:9 90:18  90:22  <b>minutes</b> 14:23  85:9 95:10 97:20  97:21 104:11  <b>missed</b> 104:12  <b>mission</b> 3:15 73:1  <b>mitigate</b> 34:20  45:19  <b>mitigated</b> 75:16  <b>mitigation</b> 36:9  37:9 41:2 70:5,24  70:25 71:6,10  72:9 75:7,10  77:23  <b>mixes</b> 62:18  <b>mixing</b> 70:11  <b>mock</b> 34:4  <b>mode</b> 99:14  <b>modeled</b> 37:7  <b>modest</b> 49:13  <b>module</b> 34:24 35:7  35:9,10,16,22  36:21 119:19  <b>modules</b> 58:11  70:20  <b>molecular</b> 42:25  <b>moment</b> 5:20 10:1  10:18 11:1,8</p>
---	---	--	--

15:19 16:21 30:17 66:25 106:17 119:14 137:22 <b>moments</b> 21:17 <b>monday</b> 99:25 <b>money</b> 100:14 <b>monitor</b> 33:7 62:7 76:3 97:9 109:5 109:11 113:3 128:24 <b>monitored</b> 75:6 119:21 <b>monitoring</b> 6:14 32:8 35:12 36:25 37:18 39:9 71:19 71:24 75:24 78:13 78:20,23 93:2,9 108:22,23 109:4 110:8 111:6 113:15 116:1 <b>monitors</b> 74:5,6 74:10 <b>moniz</b> 84:23 86:7 <b>month</b> 10:13 18:9 88:17 102:7 <b>monthly</b> 39:11 <b>months</b> 50:20 112:20 <b>mornings</b> 74:22 <b>motivating</b> 68:7 <b>mound</b> 24:17,18 24:19 <b>mounds</b> 25:7 121:22 <b>mountain</b> 82:6 <b>mounted</b> 35:23 <b>mouth</b> 96:13 <b>mouthful</b> 131:24 <b>move</b> 6:4 17:9 21:3 28:19 29:25 39:2,3 47:25	60:15 68:21 81:10 82:8 89:5,16 100:20 111:15 116:17,17 127:16 127:18,25,25 128:16 132:21 142:1 <b>moved</b> 14:20 48:1 56:6 74:9 99:12 120:1,10 <b>movement</b> 76:3 128:22 <b>moves</b> 38:22,23 <b>moving</b> 9:20 17:18 22:1,2 37:9 83:4 98:16 111:20 115:5 128:14 <b>mpc</b> 39:6 101:25 <b>multibeam</b> 76:2 <b>multibillion</b> 96:24 <b>multipart</b> 127:20 <b>multipurpose</b> 126:11 <b>mute</b> 69:6 <b>muted</b> 106:11	<b>near</b> 23:10,21 66:15 82:11 114:21 <b>nearly</b> 53:19 <b>necessary</b> 37:20 100:21 127:16,18 <b>necessity</b> 130:13 <b>need</b> 16:18 18:25 24:3 30:12 41:12 50:15 51:9 56:6 59:13 66:16 86:11 86:15 88:6 89:12 89:16,25 93:8 94:7 96:16 113:12 114:9,14 116:14 127:24 133:19 135:10 136:16 142:2,6,6 <b>needed</b> 33:13 89:10 114:4 117:17,19 128:23 <b>needs</b> 22:25 97:13 133:10 <b>negative</b> 19:23 20:2 <b>negatively</b> 52:23 <b>neighborhood</b> 18:6,7,8 21:21 <b>neither</b> 143:14 <b>never</b> 39:22 88:14 <b>new</b> 10:12 30:23 56:23,23 76:8 77:7,25 86:3 93:21 98:19 111:23 120:4 121:19 123:10 <b>news</b> 9:15 79:22 <b>nicholas</b> 3:4 <b>nicknamed</b> 74:25 <b>night</b> 19:20 23:4,6	<b>nightmare</b> 23:2 <b>nina</b> 97:17,21,22 97:25 98:2,5,8 99:9,12,19,21,23 101:4,8,14,17 102:14 103:10 125:22 127:15 131:13 133:10 <b>nina's</b> 97:18,19 103:14 133:19 <b>nine</b> 71:20 <b>nino</b> 100:3 <b>nope</b> 38:9 <b>norm</b> 32:1 <b>normal</b> 9:22 22:3 109:17 119:18 134:22 135:17,25 <b>normally</b> 5:19 101:10 <b>north</b> 68:23 69:12 69:13 71:3 72:14 77:10,24 84:8,8,20 121:23 <b>notable</b> 84:22 <b>note</b> 61:14 66:9 74:16 76:11 78:17 114:1,15 <b>notes</b> 12:6 <b>notifying</b> 74:8 <b>nozzle</b> 37:25 <b>npc</b> 36:1 <b>npesd</b> 132:8 <b>nrc</b> 28:10 31:1,5 32:1 33:2,4 64:16 64:21 81:1 84:18 92:21 94:16 95:22 101:18,20 116:24 117:7,7,17,22 118:6,10,11,15 130:2 131:4,15 133:10,14,15,15
	<b>n</b> <b>n</b> 37:5 <b>name</b> 32:13 61:5 67:4 84:22 143:19 <b>named</b> 71:2 <b>names</b> 12:7 15:8 <b>narrate</b> 38:12 <b>nation</b> 72:25 <b>national</b> 5:8 66:8 131:22 <b>native</b> 103:4 120:22 121:16 <b>natural</b> 64:6,10 65:13,24 71:16,21 72:6 75:23 77:15		

133:23 134:3,9 <b>nrc's</b> 15:15 63:25 <b>nrc.gov</b> 63:25 <b>nuclear</b> 3:18 15:5 16:1 26:24 28:14 40:8 63:12,19 66:6 89:10 94:7 94:11 96:24 107:4 121:7 126:4 128:6 130:3 131:19 132:5 <b>nucom</b> 29:7 140:11 <b>nuhoms</b> 58:4 92:19 94:24 <b>number</b> 21:6 25:4 65:18 93:7,10 94:1 103:7 120:2 120:10 143:25 <b>numbers</b> 64:22 74:19 93:12	<b>occurred</b> 70:9 77:23 120:9 <b>occurring</b> 132:18 <b>ocean</b> 35:11 62:16 62:17,19,20 63:2 63:14,14,15 69:20 73:16 78:19 100:19 123:5 <b>oceanside</b> 10:6,12 10:18 40:6 <b>october</b> 112:18,18 112:21 114:12 <b>offer</b> 76:16 89:22 <b>office</b> 17:12 31:22 99:25 <b>officer</b> 142:22 <b>officially</b> 23:23 <b>officials</b> 39:10 90:9 <b>offline</b> 108:12 <b>offset</b> 35:13 <b>offsite</b> 33:8 80:17 80:25 82:9 <b>oh</b> 126:23 138:3 <b>okay</b> 8:19 17:4,8 19:1,12,17,18 20:20,25 21:8,14 26:1,9 29:2 31:18 38:18 41:9 42:22 43:6 47:2 48:6 54:18 58:21,25 60:9,14 66:18 67:10 78:3 79:20 79:25 88:8 90:15 95:18 98:4,5 101:1,17 102:10 103:25 106:1 107:25 108:8,10 116:20,20 118:17 118:18 120:18 121:18 122:9	123:15 125:19,21 126:23 127:14,19 129:4,17 132:10 139:22 <b>old</b> 92:20 <b>older</b> 63:23 <b>once</b> 29:3 30:11 62:11 64:12 71:2 91:16 116:11 118:6 120:8 131:18 140:7 <b>ones</b> 22:3 63:21,23 121:19,21 131:10 <b>ongoing</b> 39:16 <b>online</b> 29:5 69:4 104:10 109:3,19 112:11 137:13 <b>onofre</b> 2:1 6:10,20 9:21 13:21,25 14:1,8 18:14 22:1 22:18 23:21 24:7 53:3,18 59:23 61:11 66:15 70:9 71:11 94:8,23 97:1 100:5 105:9 128:16 132:13,19 <b>onsite</b> 22:17 26:24 33:8 <b>open</b> 67:5 82:1 91:13,16,18 92:3 95:13 97:22 98:4 104:5 106:12,14 <b>opened</b> 23:24 <b>opening</b> 9:25 13:6 51:4,7,14,19 138:2 <b>openings</b> 29:25 <b>operate</b> 8:21 60:11 <b>operated</b> 38:15 <b>operates</b> 121:7 <b>operating</b> 37:19 50:5 51:6 63:24	75:8 106:20 110:19,21 120:25 121:1,5 137:5 <b>operation</b> 43:4 54:6 70:6 122:23 <b>operational</b> 16:10 70:17 <b>operations</b> 23:11 133:22 <b>operator</b> 8:9 10:13 <b>operators</b> 62:12 <b>opined</b> 133:16 <b>opportunities</b> 80:16 <b>opportunity</b> 11:13 13:9 34:15 41:14 81:6 83:2 85:6 139:24 <b>opposed</b> 138:13 <b>opposite</b> 24:9 137:6 <b>option</b> 86:15 116:11,14 <b>optionality</b> 82:8 <b>options</b> 86:16 87:2 <b>orange</b> 2:3 3:10,13 <b>order</b> 82:12 83:14 100:9 <b>orders</b> 74:18 <b>organization</b> 12:3 27:17 28:1,11,12 28:14 30:21,23 31:16,24 <b>organizationally</b> 30:22 <b>organizations</b> 41:5 66:9 <b>organize</b> 141:12 142:1 <b>orient</b> 77:3,8
<b>o</b>			
<b>obligation</b> 107:7,8 128:13 <b>observe</b> 34:15 134:4 <b>observed</b> 74:7 133:25 <b>obtained</b> 114:11 116:4 <b>obviously</b> 113:17 130:19 <b>oc</b> 67:21 <b>occluded</b> 35:25 36:4 <b>occupational</b> 64:17 <b>occupied</b> 73:4 <b>occur</b> 33:9 35:3 124:13 132:20 133:2			

[original - personnel]

<b>original</b> 58:12 <b>osha</b> 23:2 <b>outdoors</b> 65:12 <b>outlet</b> 35:7,8 93:1 108:22,24 109:11 110:16 111:4,6 136:10 <b>outlets</b> 14:3 77:25 <b>outlines</b> 98:21 111:25 <b>outreach</b> 78:21 <b>outside</b> 22:13 43:23 51:10 58:5 95:24 <b>overall</b> 57:4 129:25 <b>overarching</b> 131:25 <b>overlay</b> 33:11,16 33:19,22,24 34:18 36:8,23 37:3,11,22 37:25 38:5 41:18 42:20 46:17,20 47:16 116:22 117:13 <b>overloaded</b> 22:8 <b>overseeing</b> 48:24 <b>overseen</b> 30:25 <b>oversees</b> 131:16 131:20 132:6 <b>oversight</b> 32:1 <b>owner</b> 121:6 <b>owners</b> 81:13 121:5	142:23 <b>pages</b> 1:24 8:1 139:15 <b>paid</b> 103:4 <b>paint</b> 42:16 <b>painting</b> 42:1 <b>pallets</b> 124:15 <b>palmisano</b> 98:24 112:2,6 <b>pandemic</b> 13:15 49:7 140:18 <b>panel</b> 2:2 3:1 5:13 5:14 6:9 8:8 83:22 84:19 89:8 107:15 <b>panels</b> 15:14 <b>paper</b> 84:11 <b>parallel</b> 22:21 52:3 55:19 <b>paramount</b> 7:2 9:7 <b>parks</b> 3:12 <b>part</b> 6:18 12:3 22:22 27:2 41:7 77:15,16 85:3 109:19 112:24 113:23 114:1,10 115:4,11 117:15 126:5,14 129:21 129:25 131:1,18 133:21,25 <b>participants</b> 16:4 16:18 <b>participate</b> 12:10 118:11 <b>participated</b> 15:5 83:24 128:8 <b>particles</b> 42:8 <b>particular</b> 5:24 14:18 16:8 17:15 17:19 32:20 83:23 140:4	<b>particularly</b> 7:3 67:22 100:8 <b>parties</b> 143:17 <b>partly</b> 23:4 <b>partners</b> 73:16,24 <b>parts</b> 50:4 57:2 <b>party</b> 63:17 127:1 136:11 <b>passed</b> 26:14 <b>passes</b> 124:23 <b>passing</b> 78:14 <b>path</b> 52:5,6 55:14 <b>pathway</b> 109:13 <b>paul</b> 3:8 138:3,5 139:7 <b>pause</b> 10:1,25 11:8 15:18 16:21 25:23 30:16 39:15 66:25 85:13 137:22 <b>pay</b> 59:24 86:11 <b>payment</b> 59:21,22 <b>payments</b> 60:5 <b>peak</b> 52:22 <b>pedestal</b> 35:25 36:5 <b>pen</b> 84:11 <b>people</b> 11:17 20:1 20:18 39:17 46:21 61:18 63:7 64:11 68:5,11 69:21 85:21 86:6,8 87:1 88:22 89:14 90:8 90:11 94:12 97:7 104:12,19 105:10 105:16,24 106:19 106:23 107:2,3 122:16 134:22 138:12 140:21,21 141:9 142:8 <b>percent</b> 11:18 21:25 76:5	<b>perception</b> 66:20 <b>perennial</b> 66:19 <b>perform</b> 55:18 117:10 <b>performance</b> 34:16 71:8 75:21 76:18 <b>performed</b> 37:15 37:20 <b>period</b> 4:1 9:22 11:6 12:20 33:2 39:24 70:17 75:10 87:10 90:20 106:3 107:23 108:16 112:20 115:22 124:11 <b>periodic</b> 37:16 <b>periodically</b> 17:12 23:9 37:18 <b>permanence</b> 76:16 <b>permanent</b> 81:2 97:10 <b>permit</b> 62:4 93:15 98:16 111:20 112:25 113:18,24 114:1,11,16 115:5 115:12,15,21 131:14,23,25 132:8 <b>permitting</b> 72:20 72:22 112:24 115:10 <b>perseverance</b> 7:19 <b>person</b> 5:19 6:12 13:18 62:6 64:5 79:17 105:19,21 <b>personal</b> 28:10 <b>personally</b> 116:16 <b>personnel</b> 74:9 128:23
<p style="text-align: center;"><b>p</b></p>			
<b>p.m.</b> 2:10 142:21 <b>pacific</b> 82:25 <b>package</b> 51:10 <b>pad</b> 54:9,13 <b>page</b> 4:2 8:1 12:24 85:4,5 101:17,25			

<p><b>perspective</b> 36:24 132:8</p> <p><b>peters</b> 17:22</p> <p><b>phase</b> 28:6 42:8 72:10,11 77:5,6</p> <p><b>phases</b> 77:7 134:7</p> <p><b>phenomenon</b> 135:1</p> <p><b>phone</b> 98:9 99:12 102:23</p> <p><b>photo</b> 32:16 34:12 35:15,17 37:24 38:2</p> <p><b>photographs</b> 18:10</p> <p><b>photos</b> 35:21 44:4</p> <p><b>physical</b> 134:24 136:12</p> <p><b>physics</b> 134:25 135:3 136:25 137:4</p> <p><b>pick</b> 82:15</p> <p><b>picture</b> 9:2 24:12 26:2 27:15 51:24 53:1 74:24</p> <p><b>pictures</b> 18:5 24:6 24:23 25:8</p> <p><b>piece</b> 34:9 43:14 50:12 67:22 82:15 103:24 131:4</p> <p><b>pieces</b> 23:3,11 67:19 77:6</p> <p><b>pier</b> 71:5 77:18,19 77:24</p> <p><b>pile</b> 23:15</p> <p><b>piled</b> 123:3</p> <p><b>pin</b> 106:23</p> <p><b>pipe</b> 45:15</p> <p><b>piping</b> 49:22</p> <p><b>pit</b> 24:3 96:11</p>	<p><b>pits</b> 23:16,18</p> <p><b>pitting</b> 125:8</p> <p><b>place</b> 23:20,23 24:4 28:21 29:14 29:24 47:1 55:19 56:10 75:18 78:21 90:4,8,11 122:14 143:9</p> <p><b>placed</b> 35:16 44:24 71:4 138:20</p> <p><b>places</b> 12:25 17:15 86:17</p> <p><b>plan</b> 9:20 27:3,7,8 27:11 80:5,11,22 81:9,14,16,19,21 81:21,24 82:10,23 83:9,9,10,12,13,16 83:19 84:12,12,25 85:20 86:12 93:22 98:19,22 100:8 111:23,25 115:7 116:25 126:22,25 130:14 141:2</p> <p><b>planning</b> 19:25 130:6</p> <p><b>plans</b> 86:6 100:20 116:6</p> <p><b>plant</b> 6:11,16,17 10:20 49:21 51:6 52:16 61:9,17,24 62:14 63:24 75:9 82:17,18 87:22 88:13 89:3 90:10 110:19,21 121:23 129:10 132:1 134:13</p> <p><b>plants</b> 107:4 130:3</p> <p><b>plaque</b> 71:4</p> <p><b>plastically</b> 42:12</p> <p><b>plate</b> 35:25 36:2,3 36:4</p>	<p><b>platform</b> 79:2 81:7 106:18</p> <p><b>platforms</b> 12:16 107:1</p> <p><b>play</b> 39:1 59:10,12 59:16</p> <p><b>played</b> 6:8</p> <p><b>players</b> 84:15 86:13</p> <p><b>playing</b> 13:10 38:11,17</p> <p><b>please</b> 9:23 10:4 18:3 19:13 21:3 22:24 23:18 25:5 27:12 29:1 32:15 32:18,22 33:14 34:22 35:14,20 36:6 37:14,23 38:4 65:3 87:16 88:16 102:21 118:3 142:14</p> <p><b>plenty</b> 54:16</p> <p><b>plume</b> 110:18,21 111:3</p> <p><b>plumes</b> 70:10</p> <p><b>plus</b> 5:7</p> <p><b>point</b> 3:9 7:10 20:13 25:18 48:16 62:24 74:21 75:2 76:12 90:11 92:10 98:20 106:24 111:24 115:8 123:1 138:9</p> <p><b>points</b> 6:24 23:6 62:7 92:9 96:8</p> <p><b>policy</b> 16:7 128:14</p> <p><b>political</b> 14:19</p> <p><b>politics</b> 85:23 86:3 86:4</p> <p><b>pollutant</b> 131:22</p>	<p><b>polygon</b> 73:13,19</p> <p><b>pool</b> 44:24 57:13 57:15 58:17</p> <p><b>pools</b> 93:16 141:18</p> <p><b>porosity</b> 33:21</p> <p><b>portfolio</b> 81:25</p> <p><b>portion</b> 51:18 73:15 82:10</p> <p><b>pose</b> 101:11</p> <p><b>position</b> 114:9 128:1</p> <p><b>positive</b> 14:1,5 20:3</p> <p><b>possibility</b> 73:6</p> <p><b>possible</b> 37:1 47:17 52:21 62:1 99:18 142:11,18</p> <p><b>possibly</b> 65:20 132:12</p> <p><b>post</b> 29:5 30:12 73:5,22 79:11 101:8</p> <p><b>posted</b> 7:21 59:12 59:17 60:21 139:2</p> <p><b>postulate</b> 111:1 124:10</p> <p><b>postulated</b> 110:24</p> <p><b>potassium</b> 64:10</p> <p><b>potential</b> 14:17 40:19 113:6 129:12</p> <p><b>potentially</b> 46:22 48:18 55:7 103:22 113:12 116:10 123:23 124:18 128:21</p> <p><b>pound</b> 45:15 47:11</p> <p><b>pounds</b> 54:21</p> <p><b>power</b> 23:5 63:24</p> <p><b>powerpoint</b> 139:1</p>
---	---	---	---

<p><b>practical</b> 83:14</p> <p><b>practices</b> 15:10</p> <p><b>prearranged</b> 14:15</p> <p><b>precursors</b> 125:7</p> <p><b>predicted</b> 100:9 100:24</p> <p><b>preemption</b> 130:5</p> <p><b>prefer</b> 47:15</p> <p><b>preferred</b> 74:21</p> <p><b>preliminary</b> 9:18</p> <p><b>preparation</b> 49:16 50:20</p> <p><b>preparations</b> 124:20</p> <p><b>prepared</b> 82:12</p> <p><b>presence</b> 72:24</p> <p><b>present</b> 61:8 73:12 78:20 79:15 82:20</p> <p><b>presentation</b> 34:12 57:19 90:6 103:18 105:6 138:25</p> <p><b>presentations</b> 104:15 141:7</p> <p><b>presented</b> 67:20 112:8</p> <p><b>presenters</b> 13:21 140:3</p> <p><b>presenting</b> 99:2 109:25</p> <p><b>president</b> 10:14</p> <p><b>press</b> 67:23 97:25 102:21 133:8 134:18</p> <p><b>pressure</b> 24:6 45:4 50:11 53:2,22 55:16</p> <p><b>pressurization</b> 45:3</p>	<p><b>pressurize</b> 45:7</p> <p><b>pressurized</b> 44:25 45:5,9</p> <p><b>pressurizer</b> 49:25</p> <p><b>presumed</b> 14:5 83:6</p> <p><b>pretty</b> 25:17 43:3 49:24 50:7 53:17 55:21 73:25 74:1 84:21 96:5,21 128:4</p> <p><b>prevalent</b> 120:13</p> <p><b>prevented</b> 74:6</p> <p><b>previously</b> 75:19 83:22 121:8</p> <p><b>primarily</b> 29:15</p> <p><b>prime</b> 26:13</p> <p><b>principals</b> 15:9</p> <p><b>principles</b> 26:10</p> <p><b>print</b> 67:24 111:21</p> <p><b>prior</b> 73:4 112:20 133:23</p> <p><b>prioritize</b> 16:13</p> <p><b>priority</b> 81:12 94:1 96:2 128:18</p> <p><b>probably</b> 5:22 38:25 79:10 118:11</p> <p><b>problem</b> 14:19 93:4 94:2 96:7 100:17 108:12,13 127:12</p> <p><b>problems</b> 93:18</p> <p><b>proceedings</b> 142:20 143:8,10</p> <p><b>process</b> 7:20 8:11 9:9 15:17 32:1 33:16,18 34:3,8,19 34:19 38:5,22 42:8 45:2 46:13 48:1 55:20,24</p>	<p>61:22 72:20,22 73:2,25 80:11 112:24 116:22,24 117:5,18,22,23 118:7,11 121:15 124:23 126:6 131:7</p> <p><b>processes</b> 40:3,5</p> <p><b>produce</b> 42:13</p> <p><b>produced</b> 27:11 94:21</p> <p><b>product</b> 94:24</p> <p><b>professional</b> 60:17</p> <p><b>program</b> 6:14,18 27:24 32:24 33:6 38:24 39:21 63:10 63:11 119:23 122:21 124:2 126:15 127:3 134:6,8</p> <p><b>programs</b> 28:10</p> <p><b>progress</b> 137:21</p> <p><b>progressing</b> 120:12</p> <p><b>progressively</b> 53:10</p> <p><b>project</b> 26:19 30:10 36:11 49:13 51:22 52:5 68:24 69:12,13,14 70:5 72:14 73:3,15,17 73:21 76:14 103:16,24 122:21 132:13,21</p> <p><b>projection</b> 47:25</p> <p><b>projects</b> 76:16</p> <p><b>prominent</b> 71:3</p> <p><b>prompted</b> 81:3 100:10</p> <p><b>propagated</b> 100:1</p>	<p><b>propagation</b> 123:24</p> <p><b>proper</b> 38:24</p> <p><b>properly</b> 37:19</p> <p><b>property</b> 114:3 128:17</p> <p><b>proposal</b> 81:22</p> <p><b>proposed</b> 93:21</p> <p><b>protect</b> 50:6 73:15</p> <p><b>protected</b> 31:16</p> <p><b>protection</b> 14:24 60:17 105:7</p> <p><b>protective</b> 105:8</p> <p><b>protocol</b> 49:7 74:14,15 133:17</p> <p><b>prouder</b> 76:21</p> <p><b>provide</b> 29:7 80:10 109:7 114:15 135:14</p> <p><b>provided</b> 30:4 83:21</p> <p><b>provides</b> 53:15 75:12</p> <p><b>providing</b> 34:15</p> <p><b>provisions</b> 14:24</p> <p><b>psi</b> 42:19 45:6 46:2</p> <p><b>psig</b> 45:9</p> <p><b>public</b> 4:1 6:4 9:22 10:19 11:5 12:19 30:24 64:19 66:14 66:24 67:8 68:14 68:17 78:22 79:14 80:3 85:7 87:9,19 88:19 90:20 93:7 93:12 96:8 98:21 99:7,13,14 107:23 108:16,24 111:24 111:25 139:4 140:17</p> <p><b>publically</b> 63:20</p>
---	---	--	--



<b>publication</b> 37:7	<b>quarter</b> 9:10	<b>quick</b> 46:7	<b>rain</b> 69:20 132:2,3
<b>publish</b> 39:11	27:10 29:4 115:23	<b>quickly</b> 22:8 45:25	<b>raise</b> 87:8 137:25
136:19	141:1,24 142:7,14	47:20 77:2 110:15	<b>raised</b> 73:1 137:12
<b>pull</b> 139:14	<b>quarterly</b> 5:11,12	133:9	<b>randall</b> 3:20 26:25
<b>pulled</b> 84:5	9:11 17:25 29:2,9	<b>quinn</b> 3:17	30:15 32:6,11,12
<b>pumped</b> 25:3	30:9 68:1 113:15	<b>quite</b> 68:6 74:19	32:13 38:10,20
<b>pumps</b> 50:1 62:12	<b>question</b> 8:3 12:21	99:6 141:10	39:6,15 40:18,25
62:13,13	30:20 31:4,19	<b>quote</b> 100:11,13	41:13,22 42:5,23
<b>pup</b> 74:24	44:23 46:24 47:2	100:13	43:3,7 44:2,18,22
<b>purpose</b> 23:24,25	54:19 55:2 58:2	<b>r</b>	45:1,5,22 46:1
28:13 80:22 81:9	59:21 65:4 78:17	<b>radiation</b> 35:12	47:2 48:5 59:20
135:24	78:24 79:24 98:13	37:17 39:9 50:6	117:2,4,6,21 118:1
<b>purposes</b> 53:17	98:23 101:24	56:6 60:16 61:6	118:4 119:7,11,12
81:6	102:5 103:8 104:3	62:7,22 65:15	123:23 125:3,5,18
<b>pursue</b> 16:12	107:5 108:25	92:21 105:17,19	126:9,15 131:3,3
<b>push</b> 98:3	111:17 112:2,11	109:7,12 110:16	134:19 135:11
<b>pushing</b> 8:23	116:23 118:19	110:17,18,21	136:9
<b>put</b> 5:15 8:14 13:2	119:2,13,20	111:3,11,13	<b>range</b> 81:7 141:13
13:3 14:16,21	120:15 122:10	118:21 119:9	<b>ranging</b> 107:15
23:13 24:3,16	123:16 127:8,15	135:1	<b>rap</b> 25:15
44:2,6 58:22 79:8	127:16 129:8	<b>radio</b> 53:11 74:11	<b>rare</b> 73:25
86:22 87:21,25	130:23 131:2	<b>radioactive</b> 29:21	<b>ratepayers</b> 59:23
88:10 96:1 107:24	132:11 133:9,19	53:10 63:5 64:11	60:6
107:24 108:9	<b>questions</b> 5:17	65:13 89:15	<b>rates</b> 36:22 110:9
138:14	25:24 28:2 30:18	103:22 124:19,24	119:17
<b>putting</b> 46:16	31:22 39:16,18	<b>radioactivity</b>	<b>ratio</b> 52:19
88:20	40:14 41:17 45:24	29:20 61:10,18	<b>ray</b> 64:12 102:17
<b>q</b>	45:25 46:7 54:17	62:1,7,24	102:18 104:2,3,5,7
<b>qualification</b>	54:25 60:13 66:17	<b>radiological</b> 6:14	104:9 106:19
33:21	76:22,25 85:14	19:24 24:1 53:1	109:13
<b>qualifies</b> 33:17	99:10 101:9	60:20 61:1 63:10	<b>rays</b> 64:12 65:14
<b>qualify</b> 33:15	102:12,17 103:1	95:24 96:2 122:12	<b>rcra</b> 121:8,22,23
<b>quality</b> 131:16,24	103:10,14,14,21	131:21 132:8	<b>reach</b> 11:20 29:6
<b>quam</b> 3:21	111:16 112:5	<b>radionuclide</b> 62:5	31:21
<b>quantifiable</b>	116:21 120:19	<b>radius</b> 105:14	<b>reaction</b> 67:8
105:11	125:22 130:9	<b>radon</b> 65:15	<b>reactor</b> 24:6 50:1
<b>quantities</b> 62:19	131:9 133:4 135:6	<b>rail</b> 18:15 21:15,25	50:3,4,13,21 53:2
63:8	137:12,13,17,18	22:2,2,5,20,21,23	53:22 54:5 55:16
<b>quarantining</b> 14:7	137:25 139:25	22:25 50:9 52:17	55:16 57:12 58:16
<b>quarry</b> 71:1	140:10,13,13,13	52:17 53:23	<b>reactors</b> 50:13
122:25	141:13 142:15	100:16,19	141:21

[read - remotely]

<p><b>read</b> 42:6 60:6 67:18 101:14,16 111:17,17 129:9 138:13</p> <p><b>readiness</b> 82:20</p> <p><b>readings</b> 92:22 109:8,17 124:24 135:12,24</p> <p><b>ready</b> 33:8,12 82:14 116:15 130:14,19</p> <p><b>real</b> 42:23 57:5 96:22 107:11,12 109:11 122:13 138:12</p> <p><b>realism</b> 86:19 87:2</p> <p><b>realistic</b> 55:23 86:25</p> <p><b>reality</b> 46:5 95:9 96:8</p> <p><b>realize</b> 96:20</p> <p><b>realized</b> 12:5</p> <p><b>really</b> 6:11,18 7:5 11:17 23:7 40:21 41:19 42:18 47:15 49:6,8 57:11 83:1 90:14 107:10 140:2 141:24,24 142:4,6,12</p> <p><b>realtime</b> 6:13 13:3</p> <p><b>reappeared</b> 99:1</p> <p><b>reapplication</b> 115:22</p> <p><b>reason</b> 29:10 40:6 40:8 92:25 93:16 109:8,11 111:6 113:20 120:11 122:11,14 136:12</p> <p><b>reasonable</b> 80:24 80:24 114:21 132:22</p>	<p><b>reasons</b> 16:11</p> <p><b>reassess</b> 116:10</p> <p><b>recap</b> 122:15</p> <p><b>receive</b> 56:15</p> <p><b>received</b> 20:4 61:18 62:11 130:8</p> <p><b>receives</b> 61:17</p> <p><b>recess</b> 90:24 113:13</p> <p><b>recirculated</b> 61:24</p> <p><b>recognize</b> 84:22 86:5</p> <p><b>recommend</b> 94:11</p> <p><b>recommendations</b> 16:8,14 83:11,16 127:2</p> <p><b>reconfigure</b> 73:17</p> <p><b>reconnaissance</b> 73:8,23</p> <p><b>record</b> 5:16 31:19 143:10</p> <p><b>recorded</b> 2:9 5:14</p> <p><b>recordings</b> 5:15</p> <p><b>records</b> 73:11</p> <p><b>recreational</b> 70:1</p> <p><b>red</b> 24:13 70:25 73:13</p> <p><b>reduce</b> 43:24 75:24</p> <p><b>reed</b> 78:18</p> <p><b>reef</b> 9:17,17 68:23 69:12,14,17,24 70:4,15,18,24,25 71:2,6,17 72:5,9 72:14,15,16 74:4 75:4,6,10,11,23 76:17 77:23 78:11 78:15 103:8,16 122:11,11,13,20 122:23,24 138:16 139:2,14</p>	<p><b>reefed</b> 103:21</p> <p><b>reefs</b> 71:16,22 76:8</p> <p><b>refer</b> 50:9</p> <p><b>reference</b> 85:2 131:14</p> <p><b>referenced</b> 33:16 84:4 95:1,20 138:21</p> <p><b>references</b> 33:20</p> <p><b>referring</b> 29:12 117:21</p> <p><b>reflect</b> 107:16</p> <p><b>reg</b> 118:7</p> <p><b>regard</b> 5:24 15:20 39:25 59:21 100:16 112:10</p> <p><b>regarding</b> 9:20 13:11 14:24 61:1 80:22 98:23 112:15 117:7 140:4</p> <p><b>regional</b> 131:15,23</p> <p><b>register</b> 67:21</p> <p><b>regular</b> 1:6 74:24</p> <p><b>regulate</b> 88:2,9 101:19 127:23</p> <p><b>regulated</b> 31:5</p> <p><b>regulates</b> 131:20</p> <p><b>regulation</b> 101:20</p> <p><b>regulations</b> 130:2</p> <p><b>regulatory</b> 15:6 40:8 63:12,19 66:4,6 89:10 126:4 131:19 132:5,6</p> <p><b>rejection</b> 19:22</p> <p><b>related</b> 20:11 86:14</p> <p><b>relates</b> 26:24 112:2 127:16</p>	<p><b>relationship</b> 95:9</p> <p><b>relative</b> 71:14,15 71:23 75:25 143:16</p> <p><b>relatively</b> 25:2</p> <p><b>release</b> 65:5,13,18 87:22 127:9,10 135:8</p> <p><b>released</b> 15:25 27:12 29:4 88:13 135:6</p> <p><b>releases</b> 9:14 60:18 61:1,9 64:3 65:1,21 66:16 90:1,2,3,5 105:22 131:15 132:1 140:5</p> <p><b>relevant</b> 9:4 16:9 101:24</p> <p><b>reliance</b> 134:14</p> <p><b>relief</b> 128:8,22 129:1</p> <p><b>relocate</b> 114:4,9 116:7</p> <p><b>relocated</b> 27:6</p> <p><b>relocating</b> 81:12</p> <p><b>relocation</b> 80:25</p> <p><b>reluctancy</b> 93:11</p> <p><b>remain</b> 33:8 73:3</p> <p><b>remainder</b> 49:12</p> <p><b>remains</b> 32:10</p> <p><b>remarks</b> 89:21</p> <p><b>remediation</b> 32:21 75:11</p> <p><b>remember</b> 12:7 15:5 111:10 121:7</p> <p><b>remind</b> 8:6</p> <p><b>remote</b> 12:9 36:14 99:13</p> <p><b>remotely</b> 8:5</p>
--	--	--	--

[removal - robust]

<b>removal</b> 7:3 26:19 29:20 30:5 49:17 129:11 <b>removals</b> 55:19 <b>remove</b> 50:3 61:25 73:14 88:4 <b>removed</b> 52:10 <b>removing</b> 31:8 50:21 52:1 55:14 <b>renewal</b> 115:15 <b>renp</b> 63:11 <b>repackage</b> 94:7 <b>repackaged</b> 96:17 97:8,13 <b>repair</b> 27:1 33:12 34:5,8,13,16 36:9 36:12,24 37:10,12 38:1,3,15 40:20 41:2 45:2 46:3,25 47:19 94:15,16,18 94:24 97:4,9 117:16,20 <b>repaired</b> 45:15 <b>repairs</b> 47:23 <b>replace</b> 70:5,15 <b>replaced</b> 123:9 <b>report</b> 15:10,11,18 16:15 17:17 42:7 45:14 78:20 79:12 94:1,9 95:4,19 96:1 99:24 100:6 102:6,9 112:16,17 113:14 115:25 116:4 119:4,5,21 119:25 125:25 126:16 129:22 <b>reported</b> 1:21 15:21 39:8,10 63:18 102:2 <b>reporter</b> 143:3,6	<b>reporting</b> 116:2 126:13 <b>reports</b> 63:20 64:1 113:4 125:23 138:10,15,23 <b>repositioning</b> 78:12 <b>repository</b> 97:10 <b>representative</b> 10:12,15,17 73:9 99:2 139:23 <b>representatives</b> 31:23 <b>representing</b> 10:6 98:24 <b>request</b> 73:7 81:22 93:6 105:1 <b>requested</b> 73:14 104:22 <b>require</b> 33:4 98:16 111:20 <b>required</b> 28:10 62:12 72:2,8,23 112:19 114:2 117:11 125:23 126:16 129:3 <b>requirement</b> 33:23 63:12 116:1 126:13 <b>requirements</b> 33:3 117:19 132:23 133:11 134:5 <b>requires</b> 40:9 70:14 <b>research</b> 37:4 40:20 41:4,11,11 63:23 120:4 <b>researched</b> 94:16 <b>resident</b> 105:5 <b>residents</b> 88:15	<b>resolved</b> 127:2 <b>resources</b> 70:16 72:25 73:2,7,10,12 73:15,20 <b>respect</b> 17:10 <b>respond</b> 17:3 <b>response</b> 13:14 15:1 19:25 32:8 74:12 <b>responses</b> 68:18 <b>responsible</b> 6:20 17:19 48:25 74:7 <b>responsive</b> 137:15 137:16 140:16,22 141:14 142:18 <b>rest</b> 36:9 62:19 74:23 130:3 142:16 <b>restart</b> 133:22 <b>restating</b> 103:13 <b>rests</b> 36:1 <b>resubmit</b> 115:15 <b>resulting</b> 132:23 <b>results</b> 37:21 39:7 78:22 102:1 <b>retired</b> 112:12 <b>return</b> 93:23 <b>reusing</b> 57:15 <b>revealed</b> 70:8 71:20 <b>review</b> 34:18 <b>reviewed</b> 62:8 126:25 133:25 <b>reviewing</b> 11:4 115:13 <b>reviews</b> 107:16 117:24 131:5 <b>rey</b> 3:15 <b>rich</b> 3:11 69:19,25 <b>rigging</b> 47:10	<b>right</b> 11:11 20:10 22:14,17 25:11 31:2,3 32:12 38:2 39:6 41:6,16 42:25 46:8 47:18 49:2 51:1,15 54:13 58:10 59:14 61:4 68:21 74:3 77:24 78:1,14 86:4 87:19 89:1,1 89:16 90:18,19,22 101:16 104:2 113:20 114:20 116:6 119:16,18 126:24 128:25 135:16,19 141:10 <b>rigor</b> 117:19 <b>rip</b> 25:15 <b>rise</b> 100:1 103:12 112:15 113:2,4,7 113:21 114:5,23 115:1,7,13,18,21 <b>rising</b> 73:5 98:18 111:22 <b>risk</b> 66:20 87:24 96:2 105:19,24 107:4 <b>risks</b> 66:22 <b>road</b> 15:6 24:9 31:12 <b>rob</b> 10:11,12 11:1 11:10,12,12,24 12:17 <b>robot</b> 35:23 36:15 36:20 37:24 38:22 47:3,4,8 <b>robotic</b> 133:24 <b>robotically</b> 59:8 124:5 <b>robust</b> 128:5
---	--	---	---

[rock - secure]

<b>rock</b> 71:1 75:2 76:4 122:25 123:4 123:4,5 <b>rocks</b> 74:23 123:3 <b>rocky</b> 74:25 <b>rods</b> 124:15 <b>rogers</b> 123:16 <b>role</b> 5:25 6:9 8:7 10:22 <b>roll</b> 69:10 <b>rollout</b> 17:13 <b>roof</b> 119:15 134:19 135:4 <b>rooftop</b> 92:22 <b>room</b> 129:9 142:7 <b>ross</b> 3:21 <b>rotor</b> 46:6 <b>rotting</b> 96:12 <b>roughly</b> 64:7 114:7 <b>roundtrip</b> 64:15 <b>route</b> 28:25 128:5 <b>routine</b> 109:4 110:7 119:8 <b>row</b> 35:11 <b>rowing</b> 7:8 <b>rubblized</b> 22:10 <b>rules</b> 31:1 130:2 <b>run</b> 23:4 28:10 30:22,25 31:4 40:3,5 55:5 <b>running</b> 10:18 50:25 107:3 <b>rush</b> 48:4 <b>russian</b> 46:16,19 46:20,22 47:14,18 <b>rust</b> 125:8	65:4 66:4,13 67:16 80:24 88:12 89:4 113:11 130:8 132:7,24 142:19 <b>safely</b> 27:20,21 29:22 31:8 49:8 128:24 130:20 <b>safety</b> 5:20 13:13 26:11,12,17 47:12 61:6 89:3 90:2 94:8,23 113:22 115:17 117:16 128:3,18 <b>saline</b> 25:1 <b>sample</b> 24:23 41:21 43:13 <b>samples</b> 62:2 63:16 <b>sampling</b> 63:13,18 132:4 <b>san</b> 2:1 3:2,7,15 6:10,20 9:21 13:21,25 14:1,8 18:14 22:1,18 23:21 24:7 53:3 53:18 59:23 61:11 66:15 69:15 70:9 71:5,11 77:19,24 77:25 87:20 88:2 88:17 89:18 94:8 94:22 96:25 100:5 105:5,9 128:16 131:15,23 132:13 132:19 138:7,9 <b>sand</b> 63:15 <b>sandia</b> 93:25 95:19 96:6 119:4 <b>sanjay</b> 18:24 20:25 91:16 92:3 92:6 95:13 97:22 104:5 106:12	108:4 <b>santa</b> 78:18 <b>saw</b> 17:4 18:11 <b>saying</b> 50:16 60:7 120:4 127:10,10 134:21 <b>says</b> 77:17 105:14 135:21 <b>sc</b> 77:18 <b>scale</b> 24:5,14 <b>scary</b> 87:23 <b>sce</b> 33:15 36:7,25 37:8,10 40:22 72:7,10,21 73:14 73:16,23 75:4,8,12 76:1 81:13,25 82:11 83:1,5,10,14 84:13 <b>sce's</b> 33:21 <b>scenario</b> 100:24 <b>schedule</b> 26:3 27:11 51:22,23 55:2,9 <b>scheduled</b> 55:21 <b>schedules</b> 55:5 <b>schematic</b> 25:6 57:19 <b>schematically</b> 59:2 <b>schlick</b> 99:21 102:16,20,25 <b>school</b> 3:5 5:7 19:21 20:1,4 <b>schroeder</b> 78:18 <b>science</b> 46:4 60:21 61:1 68:9 88:12 138:12 <b>scientific</b> 66:9 <b>scientist's</b> 5:23 <b>scientists</b> 71:7 72:5 75:23	<b>scott</b> 17:22 <b>scratched</b> 133:12 <b>scratches</b> 101:21 <b>screen</b> 8:14,15,23 12:19 18:23 19:9 20:12 21:11,12 77:17 87:15 109:23 <b>scs</b> 48:17 <b>sds</b> 48:22 <b>se</b> 117:22 <b>sea</b> 31:14 62:14,18 63:7 69:23,25 73:5 74:6,23 98:18 100:1 103:12 111:22 112:15 113:1,3,6 113:14,21 114:5 114:23 115:1,7,13 115:18,21,24 116:8 <b>seafood</b> 63:3 <b>seal</b> 44:6 45:17 124:21 <b>sealed</b> 24:19 <b>season</b> 74:17 <b>seaweed</b> 122:24 <b>second</b> 7:4 15:3 46:15 75:11 82:16 84:7 86:14 101:24 103:14 <b>seconds</b> 14:11,23 85:20 <b>secretary</b> 3:5 10:8 10:23 84:23 <b>section</b> 25:6 30:13 62:16 76:13 <b>sections</b> 37:10 <b>secure</b> 100:8,20 127:18
s			
<b>sad</b> 96:17 <b>safe</b> 26:15,21 28:9 28:14 29:19 30:5			

<b>secured</b> 100:22 <b>security</b> 28:12 107:3 <b>see</b> 8:16,18,22,23 10:2 11:1,8,9 16:17,22 18:17,25 19:5,6,8 20:17,18 20:20 21:11,18,19 22:5,20 24:17 25:9,23 28:24 29:11,24 30:17,19 31:3,9 36:3 38:7 38:21 39:15 40:15 49:18 51:2,13,14 51:25 53:1 54:24 55:1,8,23 59:3,14 59:18 60:12 66:25 67:4,19 68:20 69:3 70:20 73:13 74:22 77:16 78:6 78:15 84:4 85:1,5 85:13 86:2 87:5,6 87:7 94:13,14,18 94:20,25 101:12 102:16,19 104:3 104:13,19,25 106:8,9,22 107:19 110:1,3 114:4 118:5 122:25 123:2 124:7 125:5 130:17 131:11 134:23 137:23 139:16,18 <b>seeing</b> 17:8 21:10 21:12 45:24 68:6 79:16 106:21 138:2 142:14 <b>seek</b> 116:25 128:8 128:21 129:1 <b>seen</b> 24:6 29:10,11 29:23 60:19 66:22	68:4,11 95:2 119:3 <b>segment</b> 20:15 25:22 48:9 60:16 80:2,3 90:6 101:7 <b>segmentations</b> 55:17 <b>segments</b> 50:15 58:7 <b>segregated</b> 28:4 <b>selected</b> 36:14 <b>send</b> 44:4 82:21 114:15 125:23 <b>sender</b> 93:23 <b>sending</b> 121:24 <b>sense</b> 24:5,13 25:19 86:19 <b>sensitive</b> 62:3 <b>sent</b> 35:12 <b>separate</b> 28:3,8,10 28:11 30:22 31:16 40:21 98:23 131:7 <b>separately</b> 139:2 <b>september</b> 143:20 <b>sequoias</b> 69:21 <b>series</b> 25:15 44:2 <b>serious</b> 96:5 <b>service</b> 10:10,19 46:3 <b>serving</b> 10:6 82:6 <b>set</b> 31:1 35:8 44:3 44:5,13 62:7 91:3 102:3 143:9 <b>sets</b> 64:20 <b>setting</b> 48:3 <b>severe</b> 100:2 <b>sewage</b> 61:16 <b>shape</b> 58:8 <b>share</b> 13:22 19:9 19:11 20:24 25:9 76:11 79:4 109:23	113:9 <b>shared</b> 93:7 95:3 133:14,15 <b>sharing</b> 18:25 19:11 93:1 <b>shark</b> 78:13 <b>sharks</b> 78:14 79:22 136:2 <b>sharpen</b> 9:6 <b>shell</b> 35:24 36:3,4 47:5 <b>sheriff's</b> 3:10 <b>shifting</b> 28:17 75:15 <b>shifts</b> 141:22 <b>shims</b> 101:22 <b>shiny</b> 86:23 <b>ship</b> 52:16 56:11 <b>shipment</b> 50:10 <b>shipments</b> 52:20 53:1 <b>shipped</b> 50:12 130:21 <b>shirt</b> 123:9 <b>shirts</b> 123:10 <b>sholler</b> 3:21 <b>shore</b> 62:17 70:13 <b>short</b> 7:13 9:2 72:1 94:2,4,4 96:7 133:20 <b>shortchange</b> 95:10 <b>shorthand</b> 143:3,5 143:11 <b>shot</b> 133:13 <b>show</b> 15:6 18:4,10 20:12 21:20,24 23:17 25:10 35:21 51:16 59:2 62:21 64:4 101:7 114:24 140:21	<b>showed</b> 53:5 <b>showing</b> 18:20 94:23 <b>shown</b> 22:3 24:12 24:23 70:19,24 72:11,11,13 74:23 <b>shows</b> 22:25 35:15 37:24 38:2 51:3 <b>shredder</b> 23:2,9 23:10 <b>side</b> 22:3,4,7,12 51:13 56:22 <b>sidings</b> 22:21 <b>sierra</b> 3:16 <b>sight</b> 135:1 <b>signage</b> 88:2 <b>signature</b> 143:24 <b>signed</b> 62:9 67:4 <b>significant</b> 16:5 27:18 50:1 115:1 125:10 129:13 <b>signs</b> 60:21 68:3,6 68:12 87:18,21 88:3 89:14 138:14 <b>similar</b> 58:5 123:11 <b>simply</b> 84:10 <b>simulate</b> 34:9 <b>simulated</b> 34:13 38:1 <b>simulator</b> 34:5 <b>single</b> 81:23 <b>site</b> 6:15 8:10 9:3 9:20 12:22 14:20 14:25 15:1 17:18 18:14,15 22:1,21 22:22 23:13,19,20 23:23 25:10,17 26:3 27:6 32:3,10 38:14 40:7 48:17 49:10,12 56:19,21
--	---	--	--

[site - standard]

56:22,23,24 60:11 63:3 82:12 90:4 96:16,21 97:1 105:18 112:25 114:3 116:7,12 117:8 121:8,8,9 124:15 128:1 <b>sites</b> 56:20,24 59:7 120:23 121:22 128:7,10 138:17 <b>sits</b> 100:18 <b>sitting</b> 5:22 <b>situ</b> 34:5 117:8 <b>situation</b> 82:4 112:15 <b>six</b> 54:1 112:19 <b>size</b> 22:9 72:15 <b>skype</b> 1:9 2:10 5:1 8:17 14:14 102:18 104:10 106:20 <b>slash</b> 90:4 101:25 <b>slide</b> 9:23 10:4 18:3,17,20 21:3,4 21:7,10 22:24,24 23:18 25:5,5 26:8 26:9 27:12 29:1 32:15,18,22 33:14 34:22 35:14,20 36:6,12 37:14,23 38:4 39:2,4 49:6 50:23,24 51:11,20 52:14,24 53:15 56:5 61:21 62:21 62:22 64:3 65:3 66:2 70:3 72:18 74:2,24 75:3 77:2 80:18,21 81:10 83:18 <b>slides</b> 8:5,22 18:2 18:5,21 20:11 21:20 52:15 53:5	60:24 68:25 104:13 106:24 <b>slight</b> 8:17 64:22 <b>slightly</b> 61:10 <b>slow</b> 33:9 48:1 49:10 123:24 <b>small</b> 22:25 23:1 53:24 54:2,3 57:6 66:1,12 72:7 125:15 <b>smaller</b> 50:13 <b>smart</b> 86:6 <b>smarts</b> 86:9 <b>smoke</b> 110:16,17 <b>social</b> 5:25 13:11 138:14 <b>society</b> 3:18 <b>soil</b> 25:15 <b>sole</b> 28:13 <b>solid</b> 42:8 55:17 117:5 132:23 <b>solution</b> 94:9 130:16 <b>solutions</b> 18:18 26:14 48:22 60:3 94:6 132:18 <b>somebody</b> 14:6 65:8 67:4 123:8 137:3 <b>sonar</b> 76:2 <b>songs</b> 1:7 10:13 16:10,14 20:1 24:24 26:13,15 32:16,23 48:22 60:3 63:22 70:7,8 70:17 75:7 80:25 88:20,23 99:6 100:18 101:22,23 114:3 122:23 132:18 139:3 140:2,11	<b>songscommunit...</b> 5:16 12:23 15:15 59:12,15 85:3 90:4 113:25 <b>songscommunit...</b> 7:23 29:6 30:12 39:12 79:8 <b>soon</b> 39:19 <b>sophisticated</b> 43:4 50:7 <b>sorry</b> 17:2 18:16 19:14,19 48:12 57:17 90:16 108:11 <b>sort</b> 81:16 83:3,8 84:15,21 109:9 124:7 138:6 <b>sorting</b> 80:1 <b>sound</b> 38:7,8,11 <b>sounds</b> 31:24 43:1 <b>sources</b> 64:4 <b>south</b> 38:16 <b>southern</b> 98:14,20 99:2 111:18,24 127:17 <b>southwest</b> 82:24 <b>southwestern</b> 83:6 <b>speak</b> 17:6 99:20 135:12 <b>speaking</b> 104:12 135:15 <b>specialist</b> 55:3 61:6 <b>specialists</b> 56:13 <b>specialized</b> 50:17 58:19 <b>species</b> 71:13,18 71:19 74:7 <b>specific</b> 98:21 101:25 111:25 115:7	<b>specifically</b> 56:8 69:17 98:20 <b>spend</b> 27:16 <b>spending</b> 142:12 <b>spent</b> 7:3 9:20 14:20 17:18 18:12 32:9,10 54:8 57:15,24 58:14 76:12 80:16,25 81:12 82:9,14,21 82:23 83:4 84:2 86:18 129:12 131:1 141:18,19 142:1 <b>spilled</b> 123:8 <b>spinning</b> 137:5 <b>spray</b> 33:17,18 36:22 37:25 38:22 38:23 42:7,15 43:1,5,9 45:13,16 94:24 118:10 <b>sprayer</b> 42:2 <b>spraying</b> 38:21 41:24 42:3 <b>spread</b> 14:8 <b>square</b> 45:15 86:23 <b>squares</b> 70:19 86:21,22 <b>st</b> 56:14,19 <b>stack</b> 110:19 <b>staff</b> 28:8,9 95:2 <b>stage</b> 68:19 <b>stains</b> 125:8 <b>stakeholder</b> 85:1 <b>stakeholders</b> 81:8 96:20 <b>standalone</b> 27:17 27:25 28:11 30:21 <b>standard</b> 24:2 33:17,20 46:25
---	--	--	---

<p>47:1,21 75:18,18  <b>standards</b> 33:20  37:6 48:3 71:8,9  71:10,14,15,18,23  72:1,7 75:13,14,21  75:25 76:18  <b>standing</b> 71:12  72:3  <b>star</b> 98:1,3 102:21  <b>start</b> 18:25 19:9  52:11 55:24 58:1  62:12 90:19 95:9  108:21 109:1  117:3 120:9,19  123:21 128:14  140:10,18  <b>started</b> 26:20 91:1  <b>starting</b> 35:4 52:9  <b>state</b> 2:3 3:12 6:1  18:6 39:10 63:19  72:23 78:11 80:12  94:6 99:24 100:7  100:16 113:2,16  115:25 116:2  129:23 130:18  143:6  <b>stated</b> 98:16  105:21 111:19  <b>statement</b> 105:17  <b>states</b> 6:17 56:15  83:7 100:15  <b>station</b> 13:13 28:4  28:16,24,25 29:11  29:13,21 30:8  31:9,10,13 132:25  <b>stations</b> 31:6  <b>status</b> 132:13  <b>stay</b> 11:19 85:24  85:25 87:3  <b>stays</b> 22:15</p>	<p><b>stealth</b> 74:10  <b>steam</b> 49:25  <b>steel</b> 22:11 23:3,12  47:6  <b>stephenson</b> 109:2  110:3,7  <b>steps</b> 16:25 83:2,4  <b>stetson</b> 3:3 11:3  15:23 43:15,20  44:17 77:1 78:5,7  78:10 79:18 91:7  101:9 108:17  111:9 118:18  120:16 123:15  125:19 127:7,14  129:4 131:11  132:10 133:5  <b>steve</b> 78:18 123:16  <b>stewardship</b> 26:11  <b>stick</b> 47:4  <b>sticking</b> 68:16  <b>stir</b> 36:18  <b>stock</b> 71:12 72:3  <b>stone</b> 6:6 9:6 11:14  111:11  <b>stone's</b> 85:24  <b>stop</b> 19:10 21:1  38:19 74:17  109:25  <b>storage</b> 1:7 17:20  26:24 28:7,14  31:12 32:20 34:21  34:24 35:7,16,22  36:16,21 56:20  58:11 59:22 83:5  84:3 89:6,11  96:25 97:11  115:14 119:10,23  129:11 130:1,8,9  131:1</p>	<p><b>store</b> 23:20 59:25  <b>stored</b> 23:22 24:4  27:20,22 35:10  49:9 54:8 57:23  124:1,14  <b>storing</b> 24:1 128:6  128:9  <b>storms</b> 100:2  <b>story</b> 57:5  <b>straight</b> 109:15  110:18  <b>strategic</b> 9:19 27:7  80:4,11,22 81:9,19  81:24 83:12 84:12  130:14 141:2,22  <b>strategically</b> 142:2  <b>strategy</b> 17:18  24:2 142:4  <b>streaming</b> 110:17  <b>stress</b> 34:20 40:3  43:11 96:3 120:5  <b>striking</b> 22:19  <b>strong</b> 84:21  <b>strongholds</b> 76:7  <b>structural</b> 133:1  <b>structure</b> 57:21  97:4 114:16  129:25 130:25  131:25  <b>structures</b> 26:20  28:23,23 29:13  31:8 37:16 52:4  54:5 128:23  <b>studied</b> 71:6  <b>studies</b> 70:7 113:6  <b>study</b> 43:11 70:7  115:19  <b>studying</b> 70:22  <b>stuff</b> 23:8 49:20  60:19 96:16 97:12  114:20</p>	<p><b>style</b> 109:14  <b>subcommittees</b>  41:2  <b>subject</b> 66:19  68:17  <b>submit</b> 112:21  113:4 116:2  140:15  <b>submitted</b> 37:6  99:7 103:17  113:15 126:16,20  126:21 129:9,22  137:13  <b>submitting</b> 115:25  <b>subordinate</b> 19:23  <b>subscribed</b> 143:19  <b>substantive</b> 80:3  <b>substation</b> 23:5  <b>substrate</b> 42:10,10  42:21 71:13 76:4  76:5 77:13  <b>success</b> 11:20  76:10  <b>successful</b> 6:12  70:23 73:24  <b>successfully</b> 73:18  96:24  <b>sudden</b> 120:3  <b>sufficient</b> 42:11  <b>suggest</b> 20:8 44:14  89:24 108:8  <b>suggests</b> 125:11  <b>suitable</b> 36:13  <b>summer</b> 15:21  21:23 141:17  <b>sump</b> 132:2  <b>sumps</b> 25:12  <b>super</b> 23:20 85:18  121:9 124:16  <b>supersonic</b> 42:9  43:1</p>
--	--	---	--

[supplied - terrestrial]

<b>supplied</b> 126:4 <b>support</b> 17:21,23 19:24 69:18,24 76:19 78:25 84:18 <b>supporting</b> 134:1 <b>supports</b> 34:2 69:23 <b>suppose</b> 111:1 <b>supposed</b> 102:1 <b>supposedly</b> 94:24 <b>sure</b> 17:6 26:18 28:1 31:21 50:25 52:22 60:22 68:13 76:24 77:11 81:14 82:7,12 89:25 91:5 96:18,19 99:17 101:15 108:10,19 116:12 117:1 118:20 119:12 129:18,18 130:14 <b>surf</b> 87:24 <b>surface</b> 97:11 124:5,7 <b>surfers</b> 66:14 <b>surfrider</b> 17:14 <b>surround</b> 52:5 <b>surrounding</b> 68:23 <b>survey</b> 73:8,11 <b>surveys</b> 76:2,3 119:8 <b>suspected</b> 14:4 <b>suspicious</b> 93:13 <b>swim</b> 87:24 <b>swimmers</b> 66:14 <b>swimming</b> 57:13 58:17,18 136:2 <b>swiss</b> 94:9 <b>switch</b> 31:11	<b>symbol</b> 87:15 <b>symmetrical</b> 124:14 <b>symptomatic</b> 14:6 <b>synonymous</b> 33:19 <b>system</b> 9:7 20:24 21:1 24:20 28:4 34:24 35:12 39:7 58:3,4 70:8 72:6 93:2 102:1 109:5 109:6,8 112:17 113:21 115:12,14 116:7 119:10 124:3,4,4 126:12 127:25 128:25 131:22 134:9,14 134:20 136:4 <b>systems</b> 25:12 28:6 37:18 49:17 49:21 52:2,4 112:9 128:23 135:18	143:8 <b>takes</b> 23:3,11 50:2 <b>talent</b> 84:21 <b>talk</b> 10:16 17:12 26:12 27:14 28:18 28:20 30:15 32:6 48:14,17 52:15,25 60:17 61:22 72:20 93:8 105:10 141:1 <b>talked</b> 13:11 26:10 50:10,10 81:20 86:6 120:2 <b>talking</b> 13:24 27:16 41:20 43:10 54:20 56:21 64:24 66:11 96:8 106:22 109:24 <b>talks</b> 105:12,13 <b>tanks</b> 49:22 61:24 62:13 <b>task</b> 10:16,17 15:20 16:1,2,7,17 16:23,24 17:7,10 17:13,17 37:8 118:13 <b>tasks</b> 50:22 <b>taylor</b> 3:7 43:18 44:20,22 45:2,21 59:18,20 60:4,9 <b>teach</b> 12:14 <b>teaching</b> 107:1 <b>team</b> 71:7 73:23 78:11,16,17 81:13 83:21,23,25 84:5,8 84:9,14,17,18,20 109:3 141:7 <b>teaming</b> 69:25 <b>teams</b> 74:13 84:16 <b>tech</b> 42:18 <b>technical</b> 14:10,22 18:16 48:13 70:7	85:7,18 90:16 92:6 95:20 109:11 111:5 125:3 137:20 140:13 <b>technically</b> 12:8 <b>technologies</b> 46:19 <b>technology</b> 7:19 12:16 36:9,19 93:25 94:12,16,16 95:22 137:18 <b>ted</b> 3:17 <b>tell</b> 5:21 8:20 21:1 116:7 122:18 128:3 130:10 132:20 <b>telling</b> 5:20 <b>tells</b> 126:15 <b>temperature</b> 35:8 35:9 37:17 43:22 43:24,25,25 44:8 44:13,14,15 45:7 108:22 <b>temperatures</b> 40:5 124:16 <b>tempest</b> 135:10,10 <b>temporary</b> 88:3 <b>ten</b> 22:21 24:11 75:21 <b>tend</b> 58:18 <b>tens</b> 51:23 <b>term</b> 9:5 34:16 43:13 82:11 94:2 94:4,4 96:7 <b>terminated</b> 99:1 <b>terminology</b> 41:18 <b>terms</b> 15:3 57:4 78:22 81:5,14 93:19 96:19 <b>terrestrial</b> 65:14 76:15
	<b>t</b>		
	<b>t</b> 83:3 <b>tag</b> 138:24 <b>take</b> 10:22 11:9 12:6 21:6 31:9 47:10 51:11 55:17 55:19 59:25 63:1 76:22 78:21 82:11 82:14,19 83:14 85:24 87:9 90:18 90:22 97:10 104:18 106:19 109:19 117:23 120:8 126:2 129:10,20 140:21 <b>takeaway</b> 16:8 <b>taken</b> 2:10 11:10 22:22 62:2 90:24		



[terribly - tonight]

<p><b>terribly</b> 82:7</p> <p><b>terrific</b> 86:8</p> <p><b>terrified</b> 68:5</p> <p><b>test</b> 34:5,7,9,12,14 35:3,6,10,15 38:1 38:3,13,15,15 40:6 41:21 42:17,18 44:16 77:6 117:9 126:8,9,11</p> <p><b>testing</b> 117:8</p> <p><b>tests</b> 120:7,7</p> <p><b>texas</b> 54:1 56:9,14 56:22 57:7 86:4 93:22 116:18</p> <p><b>text</b> 6:22</p> <p><b>th</b> 32:9</p> <p><b>thank</b> 5:4 6:3 7:13 7:15,15 8:4 10:5,9 10:23 11:6,13,23 12:2,11,12,17 13:8 15:2,24 20:6 21:2 21:9 26:5 27:13 32:3 39:13,14 43:6 44:17,19 45:21,23 48:6,12 49:4 54:18 55:25 56:17 58:25 59:5 60:9 61:4 66:18 67:11 68:10,12 76:23 78:16 79:19 80:8 87:14 89:20 89:21 90:15,23 91:8 95:4,5 97:13 97:15 99:23 101:1 102:9,11,14,25 103:24,25 104:15 104:17 106:1 108:11 110:2 111:7,9 116:18 118:18 123:13,15 125:19 127:6,7,14</p>	<p>129:5 131:2 132:10 133:5,7 134:17 141:5 142:19</p> <p><b>thanks</b> 5:5 13:9,23 43:20 57:10 69:11 78:7,25 80:9 123:13 139:22 141:3,6</p> <p><b>theme</b> 29:23 59:11</p> <p><b>themes</b> 80:14</p> <p><b>thereof</b> 143:13</p> <p><b>thick</b> 36:1</p> <p><b>thickness</b> 38:25</p> <p><b>thing</b> 7:4,11 17:10 28:19 41:17 57:22 86:10 89:7 104:10 120:1,6 136:8</p> <p><b>things</b> 6:11,19,23 11:19 12:9 22:11 22:19 27:15 40:19 40:23 49:23 57:14 57:16 67:25 68:3 82:2 86:17,21 87:4 88:22 105:10 106:18 108:20 114:14 116:22 117:24 134:11 142:9</p> <p><b>think</b> 7:3 13:18 16:9 17:20 18:4 19:6 24:7 29:18 31:20,21 32:5 38:25 39:17,19,21 41:19 42:3,25 44:20 46:25 48:2 48:8 51:21 55:10 55:22 56:11 57:1 57:4 59:7 67:2 79:25 84:10 85:17 86:5,14,24 87:25</p>	<p>88:6 89:12,14 91:2 92:7 94:3,10 94:13,15 96:5,15 96:23 97:7,13 105:16 106:2,4,7 106:19 107:3,6 109:3,9 110:14 113:20 114:18,19 119:20 120:12,18 122:13,16 125:2 125:16,22 127:21 131:8 132:5 133:6 133:20 134:19 136:8,12,19 137:4 137:7,11 138:8,15 139:3,6 140:5 141:9 142:6,15</p> <p><b>thinking</b> 41:20 42:2 88:20 107:17</p> <p><b>thinks</b> 39:1 137:9</p> <p><b>third</b> 5:11 7:11 27:5 63:16 75:20 83:8 92:10 127:1 136:11</p> <p><b>thirds</b> 100:3</p> <p><b>thorough</b> 118:6</p> <p><b>thought</b> 21:17 25:17 43:11 67:21 120:6,13 141:12</p> <p><b>thousands</b> 51:23</p> <p><b>threaten</b> 100:3</p> <p><b>three</b> 6:24 16:2 35:12 36:1,10 45:25 46:7,8 74:4 81:16,17 95:9 123:10</p> <p><b>throughs</b> 7:25</p> <p><b>thursday</b> 1:9 2:10 5:1</p> <p><b>thyroid</b> 61:20</p>	<p><b>tides</b> 100:2</p> <p><b>tie</b> 75:9 114:13</p> <p><b>tied</b> 71:10 88:11 115:10 116:5</p> <p><b>tight</b> 36:20 110:23 111:1</p> <p><b>tiktok</b> 38:19</p> <p><b>time</b> 9:3 12:17 27:16 39:5,13 41:17 43:10,25 48:16 49:2 55:22 59:24 67:9 74:4 83:17 84:20 87:3 90:13 94:20 103:13 110:4 112:5 114:19,21 120:8 121:14 124:11 135:13 136:3 137:11,11 140:15 142:4,13 143:9</p> <p><b>timer</b> 95:8</p> <p><b>times</b> 7:21 65:12 65:22 66:23 108:20</p> <p><b>timing</b> 83:3,4</p> <p><b>tiny</b> 70:19</p> <p><b>tip</b> 100:15</p> <p><b>tm</b> 124:3</p> <p><b>tn</b> 109:4 134:20</p> <p><b>today</b> 5:18 6:22 54:15 67:3 85:11 93:2</p> <p><b>tom</b> 83:23 84:17 98:24 112:2,6,12 112:12</p> <p><b>tonight</b> 5:10 6:4 7:12 9:1 13:20,22 16:21 27:8 32:19 95:3 104:15 137:10 138:1,10</p>
--	--	--	---

<p>138:23 140:3 141:15 <b>tonight's</b> 8:6,15 <b>tons</b> 53:21 56:8 57:23 72:2 <b>tools</b> 51:9 <b>tooth</b> 96:12,12 <b>top</b> 22:5,12 24:16 24:19 25:14,16 51:24 77:16 96:2 119:8 <b>topic</b> 16:22 17:16 17:25 39:17 67:7 67:8 68:22 87:6 139:12,15 <b>topics</b> 7:1 8:25 11:16 14:16,18 141:8 <b>topographical</b> 31:10 <b>total</b> 54:2,11 64:25 74:17 75:16 <b>totaled</b> 72:14 <b>totally</b> 23:22 <b>touch</b> 47:6,8 <b>tours</b> 140:18 <b>track</b> 22:20 <b>tradeoff</b> 46:13 <b>traffic</b> 52:23 <b>transcribed</b> 143:12 <b>transcript</b> 1:17 2:9 <b>transcription</b> 14:11,22 85:8,19 143:13 <b>transfer</b> 19:24 27:19 33:8 80:13 133:22 <b>transfers</b> 141:18</p>	<p><b>transition</b> 49:9 78:1 <b>transnuclear</b> 58:4 134:20 <b>transport</b> 93:19 93:20 129:12 130:9,11,15,16,19 <b>transportation</b> 22:6 82:17,18,22 83:13 84:3,12 <b>travels</b> 110:17 <b>treat</b> 54:7 110:22 <b>treatment</b> 61:16 61:19,20 <b>tremendous</b> 24:25 85:25 <b>tremendously</b> 10:9 <b>tri</b> 29:4 <b>tribal</b> 72:21,24 73:2,6,9,9,11,20 <b>tribe</b> 73:14,21 <b>tried</b> 59:11 104:10 <b>trillion</b> 105:12 <b>trip</b> 24:9 <b>trouble</b> 104:9 <b>truck</b> 52:20 53:25 57:6 <b>trucked</b> 25:4 <b>trucks</b> 25:5 52:18 54:2 <b>true</b> 40:23 108:4,5 <b>trustees</b> 3:6 <b>truth</b> 96:17 105:25 <b>try</b> 20:23 38:12 88:19 89:5,18 129:20 <b>trying</b> 57:11,18 92:21 94:18 99:17 129:7 139:5 141:12</p>	<p><b>tubes</b> 24:21,23 25:11 <b>tucked</b> 77:21 <b>tuned</b> 23:15 <b>turn</b> 20:17 37:2 88:7 99:9 116:21 118:10 125:2 <b>turned</b> 23:1 <b>turns</b> 21:18,21 <b>tweet</b> 99:16,16 <b>twice</b> 88:17 <b>two</b> 6:7 8:8 22:2 23:17 34:25 35:4 36:15 39:17 46:9 49:17 51:2 52:15 55:17 56:20,24 69:22 70:13 71:8 71:21 92:9 100:3 101:8 106:18 112:4 116:5 121:5 121:22 126:10 131:11,18 133:8 <b>type</b> 58:23 84:7 <b>types</b> 70:20 71:8 132:1 <b>typical</b> 61:16 <b>typically</b> 109:5 118:6</p> <hr/> <p><b>u</b></p> <hr/> <p><b>u.s.</b> 64:6 82:24 <b>uc</b> 78:18 <b>ucsb</b> 78:19 <b>ultimate</b> 25:19 <b>ultimately</b> 16:7 23:14 24:17 25:7 48:25 129:24 <b>umax</b> 32:17 135:18 <b>unbelievable</b> 68:4 <b>underneath</b> 24:21 58:20 103:6</p>	<p><b>underscore</b> 54:20 <b>undersigned</b> 143:5 <b>understand</b> 40:24 43:1 44:25 57:20 57:25 68:5,7 77:5 77:8 83:2 93:11 103:23 118:20 119:13 122:16 129:8,18 130:22 131:1 134:24 135:9 136:6,25 <b>understandably</b> 107:4 <b>understanding</b> 120:25 133:13 <b>understands</b> 112:9 <b>underwater</b> 58:19 <b>unfolds</b> 142:18 <b>unglued</b> 86:3 <b>unified</b> 3:5 19:21 <b>union</b> 10:15 <b>unit</b> 24:7 50:11 53:2,22 54:14 98:17,18 111:21 111:21 <b>united</b> 6:17 56:15 83:6 100:14 <b>units</b> 50:14 54:11 114:6 116:13 <b>universities</b> 41:6 <b>university</b> 3:2 <b>unmute</b> 102:22 108:2 <b>unmuted</b> 98:1 108:3 <b>unquote</b> 100:17 102:4 <b>unseen</b> 29:10,14 29:23 30:2 <b>unwavering</b> 17:21 17:23</p>
---	--	---	---

[update - want]

<b>update</b> 1:7 9:2,5,9 9:13,16 13:25 26:2 29:3,9 30:4 39:19 48:10 80:4 80:10 85:17 133:10 <b>updated</b> 101:20 <b>updates</b> 10:2 15:3 20:9,14 26:3 30:9 54:16 <b>upgrading</b> 57:2 <b>upper</b> 65:1 <b>uranium</b> 124:15 <b>ureva</b> 111:13 <b>use</b> 13:12 22:9 23:4 42:18 44:10 52:17 65:18 83:10 104:10 107:1 117:11 <b>useful</b> 22:7 <b>usefulness</b> 138:23 <b>usually</b> 12:6 22:18 <b>utah</b> 18:6,6 20:12 21:21,22 23:6,21 24:9 53:3,22 103:2 120:20 121:10 <b>utility</b> 10:14	<b>vendor's</b> 38:1 <b>vent</b> 93:1 109:15 110:19 111:5 118:23,25 <b>vents</b> 92:22,25 93:10 108:22 109:11 111:6 118:22 119:17 135:2,4 136:10 <b>venture</b> 132:19 <b>verbatim</b> 143:10 <b>vernon</b> 3:14 <b>vessel</b> 24:7 50:3,11 53:2,22 55:16,16 57:12 58:16 74:5 <b>vessels</b> 50:21 <b>viable</b> 46:23 <b>vice</b> 3:3 15:23 43:20 44:17 78:7 78:10 79:18 91:7 108:17 111:9 118:18 120:16 123:15 125:19 127:7,14 129:4 131:11 132:10 133:5 <b>vicinity</b> 73:12 <b>victor</b> 3:2 5:4,13 8:19 11:23 12:12 14:12 16:20 17:4 18:19 19:2,6,10,13 19:17 20:6,25 21:8,14,16 30:16 31:18 38:9,18 39:3,14 43:8 44:19 45:23 48:2 48:6,21 54:18 55:25 56:18 59:6 60:10 66:18 67:17 68:13 69:3,8 76:23 78:3 79:7	79:20 85:16 87:13 88:6 89:20 90:25 91:4,8,19 92:8,12 92:16 95:5,17 97:15 98:2,6,12 99:11,23 101:1,6 101:12,15 102:10 102:14,15,23 103:25 104:8,17 105:3 106:1,7,15 108:6 109:22 110:5 114:18 121:4,20 122:8,18 129:15 133:7 134:12 135:20 136:23 139:6 141:5 <b>video</b> 2:9 6:8 38:5 38:10,19 59:7,11 59:11,14 90:7 104:12 106:21 110:1 133:13 <b>videos</b> 59:9,10 <b>view</b> 25:6 35:23 38:6 <b>vince</b> 48:14,20 49:5 55:13 56:12 57:10 58:1,22 59:4 60:1,8 <b>virtual</b> 79:2 <b>virtually</b> 7:18 <b>visible</b> 29:13 55:11 <b>visit</b> 18:9 25:18 53:5 <b>visiting</b> 21:24 <b>visualize</b> 57:12,18 <b>visually</b> 77:4 <b>voices</b> 107:6,8 141:13 <b>volume</b> 18:14 22:7 54:20 57:4,5,6	75:21 83:8 88:7 <b>volumes</b> 81:18 <b>voracity</b> 107:12
<b>v</b>			<b>w</b>
<b>validate</b> 34:7 <b>valuable</b> 41:12 74:1 <b>value</b> 15:8 64:20 <b>variety</b> 7:24 84:1 84:16 <b>various</b> 8:10 134:7 <b>vary</b> 87:3 110:10 <b>vast</b> 62:19 <b>velocities</b> 42:9 <b>vendor</b> 34:4			<b>waist</b> 58:24 <b>wait</b> 89:9 <b>waiting</b> 19:16 <b>walked</b> 111:12 <b>walker</b> 91:13,25 92:1 95:13,16,18 <b>walker's</b> 95:13 <b>walking</b> 111:10 <b>walkway</b> 31:14 <b>wall</b> 31:14 45:10 45:11,20 92:19 94:2 124:8,9 <b>want</b> 6:3,5,23 7:13 7:20 8:4,6 10:5,9 10:21 11:8,12 12:18 13:5,15 14:12 15:18 17:6 17:6,9 18:4 20:8 20:16 21:20 23:17 25:23 26:12,18,22 27:15 28:20 29:2 30:19 39:15 40:15 42:16 45:17,18 48:8,21 52:16 54:20,24 57:22 59:14 60:14,15 66:25 67:2,11,13 78:15 79:3 82:7 82:19 84:10 87:7 87:8 88:9 91:4 93:23 96:9 103:13 104:19 106:2,18 107:18 109:18 111:15 125:17 127:15 130:20 133:16 134:4,18 135:8,12,13

[want - years]

<p>136:20,23 137:9 137:22 138:3 139:16,17,18,24 140:2,8,9,12,22 141:6,16 <b>wanted</b> 15:19 17:5 18:2,10 20:5 44:20 49:7,8 72:20 87:5,19 104:4 107:5 <b>wants</b> 25:8 66:14 67:7 77:1 102:19 104:21 111:2 <b>ward</b> 3:19 67:2 79:25 87:11,12,17 88:8 <b>ward's</b> 138:6 <b>warn</b> 53:16 <b>warning</b> 87:23 89:14 99:25 <b>wash</b> 22:16 <b>washington</b> 17:11 17:23 86:13 142:10,11 <b>waste</b> 7:3 18:12,13 22:1,8,10 23:20 24:1 25:13 51:10 53:1,7,11,19,25 54:4,4,7,12,22 56:9,13,16 59:25 61:16,17 89:6 94:7,11 96:25 97:8 103:13 121:8 128:13 <b>water</b> 24:22,25 25:2,4 50:6,16 57:12 58:20 61:9 61:16,18,23 62:14 62:19,20 63:2,14 65:22 66:7 70:11 87:22 89:15</p>	<p>131:15,23 132:2,3 <b>way</b> 8:8 17:19 23:1 28:15 40:24 46:1 54:8 68:8 75:6 77:9 79:6 87:19 89:5 93:5 94:7 105:11 106:23 112:6 113:22 116:6 118:25 <b>ways</b> 8:13 89:11 <b>we've</b> 14:3,6 46:17 49:10,15 50:18 56:21 77:7 141:25 <b>wear</b> 105:8 <b>webinar</b> 17:14 <b>website</b> 7:24,25 15:16 16:16 63:22 63:25 79:12 85:2 85:3 88:21,21 94:22 99:5,6 113:25 136:20 140:11,12,15 <b>websites</b> 138:20 <b>week</b> 5:6 7:22 24:10 <b>weight</b> 18:14 <b>welcome</b> 10:11 25:20 43:7 44:18 45:22 66:17 67:17 68:18 92:16 <b>weld</b> 36:3,4 <b>welding</b> 36:18 124:21 <b>wells</b> 35:18 <b>went</b> 24:8 <b>wheeler</b> 68:23 69:12,13,17 71:3 71:15,20,25 72:13 75:20</p>	<p><b>wheels</b> 47:4 <b>whereof</b> 143:18 <b>white</b> 22:5 24:18 78:13 <b>wide</b> 107:15 141:13 <b>widely</b> 48:4 <b>willing</b> 89:17 113:9 <b>wind</b> 84:8,8,20 110:22 <b>window</b> 19:11 <b>winds</b> 81:16 <b>winner</b> 81:23 <b>wires</b> 44:7 <b>withdrawing</b> 132:12 <b>withstand</b> 124:16 <b>witness</b> 134:9 136:11 143:18 <b>witnessed</b> 117:8 <b>words</b> 139:20 <b>work</b> 7:1 11:17 12:16 14:7 26:15 27:15 28:5,5,21,22 29:14,16,19,22 30:3,5,13 31:17 46:18 48:15,18,24 50:6,18,19 57:21 74:10,17 89:16 112:6,13 113:1 117:23 137:21 141:3 <b>worked</b> 73:16 78:16 <b>worker</b> 14:2 105:6 <b>workers</b> 10:14 14:7 30:6 51:15 64:17 <b>working</b> 11:21 18:19 34:8 41:8</p>	<p>85:9 86:8 87:1 89:8 113:19 <b>workshops</b> 79:15 <b>world</b> 72:17 86:9 137:5 <b>world's</b> 9:17 <b>worry</b> 66:16 <b>worse</b> 120:5 <b>worst</b> 100:24 113:8 <b>worth</b> 54:2 <b>write</b> 117:14 <b>writing</b> 39:18 84:9 99:7,15 103:17 <b>written</b> 62:4 93:22 <b>wrong</b> 8:24 <b>wrote</b> 15:10 <b>wyatt</b> 3:8 138:4,5</p> <tr> <td colspan="4"><b>x</b></td></tr> <tr> <td colspan="4"><b>x</b> 64:12,12 109:13</td></tr> <tr> <td colspan="4"><b>y</b></td></tr> <tr> <td colspan="4"> <p><b>yard</b> 31:11 <b>yeah</b> 38:20,20 78:24 79:3,9 116:19 132:16 <b>year</b> 9:10 18:1 26:20 27:12 29:16 33:2 36:10,11 39:23 42:7 45:14 52:13 60:5 63:9 64:9,15,20,21,25 65:23 66:10 70:17 71:6,24 72:2,4 79:1,16 102:8 113:19 116:5 126:10 133:22 <b>years</b> 12:4 33:5 34:25 35:4 39:9 46:10 47:21,23 55:17 61:7,12</p> </td></tr>	<b>x</b>				<b>x</b> 64:12,12 109:13				<b>y</b>				<p><b>yard</b> 31:11 <b>yeah</b> 38:20,20 78:24 79:3,9 116:19 132:16 <b>year</b> 9:10 18:1 26:20 27:12 29:16 33:2 36:10,11 39:23 42:7 45:14 52:13 60:5 63:9 64:9,15,20,21,25 65:23 66:10 70:17 71:6,24 72:2,4 79:1,16 102:8 113:19 116:5 126:10 133:22 <b>years</b> 12:4 33:5 34:25 35:4 39:9 46:10 47:21,23 55:17 61:7,12</p>			
<b>x</b>																			
<b>x</b> 64:12,12 109:13																			
<b>y</b>																			
<p><b>yard</b> 31:11 <b>yeah</b> 38:20,20 78:24 79:3,9 116:19 132:16 <b>year</b> 9:10 18:1 26:20 27:12 29:16 33:2 36:10,11 39:23 42:7 45:14 52:13 60:5 63:9 64:9,15,20,21,25 65:23 66:10 70:17 71:6,24 72:2,4 79:1,16 102:8 113:19 116:5 126:10 133:22 <b>years</b> 12:4 33:5 34:25 35:4 39:9 46:10 47:21,23 55:17 61:7,12</p>																			

**[years - zoomed]**

70:22 71:20 73:4 75:22 76:2,18 88:14 92:20 101:19 102:3 111:14 114:24,24 115:2 117:23 121:6 123:25 126:13 128:15 134:13 <b>yellow</b> 70:19 <b>yesterday</b> 78:11 <b>yield</b> 76:19 <b>yields</b> 65:10,12 <b>yucca</b> 82:5
<b>z</b>
<b>zion</b> 121:23,24 122:2 <b>zone</b> 74:10 <b>zoom</b> 12:14 107:1 107:3 <b>zoomed</b> 51:12