

US EPA ARCHIVE DOCUMENT

In The Matter Of:

EPA Hearing

Centredale Manor Restoration Project *July 31, 2012*



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In The Matter Of:
EPA Hearing

Proposed Plan Amendment Informational Meeting
July 30, 2012



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1 UNITED STATES DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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4 HEARING IN RE: Proposed Plan Amendment
Informational Meeting

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9 DATE: July 30, 2012
TIME: 7:00 pm.
10 PLACE: Pocasset Bay Retirement Living
11 12 Old Pocasset Lane
12 Johnston, Rhode Island
13
14
15

16 FACILITATED BY: STACY GREENLINGER, ANNA KRASKO
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1 accurate so that we can get the information out to
2 you. And by the way, if you don't traditionally
3 write an e-mail address and you do use e-mail, I
4 would love to be able to get ahold of that, too.
5 So, okay, why are we here tonight? This is the
6 agenda that you have in front of you. Again, we'll
7 go over it in more detail, but after we came out
8 with our proposed plan for the Wannasquatucket River
9 cleanup, headquarters came out with a final dioxin
10 reassessment specifically for non-cancer health
11 impacts. And we were required by headquarters to go
12 back, as was every other site in the country that
13 has dioxin, to go back and take a look at our human
14 health risks assessment and our cleanup levels, and
15 to take this new toxicity value, and plug it into
16 that specific to the site. When we did that, we did
17 indeed come out with some changes in human health
18 risks, as well as our cleanup level. So we'll talk
19 more specifically about that. But those changes is
20 what prompted us to issue the amendment that you
21 have in your hands today. And the public comment
22 period which started on the 19th of July runs
23 through August 17th. And that comment period is
24 specifically on the modifications due to the new
25 dioxin reassessment. It's not opening up comment on

1 (Hearing commenced at 7:10 p.m.)
2 MS. GREENLINGER: Thank you very much for
3 coming out. I see we have representatives from the
4 Wannasquatucket River Watershed Council, which is
5 awesome. And Nancy, thank you so much for coming
6 and representing the full congressional delegation.
7 We appreciate that. And I know the delegation has
8 really kept an ear to the ground, and we appreciate
9 your continued interest in it.
10 And as most of you know, Bob from the
11 Department of Health, the Rhode Island Department of
12 Health, is also here. Bob, thanks for your time.
13 So, I'm Stacy Greenlinger from the U.S.
14 Environmental Protection Agency, and hopefully
15 you've picked up a copy of the proposed plan
16 amendment. Never thought I would be back saying
17 those words to you, since it seems like just
18 yesterday we were talking about the proposed plan.
19 But we are back, and we will explain why we are, and
20 what the amendment has to cover, and what the
21 current comment period also has to cover. So, and
22 hopefully you grabbed an agenda as well, but no
23 need, we'll go over it all together. If you didn't
24 sign in, I will ask you to sign in, because it
25 always help me make sure that my mailing list is

1 the proposed planned cleanup alternative. We closed
2 that 120-day comment period. We're in the process
3 of responding to comments on that. We expect to
4 issue the final cleanup plan this fall. So, this
5 comment period is, again, specifically on the
6 amendment and the modifications due to the new
7 toxicity value. So, just wanted to make sure that
8 we had all of that.
9 I know most of you in this room, because I know
10 most of you in this room have the overview, so I'm
11 going to go through this really fast, because you'
12 are a sophisticated group with this site. But just
13 in case you had a momentary lapse, the past uses at
14 the site were for chemical manufacturing and drum
15 recycling was at what we call the source area, where
16 currently Brook Village and Centredale Manor
17 Apartments reside. The resulting contamination was
18 dioxin, PCBs, PAHs and metals. Our biggest driver
19 concern are dioxins, but it's certainly not the only
20 contaminant at the site.
21 Important to note that there are other
22 industrial and urban sources that are a challenge to
23 the river, and there are other contamination issues
24 going on. People will often say to us, "When you're
25 done with this cleanup, does that mean we get to

Page 5 1 swim in the river?" And no, not as far as the 2 health department is concerned; there are bacterial 3 issues and other contamination issues that continue 4 to challenge the river, but dioxin, certainly 5 addressed that will take care of one big challenge. 6 So, as I just went over, why are we issuing 7 this? As I said, we had to take the new 8 reassessment numbers and plug it back in. Once it 9 came out in February, we started that work. Chau 10 was very busy redoing the human health risks 11 assessment, and Anna and her contractors were 12 working really hard on taking a look at the 13 residential soil. And I do want to note that 14 specifically for residential soil, we also modified 15 our recreational cleanup levels as well. 16 So, and again, for those who may not -- the 17 non-cancer health impact is new. We did, before we 18 had, we were able to assess for cancer risks, but 19 not for non-cancer health risks. So, this 20 information is the first time that we really have 21 been able to calculate what those non-cancer risks 22 might be. And for exposure for dioxin, reproductive 23 effects and destruction to the endocrine system are 24 the most sensitive impacts that happen from dioxin. 25 I know if people have questions later, I'm going to	Page 7 1 I am going to turn it over to Anna for the 2 site-specific person, and make sure she is mic'd. 3 MS. KRASKO: Good evening. So, I need a 4 microphone. Stacy is lucky, she doesn't. I hope 5 everybody can hear me, because the fan is 6 interfering. So, as Stacy said, every one of us has 7 a little bit of dioxin in us because we eat 8 animal-based products, and we also can get exposed 9 to soil and sediment through everyday activities. 10 People who live near Superfund sites that have 11 dioxin contamination like Centredale can get 12 additional exposure by eating contaminated fish from 13 Wannasquatucket River, and accidentally ingesting 14 contaminated soil by doing recreational activities 15 in the large wetlands that we know exist at the 16 site, or just going about their daily life, or on 17 the North Providence side, where residents are 18 located in a floodplain, and those areas are prone 19 to flooding. 20 So, how does Superfund go about establishing 21 the exposures and risks at the site? First we 22 collect a lot of samples. We investigate sediment, 23 soil, water, collect fish and wildlife samples to 24 determine what levels of contaminants, including 25 dioxin, are present in the environment. But it's
Page 6 1 get Bob up later to answer them for you. 2 And dioxin in the environment, again, it's 3 important to remind people that dioxin in terms of 4 how it behaves, it does not readily vaporize in the 5 air, it doesn't dissolve in the water. So, again, 6 when people ask us about swimming in the river, when 7 we say, "Don't swim in the river," it's not from a 8 dioxin point of view, because putting your fingers 9 in the water is not a dioxin issue; it's churning up 10 the sediment that has the dioxin adhering to it and 11 holding onto it, that's more of an issue. But, and 12 also in terms of gardens, people have asked us that, 13 too; it doesn't readily uptake through the plants. 14 Getting on the leaves or on the fruit or the 15 vegetables, that's a different issue, because it's 16 going into the mouth. 17 So, where is dioxin found? It accumulates into 18 fish and wildlife, especially in the fat. Another 19 reason why the department of health has issued the 20 "Don't Eat The Fish From The River." And that 21 really is the biggest concern that we're faced with 22 at the river. And again, it adheres to the soil and 23 sediment particles. It really wants to hold on and 24 bind to the particles, which is in part why it 25 doesn't volatilize into the air.	Page 8 1 not enough just for chemicals to be present; a 2 person needs to come in contact with a chemical, or 3 in contact with sediment or soil or water that has 4 chemicals in it in order to get exposed. 5 For Superfund, as you can see, we evaluate 6 exposure for residents and recreational visitors to 7 the site, assuming frequent exposure over a long 8 period of time, over decades, sometimes over a 9 person's lifetime. So, we look at activities such 10 as swimming and wading in the river, eating fish and 11 other wildlife, visiting recreational areas, and 12 just residing in the floodplain. If we find that 13 those exposures to the current levels that we 14 measure in the environment pose unacceptable risk or 15 risks that are elevated, Superfund is required to 16 take an action to clean up those areas. 17 So, what happened when dioxin reassessment came 18 out from headquarters, from EPA headquarters in 19 February 2012? We went back and looked at risk 20 assessments that were done for all the areas at the 21 site; and the major change was lowering the soil 22 cleanup levels in residential properties on North 23 Providence side from 1,000 parts per trillion to 50 24 parts per trillion. There is also a change, as 25 Stacy alluded early on, in the cleanup level also

Page 9 1 for area for THE large wetlands. For recreational 2 users in that area, the level became 680 parts per 3 trillion rather than 1,000; and at that level we may 4 see potential health effects. 5 So, this is the first time we can actually see 6 the site map. Just to remind you, we have five 7 action areas. The pink areas are the additional 8 cleanup areas that need to be addressed when we 9 issue the cleanup plan in September. As you can 10 see, most of those additional areas on the eastern 11 shore of the Allendale and Lyman Mill pond areas, as 12 well as in the Source Area, and that was actually 13 the only area that hasn't been capped or previously 14 addressed. 15 So, let's go and look a little bit closer at 16 each action area and how it's changed with a new 17 risk assessment. In addition to those areas that 18 you saw in pink, we also determined that there are 19 additional potential health effects from exposure to 20 sediment in the ponds. And we'll come back to that 21 a little bit later. 22 The additional cleanup may result in about 23 10,000 cubic yards of soil being excavated. That's 24 about five to ten percent more than the total volume 25 of material that was in the original October	Page 11 1 cleanup is not expected to occur for at least the 2 next five/six years. And those interim measures are 3 expected to stay in place for a prolonged period of 4 time. 5 Because when your cleanup level of 50 parts per 6 trillion is so low, it is basically very close to 7 what you see in the background soil in urban areas 8 like North Providence, there is a likelihood of 9 recontamination from flood events from the river 10 when sediment, contaminated sediment can be 11 deposited in those low-lying areas. So, it means 12 that, if there is any cleanup to be happen on this 13 river, it has to be done simultaneously. The 14 sediment and the floodplain soils on people's back 15 yards have to be cleaned up at the same time, 16 because just cleaning up a floodplain soil, and 17 leaving contamination in the sediment, will increase 18 the likelihood of recontamination. Just to give you 19 an idea, what we see in the sediment in the 20 Allendale Pond is the maximum contamination, it's 21 about 100,000 parts per trillion, and an average is 22 1,000. In the floodplain soil we're trying to 23 achieve 50, so of course when you have 100,000 parts 24 per trillion area next to 50 parts per trillion 25 area, there is a likelihood of recontamination, and
Page 10 1 proposed plan. Depending on the alternative being 2 evaluated, the cost increase would be between \$4 3 million and \$12 million. EPA Region One still plans 4 to issue the record of decision, which will outline 5 our cleanup plan this fall, so the schedule is not 6 impacted by this dioxin reassessment. 7 Let's look at each action area separately, and 8 how they are impacted. Again, in the source area 9 there is about one-third additional acre that needs 10 to be either capped or excavated. And if we look at 11 the map, which is the next slide, it's right south 12 of Route 44. It's a landscaped area right at the 13 entrance to the apartment complexes. 14 For sediment, we looked and evaluated 15 non-cancer health effects based on exposure for 16 residents and recreational users; and we found that 17 the originally proposed 15 parts per trillion 18 cleanup level is low enough to address 19 newly-evaluated health hazards, so there is no 20 change in the scope of the sediment cleanup. 21 Again, the biggest impact is on the floodplain 22 soil in the North Providence, and these areas along 23 Allendale Mill and Lyman Mill pond would need to be 24 evaluated, and precautionary measures would need to 25 be taken while we're awaiting final cleanup. Final	Page 12 1 the whole area needs to be looked at and addressed 2 at the same time. 3 So, let's look at a couple maps. This is 4 across from Allendale. Again, the pink shows the 5 additional areas. There is a little bit of area on 6 the Johnston side, right across from the source 7 area. The rest is the areas in North Providence, 8 and pink is where we likely have concentrations 9 above 50 parts per trillion in the floodplain soil. 10 And the next slide is the same information for 11 the Lyman Mill. Again, just about the whole eastern 12 shore of Lyman Mill is pink, which means it all 13 needs to be evaluated, and there is a likelihood 14 that all those areas are above the new cleanup level 15 of 50 parts per trillion in floodplain soil. 16 So, I'm going to give the mic, or to give the 17 floor back to Stacy, and she's going to talk about 18 what precautionary measures EPA is proposing to do, 19 and also what precautionary measures the residents 20 and visitors can do themselves while the planning 21 and design of the final cleanup is underway. 22 MS. GREENLINGER: So, as Anna mentioned, it's 23 going to be likely six years or so before shoveling 24 the ground, so to speak, actually happens. So, what 25 do we do in the meantime? And as Anna pointed out,

Page 13 1 the risk of contamination or recontamination to 2 neighbors is fairly high. So that really throws a 3 curve ball in in terms of, well, do you go out and 4 sample now for those areas? If we were to have a 5 heavy rain or floods, just those numbers that Anna 6 mentioned, I think she said 100,000 in the middle of 7 the pond, to go from that to 50, if we were to 8 sample, it really would call into question those 9 sample results. If we were to excavate, the same 10 issue would happen. And we have a fairly lengthy 11 time before we expect to start the long-term 12 cleanup. 13 So, what do we do in the meantime? We don't 14 want people to be at potential risk of exposure, 15 since health risk comes from exposure, or at least 16 the potential for it. So, we are suggesting some 17 precautionary interim measures. Once we have the 18 final cleanup plan issued this fall, we will be in a 19 position to go back and work with all of the 20 property owners that could potentially be impacted 21 to take a look at what measures you could take. For 22 instance, an obvious one, particularly for those in 23 Allendale Pond, where a fences exist right now, is 24 to take a look at where that fence line is in 25 comparison to what we believe to the 100-year	Page 15 1 just never ventures down to the waterfront. So, we 2 need to engage in that interaction and that process 3 once we have the cleanup plan finalized. 4 Residents also can participate in what it is 5 that they can do to prevent exposure. And we 6 actually just concluded about two weeks of an effort 7 of trying to individually reach out to all of the 8 property owners that could be potentially affected 9 here, to sit down and talk with them, one, so they 10 that they knew what's happening, and they had the 11 opportunity to provide comment during the comment 12 period. But two, to really stress that they can 13 take action now. Much of these type of activities 14 that you see listed here are things that people do 15 anyhow. It's good hygiene to wash your hands before 16 you eat. It's a good way to control and prevent for 17 a flu, or for any other type of sickness or 18 exposure. So, that's a common one that people do. 19 Also common is when your shoes get muddy from doing 20 yard work out back, that you don't walk all through 21 your house. Because who wants to clean up after 22 that. So, that's also a typical thing that people 23 do in terms of behaviors, but this is an added 24 reason as to why they should did that, and be 25 vigilant in doing that.
Page 14 1 floodplain. Now, our maps of the 100-year 2 floodplain are not an exact science, and we 3 recognize that. We recognize that the folks who 4 live there know best in terms of, they know when it 5 floods, where does it flood, what's a typical flood, 6 what's an unusual flood. Especially since we all 7 just lived through that historic rain that happened 8 two years ago in Rhode Island. So, we would work 9 with the property owners, using the information that 10 we have in our maps, but also their knowledge from 11 living there, and to take a look at, does it make 12 sense to move the fence line. That might be a 13 really simple, easy solution to having a barrier to 14 people getting down to the floodplains that may be 15 contaminated for that interim period before we can 16 get there and do sampling and take action if action 17 is needed. 18 In some houses, that might not work. That 19 might be their driveway or their house. There are 20 some houses where they're awfully close to the 21 river. So, it really needs to be a 22 property-specific approach, and hence, we really 23 need to engage with the residents to figure out what 24 makes sense there, who lives there, are their 25 children that are there, or is it someone who really	Page 16 1 So, washing your clothing after you've done 2 yard work, instead of going and relaxing on your 3 sofa, keeping yourself clean, washing your fruits 4 and vegetables if you have a garden that's in the 5 area. Perhaps you might want to think about doing a 6 raised bed if you have a garden that's in the 7 floodplain that's in question. But clearly, so, as 8 we said before, the dioxin and its behavior is not 9 to be taken up through the plants, so it's really 10 just making sure that any soil or dirt that got on 11 the plants before you eat it or cook with it to wash 12 it. 13 So, those are pretty straightforward things 14 that residents can do now. They don't have to wait 15 for us to move the fence. These are things that 16 they can do now, and really potentially cut down on 17 any exposure that might be happening. 18 And of course, as we always stress, our "do's" 19 and "don'ts" for the Wannasquatucket River. Don't 20 eat the fish, the eels, the turtles, or wildlife or 21 other plants, don't swim or wade in it. Again, 22 that's not because of dioxin contamination, but for 23 other challenges. And don't dig into the riverbanks 24 so you're not stirring up potentially contaminated 25 soil and sediment.

Page 17 1 Do use the river wisely. We really encourage 2 the use of it, think the efforts that the 3 Wannasquatucket River Watershed Council is doing to 4 get people to get out and use this wonderful 5 resource are really great, so go partake in the 6 walking, running and biking along the trail that's 7 there, paddle or canoe or kayaking. I know from 8 talking with the residents, there are a lot of 9 people living there that do go out and use their 10 boats to paddle around the place. And of course, 11 just be smart, and wash up after you use and enjoy 12 the river. 13 We just threw a lot at you, and as we've 14 mentioned a couple of times, we do have a comment 15 period that's underway. As before, we really stress 16 the importance of your comments. We're in the 17 process of responding to all of the comments that we 18 received on the proposed plan. They truly are 19 important to us. We stress, again, we would 20 appreciate you taking the time to provide comment, 21 whether it's tonight at our formal hearing portion 22 of tonight's meeting, or via e-mail or fax or 23 regular mail to us. And these are the different 24 ways, it's in your proposed plan on page eleven has 25 the details of how you can provide comment to us in	Page 19 1 information, or it changes more often. 2 In those apartment buildings, I did see either 3 kids themselves, or evidence of kids. In terms of 4 the single-family homes or the two-family homes that 5 are along the river, I would say that the vast 6 majority of them that are -- and again, Eugenia, I'm 7 talking about directly on the floodplain, because 8 that's who we have the direct contact with -- the 9 vast majority of them are not of child-bearing age, 10 or have any children live with them. They may have 11 grandchildren that come and visit, but I would say 12 that the ages range from 50 to, actually the oldest 13 person I chatted with was 94. And a lot of folks 14 have lived there or have grown up in this area, or 15 at least their parents' house before them, they're 16 still in the same house or in the same area, so they 17 are not transients. But it's incredible, actually, 18 how long people have lived in the area. It's very 19 impressive. So, that's not to say that -- there's a 20 new couple to the neighborhood. I say new; they've 21 been here for three years, they have a 22 three-and-a-half year-old and a baby on the way. 23 Sat down and talked with them. It's the first time 24 they're hearing about the Superfund site. So, you 25 certainly have a range, but I would say on average
Page 18 1 the amendment. And again, can't stress enough how 2 important that is to get your comments so that we're 3 making a decision that reflects your opinions. 4 But before we get to the formal comment portion 5 of the formal hearing portion that's tonight, we do 6 want to be able to answer any questions that you 7 might have on the amendment, especially if you have 8 not had the opportunity to read it, and this is the 9 first time that you're hearing about the dioxin 10 reassessment and how its modification to the 11 proposed cleanup plan has caused us to issue this 12 amendment. 13 So, I'm going to stop and see if anybody has 14 any questions or thoughts that they would like to 15 share with us. Eugenia? 16 EUGENIA MARKS: How detailed is your 17 understanding of the demographics of the area in 18 terms of children in households? 19 MS. GREENLINGER: After this event, in terms of 20 my understanding of the demographic, I would say 21 that it's mixed. There are definitely a handful of 22 apartment buildings that have more transient folks 23 living there in terms of having lived there for a 24 very long time, or more likely to move, and harder 25 for us to reach, just because we don't have their	Page 20 1 it's between 55 and 70, I would say on average; and 2 no, there are not children there. And they all know 3 the deal with the river, and know the limitations 4 and the challenges it presents. 5 EUGENIA MARKS: But you have visited every 6 home, every resident within the site area that abuts 7 the river? 8 MS. GREENLINGER: That's who we reached out 9 for. So have I talked with every single one of 10 them, no. I wish it was a hundred percent. Every 11 single one of them received a letter inviting them 12 to call us, to meet with us. And they also, a vast 13 majority of them received a one-pager where we were 14 telling them about the changes and our desire to 15 come talk to them about some interim measures. So, 16 really, they all have that information. I would say 17 that out of about 48 properties, that I've had about 18 30 conversations with about 40 people. 19 AUDIENCE MEMBER: Just a follow-up. What 20 reaction have you gotten by people in terms of the 21 changes that you've had to make in moving the 22 fences, and not using personal property, things like 23 that? 24 MS. GREENLINGER: Yes. I would say most of the 25 reaction, there wasn't really surprise, from that

Page 21 1 point of view. And most people, again, know what 2 the challenges are, and take a lot of these 3 precautions anyhow. It's not like they're eating 4 fish from the river, it's not like they're swimming 5 in it. So, I think most of them are like, it's not 6 really changing their day-to-day patterns of how 7 they use their properties. So, most people are 8 like, you need to do what you need to do, but 9 consult with us, because we will have opinions about 10 what kind of fence, where the fence goes. 11 Some people certainly are concerned about their 12 use of their property. It depends, because some 13 houses, when you talk about moving the fence, it 14 could eat up a lot of their lawn. So, for those 15 people, obviously they're a little bit more 16 concerned with the idea of moving the fence, because 17 it will directly impact them. And we will need to 18 work with those folks. 19 So, some of those people kind of said, "Wait a 20 minute, this is my property, I pay taxes on it, I 21 don't want to lose the use of my property." Most 22 people were kind of like, most properties it's not 23 quite as dire of an impact by moving the fence; and 24 so, they were just saying, "Okay, when you come 25 back, we'll engage and talk with you about it." A	Page 23 1 that. 2 MS. VU: Well, the number for the residential 3 scenario is also based on site specifics, and some 4 standard assumptions as well. So, for recreational 5 scenario we have different assumptions of how much 6 people, we assume that people are exposed, so that's 7 why we come out with different numbers. 8 AUDIENCE MEMBER: But that's the other side of 9 your risk assessment. In other words, your standard 10 on both of them is 1,000 in each case. 11 MS. VU: Right. 12 AUDIENCE MEMBER: But supposedly your 13 assumptions in both of those are still the same. 14 MS. VU: That was the standard in the past, the 15 1,000 parts per trillion that you're talking about. 16 Well, we wouldn't call it standard, but it was a 17 number that was based on, just call it "science" 18 that EPA used in the past. And it was used for 19 residential specifically. Back then we didn't 20 calculate the specific number for recreational 21 scenario, we also used the same number for 22 recreational as well, because there was no standard, 23 per se. 24 And then the numbers that we show here at this 25 time were the revised numbers, specifically for two
Page 22 1 lot of people were saying, "Can we get a fence, 2 because we want to clean the shrubs on the other -- 3 the overgrowth and trash that's there." 4 AUDIENCE MEMBER: The condominiums at Allendale 5 Mill which are renovated now, are those among those 6 to whom you've spoken? 7 MS. GREENLINGER: No. And Anna can jump in, 8 too. My understanding of those mills is that's not 9 where -- the renovated mills, that that's not an 10 area that's impacted by contamination. 11 AUDIENCE MEMBER: You were talking about, maybe 12 Anna, you were talking about this. Both the 13 residential and the recreational standard previously 14 were a thousand parts per trillion? 15 MS. GREENLINGER: Um-hmm. 16 AUDIENCE MEMBER: And you say you changed the 17 residential to 50, but you didn't make it the same 18 extent for the recreational. In other words, if the 19 uses when you're doing a risk assessment with uses, 20 which is what you would be changing, but the 21 standard you're using, I wondered why you didn't 22 make the change in the same fashion for both of 23 them. In other words, it's a different parameter in 24 the equation. 25 MS. GREENLINGER: I'm going to have Chau answer	Page 24 1 separate scenarios. We don't call those standards; 2 they're site specific numbers we developed for 3 different scenarios. 4 EUGENIA MARKS: I want to go back to the 5 Allendale Mill Condominium and the tail race or the 6 head race or whatever, which is a part of that same 7 area that in 2011 was the proposed cleanup area. So 8 I understand that's not new. 9 MS. GREENLINGER: Right. 10 EUGENIA MARKS: So, we're waiting for the final 11 plan to know exactly what would be done there? 12 MS. GREENLINGER: Correct. 13 AUDIENCE MEMBER: And you don't feel there's 14 any reason to notify residents at this time about -- 15 MS. GREENLINGER: Because again, where the 16 amendment is, what are the changes based on the most 17 current new science that we have, which is this new 18 non-cancer toxicity value, and what modifications 19 did it make to the 2011 proposed cleanup plan. 20 Those modifications is what the amendment is based 21 on. And the additional properties that before were 22 not considered for the cleanup, those were the 23 properties that we targeted in terms of reaching out 24 and talking to the residents. 25 EUGENIA MARKS: I have some concern, because I

Page 25 1 don't believe there's water in that tail race; and 2 it just seems like an attractive nuisance. And I 3 realize that those are condominiums, and we don't 4 know what the demographic on children living in 5 there is. 6 MS. GREENLINGER: Right. 7 EUGENIA MARKS: It just seems like there may be 8 should be some consideration about public education 9 in that area. 10 MS. GREENLINGER: Repeat yourself in the formal 11 hearing, so we can capture that on the formal 12 record. That way you hold us to respond to that. 13 It becomes part of the formal record. But I heard 14 you. 15 Are there any other questions before we switch 16 over to the formal hearing? So, I have to do a 17 little spiel. 18 We will conclude the informational portion of 19 this meeting; we will start the formal comment 20 period, the formal hearing. The purpose of this 21 hearing is for us to take your comments. EPA cannot 22 respond to your comment. We would be happy at the 23 conclusion of the formal hearing to stay around to 24 answer any other questions or thoughts that you 25 might have.	Page 27 1 continuously filled with water. And I think it's -- 2 I know it's in a lawn situation on the river side of 3 the complex. We don't know whether there are any 4 children who live in there. And my concern is 5 asking that a review of exposures that may be 6 applicable under this new standard be undertaken. 7 Thank you. 8 MS. GREENLINGER: Do you have any other 9 thoughts, Eugenia? I'll leave it open for another 10 minute in case anybody thinks of anything. 11 EUGENIA MARKS: Another thing that occurred to 12 me, Eugenia Marks, is that while the area under 13 consideration is all on the North Providence side, 14 that, in the Lyman Mill area, there is a residential 15 area accessible across the Lyman Mill Dam; and in 16 the past, having observed recreational use of 17 homemade rafts, kids clothing in that area, of 18 whether there has been adequate public information 19 provided on the Johnston side in that residential 20 area where there's some proximity to the Lyman Mill 21 Dam. 22 MS. GREENLINGER: Okay. With that, I'm going 23 to formally close the formal hearing. Again, the 24 comment period is open until August 17th. You can 25 e-mail, fax or send a letter addressed to Anna. On
Page 26 1 So, again, during the formal hearing, if you 2 can limit your comments to the proposed plan 3 amendment, that would be great. And if you can 4 state your name and your address so that the 5 stenographer can hear you and capture that. And 6 please provide us whatever comment you would like to 7 go into the formal record. At the close of the 8 comment period, we will take these comments, and 9 write responses to them, and incorporate them into 10 the final record of decision, which is EPA's Final 11 Cleanup Plan for the Centredale Manor Restoration 12 Project Superfund Site. 13 So, with that, I'm going to grab the mic for 14 anybody who may want to provide comment so the 15 stenographer can hear you. 16 Eugenia, do you want to start us off, since we 17 know you have one? 18 EUGENIA MARKS: My name is Eugenia Marks, 19 M-A-R-K-S. I'm the director for policy at the 20 Audubon Society of Rhode Island, and I'm a past 21 member of the board of the Wannasquatucket River 22 Watershed Council. I understand that this hearing 23 regards the new standard for residential exposure; 24 and I had concerns about the mill raceway at 25 Allendale Condominiums, which I believe not to be	Page 28 1 page eleven of your proposed plan amendment, you 2 will find that detailed information. And we thank 3 you very much for coming out tonight. 4 (Hearing adjourned at 7:52 p.m.) 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

1 C E R T I F I C A T E

2
3 I, Jane F. Cormier, do hereby certify
4 that the foregoing contains a true, accurate
5 and complete transcript of my notes taken at
6 the above-entitled proceeding.

7
8 IN WITNESS WHEREOF I have hereunto set my
9 hand this 10th day of August, 2012.

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JANE F. CORMIER, CSR
NOTARY PUBLIC
MY COMMISSION EXPIRES: 1/19/2014

US EPA ARCHIVE DOCUMENT

		28:4	11;12:5,7,14;13:4	6:4
\$	7	affected (1) 15:8	around (2) 17:10;25:23	behavior (1) 16:8
\$12 (1) 10:3	7:10 (1) 2:1	Again (18) 3:6;4:5;5:16;6:2,5,22; 10:8,21;12:4,11;16:21; 17:19;18:1;19:6;21:1; 24:15;26:1;27:23	assess (1) 5:18	behaviors (1) 15:23
\$4 (1) 10:2	7:52 (1) 28:4		assessment (5) 3:14;5:11;9:17;22:19; 23:9	best (1) 14:4
1	70 (1) 20:1	age (1) 19:9	assessments (1) 8:20	big (1) 5:5
1,000 (5) 8:23;9:3;11:22;23:10, 15	9	Agency (1) 2:14	assume (1) 23:6	biggest (3) 4:18;6:21;10:21
10,000 (1) 9:23	94 (1) 19:13	agenda (2) 2:22;3:6	assuming (1) 8:7	biking (1) 17:6
100,000 (3) 11:21,23;13:6	A	ages (1) 19:12	assumptions (3) 23:4,5,13	bind (1) 6:24
100-year (2) 13:25;14:1	able (4) 3:4;5:18,21;18:6	ago (1) 14:8	attractive (1) 25:2	bit (5) 7:7;9:15,21;12:5; 21:15
120-day (1) 4:2	above (2) 12:9,14	ahold (1) 3:4	AUDIENCE (7) 20:19;22:4,11,16; 23:8,12;24:13	board (1) 26:21
15 (1) 10:17	abuts (1) 20:6	air (2) 6:5,25	Audubon (1) 26:20	boats (1) 17:10
17th (2) 3:23;27:24	accessible (1) 27:15	Allendale (8) 9:11;10:23;11:20; 12:4;13:23;22:4;24:5; 26:25	August (2) 3:23;27:24	Bob (3) 2:10,12;6:1
19th (1) 3:22	accidentally (1) 7:13	alluded (1) 8:25	average (3) 11:21;19:25;20:1	Both (4) 22:12,22;23:10,13
2	accumulates (1) 6:17	along (3) 10:22;17:6;19:5	awaiting (1) 10:25	Brook (1) 4:16
2011 (2) 24:7,19	accurate (1) 3:1	alternative (2) 4:1;10:1	awesome (1) 2:5	buildings (2) 18:22;19:2
2012 (1) 8:19	achieve (1) 11:23	always (2) 2:25;16:18	awfully (1) 14:20	busy (1) 5:10
3	acre (1) 10:9	amendment (11) 2:16,20;3:20;4:6;18:1, 7,12;24:16,20;26:3;28:1	B	C
30 (1) 20:18	across (3) 12:4,6;27:15	among (1) 22:5	baby (1) 19:22	calculate (2) 5:21;23:20
4	action (7) 8:16;9:7,16;10:7; 14:16,16;15:13	animal-based (1) 7:8	back (14) 2:16,19;3:12,13;5:8; 8:19;9:20;11:14;12:17; 13:19;15:20;21:25; 23:19;24:4	call (6) 4:15;13:8;20:12; 23:16,17;24:1
40 (1) 20:18	activities (4) 7:9,14;8:9;15:13	Anna (8) 5:11;7:1;12:22,25; 13:5;22:7,12;27:25	background (1) 11:7	came (4) 3:7,9;5:9;8:17
44 (1) 10:12	actually (6) 9:5,12;12:24;15:6; 19:12,17	apartment (3) 10:13;18:22;19:2	bacterial (1) 5:2	can (24) 3:1;7:5,8,11;8:5;9:5,9; 11:10;12:20;14:15;15:4, 5,12;16:14,16;17:25; 22:1,7;25:11;26:2,3,5, 15;27:24
48 (1) 20:17	added (1) 15:23	Apartments (1) 4:17	ball (1) 13:3	cancer (1) 5:18
5	addition (1) 9:17	applicable (1) 27:6	barrier (1) 14:13	canoe (1) 17:7
50 (9) 8:23;11:5,23,24;12:9, 15;13:7;19:12;22:17	additional (8) 7:12;9:7,10,19,22; 10:9;12:5;24:21	appreciate (3) 2:7,8;17:20	based (5) 10:15;23:3,17;24:16, 20	capped (2) 9:13;10:10
55 (1) 20:1	address (3) 3:3;10:18;26:4	approach (1) 14:22	basically (1) 11:6	capture (2) 25:11;26:5
6	addressed (5) 5:5;9:8,14;12:1;27:25	area (29) 4:15;9:1,2,12,13,16; 10:7,8,12;11:24,25;12:1, 5,7;16:5;18:17;19:14,16, 18;20:6;22:10;24:7,7; 25:9;27:12,14,15,17,20	became (1) 9:2	care (1) 5:5
680 (1) 9:2	adequate (1) 27:18	areas (17) 7:18;8:11,16,20;9:7,7, 8,10,11,17;10:22;11:7,	becomes (1) 25:13	case (3) 4:13;23:10;27:10
	adheres (1) 6:22		bed (1) 16:6	caused (1) 18:11
	adhering (1) 6:10		behaves (1)	Centredale (3)
	adjourned (1)			

4:16;7:11;26:11 certainly (4) 4:19;5:4;19:25;21:11 challenge (3) 4:22;5:4,5 challenges (3) 16:23;20:4;21:2 change (4) 8:21,24;10:20;22:22 changed (2) 9:16;22:16 changes (6) 3:17,19;19:1;20:14, 21;24:16 changing (2) 21:6;22:20 chatted (1) 19:13 Chau (2) 5:9;22:25 chemical (2) 4:14;8:2 chemicals (2) 8:1,4 child-bearing (1) 19:9 children (6) 14:25;18:18;19:10; 20:2;25:4;27:4 churning (1) 6:9 clean (4) 8:16;15:21;16:3;22:2 cleaned (1) 11:15 cleaning (1) 11:16 cleanup (29) 3:9,14,18;4:1,4,25; 5:15;8:22,25;9:8,9,22; 10:5,18,20,25;11:1,5,12; 12:14,21;13:12,18;15:3; 18:11;24:7,19,22;26:11 clearly (1) 16:7 close (4) 11:6;14:20;26:7;27:23 closed (1) 4:1 closer (1) 9:15 clothing (2) 16:1;27:17 collect (2) 7:22,23 coming (3) 2:3,5;28:3 commenced (1) 2:1 comment (18) 2:21;3:21,23,25;4:2,5; 15:11,11;17:14,20,25; 18:4;25:19,22;26:6,8,14;	27:24 comments (7) 4:3;17:16,17;18:2; 25:21;26:2,8 common (2) 15:18,19 comparison (1) 13:25 complex (1) 27:3 complexes (1) 10:13 concentrations (1) 12:8 concern (4) 4:19;6:21;24:25;27:4 concerned (3) 5:2;21:11,16 concerns (1) 26:24 conclude (1) 25:18 concluded (1) 15:6 conclusion (1) 25:23 Condominium (1) 24:5 condominiums (3) 22:4;25:3;26:25 congressional (1) 2:6 consideration (2) 25:8;27:13 considered (1) 24:22 consult (1) 21:9 contact (3) 8:2,3;19:8 contaminant (1) 4:20 contaminants (1) 7:24 contaminated (5) 7:12,14;11:10;14:15; 16:24 contamination (9) 4:17,23;5:3;7:11; 11:17,20;13:1;16:22; 22:10 continue (1) 5:3 continued (1) 2:9 continuously (1) 27:1 contractors (1) 5:11 control (1) 15:16 conversations (1) 20:18	cook (1) 16:11 copy (1) 2:15 cost (1) 10:2 Council (3) 2:4;17:3;26:22 country (1) 3:12 couple (3) 12:3;17:14;19:20 course (3) 11:23;16:18;17:10 cover (2) 2:20,21 cubic (1) 9:23 current (3) 2:21;8:13;24:17 currently (1) 4:16 curve (1) 13:3 cut (1) 16:16	detail (1) 3:7 detailed (2) 18:16;28:2 details (1) 17:25 determine (1) 7:24 determined (1) 9:18 developed (1) 24:2 different (6) 6:15;17:23;22:23; 23:5,7;24:3 dig (1) 16:23 dioxin (21) 3:9,13,25;4:18;5:4,22, 24;6:2,3,8,9,10,17;7:7, 11,25;8:17;10:6;16:8, 22;18:9 dioxins (1) 4:19 dire (1) 21:23 direct (1) 19:8 directly (2) 19:7;21:17 director (1) 26:19 dirt (1) 16:10 dissolve (1) 6:5 done (5) 4:25;8:20;11:13;16:1; 24:11 don'ts (1) 16:19 do's (1) 16:18 down (5) 14:14;15:1,9;16:16; 19:23 driver (1) 4:18 driveway (1) 14:19 drum (1) 4:14 due (2) 3:24;4:6 during (2) 15:11;26:1	eastern (2) 9:10;12:11 easy (1) 14:13 Eat (6) 6:20;7:7;15:16;16:11, 20;21:14 eating (3) 7:12;8:10;21:3 education (1) 25:8 eels (1) 16:20 effects (4) 5:23;9:4,19;10:15 effort (1) 15:6 efforts (1) 17:2 either (2) 10:10;19:2 elevated (1) 8:15 eleven (2) 17:24;28:1 e-mail (4) 3:3,3;17:22;27:25 encourage (1) 17:1 endocrine (1) 5:23 engage (3) 14:23;15:2;21:25 enjoy (1) 17:11 enough (3) 8:1;10:18;18:1 entrance (1) 10:13 environment (3) 6:2;7:25;8:14 Environmental (1) 2:14 EPA (5) 8:18;10:3;12:18; 23:18;25:21 EPA's (1) 26:10 equation (1) 22:24 especially (3) 6:18;14:6;18:7 establishing (1) 7:20 Eugenia (14) 18:15,16;19:6;20:5; 24:4,10,25;25:7;26:16, 18,18;27:9,11,12 evaluate (1) 8:5 evaluated (4) 10:2,14,24;12:13 evening (1)	
		D	daily (1) 7:16 Dam (2) 27:15,21 day-to-day (1) 21:6 deal (1) 20:3 decades (1) 8:8 decision (3) 10:4;18:3;26:10 definitely (1) 18:21 delegation (2) 2:6,7 demographic (2) 18:20;25:4 demographics (1) 18:17 Department (4) 2:11,11;5:2;6:19 Depending (1) 10:1 depends (1) 21:12 deposited (1) 11:11 design (1) 12:21 desire (1) 20:14 destruction (1) 5:23	E	ear (1) 2:8 early (1) 8:25

7:3 event (1) 18:19 events (1) 11:9 everybody (1) 7:5 everyday (1) 7:9 evidence (1) 19:3 exact (1) 14:2 exactly (1) 24:11 excavate (1) 13:9 excavated (2) 9:23;10:10 exist (2) 7:15;13:23 expect (2) 4:3;13:11 expected (2) 11:1,3 explain (1) 2:19 exposed (3) 7:8;8:4;23:6 exposure (12) 5:22;7:12;8:6,7;9:19; 10:15;13:14,15;15:5,18; 16:17;26:23 exposures (3) 7:21;8:13;27:5 extent (1) 22:18	13:24;14:12;16:15; 21:10,10,13,16,23;22:1 fences (2) 13:23;20:22 figure (1) 14:23 filled (1) 27:1 final (9) 3:9;4:4;10:25,25; 12:21;13:18;24:10; 26:10,10 finalized (1) 15:3 find (2) 8:12;28:2 fingers (1) 6:8 first (5) 5:20;7:21;9:5;18:9; 19:23 fish (7) 6:18,20;7:12,23;8:10; 16:20;21:4 five (2) 9:6,24 five/six (1) 11:2 flood (4) 11:9;14:5,5,6 flooding (1) 7:19 floodplain (12) 7:18;8:12;10:21; 11:14,16,22;12:9,15; 14:1,2;16:7;19:7 floodplains (1) 14:14 floods (2) 13:5;14:5 floor (1) 12:17 flu (1) 15:17 folks (4) 14:3;18:22;19:13; 21:18 follow-up (1) 20:19 formal (13) 17:21;18:4,5;25:10, 11,13,16,19,20,23;26:1, 7;27:23 formally (1) 27:23 found (2) 6:17;10:16 frequent (1) 8:7 front (1) 3:6 fruit (1) 6:14	fruits (1) 16:3 full (1) 2:6 G garden (2) 16:4,6 gardens (1) 6:12 goes (1) 21:10 Good (3) 7:3;15:15,16 grab (1) 26:13 grabbed (1) 2:22 grandchildren (1) 19:11 great (2) 17:5;26:3 GREENLINGER (16) 2:2,13;12:22;18:19; 20:8,24;22:7,15,25;24:9, 12,15;25:6,10;27:8,22 ground (2) 2:8;12:24 group (1) 4:12 grown (1) 19:14 H handful (1) 18:21 hands (2) 3:21;15:15 happen (3) 5:24;11:12;13:10 happened (2) 8:17;14:7 happening (2) 15:10;16:17 happens (1) 12:24 happy (1) 25:22 hard (1) 5:12 harder (1) 18:24 hazards (1) 10:19 head (1) 24:6 headquarters (4) 3:9,11;8:18,18 Health (15) 2:11,12;3:10,14,17; 5:2,10,17,19;6:19;9:4,	19;10:15,19;13:15 hear (3) 7:5;26:5,15 heard (1) 25:13 Hearing (14) 2:1;17:21;18:5,9; 19:24;25:11,16,20,21, 23;26:1,22;27:23;28:4 heavy (1) 13:5 help (1) 2:25 hence (1) 14:22 high (1) 13:2 historic (1) 14:7 hold (2) 6:23;25:12 holding (1) 6:11 home (1) 20:6 homemade (1) 27:17 homes (2) 19:4,4 hope (1) 7:4 hopefully (2) 2:14,22 house (4) 14:19;15:21;19:15,16 households (1) 18:18 houses (3) 14:18,20;21:13 human (3) 3:13,17;5:10 hundred (1) 20:10 hygiene (1) 15:15 I idea (2) 11:19;21:16 impact (4) 5:17;10:21;21:17,23 impacted (4) 10:6,8;13:20;22:10 impacts (2) 3:11;5:24 importance (1) 17:16 Important (4) 4:21;6:3;17:19;18:2 impressive (1) 19:19 including (1)	7:24 incorporate (1) 26:9 increase (2) 10:2;11:17 incredible (1) 19:17 indeed (1) 3:17 individually (1) 15:7 industrial (1) 4:22 information (8) 3:1;5:20;12:10;14:9; 19:1;20:16;27:18;28:2 informational (1) 25:18 ingesting (1) 7:13 instance (1) 13:22 instead (1) 16:2 interaction (1) 15:2 interest (1) 2:9 interfering (1) 7:6 interim (4) 11:2;13:17;14:15; 20:15 into (8) 3:15;6:16,17,25;13:8; 16:23;26:7,9 investigate (1) 7:22 inviting (1) 20:11 Island (3) 2:11;14:8;26:20 issue (9) 3:20;4:4;6:9,11,15; 9:9;10:4;13:10;18:11 issued (2) 6:19;13:18 issues (3) 4:23;5:3,3 issuing (1) 5:6 J Johnston (2) 12:6;27:19 July (1) 3:22 jump (1) 22:7 K
---	---	---	---	--

kayaking (1) 17:7	listed (1) 15:14	9:6;10:11	modification (1) 18:10	24:14
keeping (1) 16:3	little (6) 7:7;9:15,21;12:5; 21:15;25:17	maps (3) 12:3;14:1,10	modifications (4) 3:24;4:6;24:18,20	nuisance (1) 25:2
kept (1) 2:8	live (4) 7:10;14:4;19:10;27:4	MARKS (10) 18:16;20:5;24:4,10, 25;25:7;26:18,18;27:11, 12	modified (1) 5:14	number (4) 23:2,17,20,21
kids (3) 19:3,3;27:17	lived (4) 14:7;18:23;19:14,18	M-A-R-K-S (1) 26:19	momentary (1) 4:13	numbers (6) 5:8;13:5;23:7,24,25; 24:2
kind (3) 21:10,19,22	lives (1) 14:24	material (1) 9:25	more (8) 3:7,19;6:11;9:24; 18:22,24;19:1;21:15	O
knew (1) 15:10	living (4) 14:11;17:9;18:23;25:4	maximum (1) 11:20	most (12) 2:10;4:9,10;5:24;9:10; 20:24;21:1,5,7,21,22; 24:16	observed (1) 27:16
knowledge (1) 14:10	located (1) 7:18	may (8) 5:16;9:3,22;14:14; 19:10;25:7;26:14;27:5	mouth (1) 6:16	obvious (1) 13:22
KRASKO (1) 7:3	long (3) 8:7;18:24;19:18	maybe (1) 22:11	move (3) 14:12;16:15;18:24	obviously (1) 21:15
L	long-term (1) 13:11	mean (1) 4:25	moving (4) 20:21;21:13,16,23	occur (1) 11:1
landscaped (1) 10:12	look (10) 3:13;5:12;8:9;9:15; 10:7,10;12:3;13:21,24; 14:11	means (2) 11:11;12:12	much (5) 2:2,5;15:13;23:5;28:3	occurred (1) 27:11
lapse (1) 4:13	looked (3) 8:19;10:14;12:1	meantime (2) 12:25;13:13	muddy (1) 15:19	October (1) 9:25
large (2) 7:15;9:1	lose (1) 21:21	measure (1) 8:14	N	off (1) 26:16
later (3) 5:25;6:1;9:21	lot (7) 7:22;17:8,13;19:13; 21:2,14;22:1	measures (7) 10:24;11:2;12:18,19; 13:17,21;20:15	name (2) 26:4,18	often (2) 4:24;19:1
lawn (2) 21:14;27:2	love (1) 3:4	meet (1) 20:12	Nancy (1) 2:5	oldest (1) 19:12
least (3) 11:1;13:15;19:15	low (2) 10:18;11:6	meeting (2) 17:22;25:19	near (1) 7:10	Once (3) 5:8;13:17;15:3
leave (1) 27:9	lowering (1) 8:21	MEMBER (8) 20:19;22:4,11,16; 23:8,12;24:13;26:21	need (10) 2:23;7:3;9:8;10:23,24; 14:23;15:2;21:8,8,17	one (9) 5:5;7:6;10:3;13:22; 15:9,18;20:9,11;26:17
leaves (1) 6:14	low-lying (1) 11:11	mentioned (3) 12:22;13:6;17:14	needed (1) 14:17	one-pager (1) 20:13
leaving (1) 11:17	lucky (1) 7:4	metals (1) 4:18	needs (5) 8:2;10:9;12:1,13; 14:21	one-third (1) 10:9
lengthy (1) 13:10	Lyman (7) 9:11;10:23;12:11,12; 27:14,15,20	mic (2) 12:16;26:13	neighborhood (1) 19:20	only (2) 4:19;9:13
letter (2) 20:11;27:25	M	mic'd (1) 7:2	neighbors (1) 13:2	onto (1) 6:11
level (7) 3:18;8:25;9:2,3;10:18; 11:5;12:14	mail (1) 17:23	microphone (1) 7:4	new (14) 3:15,24;4:6;5:7,17; 9:16;12:14;19:20,20; 24:8,17,17;26:23;27:6	open (2) 27:9,24
levels (5) 3:14;5:15;7:24;8:13, 22	mailing (1) 2:25	middle (1) 13:6	newly-evaluated (1) 10:19	opening (1) 3:25
life (1) 7:16	major (1) 8:21	might (8) 5:22;14:12,18,19; 16:5,17;18:7;25:25	next (4) 10:11;11:2,24;12:10	opinions (2) 18:3;21:9
lifetime (1) 8:9	majority (3) 19:6,9;20:13	Mill (11) 9:11;10:23,23;12:11, 12;22:5;24:5;26:24; 27:14,15,20	non-cancer (6) 3:10;5:17,19,21; 10:15;24:18	opportunity (2) 15:11;18:8
likelihood (4) 11:8,18,25;12:13	makes (1) 14:24	million (2) 10:3,3	North (6) 7:17;8:22;10:22;11:8; 12:7;27:13	order (1) 8:4
likely (3) 12:8,23;18:24	making (2) 16:10;18:3	mills (2) 22:8,9	note (2) 4:21;5:13	original (1) 9:25
limit (1) 26:2	Manor (2) 4:16;26:11	minute (2) 21:20;27:10	notify (1)	originally (1) 10:17
limitations (1) 20:3	manufacturing (1) 4:14	mixed (1) 18:21		out (19) 2:3;3:1,7,9,17;5:9; 8:18;12:25;13:3;14:23; 15:7,20;17:4,9;20:8,17; 23:7;24:23;28:3
line (2) 13:24;14:12	map (2)			outline (1) 10:4
list (1) 2:25				

over (8) 2:23;3:7;5:6;7:1;8:7,8, 8;25:16	8:8;11:3;14:15;15:12; 17:15;25:20;26:8;27:24	16:13	rain (2) 13:5;14:7	25:10
overgrowth (1) 22:3	person (3) 7:2;8:2;19:13	prevent (2) 15:5,16	raised (1) 16:6	representatives (1) 2:3
overview (1) 4:10	personal (1) 20:22	previously (2) 9:13;22:13	range (2) 19:12,25	representing (1) 2:6
owners (3) 13:20;14:9;15:8	person's (1) 8:9	process (3) 4:2;15:2;17:17	rather (1) 9:3	reproductive (1) 5:22
P	picked (1) 2:15	products (1) 7:8	reach (2) 15:7;18:25	required (2) 3:11;8:15
paddle (2) 17:7,10	pink (5) 9:7,18;12:4,8,12	Project (1) 26:12	reached (1) 20:8	reside (1) 4:17
page (2) 17:24;28:1	place (2) 11:3;17:10	prolonged (1) 11:3	reaching (1) 24:23	resident (1) 20:6
PAHs (1) 4:18	plan (17) 2:15,18;3:8;4:4;9:9; 10:1,5;13:18;15:3; 17:18,24;18:11;24:11, 19;26:2,11;28:1	prompted (1) 3:20	reaction (2) 20:20,25	residential (10) 5:13,14;8:22;22:13, 17;23:2,19;26:23;27:14, 19
parameter (1) 22:23	planned (1) 4:1	prone (1) 7:18	read (1) 18:8	residents (10) 7:17;8:6;10:16;12:19; 14:23;15:4;16:14;17:8; 24:14,24
parents' (1) 19:15	planning (1) 12:20	properties (6) 8:22;20:17;21:7,22; 24:21,23	readily (2) 6:4,13	residing (1) 8:12
part (3) 6:24;24:6;25:13	plans (1) 10:3	property (7) 13:20;14:9;15:8; 20:22;21:12,20,21	realize (1) 25:3	resource (1) 17:5
partake (1) 17:5	plants (4) 6:13;16:9,11,21	property-specific (1) 14:22	really (21) 2:8;4:11;5:12,20;6:21, 23;13:2,8;14:13,21,22, 25;15:12;16:9,16;17:1,5, 15;20:16,25;21:6	respond (2) 25:12,22
participate (1) 15:4	please (1) 26:6	proposed (13) 2:15,18;3:8;4:1;10:1, 17;17:18,24;18:11;24:7, 19;26:2;28:1	reason (3) 6:19;15:24;24:14	responding (2) 4:3;17:17
particles (2) 6:23,24	plug (2) 3:15;5:8	proposing (1) 12:18	reassessment (6) 3:10,25;5:8;8:17;10:6; 18:10	responses (1) 26:9
particularly (1) 13:22	pm (2) 2:1;28:4	Protection (1) 2:14	received (3) 17:18;20:11,13	rest (1) 12:7
parts (12) 8:23,24;9:2;10:17; 11:5,21,23,24;12:9,15; 22:14;23:15	point (2) 6:8;21:1	provide (5) 15:11;17:20,25;26:6, 14	recognize (2) 14:3,3	Restoration (1) 26:11
past (5) 4:13;23:14,18;26:20; 27:16	pointed (1) 12:25	provided (1) 27:19	recontamination (4) 11:9,18,25;13:1	result (1) 9:22
patterns (1) 21:6	policy (1) 26:19	Providence (6) 7:17;8:23;10:22;11:8; 12:7;27:13	record (5) 10:4;25:12,13;26:7,10	resulting (1) 4:17
pay (1) 21:20	pond (5) 9:11;10:23;11:20; 13:7,23	proximity (1) 27:20	recreational (12) 5:15;7:14;8:6,11;9:1; 10:16;22:13,18;23:4,20, 22;27:16	results (1) 13:9
PCBs (1) 4:18	ponds (1) 9:20	public (3) 3:21;25:8;27:18	recycling (1) 4:15	review (1) 27:5
People (25) 4:24;5:25;6:3,6,12; 7:10;13:14;14:14;15:14, 18,22;17:4,9;19:18; 20:18,20;21:1,7,11,15, 19,22;22:1;23:6,6	portion (4) 17:21;18:4,5;25:18	purpose (1) 25:20	redoing (1) 5:10	revised (1) 23:25
people's (1) 11:14	pose (1) 8:14	putting (1) 6:8	reflects (1) 18:3	Rhode (3) 2:11;14:8;26:20
per (13) 8:23,24;9:2;10:17; 11:5,21,24,24;12:9,15; 22:14;23:15,23	position (1) 13:19	Q	regards (1) 26:23	right (7) 10:11,12;12:6;13:23; 23:11;24:9;25:6
percent (2) 9:24;20:10	potential (4) 9:4,19;13:14,16	quite (1) 21:23	Region (1) 10:3	risk (8) 8:14,19;9:17;13:1,14, 15;22:19;23:9
Perhaps (1) 16:5	potentially (4) 13:20;15:8;16:16,24	R	regular (1) 17:23	risks (8) 3:14,18;5:10,18,19,21; 7:21;8:15
period (13) 2:21;3:22,23;4:2,5;	precautionary (4) 10:24;12:18,19;13:17	race (3) 24:5,6;25:1	relaxing (1) 16:2	River (24) 2:4;3:8;4:23;5:1,4;6:6, 7,20,22;7:13;8:10;11:9, 13;14:21;16:19;17:1,3, 12;19:5;20:3,7;21:4; 26:21;27:2
	precautions (1) 21:3	raceway (1) 26:24	remind (2) 6:3;9:6	riverbanks (1)
	present (2) 7:25;8:1	rafts (1) 27:17	renovated (2) 22:5,9	
	presents (1) 20:4		Repeat (1)	
	pretty (1)			

16:23 room (2) 4:9,10 Route (1) 10:12 running (1) 17:6 runs (1) 3:22	9:11;12:12 shoveling (1) 12:23 show (1) 23:24 shows (1) 12:4 shrubs (1) 22:2 sickness (1) 15:17 side (7) 7:17;8:23;12:6;23:8; 27:2,13,19 sign (2) 2:24,24 simple (1) 14:13 simultaneously (1) 11:13 single (2) 20:9,11 single-family (1) 19:4 sit (1) 15:9 site (15) 3:12,16;4:12,14,20; 7:16,21;8:7,21;9:6; 19:24;20:6;23:3;24:2; 26:12 sites (1) 7:10 site-specific (1) 7:2 situation (1) 27:2 six (1) 12:23 slide (2) 10:11;12:10 smart (1) 17:11 Society (1) 26:20 sofa (1) 16:3 soil (17) 5:13,14;6:22;7:9,14, 23;8:3,21;9:23;10:22; 11:7,16,22;12:9,15; 16:10,25 soils (1) 11:14 solution (1) 14:13 someone (1) 14:25 sometimes (1) 8:8 sophisticated (1) 4:12 source (4)	4:15;9:12;10:8;12:6 sources (1) 4:22 south (1) 10:11 speak (1) 12:24 specific (3) 3:16;23:20;24:2 specifically (7) 3:10,19,24;4:5;5:14; 23:19,25 specifics (1) 23:3 spiel (1) 25:17 spoken (1) 22:6 Stacy (5) 2:13;7:4,6;8:25;12:17 standard (9) 22:13,21;23:4,9,14,16, 22:26;23:27;6 standards (1) 24:1 start (3) 13:11;25:19;26:16 started (2) 3:22;5:9 state (1) 26:4 stay (2) 11:3;25:23 stenographer (2) 26:5,15 still (3) 10:3;19:16;23:13 stirring (1) 16:24 stop (1) 18:13 straightforward (1) 16:13 stress (5) 15:12;16:18;17:15,19; 18:1 suggesting (1) 13:16 Superfund (6) 7:10,20;8:5,15;19:24; 26:12 supposedly (1) 23:12 sure (4) 2:25;4:7;7:2;16:10 surprise (1) 20:25 swim (3) 5:1;6:7;16:21 swimming (3) 6:6;8:10;21:4 switch (1) 25:15	system (1) 5:23 T tail (2) 24:5;25:1 talk (6) 3:18;12:17;15:9; 20:15;21:13,25 talked (2) 19:23;20:9 talking (7) 2:18;17:8;19:7;22:11, 12:23;15:24;24 targeted (1) 24:23 taxes (1) 21:20 telling (1) 20:14 ten (1) 9:24 terms (11) 6:3,12;13:3;14:4; 15:23;18:18,19,23;19:3; 20:20;24:23 thanks (1) 2:12 thought (1) 2:16 thoughts (3) 18:14;25:24;27:9 thousand (1) 22:14 three (1) 19:21 three-and-a-half (1) 19:22 threw (1) 17:13 throws (1) 13:2 times (1) 17:14 today (1) 3:21 together (1) 2:23 tonight (4) 3:5;17:21;18:5;28:3 tonight's (1) 17:22 total (1) 9:24 toxicity (3) 3:15;4:7;24:18 traditionally (1) 3:2 trail (1) 17:6 transient (1) 18:22	transients (1) 19:17 trash (1) 22:3 trillion (12) 8:23,24;9:3;10:17; 11:6,21,24,24;12:9,15; 22:14;23:15 truly (1) 17:18 trying (2) 11:22;15:7 turn (1) 7:1 turtles (1) 16:20 two (4) 14:8;15:6,12;23:25 two-family (1) 19:4 type (2) 15:13,17 typical (2) 14:5;15:22 U Um-hmm (1) 22:15 unacceptable (1) 8:14 under (2) 27:6,12 undertaken (1) 27:6 underway (2) 12:21;17:15 unusual (1) 14:6 up (13) 2:15;3:25;6:1,9;8:16; 11:15,16;15:21;16:9,24; 17:11;19:14;21:14 uptake (1) 6:13 urban (2) 4:22;11:7 use (10) 3:3;17:1,2,4,9,11;21:7, 12,21;27:16 used (3) 23:18,18,21 users (2) 9:2;10:16 uses (3) 4:13;22:19,19 using (3) 14:9;20:22;22:21 V value (3) 3:15;4:7;24:18
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vaporize (1) 6:4 vast (3) 19:5,9;20:12 vegetables (2) 6:15;16:4 ventures (1) 15:1 via (1) 17:22 view (2) 6:8;21:1 vigilant (1) 15:25 Village (1) 4:16 visit (1) 19:11 visited (1) 20:5 visiting (1) 8:11 visitors (2) 8:6;12:20 volatilize (1) 6:25 volume (1) 9:24 VU (3) 23:2,11,14	ways (1) 17:24 weeks (1) 15:6 wetlands (2) 7:15;9:1 what's (3) 14:5,6;15:10 whole (2) 12:1,11 wildlife (4) 6:18;7:23;8:11;16:20 wisely (1) 17:1 wish (1) 20:10 within (1) 20:6 wondered (1) 22:21 wonderful (1) 17:4 words (4) 2:17;22:18,23;23:9 work (7) 5:9;13:19;14:8,18; 15:20;16:2;21:18 working (1) 5:12 write (2) 3:3;26:9			
W	Y			
wade (1) 16:21 wading (1) 8:10 wait (2) 16:14;21:19 waiting (1) 24:10 walk (1) 15:20 walking (1) 17:6 Wannasquatucket (6) 2:4;3:8;7:13;16:19; 17:3;26:21 wants (2) 6:23;15:21 wash (3) 15:15;16:11;17:11 washing (2) 16:1,3 water (6) 6:5,9;7:23;8:3;25:1; 27:1 waterfront (1) 15:1 Watershed (3) 2:4;17:3;26:22 way (4) 3:2;15:16;19:22;25:12	yard (2) 15:20;16:2 yards (2) 9:23;11:15 year-old (1) 19:22 years (4) 11:2;12:23;14:8;19:21 yesterday (1) 2:18 you' (1) 4:11			

In The Matter Of:
EPA Hearing

Centredale Manor Restoration Project
July 31, 2012



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UNITED STATES DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

**IN RE: Centredale Manor Restoration Project
Proposed Plan Amendment
Informational Meeting and Hearing**

**DATE: July 31, 2012
TIME: 7:00 pm.
PLACE: North Providence Town Hall
2000 Smith Street
North Providence, Rhode Island**

FACILITATED BY: STACY GREENDLINGER

1 (Meeting commenced at 7:10 p.m.)

2 MS. GREENDLINGER: Welcome, and thank you for
3 coming out this evening to a meeting about an
4 amendment to the proposed plan for the Centredale
5 Manor Restoration Superfund site. My name is Stacy
6 Greendlinger, and I'm from the United States
7 Environmental Protection Agency. I have with me
8 tonight to also come up later to talk, Tarah Somers,
9 who is from ATSTR. She'll explain what that acronym
10 stands for, but basically it's for the Federal
11 Health Agency.

12 We also have Anna Krasko, who is the EPA
13 project manager, Lou Maccarone from the Rhode Island
14 Department of Environmental Management, as well as
15 Bob Vanderslice from the Department of Health. If
16 at any point people can't hear, raise your hand, and
17 we'll make sure we correct that.

18 So, I wanted to thank you for coming out
19 tonight. The purpose of this meeting is to talk
20 about solely the amendment to the proposed plan. I
21 know some people may not be familiar with the site.
22 We'll give a brief overview of the site, but we
23 cannot speak about the cleanup plan, because it's
24 still a proposed cleanup plan; we have not made a
25 final decision as of yet. We expect to issue the

1 final cleanup plan this coming fall. And we did
2 receive comments through a 120-day public comment
3 period on the different approaches identified for
4 cleaning up the river; and we are in the process of
5 responding to those comments. I know some of you
6 may not be familiar with that, and some of you may
7 want more information. And as I said, we're unable
8 to speak about that tonight, but if you let me know
9 after the meeting, I would be happy to get a copy of
10 the proposed plan to you so that you can read that
11 and see what was issued. You can also look at that
12 at either the North Providence Library, the Johnston
13 Library, or online. And you should have a copy of
14 the actual amendment that has the website on there.
15 So, again, if you would like more information about
16 the proposed cleanup, please go to the libraries or
17 online. And let me know, I'll get you a copy of
18 that. We cannot speak about it tonight, because
19 we're still in that process.

20 We do want to talk to you about the amendment
21 to that proposed cleanup plan. And before I get
22 into that, just for those of you who may not have
23 been to one of my meetings before, I would ask you
24 to hold your questions until we get to the
25 question-and-answer period of this informational

1 meeting. We will answer all of your questions;
2 however, I will ask you to ask one question at a
3 time so that everybody has the opportunity to ask
4 questions.

5 So, tonight, if you didn't pick up an agenda,
6 tonight is two parts to this meeting. The first
7 part is an informational meeting. We will go over
8 the amendment, why are we issuing an amendment,
9 what's the new science, and how does that impact the
10 proposed plan.

11 We then, after we conclude that informational
12 meeting, we will switch gears and do a formal
13 hearing. The purpose of the formal hearing is to
14 capture your comments into the formal record. As
15 you can tell, we have a stenographer here tonight.
16 And she will be transcribing what everyone says so
17 that it goes into our formal record, and so that we
18 can respond to your comments, which is part of our
19 final cleanup plan when we issue that this fall.
20 During that formal hearing, we cannot -- EPA cannot
21 respond to your comment. It's simply to capture
22 your comments for the record. We will stay after
23 when the hearing concludes, and we will be happy to
24 answer more questions that you may have, though.

25 So, let me get into the meeting this evening.

1 Why are we here? We are going to be talking about
2 an amendment to the proposed cleanup plan. As many
3 of you know, we issued a proposed cleanup plan last
4 October 2011. After we had our public comment
5 period, EPA headquarters came out with a dioxin
6 reassessment. It's important to us to make our
7 decisions using the best and most current science
8 that we have, and so we were required to take this
9 new information, and to go back and apply it to this
10 site specifically. So, we took that information,
11 and we -- I'm getting ahead of myself. My
12 apologies. Let me put that on pause, and give a
13 brief overview for those of you who may not know the
14 site. And I do apologize for that.

15 So, why are we even here to begin with before
16 we issue the proposed cleanup plan? The area that
17 we refer to as "the source area" currently has the
18 Brook Village Apartment buildings and the Centredale
19 Manor Apartment building on it. Prior to those
20 apartment buildings being there, there was a
21 chemical company and drum recycling within the area.
22 They operated from the 1940s to the 1970s. And the
23 primary source of contamination included storage and
24 disposal of chemicals from their various activities.
25 So, the contamination found its way into soil and

1 sediment in the river and the Allendale Pond and the
2 Lyman Mill Pond. Dioxin, as you can see this list
3 here, the resulting contamination includes dioxin,
4 PCBs, PAHs and metals. Of that list, dioxin is the
5 contaminant of the biggest concern for us.

6 It's important to note, however, there are
7 other challenges that this river faces in addition
8 to the contamination that came from these industrial
9 practices at the source area. So this cleanup will
10 address the contaminants that you see here from the
11 industrial processes that happened at the source
12 area. There are other challenges to this river that
13 this cleanup is not designed to address, but it is
14 moving forward a big piece of what needs to be done
15 to get this river back to a healthy resource for the
16 area.

17 And it's also important to note that,
18 unfortunately, we live in an industrial, urbanized
19 area; and dioxin is something that we all face just
20 in the environment. And that background
21 contamination, what we call "background," meaning
22 contaminants that are coming from other sources, are
23 here in this area, and it's a legacy of us living in
24 an industrialized area.

25 So, to pick back up on my thread of what are we

1 doing with this new science that came out in
2 February, I started to mention that it's important
3 for us to make decisions on the best science that we
4 have available. So, we took -- this dioxin
5 assessment was really focusing in on non-cancer
6 health effects, and giving a toxicity value for
7 non-cancer health effects. It's something that we
8 couldn't calculate before, because we didn't have
9 that value. So, we took it, and we reassessed our
10 human health risks that we had determined for our
11 sites before, and we made modifications to that to
12 come up with and identify the non-cancer health
13 impact. We also took those values, and we
14 recalculated what should be the cleanup level for
15 the site, both of which we'll talk in more detail
16 about when Anna and Tara come up.

17 It is important to mention that the
18 modification is specifically for residential soil.
19 And I just want to point out that that really has
20 the biggest impact on the North Providence side of
21 the river, simply because the Johnston side of the
22 river, as folks who live in Johnston know, for the
23 most part it has a higher elevation, and so folks
24 who live there are not in the floodplain; whereas in
25 North Providence, many of the houses along the way

1 are either in the floodplain or right along the
2 floodplain. So, modifying our cleanup levels and
3 making them more protective has a possible impact on
4 these houses. And we've really tried in the last
5 couple of weeks to reach out to the property owners
6 to make them aware of this, let them know about the
7 public comment period, and to engage them in
8 discussions about what we can do. There will be
9 more to come on that.

10 I would like to pick up the conversation in a
11 little bit more detail about non-cancer health
12 impact, and I would ask Tarah to come up and do
13 that.

14 MS. SOMERS: So, we're the Agency for Toxic
15 Substance and Disease Registry. We're a sister
16 agency for the Center for Disease Control
17 Prevention. And we work with EPA to help assess the
18 public health impact of contaminated sites.

19 The proposed plan aims to protect against
20 certain non-cancer health effects of dioxin. We
21 generally refer to health effects as non-cancer
22 health effects or cancer effect. So non-cancer
23 health effects would be illnesses that chemicals can
24 cause you that are not cancerous illnesses. If you
25 have skin rashes, or some chemicals can be kidney

1 toxic, those are non-cancer health effects. So, for
2 dioxin, the health effects related to the proposed
3 plan are reproduction effect, which specifically
4 could be a decrease in sperm count and motility; or
5 disruption to the endocrine system, which
6 specifically is increased levels of thyroid
7 stimulating hormones.

8 And we wanted to mention how people could be
9 exposed to dioxin in their environment. In the
10 environment, dioxin does not readily, it doesn't
11 volatilize in the air very well. It tends to stay
12 bound to soil or sediment that has dioxin. It does
13 not very easily dissolve into water, so once it's in
14 soil or sediment and water, it tends to stay stuck
15 to that sediment or soil. And generally it's not
16 taken up by plants, so plants growing in an area
17 that may have dioxin in the soil, generally the
18 plants don't tend to take up much of that
19 contamination in the plant.

20 Where we do find dioxin in the environment is
21 largely people are exposed via their diet. So, when
22 you eat foods, especially fatty foods, you can get
23 exposed to dioxin. In this specific case, dioxin
24 can accumulate in fish or other wildlife, so as the
25 smaller fish are eaten by bigger fish, then the

1 bigger fish get more dioxin in them. And also they
2 can adhere to soil or sediment particles that are in
3 the environment.

4 But it's important to remember that people
5 won't have health effects unless they're actually
6 exposed to the contaminant. So, in this specific
7 site, the specific exposures that people have that
8 could add to their risk of health effects would be
9 eating contaminated fish from the river, or
10 accidentally ingesting contaminated soil or
11 sediment. So, again, if you're not getting exposed,
12 if you're limiting your contact with soil sediment,
13 not ingesting soil sediment, and not eating fish
14 from the river, then do not expect to have any
15 health problems.

16 MS. KRASKO: So, what are the potential
17 exposures and risks at the site for people who
18 reside or visit the Wannasquatucket River? EPA has
19 spent the last ten years analyzing what levels of
20 contaminants are in the sediment. But it's not
21 enough, as Tarah said, for chemicals to be in the
22 environment, people have to have exposure. And
23 those are the kinds of exposures that EPA usually
24 evaluates at Superfund sites. It includes eating
25 fish, swimming or wading in the river, visiting

1 recreational areas, or residing in the floodplain.

2 As you can see from the slide, Superfund risk
3 assessment assumes the worst exposures occur on a
4 very frequent basis over a long period of time,
5 sometimes over decades. And if EPA finds that there
6 are elevated health hazards based on those
7 exposures, then we're required to take a Superfund
8 action, cleanup action.

9 So, what are the main impacts from the new
10 dioxin level at this site? The main change is
11 lowering the soil cleanup level in the floodplain
12 soil from about 1,000 parts per trillion to 50 parts
13 per trillion, and as well as a change in the dioxin
14 level in the recreational soil from 1,000 parts per
15 trillion to 680 parts per trillion.

16 So, if we look at the map where those changes
17 are going to occur, just to orient everybody, on the
18 very top we have Route 44, then what Stacy was
19 referring to was the source area where the
20 contamination is originating. The pond below that
21 is Allendale, with Allendale Dam. Then there is a
22 large wetland. This is the green area of the map.
23 And then the second pond is Lyman Mill. That's the
24 extent of the Superfund site we're talking about.
25 And they changed, the additional action areas would

1 be areas in pink. And we'll look at the map and the
2 slides as we go along.

3 So, what are the implications for those action
4 areas? The overview of the actual areas of cleanup
5 includes potential new excavation of 10,200 cubic
6 yards of soil based on the new evaluation.
7 Depending on the alternatives evaluated by EPA, the
8 cost would increase between 3.5 million and
9 \$12 million. And we're still planning to issue the
10 cleanup plan in the fall of 2012.

11 If we go area by area, and look at specific
12 impacts for the source area, that means that we have
13 to extend the cap over about additional one-third of
14 an acre. That's less than two percent of the total
15 area to be capped where Centredale and Brook Village
16 Apartments are.

17 For the Allendale Pond sediment, there is no
18 change in the scope of the action, because the
19 sediment dioxin cleanup levels are 15 parts per
20 trillion, is already low enough to be protective.

21 This is the source area. And right next
22 to Route 44 is where additional cap or additional
23 excavation of the area where we know we have levels
24 above 50 parts per trillion of dioxin in the soil.

25 The biggest impact, of course, is the Allendale

1 floodplain soil and Lyman Mill floodplain soil.

2 Those are the areas where EPA is proposing to take
3 precautionary measures while awaiting final cleanup,
4 which is not expected to happen until the next five
5 or six years. Those are the areas prone to
6 flooding, and those are the areas that have elevated
7 levels of dioxin and other contaminants.

8 Because of the low new cleanup level, 50 parts
9 per trillion, which is very close to what we see in
10 the background levels of soil in urban areas, there
11 is a potential for recontamination of those areas
12 should sediment from the river be deposited on those
13 residential properties during flooding. For
14 example, in Allendale Pond we have levels of dioxin
15 up to 100,000 parts per trillion, with an average of
16 1,000 parts per trillion. In Lyman Mill it's about
17 half of that. So, when you talk about cleanup level
18 of 50 parts per trillion on residential floodplain
19 soil next to levels of 1,000 parts per trillion in
20 sediment, there is obviously a likelihood of
21 recontamination.

22 So, what it means for cleanup, it means that as
23 long as dioxin-contaminated sediment remain
24 uncontrolled in the ponds, we are not likely to
25 achieve levels of 50 parts per trillion in the

1 floodplain soil on people's properties. So, if
2 there is a cleanup to be done on this project, the
3 soil and sediment have to be cleaned up
4 simultaneously, they have to be addressed
5 simultaneously to avoid recontamination.

6 So, if you look at the maps again a little
7 close up, this is Allendale Pond. And you have
8 those in your proposed plan amendment. And the
9 thing is that most of them are on the North
10 Providence side, but there is some areas across
11 source area in Johnston that are impacted, and we've
12 seen elevated levels of dioxin and other compounds.

13 And the next map is similar depiction of Lyman
14 Mill Pond. And here you see just about the whole
15 shore on the North Providence side is colored pink,
16 which means there is a likelihood of levels of about
17 50 parts per trillion in the soil along the whole
18 shore.

19 So, Stacy is going to talk about what
20 preventive measures or interim steps EPA is
21 hopefully going to undertake while waiting for the
22 final cleanup, and while the final cleanup is being
23 planned at the site; and also what precautionary
24 measures the residents and the visitors to the area
25 can take during that time period.

1 MS. GREENDLINGER: Thanks, Anna. So, as Anna
2 mentioned, unfortunately, it's going to be a long
3 time until a shovel is in the ground. And some
4 people have asked, why so long. And after we come
5 out with a final cleanup plan this fall, we need to
6 engage the potentially responsible parties in the
7 conversation in the hopes of having them come to the
8 table and undertake the cleanup.

9 Once we get past discussions as to who is going
10 to take on the cleanup, we have to do engineering
11 and design work. And as I've said to many of you,
12 much as if you were to do an addition onto your
13 house, you would need to do measurements, figure out
14 how much of your supplies you need, what the depth
15 of your support beams need to be, or anything like
16 that to do the design work, before you actually
17 start your construction. That's very similar for
18 us. We need to take on that design work at a
19 typical Superfund site. Doing design work like that
20 can take several years. So, we look at it, and we
21 wish we had a crystal ball to be exact, but we feel
22 confident saying that it is several years out before
23 we start doing work. And as Anna mentioned, in the
24 meantime, if you plug in these new numbers with the
25 dioxin reassessment, it brings it down to levels

1 where we want to make sure that in the interim,
2 before we start doing the cleanup, that residents
3 are as protected as they can be from potential
4 exposure.

5 So, we started, as I mentioned, conversations
6 with residents along the river in the hopes that we
7 can identify what works for the specific properties
8 to be able to prevent physical contact with
9 potentially contaminated soil. So, once we have a
10 cleanup plan this fall, we'll be going back out to
11 those various property owners to figure out what
12 makes sense for each of those properties. And
13 certainly we wouldn't do anything without consulting
14 with the folks who live there.

15 And we've also talked with folks, and this is a
16 good thing for everybody in terms of action that
17 people can take right now in terms of how you behave
18 and interact with your environment to protect
19 yourself from potential exposure. Much of what you
20 see listed on the slide is good practice that people
21 do on a day-to-day basis to protect yourself from
22 catching a cold or catching the flu. It's the same
23 thing, it's preventative for this case, too. As
24 you've heard, well, one, don't eat the fish from the
25 river. And that's great protection. But as you've

1 heard, getting contaminated sediment into your mouth
2 is another issue. So, if you're washing your hands
3 before you drink and smoke and eat, that's an
4 excellent way to not only make sure you don't get a
5 cold, but to prevent any contaminated soils from
6 entering into your body. Much the same if you're
7 doing yard work in your yard; to wash your clothing
8 after coming in, to take your shoes off before you
9 enter your house. Again, much of which people say,
10 "got that," "do that." So, it's not extraordinary
11 measures that you have to take, but there's an added
12 reason, living in the floodplain or interacting with
13 the floodplain, as to why you should make those good
14 practices as part of your daily life. And of
15 course, if you have a garden, to, before eating your
16 produce, to make sure that you wash it before you do
17 so.

18 And we always issue our Do's and Don'ts of the
19 Wannasquatucket River. We have signs up throughout
20 the river area. We've put out press releases. We
21 really rely on the residents. I can't say how many
22 residents, when we were talking to them in the last
23 couple of weeks, saying, "I've stopped the kids from
24 going in there, and I'm always telling people,
25 'release your fish, and wash your hands.'" And we

1 really appreciate the residents taking on the
2 message and sharing it with other people in the
3 community for those who don't know.

4 So, it's the standard, don't eat the fish,
5 eels, turtles or other wildlife or plants. Don't
6 swim or wade. And the swimming and wading, I just
7 want to clarify for people. For us, from a
8 hazardous waste point of view, it's a concern with
9 churning up the sediment or the mud that's along the
10 riverbanks or in the ponds, because the ponds are
11 very shallow, and that's where the hazardous
12 contaminants are; it's not from a point of view of
13 touching the water. That doesn't mean that touching
14 the water is necessarily a good thing, because there
15 are high bacterial counts in this river, but those
16 are non-Superfund issues. And I just want, again,
17 to clarify, it's a good thing to not swim in the
18 river, but just from, it's not a touch, and you get
19 dioxin on you.

20 It's a beautiful river. We've heard that so
21 much from the residents that live along the pond.
22 And after spending hours sitting on people's patios
23 and enjoying their back yard along with them, we
24 really do appreciate the beauty that the pond offers
25 and the river offers the people that live here. We

1 encourage people to continue to use the river. The
2 Wannasquatucket River Watershed Council does a
3 really fabulous job of getting people out on the
4 bike path to enjoy this area and the resources that
5 it has. And it's a tremendous undertaking that
6 they're making. And we support using the river
7 wisely. And just, when you use the river, use it
8 wisely. Follow the "wash your hands" and "take your
9 shoes off," and all of those good practices, and you
10 can really enjoy a beautiful time out on the river.

11 This is a proposed amendment to the cleanup
12 plan. That means that we are in the comment period
13 right now. We do value your comment very much, so
14 we are still in the process, as I said earlier, of
15 responding to comments that we received on the
16 proposed plan. We're seeking your comment
17 specifically on this amendment and the new dioxin
18 reassessment, and how that modifies the cleanup
19 plan. The comment period has started on July 17th,
20 and it runs through -- I'm sorry, July 19th it
21 started. It runs through August 17th. There are
22 various ways that you can provide comment for us.
23 On page eleven of your proposed plan amendment there
24 are these details. You don't need to jot it down.
25 It's for mailing, e-mailing or faxing your comments.

1 And clearly, tonight in our second portion of
2 our meeting we'll have the formal hearing where you
3 can orally provide comment if that's convenient for
4 you. So, we do very much value and encourage you to
5 share those. But right now I would like to do the
6 question-and-answer period. This is not for the
7 formal record. This is just so that we have the
8 opportunity to clarify anything for you before we
9 get to the formal comments. Again, the formal
10 comment, we can't respond back.

11 So, I'd like to go to the question and answer.
12 Again, I'm going to ask if you could just ask one
13 question at a time. Do I see a start of a question?
14 Go ahead.

15 AUDIENCE MEMBER: I think people are going to
16 ask if there's going to be additional expense and
17 additional disturbance a little bit more about this
18 talk that you found, for example, you said the
19 reproductive problems and a low sperm count. Can
20 you quantify that a little bit? Is there a risk of
21 increased difficulty of conception? Or if there are
22 birth defects. I mean, what is the nature of this
23 health risk?

24 MS. GREENDLINGER: I'm going to ask either Bob
25 or Tarah. I'm going to ask Bob. Tarah's been up

1 here. I'm going to share. Bob, why don't you take
2 the question.

3 MR. VANDERSLICE: That came from a statistical
4 analysis, a previous study, so it's actually human
5 data on kids who have been exposed to very high
6 levels, and then they extrapolated back. So, what
7 would have happened at lower levels, I'm not
8 familiar with the models that much, but that's what
9 the information is based on.

10 AUDIENCE MEMBER: What are the health effects?

11 MR. VANDERSLICE: So, they've seen that boys
12 when they're exposed, and women when they're
13 pregnant, had very high levels. Those boys had
14 decreased sperm motility and sperm count. The
15 girls, when their mothers were exposed, had impacts
16 on their hormone levels, thyroid, TSH levels. So,
17 but then the question is, "Well, would that happen
18 at lower levels?" And that was done using fairly
19 sophisticated models. And that I can't explain to
20 you, so maybe Tarah can. So, these were actual
21 results in humans to the incidence.

22 MS. GREENDLINGER: Chau, come on up. Chau Vu
23 is our human health risk assessor, so she's the one
24 who had the final answer.

25 MS. VU: So, just like Bob had mentioned, those

1 studies, those two specific health studies, they are
2 the only human studies that we have for non-cancer
3 effects from exposure to dioxin at very high levels.
4 And we applied the proper extrapolation model. It's
5 a mathematical model, it's very complicated, but it
6 takes into account that whatever you are exposed to,
7 how much of that amount is transferred into your
8 body, absorbed into your body, and then distributed
9 to different organs, and then some of it might get
10 excreted out as well. And then they take into
11 consideration the different uncertainty factors of
12 the variation of one person to another person. At
13 that level we see some effects to no effect at all.
14 So, all of that is taken into consideration when
15 they calculate a number that we call an estimated
16 dose. If a person is exposed to this very small
17 number every day, absorbing by mouth every day, then
18 we expect to see no effect at all.

19 And then EPA used that estimated number based
20 on the study to develop what we call a reference
21 dose. And then from the region we used the
22 reference dose to reevaluate the non-cancer effects,
23 as well as the proposed cleanup number in the
24 sediment and the soil. If that answers your
25 question.

1 AUDIENCE MEMBER: Thank you.

2 MS. GREENDLINGER: Any other questions? Yes?

3 AUDIENCE MEMBER: You had mentioned that, you
4 said that there were about 48 properties that are
5 affected, mostly on the North Providence side, and
6 that you are starting conversations or have had
7 conversations with the property owners. Can I
8 assume that if you have not contacted anyone else,
9 that conversation does not need to be had because of
10 where we are located?

11 MS. GREENDLINGER: On the Johnston side, that's
12 correct.

13 AUDIENCE MEMBER: Towards the beginning of
14 Anna's presentation there was a slide that had two
15 criteria on it: It had the 50 parts per million
16 residential criteria, and then I thought it had
17 another one. And I was wondering --

18 MS. GREENDLINGER: Recreational.

19 AUDIENCE MEMBER: Are you going to use that
20 somewhere at the site?

21 MS. GREENDLINGER: That recreational use, the
22 cleanup level that applied to the Oxbow, or other
23 parts, too. Let me get a clarification on that.

24 MS. KRASKO: It was not used as a pure cleanup
25 level. We used 1,000 parts per trillion of dioxin

1 to differentiate the areas that need to be excavated
2 and the areas that don't need to be excavated. It
3 was one of the factors used. So, because we no
4 longer have that number available to EPA, 1,000
5 parts per trillion no longer exists, if we were to
6 calculate what would be the non-cancer risk for
7 recreational users of that area, it would be 680.
8 And when we looked at the original data set, based
9 on the data we have, 680 is so close to 1,000, there
10 is no change.

11 AUDIENCE MEMBER: Obviously dioxin has nothing
12 to do with the geese and the ducks and the frogs,
13 because they're fine.

14 MS. GREENDLINGER: Okay, so the question is,
15 does dioxin have an impact on the wildlife?

16 AUDIENCE MEMBER: Right. Does it?

17 MS. GREENDLINGER: Actually, we got that
18 question earlier today. So, there have been health
19 studies done on the wildlife. I think I'll have
20 Anna, she knows the details better than I in terms
21 of studies on dioxin and its impact on wildlife on
22 the test site.

23 MS. KRASKO: In addition to collecting data
24 from the fish, which show high levels of dioxin,
25 there were additional studies. Specifically, there

1 was a study on tree swallows, and tree swallows that
2 have been studied elsewhere on contaminated soils,
3 and there's also a lot of them around here. And the
4 study was done over several years. We put the
5 swallows nest houses in both Allendale and Lyman
6 Mill Pond, as well as the pond upstream and
7 downstream from the area, and we've seen various
8 changes in contaminant levels and hatchability.

9 MS. GREENDLINGER: So, hatchability, whether
10 they can hatch from the egg or not.

11 MS. KRASKO: Between background level, between
12 background areas and the areas impacted by dioxin,
13 in their eggs and their nestlings, and we did so
14 over several years.

15 AUDIENCE MEMBER: So, are you saying that there
16 is an impact on them?

17 MS. KRASKO: Yes, there is an impact.

18 AUDIENCE MEMBER: Where we are, they're
19 thriving, the geese and the ducks and the frogs. It
20 doesn't seem to be affecting them as far as where we
21 are, the tree swallows.

22 MS. GREENDLINGER: We've seen the baby swans,
23 and they're very cute. But from the science, there
24 are impacts.

25 Yes, sir?

1 AUDIENCE MEMBER: As a property owner, am I
2 allowed to refuse to have this work done on my land?

3 MS. GREENDLINGER: The cleanup done?

4 AUDIENCE MEMBER: The whole thing. Can I just
5 say no?

6 MS. GREENDLINGER: Well, we would work with you
7 to see what your concerns are in terms of your
8 property.

9 AUDIENCE MEMBER: So then to allow anybody on,
10 I would definitely make it clear where you can go
11 and where you can't, and how far you are to proceed.

12 MS. GREENDLINGER: Well, we definitely work
13 with every property owner. It's not something where
14 we want to be in a position of forcing something to
15 happen. But ultimately EPA is responsible for
16 making sure that the cleanup does happen. And we
17 need to make sure that that cleanup happens so that
18 one location isn't a source of contamination for
19 another. So, usually in our experience when we've
20 had concern from a property owner, there's specific
21 reasons that are behind that. And we can work with
22 what those reasons are to make sure that, for
23 instance, if there's a mature tree there that
24 someone really wants to be able to hang in there, do
25 we really need to take it down or not, and what can

1 we do to avoid having that happen. So, we really do
2 try to work with property owners, but ultimately we
3 are responsible for having the cleanup happen.

4 I'm just going to wait. I can come back to
5 you. I want to see if there's other people who have
6 questions. Yes?

7 AUDIENCE MEMBER: Just looking at this map
8 here, and listening, trying catch it all. The new
9 light pink areas that are here, that's a potential
10 problem, or it is a problem?

11 MS. GREENDLINGER: It's areas that, based on
12 the proposed cleanup level of 50 parts per trillion,
13 we would want to go back and reevaluate. So, not
14 necessarily, but maybe. So, we need to go back and
15 look at it. And when we get to the final cleanup
16 plan, and on page two of everyone's amendment is a
17 full site map, so you can look at the full areas to
18 see the light pink areas that David was talking
19 about.

20 So, those are areas that may have concerns
21 because of the proposal to drop the -- to be that
22 much more protective of the cleanup level. So, yes,
23 possibly. And when we get to -- that's why we're
24 talking about interim measures with people. Because
25 if we went out and sampled someone's house next

1 week, and we got a big flood in, as Anna pointed
2 out, the levels are so low, that it could very well
3 get recontaminated, and that would be, sort of, it
4 would be at a loss. And the same thing if we went
5 in and excavated that area, same thing: A storm
6 comes in, and we haven't done the cleanup yet; you
7 could end up having the same issue, the same problem
8 as before. So, that's why we were talking about
9 taking interim measures until the cleanup happens.

10 When we get to the cleanup for those light pink
11 areas, we need to reassess, is this an issue or not.
12 So, we would need to do sampling in tandem that's
13 connected to the cleanup timed so that if we did
14 find an issue, we can get in there as part of the
15 cleanup, and take care of it. And should there need
16 to be removal of contamination in those light pink
17 areas, then it would happen. There might not be.
18 And it would be a type of sampling where you're not
19 looking at one individual point, but you're looking
20 at a composite sample. So, you would look at
21 various samples and say, "What is representative of
22 this back yard, for instance." And say, "What's the
23 average area, and is that average below or above the
24 50 parts per trillion," and then a decision would be
25 made.

1 AUDIENCE MEMBER: Just to return on the same
2 question. So, the Oxbow area and the areas that are
3 in yellow that were already proposed, those levels
4 are above what we're seeing here, or they need to be
5 checked again? And I just say this because I had a
6 boat up here just the other day, and this is a very
7 sensitive ecological area right here. Absolutely
8 beautiful flowers, and birds all over the place.
9 And it just seems to me just a major impact in this
10 area to excavate this. It just, it really -- and
11 I'm not a huge fan, I love the animals, but I mean,
12 I love humans more -- it just seems to me it's an
13 awful big impact. And disturbing this whole
14 section, potentially causing other harm in the other
15 parts of the river scares me.

16 MS. GREENDLINGER: Okay. So, here's where we
17 dance our fine line of whether we're talking about
18 the full cleanup, or whether we're talking about
19 impacting --

20 AUDIENCE MEMBER: Right.

21 MS. GREENDLINGER: I hear you. We can't get
22 into a full discussion about the proposed cleanup,
23 just because of where we are in our process.

24 AUDIENCE MEMBER: Right. But this yellow area
25 is definitely?

1 MS. GREENDLINGER: The yellow area stands as
2 what we proposed in October as an area that needs to
3 be addressed, how we end up addressing it when we
4 make the final cleanup plan. But it's not, with
5 this amendment and the modifications of lowering the
6 cleanup level, it's not in pink.

7 AUDIENCE MEMBER: Different question this time.
8 Does the EPA have any studies of the economic loss
9 to property value at different levels of dioxin
10 concentration nearby? So, for example, does
11 cleaning up this lower level improve property
12 values?

13 MS. GREENDLINGER: There's not a specific study
14 to the site that I'm aware of in terms of property
15 values. And I'm not sure if there's been a study at
16 other sites. I think it's -- we don't have a
17 crystal ball on that. What I've heard from other
18 people at other sites is that when you get to the
19 cleanup level, when you get to the final cleanup,
20 they have an area that has been so well-studied
21 compared to other industrial areas that it could
22 have God knows what there, but that their property,
23 they know exactly what's going on with it, and it
24 crosses the finish line of having been addressed,
25 and it is monitored more so than other areas. Does

1 it hurt them in the short term? Perhaps, perhaps
2 not. I think it's hard to say. I have not had any
3 banks call me about this site specifically. I've
4 had that at other sites, where we've had people who
5 are trying to get equity loans, or to do a real
6 estate transfer, where we've had financial
7 institutions call us and ask. I have not received a
8 single call due to this site.

9 AUDIENCE MEMBER: I was just thinking as a
10 potential buyer, the lower the level, the more --
11 and the same way, I know there are some things like
12 proximity to bike paths increasing property values,
13 so I was wondering if there was a similar study.

14 MS. GREENDLINGER: I'm not aware. I can just
15 say I haven't gotten a call from a financial
16 institution.

17 Lou?

18 AUDIENCE MEMBER: You stated earlier that there
19 is an additional 10,000 cubic yards that you expect
20 to remove. What's the grand total? Is it close to
21 150 or 160,000?

22 MS. GREENDLINGER: Do you know offhand what the
23 grand total is? I don't know the number offhand,
24 unless Anna does. I know in the back of the planned
25 amendment there's a table that shows, I believe, in

1 the table, the additional amounts that we believe,
2 so there might be a comparison there.

3 AUDIENCE MEMBER: I thought it was in the area
4 of 150,000 cubic yards originally at one point.

5 MS. GREENDLINGER: Prior to October?

6 AUDIENCE MEMBER: Yes.

7 MS. GREENDLINGER: Anna, do you know?

8 MS. KRASKO: Yeah, I think we're talking about
9 150,000 of sediment, plus a bit of soil. And
10 150,000 cubic yards of sediment was insitu volume,
11 including volume of water. So, by the time you
12 actually do something with it, it's less. So, I
13 think overall volume with sediment and soil was
14 under 150,000. That 10,000 cubic yards, we estimate
15 up to five to ten percent increase in the volume of
16 that original proposal. And again, as Stacy said,
17 this assumes almost the maximum excavation of all
18 the properties on the North Providence side. And
19 those properties are subject to additional sampling.
20 But this is a conservative estimate, 10,000 cubic
21 yards.

22 MS. GREENDLINGER: Other questions before we
23 switch gears?

24 AUDIENCE MEMBER: In response to the spring
25 2010 flooding, the City of Providence and then EPA

1 took some samples in Merino Park, and then EPA
2 issued some guidance. With the new standard, are
3 you guys going to revisit those statements that you
4 made?

5 MS. GREENDLINGER: That was one of the first
6 things that I asked Chau when the new standards came
7 out. I said, "Oh, my goodness, what about our work
8 in Providence?"

9 And just so that people know, this park is
10 downstream, and it is a park that we had committed
11 to doing future monitoring, and we remain with that
12 commitment, basically for Merino Park. So, I asked
13 Chau that exact question, and said, "Please run the
14 numbers, and tell me whether there's any change."
15 And I'll let her speak to that.

16 MS. VU: Yeah, we did look at all the data we
17 have for Merino Park, running them using the same
18 the new tox values again. And the risk does go up,
19 of course. We didn't have the non-cancer effects
20 calculated for those areas before, but it was within
21 the acceptable level. So, there was no change for
22 the park. We talked to Ted Bzenas, who is our
23 on-the-scene coordinator, so he's been on top of
24 that project.

25 AUDIENCE MEMBER: I was just thinking this

1 amendment that has gotten a little more pressing
2 than I thought it was going to get, and I was just
3 wondering, when you said EPA was amending the
4 standard, it may be useful about what -- the
5 statements were made about the public park. Even
6 though the conclusion hasn't changed, the standard
7 has changed.

8 MS. VU: Well, let me just clarify. I try to
9 say that to people, that it's not the new standard.
10 We try to say to the public, as well as the
11 professional people at EPA as well, that it's not
12 the standard that is new, it's a new science. And
13 based on that new science, we developed
14 site-specific cleanup number, site-specific risk,
15 and we use that to clean up sites. So, it's
16 different site by site. Different areas in the
17 site, you get different numbers. But back to your
18 question about --

19 AUDIENCE MEMBER: Well, I just think someone
20 should talk to the City of Providence.

21 MS. GREENDLINGER: And Lou also is aware of
22 this, and continues to work with the City of
23 Providence and other interested stakeholders, so I'm
24 assuming that Lou is sharing that information with
25 others.

1 AUDIENCE MEMBER: Yeah. We're still working
2 with the City of Providence on what's going on in
3 Merino right now, maybe see what's going on in the
4 future. And there's also some plans to bring the
5 bike path through, and we want to be made aware of
6 the sample results. And so, we're kind of waiting
7 to see what the city is doing right now. But
8 everybody has been made aware of the new science and
9 the sampling data from last year.

10 MS. VU: Also that, now I remember that Merino
11 Park we used a different risk, acceptable risk
12 level, because it's removal, so we have a different
13 standard that we accept compared to remedial
14 standard, which we used for this part of the site.
15 So, even when we applied the new science, it doesn't
16 trigger the risk for removal, actually. That's why
17 it doesn't change.

18 AUDIENCE MEMBER: I'm not saying it does or it
19 doesn't, I'm just saying that right now the message
20 out there is "We have made a change."

21 MS. VU: Right. But the follow-up action,
22 there's nothing new than what we had discussed.

23 AUDIENCE MEMBER: I think I missed something.
24 Merino Park is somewhat far from below the Lyman
25 Dam. And if there is concern with Merino Park, then

1 what about all these areas that possibly could get
2 flooded between the Lyman Dam and there?

3 MS. GREENDLINGER: To give you the background,
4 two years ago when the big flood had happened,
5 people had asked us, saying what about recreational
6 and parks, and particularly that park. And the City
7 of Providence actually undertook some sampling, and
8 I want to say there were like four sample locations,
9 or maybe five, I'm not quite remembering off the top
10 of my head. But there was one that came back with
11 an elevated dioxin level which we found to be
12 historical, meaning it didn't happen from that
13 flood, it had happened from historically. And they
14 could tell that by the amount of wetness that was
15 there, and other things that I'm not quite
16 remembering off the top of my head. So, the city
17 put some fencing around the area, and we had worked
18 with various stakeholders to do a -- I'm not sure
19 what we called it, but like a limited investigation
20 on that area to determine if there was a need to do
21 a short-term cleanup there or not. Which it came
22 back at that point that no, there was not. And
23 there was talk about doing protective fencing, which
24 happened, and then that we would monitor it
25 long-term as part of this site. Because it was

1 historical, it may be from Centredale, and we were
2 committed to keeping that under a long-term
3 monitoring at the site. And currently various
4 stakeholders are working with the city, and possibly
5 bike path expansion, and using that bike path as a
6 cap to that area. And with going back and looking
7 at the new science to say, is this an issue that
8 would trigger action; and the answer is no.

9 AUDIENCE MEMBER: Is there monitoring below the
10 Lyman Dam?

11 MS. GREENDLINGER: No, not currently. But that
12 was what we were talking about is working with the
13 Rhode Island Department of Environmental Management
14 for some limited monitoring downstream of the river.

15 Okay, I had promised that we would try to
16 switch gears around 8:00. Are there other
17 questions? And again, we will be here after the
18 formal comment period.

19 Okay. So, I am going to close out the
20 informational portion of tonight's meeting. We are
21 going to shift into the formal hearing. And again,
22 the hearing's purpose is to take public comment on
23 the new science, and how it's modified the proposed
24 cleanup. Those modifications are the human health
25 risk assessment, and with new science on the

1 non-cancer dioxin impact, the proposed lower cleanup
2 level for residential soil from 1,000 parts per
3 trillion to 50 parts per trillion, and for the
4 recreational, from 1,000 parts per trillion to 680
5 parts per trillion; and the resulting shift in scope
6 of potential areas that would need to be
7 reevaluated, and the potential impact on cost. So,
8 those are the aspects of the modifications that have
9 happened because of the dioxin reassessment, that's
10 what we're opening comments on.

11 Again, if you would like to know more about the
12 general cleanup plan, you can seek that from the
13 public library or from me. I'll get you a copy of
14 that proposed plan after the formal hearing.

15 So, I'd like to open up the formal hearing. I
16 will ask -- I'll bring the mic to you, or perhaps
17 you might have to meet me halfway. I will ask you
18 to state your name and your address so that the
19 stenographer can capture that. And I need you to
20 provide your comment; and again, we will not be able
21 to respond to that.

22 So, I would like to open the formal public
23 comment hearing for the proposed plan amendment. Do
24 I have anybody who would like to start us off with a
25 comment? I'll wait a minute, just in case someone

1 is getting your thoughts together. Yes?

2 MS. CARLINO: I have one comment.

3 MS. GREENDLINGER: Name and address, please.

4 MS. CARLINO: Marie Carlino, C-A-R-L-I-N-O;
5 Johnston. My comment basically is, I did not get
6 enough information about when you cap an area, and
7 what we're planning to do with this area, what we're
8 going to do, have we done it before, and how long
9 has that been in existence: ten years/fifteen years?
10 Because when you look out thirty to forty years, you
11 have an area that's been capped, and you have
12 dioxin, and I don't know how that poses a threat to
13 health thirty or forty years later. Because we're
14 so concerned about the water and the fish, and we're
15 removing it to help them right now to keep it
16 contained, but I don't know if there are statistics
17 available that would show us in thirty or forty or
18 fifty years down the road, after capping of the
19 soil, what that does for the health of the
20 community.

21 MS. GREENDLINGER: Thank you, Marie. Are there
22 any other comments? Yes, sir?

23 MR. DESNOYERS: A. Desnoyers,
24 D-E-S-N-O-Y-E-R-S. This is being run by the EPA,
25 yes?

1 MS. GREENDLINGER: I can't respond. At this
2 point we can't respond to comments. Go ahead and
3 provide your comment, and we'll be here afterwards.

4 MR. DESNOYERS: It seems that it was run by the
5 EPA. The EPA in recent years has done a lot of
6 stupid things countrywide, nationwide. And I think
7 this is another one of those boondoggles. It's just
8 a waste of money. The EPA is trying to justify its
9 existence by stupid things like this.

10 MS. GREENDLINGER: Okay, thank you for your
11 comment. Yes?

12 MR. SCHULER: I wasn't going to comment, but my
13 name is Barry Schuler, and I just want to defend the
14 EPA. And I'm not a scientist to judge the
15 appropriate level per trillion, I don't really
16 understand the human health effect that you're
17 savings us from as well as I would like, but I don't
18 think the EPA has done stupid things. And I think
19 they've protected us from pollution, especially as
20 we're downwind to a lot of power plants. And it's
21 very important for Rhode Islanders to support the
22 EPA, because the upwind power plants threaten our
23 health. So, I just don't want the record to
24 indicate that North Providence people don't
25 appreciate the EPA. Most of us do.

1 MS. GREENDLINGER: Are there others that have
2 comment for the record? Okay, I am going to
3 formally close out the public hearing portion of it.
4 Again, we are here to answer any questions that you
5 have, and we're very appreciative of your time.
6 Thank you for coming this evening.

7 (Meeting adjourned at 8:07 p.m.)
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C E R T I F I C A T E

I, Jane F. Cormier, do hereby certify
that the foregoing contains a true, accurate
and complete transcript of my notes taken at
the above-entitled proceeding.

IN WITNESS WHEREOF I have hereunto set my
hand this 15th day of August, 2012.

JANE F. CORMIER, CSR
NOTARY PUBLIC
MY COMMISSION EXPIRES: 1/19/2014

\$	6	6:7;15;12;24:23	amount (2) 22:7;36:14	11:3;32:17
\$12 (1) 12:9	680 (4) 11:15;24:7,9;38:4	additional (10) 11:25;12:13,22,22; 20:16,17;24:25;31:19; 32:1,19	amounts (1) 32:1	assuming (1) 34:24
1	7	address (4) 6:10,13;38:18;39:3	analysis (1) 21:4	ATSTR (1) 2:9
1,000 (9) 11:12,14;13:16,19; 23:25;24:4,9;38:2,4	7:10 (1) 2:1	addressed (3) 14:4;30:3,24	analyzing (1) 10:19	AUDIENCE (29) 20:15;21:10;23:1,3, 13,19;24:11,16;25:15, 18;26:1,4,9;27:7;29:1, 20,24;30:7;31:9,18;32:3, 6,24;33:25;34:19;35:1, 18,23;37:9
10,000 (3) 31:19;32:14,20	8	addressing (1) 30:3	animals (1) 29:11	August (1) 19:21
10,200 (1) 12:5	8:00 (1) 37:16	adhere (1) 10:2	Anna (9) 2:12;7:16;15:1,1,23; 24:20;28:1,31:24;32:7	available (3) 7:4;24:4;39:17
100,000 (1) 13:15	8:07 (1) 41:7	adjourned (1) 41:7	Anna's (1) 23:14	average (3) 13:15;28:23,23
120-day (1) 3:2	A	affected (1) 23:5	Apartment (3) 5:18,19,20	avoid (2) 14:5;27:1
15 (1) 12:19	able (3) 16:8;26:24;38:20	affecting (1) 25:20	Apartments (1) 12:16	awaiting (1) 13:3
150 (1) 31:21	above (3) 12:24;28:23;29:4	afterwards (1) 40:3	apologies (1) 5:12	aware (6) 8:6;30:14;31:14; 34:21;35:5,8
150,000 (4) 32:4,9,10,14	Absolutely (1) 29:7	again (15) 3:15;10:11;14:6;17:9; 18:16;20:9,12;29:5; 32:16;33:18;37:17,21; 38:11,20;41:4	apologize (1) 5:14	awful (1) 29:13
160,000 (1) 31:21	absorbed (1) 22:8	against (1) 8:19	apply (1) 5:9	B
17th (2) 19:19,21	absorbing (1) 22:17	Agency (4) 2:7,11;8:14,16	appreciate (3) 18:1,24;40:25	baby (1) 25:22
1940s (1) 5:22	accept (1) 35:13	agenda (1) 4:5	appreciative (1) 41:5	back (16) 5:9;6:15,25;16:10; 18:23;20:10;21:6;27:4, 13,14;28:22;31:24; 34:17;36:10,22;37:6
1970s (1) 5:22	acceptable (2) 33:21;35:11	ago (1) 36:4	approaches (1) 3:3	background (6) 6:20,21;13:10;25:11, 12;36:3
19th (1) 19:20	accidentally (1) 10:10	ahead (3) 5:11;20:14;40:2	appropriate (1) 40:15	bacterial (1) 18:15
2	account (1) 22:6	aims (1) 8:19	area (40) 5:16,17,21;6:9,12,16, 19,23,24,9;16:11;19,22; 12:11,11,12,15,21,23; 14:11,24;17:20;19:4; 24:7;25:7;28:5,23;29:2, 7,10,24;30:1,2,20;32:3; 36:17,20;37:6;39:6,7,11	ball (2) 15:21;30:17
2010 (1) 32:25	accumulate (1) 9:24	air (1) 9:11	areas (29) 11:1,25;12:1,4,4;13:2, 5,6,10,11;14:10;24:1,2; 25:12,12;27:9,11,17,18, 20;28:11,17;29:2;30:21, 25;33:20;34:16;36:1; 38:6	banks (1) 31:3
2011 (1) 5:4	achieve (1) 13:25	Allendale (8) 6:1;11:21,21;12:17, 25;13:14;14:7;25:5	around (3) 25:3;36:17;37:16	Barry (1) 40:13
2012 (1) 12:10	acre (1) 12:14	allow (1) 26:9	aspects (1) 38:8	based (7) 11:6;12:6;21:9;22:19; 24:8;27:11;34:13
3	acronym (1) 2:9	allowed (1) 26:2	assess (1) 8:17	basically (3) 2:10;33:12;39:5
3.5 (1) 12:8	across (1) 14:10	almost (1) 32:17	assessment (3) 7:5;11:3;37:25	basis (2) 11:4;16:21
4	action (8) 11:8,8,25;12:3,18; 16:16;35:21;37:8	along (8) 7:25;8:1;12:2;14:17; 16:6;18:9,21,23	assessor (1) 21:23	Bazenas (1) 33:22
44 (2) 11:18;12:22	activities (1) 5:24	alternatives (1) 12:7	assume (1) 23:8	beams (1) 15:15
48 (1) 23:4	actual (3) 3:14;12:4;21:20	always (2) 17:18,24	assumes (2)	beautiful (3) 18:20;19:10;29:8
5	actually (7) 10:5;15:16;21:4; 24:17;32:12;35:16;36:7	amending (1) 34:3		beauty (1) 18:24
50 (10) 11:12;12:24;13:8,18, 25;14:17;23:15;27:12; 28:24;38:3	add (1) 10:8	amendment (16) 2:4,20;3:14,20;4:8,8; 5:2;14:8;19:11,17,23; 27:16;30:5;31:25;34:1; 38:23		
	added (1) 17:11			
	addition (3)			

begin (1) 5:15	calculated (1) 33:20	Chau (4) 21:22,22;33:6,13	19:15,25;20:9;38:10; 39:22;40:2	5:23,25;6:3,8,21;9:19; 11:20;26:18;28:16
beginning (1) 23:13	call (7) 6:21;22:15,20;31:3,7, 8,15	checked (1) 29:5	commitment (1) 33:12	continue (1) 19:1
behave (1) 16:17	called (1) 36:19	chemical (1) 5:21	committed (2) 33:10;37:2	continues (1) 34:22
behind (1) 26:21	came (7) 5:5;6:8;7:1;21:3;33:6; 36:10,21	chemicals (4) 5:24;8:23,25;10:21	community (2) 18:3;39:20	Control (1) 8:16
below (4) 11:20;28:23;35:24; 37:9	can (34) 3:10,11;4:15,18;6:2; 8:8,23,25;9:22,24;10:2; 11:2;14:25;15:20;16:3, 7,17;19:10,22;20:3,19; 21:20;23:7;25:10;26:4, 10,21,25;27:4,17;28:14; 31:14;38:12,19	churning (1) 18:9	company (1) 5:21	convenient (1) 20:3
best (2) 5:7;7:3	cancer (1) 8:22	City (8) 32:25;34:20,22;35:2, 7;36:6,16;37:4	compared (2) 30:21;35:13	conversation (3) 8:10;15:7;23:9
better (1) 24:20	cancerous (1) 8:24	clarification (1) 23:23	comparison (1) 32:2	conversations (3) 16:5;23:6,7
big (4) 6:14;28:1;29:13;36:4	cap (4) 12:13,22;37:6;39:6	clarify (4) 18:7,17;20:8;34:8	complicated (1) 22:5	coordinator (1) 33:23
bigger (2) 9:25;10:1	capped (2) 12:15;39:11	clean (1) 34:15	composite (1) 28:20	copy (4) 3:9,13,17;38:13
biggest (3) 6:5;7:20;12:25	capping (1) 39:18	cleaned (1) 14:3	compounds (1) 14:12	cost (2) 12:8;38:7
bike (5) 19:4;31:12;35:5;37:5, 5	capture (3) 4:14,21;38:19	cleaning (2) 3:4;30:11	concentration (1) 30:10	Council (1) 19:2
birds (1) 29:8	care (1) 28:15	cleanup (58) 2:23,24;3:1,16,21; 4:19;5:2,3,16;6:9,13; 7:14;8:2;11:8,11;12:4, 10,19;13:3,8,17,22;14:2, 22,22;15:5,8,10;16:2,10; 19:11,18;22:23;23:22, 24;26:3,16,17;27:3,12, 15,22;28:6,9,10,13,15; 29:18,22;30:4,6,19,19; 34:14;36:21;37:24;38:1, 12	conception (1) 20:21	count (3) 9:4;20:19;21:14
birth (1) 20:22	CARLINO (3) 39:2,4,4	clear (1) 26:10	concern (4) 6:5;18:8;26:20;35:25	countrywide (1) 40:6
bit (4) 8:11;20:17,20;32:9	C-A-R-L-I-N-O (1) 39:4	clearly (1) 20:1	concerned (1) 39:14	counts (1) 18:15
boat (1) 29:6	case (3) 9:23;16:23;38:25	close (6) 13:9;14:7;24:9;31:20; 37:19;41:3	concerns (2) 26:7;27:20	couple (2) 8:5;17:23
Bob (5) 2:15;20:24,25;21:1,25	catch (1) 27:8	clothing (1) 17:7	conclude (1) 4:11	course (3) 12:25;17:15;33:19
body (3) 17:6;22:8,8	catching (2) 16:22,22	cold (2) 16:22;17:5	concludes (1) 4:23	criteria (2) 23:15,16
boondoggles (1) 40:7	cause (1) 8:24	collecting (1) 24:23	conclusion (1) 34:6	crosses (1) 30:24
both (2) 7:15;25:5	causing (1) 29:14	colored (1) 14:15	confident (1) 15:22	crystal (2) 15:21;30:17
bound (1) 9:12	Center (1) 8:16	coming (6) 2:3,18;3:1;6:22;17:8; 41:6	connected (1) 28:13	cubic (6) 12:5;31:19;32:4,10, 14,20
boys (2) 21:11,13	Centredale (4) 2:4;5:18;12:15;37:1	commenced (1) 2:1	conservative (1) 32:20	current (1) 5:7
brief (2) 2:22;5:13	certain (1) 8:20	comment (22) 3:2;4:21;5:4;8:7; 19:12,13,16,19,22;20:3, 10;37:18,22;38:20,23, 25;39:2,5;40:3,11,12; 41:2	consideration (2) 22:11,14	currently (3) 5:17;37:3,11
bring (2) 35:4;38:16	certainly (1) 16:13	comments (11) 3:2,5;4:14,18,22;	construction (1) 15:17	cute (1) 25:23
brings (1) 15:25	challenges (2) 6:7,12		consulting (1) 16:13	
Brook (2) 5:18;12:15	change (8) 11:10,13;12:18;24:10; 33:14,21;35:17,20		contact (2) 10:12;16:8	D
building (1) 5:19	changed (3) 11:25;34:6,7		contacted (1) 23:8	daily (1) 17:14
buildings (2) 5:18,20	changes (2) 11:16;25:8		contained (1) 39:16	Dam (4) 11:21;35:25;36:2; 37:10
buyer (1) 31:10			contaminant (3) 6:5;10:6;25:8	dance (1) 29:17
C			contaminants (5) 6:10,22;10:20;13:7; 18:12	data (6) 21:5;24:8,9,23;33:16; 35:9
calculate (3) 7:8;22:15;24:6			contaminated (7) 8:18;10:9,10;16:9; 17:1,5;25:2	David (1) 27:18
			contamination (9)	day (3)

22:17,17;29:6 day-to-day (1) 16:21 decades (1) 11:5 decision (2) 2:25;28:24 decisions (2) 5:7;7:3 decrease (1) 9:4 decreased (1) 21:14 defects (1) 20:22 defend (1) 40:13 definitely (3) 26:10,12;29:25 Department (3) 2:14,15;37:13 Depending (1) 12:7 depiction (1) 14:13 deposited (1) 13:12 depth (1) 15:14 design (4) 15:11,16,18,19 designed (1) 6:13 DESNOYERS (3) 39:23,23;40:4 D-E-S-N-O-Y-E-R-S (1) 39:24 detail (2) 7:15;8:11 details (2) 19:24;24:20 determine (1) 36:20 determined (1) 7:10 develop (1) 22:20 developed (1) 34:13 diet (1) 9:21 different (10) 3:3;22:9,11;30:7,9; 34:16,16,17;35:11,12 differentiate (1) 24:1 difficulty (1) 20:21 dioxin (38) 5:5;6:2,3,4,19;7:4; 8:20;9:2,9,10,12,17,20, 23,23;10:1;11:10,13; 12:19,24;13:7,14;14:12;	15:25;18:19;19:17;22:3; 23:25;24:11,15,21,24; 25:12;30:9;36:11;38:1, 9;39:12 dioxin-contaminated (1) 13:23 discussed (1) 35:22 discussion (1) 29:22 discussions (2) 8:8;15:9 Disease (2) 8:15,16 disposal (1) 5:24 disruption (1) 9:5 dissolve (1) 9:13 distributed (1) 22:8 disturbance (1) 20:17 disturbing (1) 29:13 done (11) 6:14;14:2;21:18; 24:19;25:4;26:2,3;28:6; 39:8;40:5,18 Don'ts (1) 17:18 Do's (1) 17:18 dose (3) 22:16,21,22 down (4) 15:25;19:24;26:25; 39:18 downstream (3) 25:7;33:10;37:14 downwind (1) 40:20 drink (1) 17:3 drop (1) 27:21 drum (1) 5:21 ducks (2) 24:12;25:19 due (1) 31:8 During (3) 4:20;13:13;14:25	9:22;16:24;17:3;18:4 eaten (1) 9:25 eating (4) 10:9,13,24;17:15 ecological (1) 29:7 economic (1) 30:8 eels (1) 18:5 effect (5) 8:22;9:3;22:13,18; 40:16 effects (15) 7:6,7;8:20,21,22,23; 9:1,2;10:5,8;21:10;22:3, 13,22;33:19 egg (1) 25:10 eggs (1) 25:13 either (3) 3:12;8:1;20:24 elevated (4) 11:6;13:6;14:12;36:11 elevation (1) 7:23 eleven (1) 19:23 else (1) 23:8 elsewhere (1) 25:2 e-mailing (1) 19:25 encourage (2) 19:1;20:4 end (2) 28:7;30:3 endocrine (1) 9:5 engage (2) 8:7;15:6 engineering (1) 15:10 enjoy (2) 19:4,10 enjoying (1) 18:23 enough (3) 10:21;12:20;39:6 enter (1) 17:9 entering (1) 17:6 environment (7) 6:20;9:9,10,20;10:3, 22;16:18 Environmental (3) 2:7,14;37:13 EPA (26) 2:12;4:20;5:5;8:17;	10:18,23;11:5;12:7; 13:2;14:20;22:19;24:4; 26:15;30:8;32:25;33:1; 34:3,11;39:24;40:5,5,8, 14,18,22,25 equity (1) 31:5 especially (2) 9:22;40:19 estate (1) 31:6 estimate (2) 32:14,20 estimated (2) 22:15,19 evaluated (1) 12:7 evaluates (1) 10:24 evaluation (1) 12:6 even (3) 5:15;34:5;35:15 evening (3) 2:3;4:25;41:6 everybody (4) 4:3;11:17;16:16;35:8 everyone (1) 4:16 everyone's (1) 27:16 exact (2) 15:21;33:13 exactly (1) 30:23 example (3) 13:14;20:18;30:10 excavate (1) 29:10 excavated (3) 24:1,2;28:5 excavation (3) 12:5,23;32:17 excellent (1) 17:4 excreted (1) 22:10 existence (2) 39:9;40:9 exists (1) 24:5 expansion (1) 37:5 expect (4) 2:25;10:14;22:18; 31:19 expected (1) 13:4 expense (1) 20:16 experience (1) 26:19 explain (2)	2:9;21:19 exposed (10) 9:9,21,23;10:6,11; 21:5,12,15;22:6,16 exposure (4) 10:22;16:4,19;22:3 exposures (5) 10:7,17,23;11:3,7 extend (1) 12:13 extent (1) 11:24 extraordinary (1) 17:10 extrapolated (1) 21:6 extrapolation (1) 22:4
F				
				fabulous (1) 19:3 face (1) 6:19 faces (1) 6:7 factors (2) 22:11;24:3 fairly (1) 21:18 fall (5) 3:1;4:19;12:10;15:5; 16:10 familiar (3) 2:21;3:6;21:8 fan (1) 29:11 far (3) 25:20;26:11;35:24 fatty (1) 9:22 faxing (1) 19:25 February (1) 7:2 Federal (1) 2:10 feel (1) 15:21 fencing (2) 36:17,23 fifty (1) 39:18 figure (2) 15:13;16:11 final (11) 2:25;3:1;4:19;13:3; 14:22,22;15:5;21:24; 27:15;30:4,19 financial (2) 31:6,15 find (2)

9:20;28:14 finds (1) 11:5 fine (2) 24:13;29:17 finish (1) 30:24 first (2) 4:6;33:5 fish (12) 9:24,25,25;10:1,9,13, 25;16:24;17:25;18:4; 24:24;39:14 five (3) 13:4;32:15;36:9 flood (3) 28:1;36:4,13 flooded (1) 36:2 flooding (3) 13:6,13;32:25 floodplain (11) 7:24;8:1,2;11:1,11; 13:1,1,18;14:1;17:12,13 flowers (1) 29:8 flu (1) 16:22 focusing (1) 7:5 folks (4) 7:22,23;16:14,15 Follow (1) 19:8 follow-up (1) 35:21 foods (2) 9:22,22 forcing (1) 26:14 formal (14) 4:12,13,14,17,20;20:2, 7,9,9;37:18,21;38:14,15, 22 formally (1) 41:3 forty (3) 39:10,13,17 forward (1) 6:14 found (3) 5:25;20:18;36:11 four (1) 36:8 frequent (1) 11:4 frogs (2) 24:12;25:19 full (4) 27:17,17;29:18,22 future (2) 33:11;35:4	G garden (1) 17:15 gears (3) 4:12;32:23;37:16 geese (2) 24:12;25:19 general (1) 38:12 generally (3) 8:21;9:15,17 girls (1) 21:15 giving (1) 7:6 God (1) 30:22 goes (1) 4:17 good (6) 16:16,20;17:13;18:14, 17;19:9 goodness (1) 33:7 grand (2) 31:20,23 great (1) 16:25 green (1) 11:22 GREENDLINGER (35) 2:2,6;15:1;20:24; 21:22;23:2,11,18,21; 24:14,17;25:9,22;26:3,6, 12;27:11;29:16,21;30:1, 13;31:14,22;32:5,7,22; 33:5;34:21;36:3;37:11; 39:3,21;40:1,10;41:1 ground (1) 15:3 growing (1) 9:16 guidance (1) 33:2 guys (1) 33:3	H half (1) 13:17 halfway (1) 38:17 hand (1) 2:16 hands (2) 17:2;19:8 hands' (1) 17:25 hang (1) 26:24	happen (8) 13:4;21:17;26:15,16; 27:1,3;28:17;36:12 happened (6) 6:11;21:7;36:4,13,24; 38:9 happens (2) 26:17;28:9 happy (2) 3:9;4:23 hard (1) 31:2 harm (1) 29:14 hatch (1) 25:10 hatchability (2) 25:8,9 hazardous (2) 18:8,11 hazards (1) 11:6 head (2) 36:10,16 headquarters (1) 5:5 Health (28) 2:11,15;7:6,7,10,12; 8:11,18,20,21,22,23;9:1, 2;10:5,8,15;11:6;20:23; 21:10,23;22:1;24:18; 37:24;39:13,19;40:16,23 healthy (1) 6:15 hear (2) 2:16;29:21 heard (4) 16:24;17:1;18:20; 30:17 hearing (10) 4:13,13,20,23;20:2; 37:21;38:14,15,23;41:3 hearing's (1) 37:22 help (2) 8:17;39:15 here's (1) 29:16 high (5) 18:15;21:5,13;22:3; 24:24 higher (1) 7:23 historical (2) 36:12;37:1 historically (1) 36:13 hold (1) 3:24 hopefully (1) 14:21 hopes (2) 15:7;16:6	hormone (1) 21:16 hormones (1) 9:7 hours (1) 18:22 house (3) 15:13;17:9;27:25 houses (3) 7:25;8:4;25:5 huge (1) 29:11 human (6) 7:10;21:4,23;22:2; 37:24;40:16 humans (2) 21:21;29:12 hurt (1) 31:1	I identified (1) 3:3 identify (2) 7:12;16:7 illnesses (2) 8:23,24 impact (15) 4:9;7:13,20;8:3,12,18; 12:25;24:15,21;25:16, 17;29:9,13;38:1,7 impacted (2) 14:11;25:12 impacting (1) 29:19 impacts (4) 11:9;12:12;21:15; 25:24 implications (1) 12:3 important (7) 5:6;6:6,17;7:2,17; 10:4;40:21 improve (1) 30:11 incidence (1) 21:21 included (1) 5:23 includes (3) 6:3;10:24;12:5 including (1) 32:11 increase (2) 12:8;32:15 increased (2) 9:6;20:21 increasing (1) 31:12 indicate (1) 40:24 individual (1)	28:19 industrial (4) 6:8,11,18;30:21 industrialized (1) 6:24 information (7) 3:7,15;5:9,10;21:9; 34:24;39:6 informational (4) 3:25;4:7,11;37:20 ingesting (2) 10:10,13 insitu (1) 32:10 instance (2) 26:23;28:22 institution (1) 31:16 institutions (1) 31:7 interact (1) 16:18 interacting (1) 17:12 interested (1) 34:23 interim (4) 14:20;16:1;27:24;28:9 into (15) 3:22;4:14,17,25;5:25; 9:13;17:1,6;22:6,7,8,10, 14;29:22;37:21 investigation (1) 36:19 Island (2) 2:13;37:13 Islanders (1) 40:21 issue (10) 2:25;4:19;5:16;12:9; 17:2,18;28:7,11,14;37:7 issued (3) 3:11;5:3;33:2 issues (1) 18:16 issuing (1) 4:8	J job (1) 19:3 Johnston (6) 3:12;7:21,22;14:11; 23:11;39:5 jot (1) 19:24 judge (1) 40:14 July (2) 19:19,20 justify (1) 40:8
---	--	---	---	--	---	---	---

K	36:19;37:14	M	MEMBER (29)	mothers (1)
	limiting (1)		20:15;21:10;23:1,3, 13,19;24:11,16;25:15, 18;26:1,4,9;27:7;29:1, 20,24;30:7;31:9,18;32:3, 6,24;33:25;34:19;35:1, 18,23;37:9	21:15
keep (1)	10:12	Maccarone (1)	mentioned (5)	motility (2)
keeping (1)	line (2)		7:2,17;9:8	9:4;21:14
39:15	29:17;30:24	mailing (1)	mentioned (5)	mouth (2)
37:2	list (2)	19:25	15:2,23;16:5;21:25; 23:3	17:1;22:17
kidney (1)	listed (1)	main (2)	Merino (7)	moving (1)
8:25	16:20	11:9,10	33:1,12,17;35:3,10,24, 25	6:14
kids (2)	listening (1)	major (1)	message (2)	much (12)
17:23;21:5	27:8	29:9	18:2;35:19	9:18;15:12,14;16:19; 17:6,9;18:21;19:13; 20:4;21:8;22:7;27:22
kind (1)	little (5)	makes (1)	metals (1)	mud (1)
35:6	8:11;14:6;20:17,20; 34:1	16:12	6:4	18:9
kinds (1)	live (6)	making (3)	mic (1)	myself (1)
10:23	6:18;7:22,24;16:14; 18:21,25	8:3;19:6;26:16	38:16	5:11
knows (2)	living (2)	Management (2)	might (4)	N
24:20;30:22	6:23;17:12	2:14;37:13	22:9;28:17;32:2;38:17	
Krasko (7)	loans (1)	manager (1)	Mill (6)	name (4)
2:12;10:16;23:24; 24:23;25:11,17;32:8	31:5	2:13	6:2;11:23;13:1,16; 14:14;25:6	2:5;38:18;39:3;40:13
L	located (1)	Manor (2)	million (3)	nationwide (1)
	23:10	2:5;5:19	12:8,9;23:15	40:6
land (1)	location (1)	many (4)	minute (1)	nature (1)
26:2	26:18	5:2;7:25;15:11;17:21	38:25	20:22
large (1)	locations (1)	map (6)	missed (1)	nearby (1)
11:22	36:8	11:16,22;12:1;14:13; 27:7,17	35:23	30:10
largely (1)	long (5)	maps (1)	model (2)	necessarily (2)
9:21	11:4;13:23;15:2,4; 39:8	14:6	22:4,5	18:14;27:14
last (5)	longer (2)	Marie (2)	models (2)	need (19)
5:3;8:4;10:19;17:22; 35:9	24:4,5	39:4,21	21:8,19	15:5,13,14,15,18; 19:24;23:9;24:1,2; 26:17,25;27:14;28:11, 12,15;29:4;36:20;38:6, 19
later (2)	long-term (2)	mathematical (1)	modification (1)	needs (2)
2:8;39:13	36:25;37:2	22:5	7:18	6:14;30:2
legacy (1)	look (11)	mature (1)	modifications (4)	nest (1)
6:23	3:11;11:16;12:1,11; 14:6;15:20;27:15,17; 28:20;33:16;39:10	26:23	7:11;30:5;37:24;38:8	25:5
less (2)	looked (1)	maximum (1)	modified (1)	nestlings (1)
12:14;32:12	24:8	32:17	37:23	25:13
level (21)	looking (4)	may (10)	modifies (1)	new (23)
7:14;11:10,11,14; 13:8,17;22:13;23:22,25; 25:11;27:12,22;30:6,11, 19;31:10;33:21;35:12; 36:11;38:2;40:15	27:7;28:19,19;37:6	2:21;3:6,6,22;4:24; 5:13;9:17;27:20;34:4; 37:1	19:18	4:9;5:9;7:1;11:9;12:5, 6;13:8;15:24;19:17; 27:8;33:2,6,18;34:9,12, 12,13;35:8,15,22;37:7, 23,25
levels (25)	loss (2)	maybe (4)	modifying (1)	next (5)
8:2;9:6;10:19;12:19, 23;13:7,10,14,19,25; 14:12,16;15:25;21:6,7, 13,16,16,18;22:3;24:24; 25:8;28:2;29:3;30:9	28:4;30:8	21:20;27:14;35:3;36:9	8:2	12:21;13:4,19;14:13; 27:25
libraries (1)	lot (3)	mean (3)	money (1)	non-cancer (13)
3:16	25:3;40:5,20	18:13;20:22;29:11	40:8	7:5,7,12;8:11,20,21, 22:9,1;22:2,22;24:6; 33:19;38:1
Library (3)	Lou (4)	meaning (2)	monitor (1)	non-Superfund (1)
3:12,13;38:13	2:13;31:17;34:21,24	6:21;36:12	36:24	18:16
life (1)	love (2)	means (5)	monitored (1)	North (8)
17:14	29:11,12	12:12;13:22,22;14:16; 19:12	30:25	3:12;7:20,25;14:9,15; 23:5;32:18;40:24
light (4)	low (4)	meantime (1)	monitoring (4)	note (2)
27:9,18;28:10,16	12:20;13:8;20:19;28:2	15:24	33:11;37:3,9,14	6:6,17
likelihood (2)	lower (5)	measurements (1)	more (15)	number (7)
13:20;14:16	21:7,18;30:11;31:10; 38:1	15:13	3:7,15;4:24;7:15;8:3, 9,11;10:1;20:17;27:22; 29:12;30:25;31:10;34:1; 38:11	22:15,17,19,23;24:4;
likely (1)	lowering (2)	measures (6)	most (4)	
13:24	11:11;30:5	13:3;14:20,24;17:11; 27:24;28:9	5:7;7:23;14:9;40:25	
limited (2)	Lyman (9)	meet (1)	mostly (1)	
	6:2;11:23;13:1,16; 14:13;25:5;35:24;36:2; 37:10	38:17	23:5	
		Meeting (12)		
		2:1,3,19;3:9;4:1,6,7, 12,25;20:2;37:20;41:7		
		meetings (1)		
		3:23		

31:23;34:14 numbers (3) 15:24;33:14;34:17	37:19;39:10;41:3 over (7) 4:7;11:4,5;12:13;25:4, 14;29:8 overall (1) 32:13 overview (3) 2:22;5:13;12:4 owner (3) 26:1,13,20 owners (4) 8:5;16:11;23:7;27:2 Oxbow (2) 23:22;29:2	11:12,13,14,15;12:19, 24;13:9,15,16,18,19,25; 14:17;23:15,25;24:5; 27:12;28:24;38:2,3,4,5; 40:15 percent (2) 12:14;32:15 perhaps (3) 31:1,1;38:16 period (10) 3:3,25;5:5;8:7;11:4; 14:25;19:12,19;20:6; 37:18 person (3) 22:12,12,16 physical (1) 16:8 pick (3) 4:5;6:25;8:10 piece (1) 6:14 pink (7) 12:1;14:15;27:9,18; 28:10,16;30:6 place (1) 29:8 plan (27) 2:4,20,23,24;3:1,10, 21;4:10,19;5:2,3,16; 8:19;9:3;12:10;14:8; 15:5;16:10;19:12,16,19, 23;27:16;30:4;38:12,14, 23 planned (2) 14:23;31:24 planning (2) 12:9;39:7 plans (1) 35:4 plant (1) 9:19 plants (6) 9:16,16,18;18:5; 40:20,22 please (3) 3:16;33:13;39:3 plug (1) 15:24 plus (1) 32:9 pm (2) 2:1;41:7 point (8) 2:16;7:19;18:8,12; 28:19;32:4;36:22;40:2 pointed (1) 28:1 pollution (1) 40:19 Pond (12) 6:1,2;11:20,23;12:17; 13:14;14:7,14;18:21,24; 25:6,6	ponds (3) 13:24;18:10,10 portion (3) 20:1;37:20;41:3 poses (1) 39:12 position (1) 26:14 possible (1) 8:3 possibly (3) 27:23;36:1;37:4 potential (9) 10:16;12:5;13:11; 16:3,19;27:9;31:10; 38:6,7 potentially (3) 15:6;16:9;29:14 power (2) 40:20,22 practice (1) 16:20 practices (3) 6:9;17:14;19:9 precautionary (2) 13:3;14:23 pregnant (1) 21:13 presentation (1) 23:14 press (1) 17:20 pressing (1) 34:1 prevent (2) 16:8;17:5 preventative (1) 16:23 Prevention (1) 8:17 preventive (1) 14:20 previous (1) 21:4 primary (1) 5:23 Prior (2) 5:19;32:5 problem (3) 27:10,10;28:7 problems (2) 10:15;20:19 proceed (1) 26:11 process (4) 3:4,19;19:14;29:23 processes (1) 6:11 produce (1) 17:16 professional (1) 34:11 project (3)	2:13;14:2;33:24 promised (1) 37:15 prone (1) 13:5 proper (1) 22:4 properties (7) 13:13;14:1;16:7,12; 23:4;32:18,19 property (13) 8:5;16:11;23:7;26:1,8, 13,20;27:2;30:9,11,14, 22;31:12 proposal (2) 27:21;32:16 proposed (25) 2:4,20,24;3:10,16,21; 4:10;5:2,3,16;8:19;9:2; 14:8;19:11,16,23;22:23; 27:12;29:3,22;30:2; 37:23;38:1,14,23 proposing (1) 13:2 protect (3) 8:19;16:18,21 protected (2) 16:3;40:19 Protection (2) 2:7;16:25 protective (4) 8:3;12:20;27:22;36:23 provide (4) 19:22;20:3;38:20;40:3 Providence (14) 3:12;7:20,25;14:10, 15;23:5;32:18,25;33:8; 34:20,23;35:2;36:7; 40:24 proximity (1) 31:12 public (10) 3:2;5:4;8:7,18;34:5, 10;37:22;38:13,22;41:3 pure (1) 23:24 purpose (3) 2:19;4:13;37:22 put (4) 5:12;17:20;25:4;36:17
O	P			Q
obviously (2) 13:20;24:11 occur (2) 11:3,17 October (3) 5:4;30:2;32:5 off (5) 17:8;19:9;36:9,16; 38:24 offers (2) 18:24,25 offhand (2) 31:22,23 once (3) 9:13;15:9;16:9 one (15) 3:23;4:2;16:24;20:12; 21:23;22:12;23:17;24:3; 26:18;28:19;32:4;33:5; 36:10;39:2;40:7 one-third (1) 12:13 online (2) 3:13,17 only (2) 17:4;22:2 on-the-scene (1) 33:23 onto (1) 15:12 open (2) 38:15,22 opening (1) 38:10 operated (1) 5:22 opportunity (2) 4:3;20:8 orally (1) 20:3 organs (1) 22:9 orient (1) 11:17 original (2) 24:8;32:16 originally (1) 32:4 originating (1) 11:20 others (2) 34:25;41:1 out (22) 2:3,18;5:5;7:1,19;8:5; 15:5,13,22;16:10,11; 17:20;19:3,10;22:10; 27:25;28:2;33:7;35:20;	page (2) 19:23;27:16 PAHs (1) 6:4 Park (11) 33:1,9,10,12,17,22; 34:5;35:11,24,25;36:6 parks (1) 36:6 part (7) 4:7,18;7:23;17:14; 28:14;35:14;36:25 particles (1) 10:2 particularly (1) 36:6 parties (1) 15:6 parts (25) 4:6;11:12,12,14,15; 12:19,24;13:8,15,16,18, 19,25;14:17;23:15,23, 25;24:5;27:12;28:24; 29:15;38:2,3,4,5 past (1) 15:9 path (4) 19:4;35:5;37:5,5 paths (1) 31:12 patios (1) 18:22 pause (1) 5:12 PCBs (1) 6:4 people (28) 2:16,21;9:8,21;10:4,7, 17,22;15:4;16:17,20; 17:9,24;18:2,7,25;19:1, 3;20:15;27:5,24;30:18; 31:4;33:9;34:9,11;36:5; 40:24 people's (2) 14:1;18:22 per (23)			quantify (1) 20:20 question-and-answer (2) 3:25;20:6 quite (2) 36:9,15
				R
				raise (1)

2:16	release (1) 17:25	right (14) 8:1;12:21;16:17; 19:13;20:5;24:16;29:7, 20,24;35:3,7,19,21; 39:15	section (1) 29:14	2:5,21,22;5:10,14; 7:15;10:7,17;11:10,24; 14:23;15:19;23:20; 24:22;27:17;30:14;31:3, 8;34:16,16,17;35:14; 36:25;37:3
rashes (1) 8:25	releases (1) 17:20	risk (12) 10:8;11:2;20:20,23; 21:23;24:6;33:18;34:14; 35:11,11,16;37:25	sediment (21) 6:1;9:12,14,15;10:2, 11,12,13,20;12:17,19; 13:12,20,23;14:3;17:1; 18:9;22:24;32:9,10,13	sites (7) 7:11;8:18;10:24; 30:16,18;31:4;34:15
reach (1) 8:5	rely (1) 17:21	risks (2) 7:10;10:17	seeing (1) 29:4	site-specific (2) 34:14,14
read (1) 3:10	remain (2) 13:23;33:11	river (27) 3:4;6:1,7,12,15;7:21, 22;10:9,14,18,25;13:12; 16:6,25;17:19,20;18:15, 18,20,25;19:1,2,6,7,10; 29:15;37:14	seek (1) 38:12	sitting (1) 18:22
readily (1) 9:10	remedial (1) 35:13	riverbanks (1) 18:10	seeking (1) 19:16	six (1) 13:5
real (1) 31:5	remember (2) 10:4;35:10	road (1) 39:18	seem (1) 25:20	skin (1) 8:25
really (13) 7:5,19;8:4;17:21;18:1, 24;19:3,10;26:24,25; 27:1;29:10;40:15	remembering (2) 36:9,16	Route (2) 11:18;12:22	seems (3) 29:9,12;40:4	slide (3) 11:2;16:20;23:14
reason (1) 17:12	removal (3) 28:16;35:12,16	run (3) 33:13;39:24;40:4	sense (1) 16:12	slides (1) 12:2
reasons (2) 26:21,22	remove (1) 31:20	running (1) 33:17	sensitive (1) 29:7	small (1) 22:16
reassess (1) 28:11	removing (1) 39:15	runs (2) 19:20,21	set (1) 24:8	smaller (1) 9:25
reassessed (1) 7:9	representative (1) 28:21	S	several (4) 15:20,22;25:4,14	smoke (1) 17:3
reassessment (4) 5:6;15:25;19:18;38:9	reproduction (1) 9:3		shallow (1) 18:11	soil (28) 5:25;7:18;9:12,14,15, 17;10:2,10,12,13;11:11, 12,14;12:6,24;13:1,1,10, 19;14:1,3,17;16:9; 22:24;32:9,13;38:2; 39:19
recalculated (1) 7:14	reproductive (1) 20:19	same (9) 16:22;17:6;28:4,5,7,7; 29:1;31:11;33:17	share (2) 20:5;21:1	soils (2) 17:5;25:2
receive (1) 3:2	required (2) 5:8;11:7	sample (3) 28:20;35:6;36:8	sharing (2) 18:2;34:24	solely (1) 2:20
received (2) 19:15;31:7	reside (1) 10:18	sampled (1) 27:25	shift (2) 37:21;38:5	someone (3) 26:24;34:19;38:25
recent (1) 40:5	residential (5) 7:18;13:13,18;23:16; 38:2	samples (2) 28:21;33:1	shoes (2) 17:8;19:9	someone's (1) 27:25
recontaminated (1) 28:3	residents (7) 14:24;16:2,6;17:21, 22;18:1,21	sampling (5) 28:12,18;32:19;35:9; 36:7	shore (2) 14:15,18	Somers (2) 2:8;8:14
recontamination (3) 13:11,21;14:5	residing (1) 11:1	savings (1) 40:17	short (1) 31:1	sometimes (1) 11:5
record (6) 4:14,17,22;20:7; 40:23;41:2	resource (1) 6:15	saying (6) 15:22;17:23;25:15; 35:18,19;36:5	short-term (1) 36:21	somewhat (1) 35:24
recreational (7) 11:1,14;23:18,21; 24:7;36:5;38:4	resources (1) 19:4	scares (1) 29:15	shovel (1) 15:3	somewhere (1) 23:20
recycling (1) 5:21	respond (6) 4:18,21;20:10;38:21; 40:1,2	SCHULER (2) 40:12,13	show (2) 24:24;39:17	sophisticated (1) 21:19
reevaluate (2) 22:22;27:13	responding (2) 3:5;19:15	science (12) 4:9;5:7;7:1,3;25:23; 34:12,13;35:8,15;37:7, 23,25	shows (1) 31:25	sorry (1) 19:20
reevaluated (1) 38:7	response (1) 32:24	scientist (1) 40:14	side (7) 7:20,21;14:10,15; 23:5,11;32:18	sort (1) 28:3
refer (2) 5:17;8:21	responsible (3) 15:6;26:15;27:3	scope (2) 12:18;38:5	signs (1) 17:19	source (9) 5:17,23;6:9,11;11:19; 12:12,21;14:11;26:18
reference (2) 22:20,22	Restoration (1) 2:5	second (2) 11:23;20:1	similar (3) 14:13;15:17;31:13	sources (1) 6:22
referring (1) 11:19	resulting (2) 6:3;38:5		simply (2) 4:21;7:21	speak (4) 2:23;3:8,18;33:15
refuse (1) 26:2	results (2) 21:21;35:6		simultaneously (2) 14:4,5	
region (1) 22:21	return (1) 29:1		single (1) 31:8	
Registry (1) 8:15	revisit (1) 33:3		sister (1) 8:15	
related (1) 9:2	Rhode (3) 2:13;37:13;40:21		site (24)	

specific (8) 9:23;10:6,7;12:11; 16:7;22:1;26:20;30:13 specifically (7) 5:10;7:18;9:3,6;19:17; 24:25;31:3 spending (1) 18:22 spent (1) 10:19 sperm (4) 9:4;20:19;21:14,14 spring (1) 32:24 Stacy (4) 2:5;11:18;14:19;32:16 stakeholders (3) 34:23;36:18;37:4 standard (8) 18:4;33:2;34:4,6,9,12; 35:13,14 standards (1) 33:6 stands (2) 2:10;30:1 start (5) 15:17,23;16:2;20:13; 38:24 started (4) 7:2;16:5;19:19,21 starting (1) 23:6 state (1) 38:18 stated (1) 31:18 statements (2) 33:3;34:5 States (1) 2:6 statistical (1) 21:3 statistics (1) 39:16 stay (3) 4:22;9:11,14 stenographer (2) 4:15;38:19 steps (1) 14:20 still (5) 2:24;3:19;12:9;19:14; 35:1 stimulating (1) 9:7 stopped (1) 17:23 storage (1) 5:23 storm (1) 28:5 stuck (1) 9:14	studied (1) 25:2 studies (7) 22:1,1,2;24:19,21,25; 30:8 study (7) 21:4;22:20;25:1,4; 30:13,15;31:13 stupid (3) 40:6,9,18 subject (1) 32:19 Substance (1) 8:15 Superfund (6) 2:5;10:24;11:2,7,24; 15:19 supplies (1) 15:14 support (3) 15:15;19:6;40:21 sure (9) 2:17;16:1;17:4,16; 26:16,17,22;30:15;36:18 swallows (4) 25:1,1,5,21 swans (1) 25:22 swim (2) 18:6,17 swimming (2) 10:25;18:6 switch (3) 4:12;32:23;37:16 system (1) 9:5	17:24 ten (3) 10:19;32:15;39:9 tend (1) 9:18 tends (2) 9:11,14 term (1) 31:1 terms (5) 16:16,17;24:20;26:7; 30:14 test (1) 24:22 Thanks (1) 15:1 thinking (2) 31:9;33:25 thirty (3) 39:10,13,17 though (2) 4:24;34:6 thought (3) 23:16;32:3;34:2 thoughts (1) 39:1 thread (1) 6:25 threat (1) 39:12 threaten (1) 40:22 thriving (1) 25:19 throughout (1) 17:19 thyroid (2) 9:6;21:16 timed (1) 28:13 today (1) 24:18 together (1) 39:1 tonight (8) 2:8,19;3:8,18;4:5,6, 15;20:1 tonight's (1) 37:20 took (5) 5:10;7:4,9,13;33:1 top (4) 11:18;33:23;36:9,16 total (3) 12:14;31:20,23 touch (1) 18:18 touching (2) 18:13,13 Towards (1) 23:13 tox (1) 33:18	Toxic (2) 8:14;9:1 toxicity (1) 7:6 transcribing (1) 4:16 transfer (1) 31:6 transferred (1) 22:7 tree (4) 25:1,1,21;26:23 tremendous (1) 19:5 tried (1) 8:4 trigger (2) 35:16;37:8 trillion (22) 11:12,13,15,15;12:20, 24;13:9,15,16,18,19,25; 14:17;23:25;24:5;27:12; 28:24;38:3,3,4,5;40:15 try (4) 27:2;34:8,10;37:15 trying (3) 27:8;31:5;40:8 TSH (1) 21:16 turtles (1) 18:5 two (6) 4:6;12:14;22:1;23:14; 27:16;36:4 type (1) 28:18 typical (1) 15:19	up (25) 2:8;3:4;4:5;6:25;7:12, 16;8:10,12;9:16,18; 13:15;14:3,7;17:19; 18:9;20:25;21:22;28:7; 29:6;30:3,11;32:15; 33:18;34:15;38:15 upstream (1) 25:6 upwind (1) 40:22 urban (1) 13:10 urbanized (1) 6:18 use (6) 19:1,7,7;23:19,21; 34:15 used (7) 22:19,21;23:24,25; 24:3;35:11,14 useful (1) 34:4 users (1) 24:7 using (5) 5:7;19:6;21:18;33:17; 37:5 usually (2) 10:23;26:19
				V
				value (5) 7:6,9;19:13;20:4;30:9 values (5) 7:13;30:12,15;31:12; 33:18 Vanderslice (3) 2:15;21:3,11 variation (1) 22:12 various (7) 5:24;16:11;19:22; 25:7;28:21;36:18;37:3 via (1) 9:21 view (2) 18:8,12 Village (2) 5:18;12:15 visit (1) 10:18 visiting (1) 10:25 visitors (1) 14:24 volatilize (1) 9:11 volume (4) 32:10,11,13,15 Vu (6) 21:22,25;33:16;34:8;
	T		U	
	table (3) 15:8;31:25;32:1 talk (9) 2:8,19;3:20;7:15; 13:17;14:19;20:18; 34:20;36:23 talked (2) 16:15;33:22 talking (10) 5:1;11:24;17:22; 27:18,24;28:8;29:17,18; 32:8;37:12 tandem (1) 28:12 Tara (1) 7:16 Tarah (5) 2:8;8:12;10:21;20:25; 21:20 Tarah's (1) 20:25 Ted (1) 33:22 telling (1)			

35:10,21	21:12			
W	wondering (3) 23:17;31:13;34:3			
wade (1) 18:6	work (14) 8:17;15:11,16,18,19, 23:17;7;26:2,6,12,21; 27:2;33:7;34:22			
wading (2) 10:25;18:6	worked (1) 36:17			
wait (2) 27:4;38:25	working (3) 35:1;37:4,12			
waiting (2) 14:21;35:6	works (1) 16:7			
Wannasquatucket (3) 10:18;17:19;19:2	worst (1) 11:3			
wants (1) 26:24	Y			
wash (4) 17:7,16,25;19:8	yard (4) 17:7,7;18:23;28:22			
washing (1) 17:2	yards (6) 12:6;31:19;32:4,10, 14,21			
waste (2) 18:8;40:8	year (1) 35:9			
water (6) 9:13,14;18:13,14; 32:11;39:14	years (12) 10:19;13:5;15:20,22; 25:4,14;36:4;39:9,10,13, 18;40:5			
Watershed (1) 19:2	years/fifteen (1) 39:9			
way (4) 5:25;7:25;17:4;31:11	yellow (3) 29:3,24;30:1			
ways (1) 19:22				
website (1) 3:14				
week (1) 28:1				
weeks (2) 8:5;17:23				
Welcome (1) 2:2				
well-studied (1) 30:20				
wetland (1) 11:22				
wetness (1) 36:14				
what's (6) 4:9;28:22;30:23; 31:20;35:2,3				
whereas (1) 7:24				
whole (4) 14:14,17;26:4;29:13				
wildlife (5) 9:24;18:5;24:15,19,21				
wisely (2) 19:7,8				
wish (1) 15:21				
within (2) 5:21;33:20				
without (1) 16:13				
women (1)				

1 UNITED STATES DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

2
3 IN RE: Centredale Manor Restoration Project
4 Proposed Plan Amendment
5 Informational Meeting and Hearing
6
7
8

9 DATE: July 31, 2012
10 TIME: 7:00 pm.
11 PLACE: North Providence Town Hall
2000 Smith Street
North Providence, Rhode Island
12
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15

16 FACILITATED BY: STACY GREENDLINGER
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1 (Meeting commenced at 7:10 p.m.)

2 MS. GREENDLINGER: Welcome, and thank you for
3 coming out this evening to a meeting about an
4 amendment to the proposed plan for the Centredale
5 Manor Restoration Superfund site. My name is Stacy
6 Greendlinger, and I'm from the United States
7 Environmental Protection Agency. I have with me
8 tonight to also come up later to talk, Tarah Somers,
9 who is from ATSTR. She'll explain what that acronym
10 stands for, but basically it's for the Federal
11 Health Agency.

12 We also have Anna Krasko, who is the EPA
13 project manager, Lou Maccarone from the Rhode Island
14 Department of Environmental Management, as well as
15 Bob Vanderslice from the Department of Health. If
16 at any point people can't hear, raise your hand, and
17 we'll make sure we correct that.

18 So, I wanted to thank you for coming out
19 tonight. The purpose of this meeting is to talk
20 about solely the amendment to the proposed plan. I
21 know some people may not be familiar with the site.
22 We'll give a brief overview of the site, but we
23 cannot speak about the cleanup plan, because it's
24 still a proposed cleanup plan; we have not made a
25 final decision as of yet. We expect to issue the

1 final cleanup plan this coming fall. And we did
2 receive comments through a 120-day public comment
3 period on the different approaches identified for
4 cleaning up the river; and we are in the process of
5 responding to those comments. I know some of you
6 may not be familiar with that, and some of you may
7 want more information. And as I said, we're unable
8 to speak about that tonight, but if you let me know
9 after the meeting, I would be happy to get a copy of
10 the proposed plan to you so that you can read that
11 and see what was issued. You can also look at that
12 at either the North Providence Library, the Johnston
13 Library, or online. And you should have a copy of
14 the actual amendment that has the website on there.
15 So, again, if you would like more information about
16 the proposed cleanup, please go to the libraries or
17 online. And let me know, I'll get you a copy of
18 that. We cannot speak about it tonight, because
19 we're still in that process.

20 We do want to talk to you about the amendment
21 to that proposed cleanup plan. And before I get
22 into that, just for those of you who may not have
23 been to one of my meetings before, I would ask you
24 to hold your questions until we get to the
25 question-and-answer period of this informational

1 meeting. We will answer all of your questions;
2 however, I will ask you to ask one question at a
3 time so that everybody has the opportunity to ask
4 questions.

5 So, tonight, if you didn't pick up an agenda,
6 tonight is two parts to this meeting. The first
7 part is an informational meeting. We will go over
8 the amendment, why are we issuing an amendment,
9 what's the new science, and how does that impact the
10 proposed plan.

11 We then, after we conclude that informational
12 meeting, we will switch gears and do a formal
13 hearing. The purpose of the formal hearing is to
14 capture your comments into the formal record. As
15 you can tell, we have a stenographer here tonight.
16 And she will be transcribing what everyone says so
17 that it goes into our formal record, and so that we
18 can respond to your comments, which is part of our
19 final cleanup plan when we issue that this fall.
20 During that formal hearing, we cannot -- EPA cannot
21 respond to your comment. It's simply to capture
22 your comments for the record. We will stay after
23 when the hearing concludes, and we will be happy to
24 answer more questions that you may have, though.

25 So, let me get into the meeting this evening.

1 Why are we here? We are going to be talking about
2 an amendment to the proposed cleanup plan. As many
3 of you know, we issued a proposed cleanup plan last
4 October 2011. After we had our public comment
5 period, EPA headquarters came out with a dioxin
6 reassessment. It's important to us to make our
7 decisions using the best and most current science
8 that we have, and so we were required to take this
9 new information, and to go back and apply it to this
10 site specifically. So, we took that information,
11 and we -- I'm getting ahead of myself. My
12 apologies. Let me put that on pause, and give a
13 brief overview for those of you who may not know the
14 site. And I do apologize for that.

15 So, why are we even here to begin with before
16 we issue the proposed cleanup plan? The area that
17 we refer to as "the source area" currently has the
18 Brook Village Apartment buildings and the Centredale
19 Manor Apartment building on it. Prior to those
20 apartment buildings being there, there was a
21 chemical company and drum recycling within the area.
22 They operated from the 1940s to the 1970s. And the
23 primary source of contamination included storage and
24 disposal of chemicals from their various activities.
25 So, the contamination found its way into soil and

1 sediment in the river and the Allendale Pond and the
2 Lyman Mill Pond. Dioxin, as you can see this list
3 here, the resulting contamination includes dioxin,
4 PCBs, PAHs and metals. Of that list, dioxin is the
5 contaminant of the biggest concern for us.

6 It's important to note, however, there are
7 other challenges that this river faces in addition
8 to the contamination that came from these industrial
9 practices at the source area. So this cleanup will
10 address the contaminants that you see here from the
11 industrial processes that happened at the source
12 area. There are other challenges to this river that
13 this cleanup is not designed to address, but it is
14 moving forward a big piece of what needs to be done
15 to get this river back to a healthy resource for the
16 area.

17 And it's also important to note that,
18 unfortunately, we live in an industrial, urbanized
19 area; and dioxin is something that we all face just
20 in the environment. And that background
21 contamination, what we call "background," meaning
22 contaminants that are coming from other sources, are
23 here in this area, and it's a legacy of us living in
24 an industrialized area.

25 So, to pick back up on my thread of what are we

1 doing with this new science that came out in

2 February, I started to mention that it's important
3 for us to make decisions on the best science that we
4 have available. So, we took -- this dioxin
5 assessment was really focusing in on non-cancer
6 health effects, and giving a toxicity value for
7 non-cancer health effects. It's something that we
8 couldn't calculate before, because we didn't have
9 that value. So, we took it, and we reassessed our
10 human health risks that we had determined for our
11 sites before, and we made modifications to that to
12 come up with and identify the non-cancer health
13 impact. We also took those values, and we
14 recalculated what should be the cleanup level for
15 the site, both of which we'll talk in more detail
16 about when Anna and Tara come up.

17 It is important to mention that the
18 modification is specifically for residential soil.
19 And I just want to point out that that really has
20 the biggest impact on the North Providence side of
21 the river, simply because the Johnston side of the
22 river, as folks who live in Johnston know, for the
23 most part it has a higher elevation, and so folks
24 who live there are not in the floodplain; whereas in
25 North Providence, many of the houses along the way

1 are either in the floodplain or right along the

2 floodplain. So, modifying our cleanup levels and
3 making them more protective has a possible impact on
4 these houses. And we've really tried in the last
5 couple of weeks to reach out to the property owners
6 to make them aware of this, let them know about the
7 public comment period, and to engage them in
8 discussions about what we can do. There will be
9 more to come on that.

10 I would like to pick up the conversation in a
11 little bit more detail about non-cancer health
12 impact, and I would ask Tarah to come up and do
13 that.

14 MS. SOMERS: So, we're the Agency for Toxic
15 Substance and Disease Registry. We're a sister
16 agency for the Center for Disease Control
17 Prevention. And we work with EPA to help assess the
18 public health impact of contaminated sites.

19 The proposed plan aims to protect against
20 certain non-cancer health effects of dioxin. We
21 generally refer to health effects as non-cancer
22 health effects or cancer effect. So non-cancer
23 health effects would be illnesses that chemicals can
24 cause you that are not cancerous illnesses. If you
25 have skin rashes, or some chemicals can be kidney

1 toxic, those are non-cancer health effects. So, for
2 dioxin, the health effects related to the proposed

3 plan are reproduction effect, which specifically
4 could be a decrease in sperm count and motility; or
5 disruption to the endocrine system, which
6 specifically is increased levels of thyroid
7 stimulating hormones.

8 And we wanted to mention how people could be
9 exposed to dioxin in their environment. In the
10 environment, dioxin does not readily, it doesn't
11 volatilize in the air very well. It tends to stay
12 bound to soil or sediment that has dioxin. It does
13 not very easily dissolve into water, so once it's in
14 soil or sediment and water, it tends to stay stuck
15 to that sediment or soil. And generally it's not
16 taken up by plants, so plants growing in an area
17 that may have dioxin in the soil, generally the
18 plants don't tend to take up much of that
19 contamination in the plant.

20 Where we do find dioxin in the environment is
21 largely people are exposed via their diet. So, when
22 you eat foods, especially fatty foods, you can get
23 exposed to dioxin. In this specific case, dioxin
24 can accumulate in fish or other wildlife, so as the
25 smaller fish are eaten by bigger fish, then the

1 bigger fish get more dioxin in them. And also they
2 can adhere to soil or sediment particles that are in

3 the environment.

4 But it's important to remember that people
5 won't have health effects unless they're actually
6 exposed to the contaminant. So, in this specific
7 site, the specific exposures that people have that
8 could add to their risk of health effects would be
9 eating contaminated fish from the river, or
10 accidentally ingesting contaminated soil or
11 sediment. So, again, if you're not getting exposed,
12 if you're limiting your contact with soil sediment,
13 not ingesting soil sediment, and not eating fish
14 from the river, then do not expect to have any
15 health problems.

16 MS. KRASKO: So, what are the potential
17 exposures and risks at the site for people who
18 reside or visit the Wannasquatucket River? EPA has
19 spent the last ten years analyzing what levels of
20 contaminants are in the sediment. But it's not
21 enough, as Tarah said, for chemicals to be in the
22 environment, people have to have exposure. And
23 those are the kinds of exposures that EPA usually
24 evaluates at Superfund sites. It includes eating
25 fish, swimming or wading in the river, visiting
11

1 recreational areas, or residing in the floodplain.

2 As you can see from the slide, Superfund risk
3 assessment assumes the worst exposures occur on a

4 very frequent basis over a long period of time,
5 sometimes over decades. And if EPA finds that there
6 are elevated health hazards based on those
7 exposures, then we're required to take a Superfund
8 action, cleanup action.

9 So, what are the main impacts from the new
10 dioxin level at this site? The main change is
11 lowering the soil cleanup level in the floodplain
12 soil from about 1,000 parts per trillion to 50 parts
13 per trillion, and as well as a change in the dioxin
14 level in the recreational soil from 1,000 parts per
15 trillion to 680 parts per trillion.

16 So, if we look at the map where those changes
17 are going to occur, just to orient everybody, on the
18 very top we have Route 44, then what Stacy was
19 referring to was the source area where the
20 contamination is originating. The pond below that
21 is Allendale, with Allendale Dam. Then there is a
22 large wetland. This is the green area of the map.
23 And then the second pond is Lyman Mill. That's the
24 extent of the Superfund site we're talking about.
25 And they changed, the additional action areas would

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1 be areas in pink. And we'll look at the map and the
2 slides as we go along.

3 So, what are the implications for those action

4 areas? The overview of the actual areas of cleanup
5 includes potential new excavation of 10,200 cubic
6 yards of soil based on the new evaluation.
7 Depending on the alternatives evaluated by EPA, the
8 cost would increase between 3.5 million and
9 \$12 million. And we're still planning to issue the
10 cleanup plan in the fall of 2012.

11 If we go area by area, and look at specific
12 impacts for the source area, that means that we have
13 to extend the cap over about additional one-third of
14 an acre. That's less than two percent of the total
15 area to be capped where Centredale and Brook Village
16 Apartments are.

17 For the Allendale Pond sediment, there is no
18 change in the scope of the action, because the
19 sediment dioxin cleanup levels are 15 parts per
20 trillion, is already low enough to be protective.

21 This is the source area. And right next
22 to Route 44 is where additional cap or additional
23 excavation of the area where we know we have levels
24 above 50 parts per trillion of dioxin in the soil.

25 The biggest impact, of course, is the Allendale

13

1 floodplain soil and Lyman Mill floodplain soil.
2 Those are the areas where EPA is proposing to take
3 precautionary measures while awaiting final cleanup,
4 which is not expected to happen until the next five

5 or six years. Those are the areas prone to
6 flooding, and those are the areas that have elevated
7 levels of dioxin and other contaminants.

8 Because of the low new cleanup level, 50 parts
9 per trillion, which is very close to what we see in
10 the background levels of soil in urban areas, there
11 is a potential for recontamination of those areas
12 should sediment from the river be deposited on those
13 residential properties during flooding. For
14 example, in Allendale Pond we have levels of dioxin
15 up to 100,000 parts per trillion, with an average of
16 1,000 parts per trillion. In Lyman Mill it's about
17 half of that. So, when you talk about cleanup level
18 of 50 parts per trillion on residential floodplain
19 soil next to levels of 1,000 parts per trillion in
20 sediment, there is obviously a likelihood of
21 recontamination.

22 So, what it means for cleanup, it means that as
23 long as dioxin-contaminated sediment remain
24 uncontrolled in the ponds, we are not likely to
25 achieve levels of 50 parts per trillion in the

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1 floodplain soil on people's properties. So, if
2 there is a cleanup to be done on this project, the
3 soil and sediment have to be cleaned up
4 simultaneously, they have to be addressed

5 simultaneously to avoid recontamination.

6 So, if you look at the maps again a little
7 close up, this is Allendale Pond. And you have
8 those in your proposed plan amendment. And the
9 thing is that most of them are on the North
10 Providence side, but there is some areas across
11 source area in Johnston that are impacted, and we've
12 seen elevated levels of dioxin and other compounds.

13 And the next map is similar depiction of Lyman
14 Mill Pond. And here you see just about the whole
15 shore on the North Providence side is colored pink,
16 which means there is a likelihood of levels of about
17 50 parts per trillion in the soil along the whole
18 shore.

19 So, Stacy is going to talk about what
20 preventive measures or interim steps EPA is
21 hopefully going to undertake while waiting for the
22 final cleanup, and while the final cleanup is being
23 planned at the site; and also what precautionary
24 measures the residents and the visitors to the area
25 can take during that time period.

15

1 MS. GREENDLINGER: Thanks, Anna. So, as Anna
2 mentioned, unfortunately, it's going to be a long
3 time until a shovel is in the ground. And some
4 people have asked, why so long. And after we come
5 out with a final cleanup plan this fall, we need to

6 engage the potentially responsible parties in the
7 conversation in the hopes of having them come to the
8 table and undertake the cleanup.

9 Once we get past discussions as to who is going
10 to take on the cleanup, we have to do engineering
11 and design work. And as I've said to many of you,
12 much as if you were to do an addition onto your
13 house, you would need to do measurements, figure out
14 how much of your supplies you need, what the depth
15 of your support beams need to be, or anything like
16 that to do the design work, before you actually
17 start your construction. That's very similar for
18 us. We need to take on that design work at a
19 typical Superfund site. Doing design work like that
20 can take several years. So, we look at it, and we
21 wish we had a crystal ball to be exact, but we feel
22 confident saying that it is several years out before
23 we start doing work. And as Anna mentioned, in the
24 meantime, if you plug in these new numbers with the
25 dioxin reassessment, it brings it down to levels

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1 where we want to make sure that in the interim,
2 before we start doing the cleanup, that residents
3 are as protected as they can be from potential
4 exposure.

5 So, we started, as I mentioned, conversations

6 with residents along the river in the hopes that we
7 can identify what works for the specific properties
8 to be able to prevent physical contact with
9 potentially contaminated soil. So, once we have a
10 cleanup plan this fall, we'll be going back out to
11 those various property owners to figure out what
12 makes sense for each of those properties. And
13 certainly we wouldn't do anything without consulting
14 with the folks who live there.

15 And we've also talked with folks, and this is a
16 good thing for everybody in terms of action that
17 people can take right now in terms of how you behave
18 and interact with your environment to protect
19 yourself from potential exposure. Much of what you
20 see listed on the slide is good practice that people
21 do on a day-to-day basis to protect yourself from
22 catching a cold or catching the flu. It's the same
23 thing, it's preventative for this case, too. As
24 you've heard, well, one, don't eat the fish from the
25 river. And that's great protection. But as you've

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1 heard, getting contaminated sediment into your mouth
2 is another issue. So, if you're washing your hands
3 before you drink and smoke and eat, that's an
4 excellent way to not only make sure you don't get a
5 cold, but to prevent any contaminated soils from
6 entering into your body. Much the same if you're

7 doing yard work in your yard; to wash your clothing
8 after coming in, to take your shoes off before you
9 enter your house. Again, much of which people say,
10 "got that," "do that." So, it's not extraordinary
11 measures that you have to take, but there's an added
12 reason, living in the floodplain or interacting with
13 the floodplain, as to why you should make those good
14 practices as part of your daily life. And of
15 course, if you have a garden, to, before eating your
16 produce, to make sure that you wash it before you do
17 so.

18 And we always issue our Do's and Don'ts of the
19 Wannasquatucket River. We have signs up throughout
20 the river area. We've put out press releases. We
21 really rely on the residents. I can't say how many
22 residents, when we were talking to them in the last
23 couple of weeks, saying, "I've stopped the kids from
24 going in there, and I'm always telling people,
25 'release your fish, and wash your hands.'" And we
18

1 really appreciate the residents taking on the
2 message and sharing it with other people in the
3 community for those who don't know.

4 So, it's the standard, don't eat the fish,
5 eels, turtles or other wildlife or plants. Don't
6 swim or wade. And the swimming and wading, I just

7 want to clarify for people. For us, from a
8 hazardous waste point of view, it's a concern with
9 churning up the sediment or the mud that's along the
10 riverbanks or in the ponds, because the ponds are
11 very shallow, and that's where the hazardous
12 contaminants are; it's not from a point of view of
13 touching the water. That doesn't mean that touching
14 the water is necessarily a good thing, because there
15 are high bacterial counts in this river, but those
16 are non-Superfund issues. And I just want, again,
17 to clarify, it's a good thing to not swim in the
18 river, but just from, it's not a touch, and you get
19 dioxin on you.

20 It's a beautiful river. We've heard that so
21 much from the residents that live along the pond.
22 And after spending hours sitting on people's patios
23 and enjoying their back yard along with them, we
24 really do appreciate the beauty that the pond offers
25 and the river offers the people that live here. We

19

1 encourage people to continue to use the river. The
2 Wannasquatucket River Watershed Council does a
3 really fabulous job of getting people out on the
4 bike path to enjoy this area and the resources that
5 it has. And it's a tremendous undertaking that
6 they're making. And we support using the river
7 wisely. And just, when you use the river, use it

8 wisely. Follow the "wash your hands" and "take your
9 shoes off," and all of those good practices, and you
10 can really enjoy a beautiful time out on the river.

11 This is a proposed amendment to the cleanup
12 plan. That means that we are in the comment period
13 right now. We do value your comment very much, so
14 we are still in the process, as I said earlier, of
15 responding to comments that we received on the
16 proposed plan. We're seeking your comment
17 specifically on this amendment and the new dioxin
18 reassessment, and how that modifies the cleanup
19 plan. The comment period has started on July 17th,
20 and it runs through -- I'm sorry, July 19th it
21 started. It runs through August 17th. There are
22 various ways that you can provide comment for us.
23 On page eleven of your proposed plan amendment there
24 are these details. You don't need to jot it down.
25 It's for mailing, e-mailing or faxing your comments.

20

1 And clearly, tonight in our second portion of
2 our meeting we'll have the formal hearing where you
3 can orally provide comment if that's convenient for
4 you. So, we do very much value and encourage you to
5 share those. But right now I would like to do the
6 question-and-answer period. This is not for the
7 formal record. This is just so that we have the

8 opportunity to clarify anything for you before we
9 get to the formal comments. Again, the formal
10 comment, we can't respond back.

11 So, I'd like to go to the question and answer.
12 Again, I'm going to ask if you could just ask one
13 question at a time. Do I see a start of a question?
14 Go ahead.

15 AUDIENCE MEMBER: I think people are going to
16 ask if there's going to be additional expense and
17 additional disturbance a little bit more about this
18 talk that you found, for example, you said the
19 reproductive problems and a low sperm count. Can
20 you quantify that a little bit? Is there a risk of
21 increased difficulty of conception? Or if there are
22 birth defects. I mean, what is the nature of this
23 health risk?

24 MS. GREENDLINGER: I'm going to ask either Bob
25 or Tarah. I'm going to ask Bob. Tarah's been up
21

1 here. I'm going to share. Bob, why don't you take
2 the question.

3 MR. VANDERSLICE: That came from a statistical
4 analysis, a previous study, so it's actually human
5 data on kids who have been exposed to very high
6 levels, and then they extrapolated back. So, what
7 would have happened at lower levels, I'm not
8 familiar with the models that much, but that's what

9 the information is based on.

10 AUDIENCE MEMBER: What are the health effects?

11 MR. VANDERSLICE: So, they've seen that boys
12 when they're exposed, and women when they're
13 pregnant, had very high levels. Those boys had
14 decreased sperm motility and sperm count. The
15 girls, when their mothers were exposed, had impacts
16 on their hormone levels, thyroid, TSH levels. So,
17 but then the question is, "Well, would that happen
18 at lower levels?" And that was done using fairly
19 sophisticated models. And that I can't explain to
20 you, so maybe Tarah can. So, these were actual
21 results in humans to the incidence.

22 MS. GREENDLINGER: Chau, come on up. Chau Vu
23 is our human health risk assessor, so she's the one
24 who had the final answer.

25 MS. VU: So, just like Bob had mentioned, those
22

1 studies, those two specific health studies, they are
2 the only human studies that we have for non-cancer
3 effects from exposure to dioxin at very high levels.
4 And we applied the proper extrapolation model. It's
5 a mathematical model, it's very complicated, but it
6 takes into account that whatever you are exposed to,
7 how much of that amount is transferred into your
8 body, absorbed into your body, and then distributed

9 to different organs, and then some of it might get
10 excreted out as well. And then they take into
11 consideration the different uncertainty factors of
12 the variation of one person to another person. At
13 that level we see some effects to no effect at all.
14 So, all of that is taken into consideration when
15 they calculate a number that we call an estimated
16 dose. If a person is exposed to this very small
17 number every day, absorbing by mouth every day, then
18 we expect to see no effect at all.

19 And then EPA used that estimated number based
20 on the study to develop what we call a reference
21 dose. And then from the region we used the
22 reference dose to reevaluate the non-cancer effects,
23 as well as the proposed cleanup number in the
24 sediment and the soil. If that answers your
25 question.

23

1 AUDIENCE MEMBER: Thank you.

2 MS. GREENDLINGER: Any other questions? Yes?

3 AUDIENCE MEMBER: You had mentioned that, you
4 said that there were about 48 properties that are
5 affected, mostly on the North Providence side, and
6 that you are starting conversations or have had
7 conversations with the property owners. Can I
8 assume that if you have not contacted anyone else,
9 that conversation does not need to be had because of

10 where we are located?

11 MS. GREENDLINGER: On the Johnston side, that's
12 correct.

13 AUDIENCE MEMBER: Towards the beginning of
14 Anna's presentation there was a slide that had two
15 criteria on it: It had the 50 parts per million
16 residential criteria, and then I thought it had
17 another one. And I was wondering --

18 MS. GREENDLINGER: Recreational.

19 AUDIENCE MEMBER: Are you going to use that
20 somewhere at the site?

21 MS. GREENDLINGER: That recreational use, the
22 cleanup level that applied to the Oxbow, or other
23 parts, too. Let me get a clarification on that.

24 MS. KRASKO: It was not used as a pure cleanup
25 level. We used 1,000 parts per trillion of dioxin

24

1 to differentiate the areas that need to be excavated
2 and the areas that don't need to be excavated. It
3 was one of the factors used. So, because we no
4 longer have that number available to EPA, 1,000
5 parts per trillion no longer exists, if we were to
6 calculate what would be the non-cancer risk for
7 recreational users of that area, it would be 680.
8 And when we looked at the original data set, based
9 on the data we have, 680 is so close to 1,000, there

10 is no change.

11 AUDIENCE MEMBER: Obviously dioxin has nothing
12 to do with the geese and the ducks and the frogs,
13 because they're fine.

14 MS. GREENDLINGER: Okay, so the question is,
15 does dioxin have an impact on the wildlife?

16 AUDIENCE MEMBER: Right. Does it?

17 MS. GREENDLINGER: Actually, we got that
18 question earlier today. So, there have been health
19 studies done on the wildlife. I think I'll have
20 Anna, she knows the details better than I in terms
21 of studies on dioxin and its impact on wildlife on
22 the test site.

23 MS. KRASKO: In addition to collecting data
24 from the fish, which show high levels of dioxin,
25 there were additional studies. Specifically, there
25

1 was a study on tree swallows, and tree swallows that
2 have been studied elsewhere on contaminated soils,
3 and there's also a lot of them around here. And the
4 study was done over several years. We put the
5 swallows nest houses in both Allendale and Lyman
6 Mill Pond, as well as the pond upstream and
7 downstream from the area, and we've seen various
8 changes in contaminant levels and hatchability.

9 MS. GREENDLINGER: So, hatchability, whether
10 they can hatch from the egg or not.

11 MS. KRASKO: Between background level, between
12 background areas and the areas impacted by dioxin,
13 in their eggs and their nestlings, and we did so
14 over several years.

15 AUDIENCE MEMBER: So, are you saying that there
16 is an impact on them?

17 MS. KRASKO: Yes, there is an impact.

18 AUDIENCE MEMBER: Where we are, they're
19 thriving, the geese and the ducks and the frogs. It
20 doesn't seem to be affecting them as far as where we
21 are, the tree swallows.

22 MS. GREENDLINGER: We've seen the baby swans,
23 and they're very cute. But from the science, there
24 are impacts.

25 Yes, sir?

26

1 AUDIENCE MEMBER: As a property owner, am I
2 allowed to refuse to have this work done on my land?

3 MS. GREENDLINGER: The cleanup done?

4 AUDIENCE MEMBER: The whole thing. Can I just
5 say no?

6 MS. GREENDLINGER: Well, we would work with you
7 to see what your concerns are in terms of your
8 property.

9 AUDIENCE MEMBER: So then to allow anybody on,
10 I would definitely make it clear where you can go

11 and where you can't, and how far you are to proceed.

12 MS. GREENDLINGER: Well, we definitely work
13 with every property owner. It's not something where
14 we want to be in a position of forcing something to
15 happen. But ultimately EPA is responsible for
16 making sure that the cleanup does happen. And we
17 need to make sure that that cleanup happens so that
18 one location isn't a source of contamination for
19 another. So, usually in our experience when we've
20 had concern from a property owner, there's specific
21 reasons that are behind that. And we can work with
22 what those reasons are to make sure that, for
23 instance, if there's a mature tree there that
24 someone really wants to be able to hang in there, do
25 we really need to take it down or not, and what can

27

1 we do to avoid having that happen. So, we really do
2 try to work with property owners, but ultimately we
3 are responsible for having the cleanup happen.

4 I'm just going to wait. I can come back to
5 you. I want to see if there's other people who have
6 questions. Yes?

7 AUDIENCE MEMBER: Just looking at this map
8 here, and listening, trying catch it all. The new
9 light pink areas that are here, that's a potential
10 problem, or it is a problem?

11 MS. GREENDLINGER: It's areas that, based on

12 the proposed cleanup level of 50 parts per trillion,
13 we would want to go back and reevaluate. So, not
14 necessarily, but maybe. So, we need to go back and
15 look at it. And when we get to the final cleanup
16 plan, and on page two of everyone's amendment is a
17 full site map, so you can look at the full areas to
18 see the light pink areas that David was talking
19 about.

20 So, those are areas that may have concerns
21 because of the proposal to drop the -- to be that
22 much more protective of the cleanup level. So, yes,
23 possibly. And when we get to -- that's why we're
24 talking about interim measures with people. Because
25 if we went out and sampled someone's house next
28

1 week, and we got a big flood in, as Anna pointed
2 out, the levels are so low, that it could very well
3 get recontaminated, and that would be, sort of, it
4 would be at a loss. And the same thing if we went
5 in and excavated that area, same thing: A storm
6 comes in, and we haven't done the cleanup yet; you
7 could end up having the same issue, the same problem
8 as before. So, that's why we were talking about
9 taking interim measures until the cleanup happens.

10 When we get to the cleanup for those light pink
11 areas, we need to reassess, is this an issue or not.

12 So, we would need to do sampling in tandem that's
13 connected to the cleanup timed so that if we did
14 find an issue, we can get in there as part of the
15 cleanup, and take care of it. And should there need
16 to be removal of contamination in those light pink
17 areas, then it would happen. There might not be.
18 And it would be a type of sampling where you're not
19 looking at one individual point, but you're looking
20 at a composite sample. So, you would look at
21 various samples and say, "What is representative of
22 this back yard, for instance." And say, "What's the
23 average area, and is that average below or above the
24 50 parts per trillion," and then a decision would be
25 made.

29

1 AUDIENCE MEMBER: Just to return on the same
2 question. So, the Oxbow area and the areas that are
3 in yellow that were already proposed, those levels
4 are above what we're seeing here, or they need to be
5 checked again? And I just say this because I had a
6 boat up here just the other day, and this is a very
7 sensitive ecological area right here. Absolutely
8 beautiful flowers, and birds all over the place.
9 And it just seems to me just a major impact in this
10 area to excavate this. It just, it really -- and
11 I'm not a huge fan, I love the animals, but I mean,
12 I love humans more -- it just seems to me it's an

13 awful big impact. And disturbing this whole
14 section, potentially causing other harm in the other
15 parts of the river scares me.

16 MS. GREENDLINGER: Okay. So, here's where we
17 dance our fine line of whether we're talking about
18 the full cleanup, or whether we're talking about
19 impacting --

20 AUDIENCE MEMBER: Right.

21 MS. GREENDLINGER: I hear you. We can't get
22 into a full discussion about the proposed cleanup,
23 just because of where we are in our process.

24 AUDIENCE MEMBER: Right. But this yellow area
25 is definitely?

30

1 MS. GREENDLINGER: The yellow area stands as
2 what we proposed in October as an area that needs to
3 be addressed, how we end up addressing it when we
4 make the final cleanup plan. But it's not, with
5 this amendment and the modifications of lowering the
6 cleanup level, it's not in pink.

7 AUDIENCE MEMBER: Different question this time.
8 Does the EPA have any studies of the economic loss
9 to property value at different levels of dioxin
10 concentration nearby? So, for example, does
11 cleaning up this lower level improve property
12 values?

13 MS. GREENDLINGER: There's not a specific study
14 to the site that I'm aware of in terms of property
15 values. And I'm not sure if there's been a study at
16 other sites. I think it's -- we don't have a
17 crystal ball on that. What I've heard from other
18 people at other sites is that when you get to the
19 cleanup level, when you get to the final cleanup,
20 they have an area that has been so well-studied
21 compared to other industrial areas that it could
22 have God knows what there, but that their property,
23 they know exactly what's going on with it, and it
24 crosses the finish line of having been addressed,
25 and it is monitored more so than other areas. Does
31

1 it hurt them in the short term? Perhaps, perhaps
2 not. I think it's hard to say. I have not had any
3 banks call me about this site specifically. I've
4 had that at other sites, where we've had people who
5 are trying to get equity loans, or to do a real
6 estate transfer, where we've had financial
7 institutions call us and ask. I have not received a
8 single call due to this site.

9 AUDIENCE MEMBER: I was just thinking as a
10 potential buyer, the lower the level, the more --
11 and the same way, I know there are some things like
12 proximity to bike paths increasing property values,
13 so I was wondering if there was a similar study.

14 MS. GREENDLINGER: I'm not aware. I can just
15 say I haven't gotten a call from a financial
16 institution.

17 Lou?

18 AUDIENCE MEMBER: You stated earlier that there
19 is an additional 10,000 cubic yards that you expect
20 to remove. What's the grand total? Is it close to
21 150 or 160,000?

22 MS. GREENDLINGER: Do you know offhand what the
23 grand total is? I don't know the number offhand,
24 unless Anna does. I know in the back of the planned
25 amendment there's a table that shows, I believe, in
32

1 the table, the additional amounts that we believe,
2 so there might be a comparison there.

3 AUDIENCE MEMBER: I thought it was in the area
4 of 150,000 cubic yards originally at one point.

5 MS. GREENDLINGER: Prior to October?

6 AUDIENCE MEMBER: Yes.

7 MS. GREENDLINGER: Anna, do you know?

8 MS. KRASKO: Yeah, I think we're talking about
9 150,000 of sediment, plus a bit of soil. And
10 150,000 cubic yards of sediment was insitu volume,
11 including volume of water. So, by the time you
12 actually do something with it, it's less. So, I
13 think overall volume with sediment and soil was

14 under 150,000. That 10,000 cubic yards, we estimate
15 up to five to ten percent increase in the volume of
16 that original proposal. And again, as Stacy said,
17 this assumes almost the maximum excavation of all
18 the properties on the North Providence side. And
19 those properties are subject to additional sampling.
20 But this is a conservative estimate, 10,000 cubic
21 yards.

22 MS. GREENDLINGER: Other questions before we
23 switch gears?

24 AUDIENCE MEMBER: In response to the spring
25 2010 flooding, the City of Providence and then EPA
33

1 took some samples in Merino Park, and then EPA
2 issued some guidance. With the new standard, are
3 you guys going to revisit those statements that you
4 made?

5 MS. GREENDLINGER: That was one of the first
6 things that I asked Chau when the new standards came
7 out. I said, "Oh, my goodness, what about our work
8 in Providence?"

9 And just so that people know, this park is
10 downstream, and it is a park that we had committed
11 to doing future monitoring, and we remain with that
12 commitment, basically for Merino Park. So, I asked
13 Chau that exact question, and said, "Please run the
14 numbers, and tell me whether there's any change."

15 And I'll let her speak to that.

16 MS. VU: Yeah, we did look at all the data we
17 have for Merino Park, running them using the same
18 the new tox values again. And the risk does go up,
19 of course. We didn't have the non-cancer effects
20 calculated for those areas before, but it was within
21 the acceptable level. So, there was no change for
22 the park. We talked to Ted Bzenas, who is our
23 on-the-scene coordinator, so he's been on top of
24 that project.

25 AUDIENCE MEMBER: I was just thinking this
34

1 amendment that has gotten a little more pressing
2 than I thought it was going to get, and I was just
3 wondering, when you said EPA was amending the
4 standard, it may be useful about what -- the
5 statements were made about the public park. Even
6 though the conclusion hasn't changed, the standard
7 has changed.

8 MS. VU: Well, let me just clarify. I try to
9 say that to people, that it's not the new standard.
10 We try to say to the public, as well as the
11 professional people at EPA as well, that it's not
12 the standard that is new, it's a new science. And
13 based on that new science, we developed
14 site-specific cleanup number, site-specific risk,

15 and we use that to clean up sites. So, it's
16 different site by site. Different areas in the
17 site, you get different numbers. But back to your
18 question about --

19 AUDIENCE MEMBER: Well, I just think someone
20 should talk to the City of Providence.

21 MS. GREENDLINGER: And Lou also is aware of
22 this, and continues to work with the City of
23 Providence and other interested stakeholders, so I'm
24 assuming that Lou is sharing that information with
25 others.

35

1 AUDIENCE MEMBER: Yeah. We're still working
2 with the City of Providence on what's going on in
3 Merino right now, maybe see what's going on in the
4 future. And there's also some plans to bring the
5 bike path through, and we want to be made aware of
6 the sample results. And so, we're kind of waiting
7 to see what the city is doing right now. But
8 everybody has been made aware of the new science and
9 the sampling data from last year.

10 MS. VU: Also that, now I remember that Merino
11 Park we used a different risk, acceptable risk
12 level, because it's removal, so we have a different
13 standard that we accept compared to remedial
14 standard, which we used for this part of the site.
15 So, even when we applied the new science, it doesn't

16 trigger the risk for removal, actually. That's why
17 it doesn't change.

18 AUDIENCE MEMBER: I'm not saying it does or it
19 doesn't, I'm just saying that right now the message
20 out there is "We have made a change."

21 MS. VU: Right. But the follow-up action,
22 there's nothing new than what we had discussed.

23 AUDIENCE MEMBER: I think I missed something.
24 Merino Park is somewhat far from below the Lyman
25 Dam. And if there is concern with Merino Park, then

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1 what about all these areas that possibly could get
2 flooded between the Lyman Dam and there?

3 MS. GREENDLINGER: To give you the background,
4 two years ago when the big flood had happened,
5 people had asked us, saying what about recreational
6 and parks, and particularly that park. And the City
7 of Providence actually undertook some sampling, and
8 I want to say there were like four sample locations,
9 or maybe five, I'm not quite remembering off the top
10 of my head. But there was one that came back with
11 an elevated dioxin level which we found to be
12 historical, meaning it didn't happen from that
13 flood, it had happened from historically. And they
14 could tell that by the amount of wetness that was
15 there, and other things that I'm not quite

16 remembering off the top of my head. So, the city
17 put some fencing around the area, and we had worked
18 with various stakeholders to do a -- I'm not sure
19 what we called it, but like a limited investigation
20 on that area to determine if there was a need to do
21 a short-term cleanup there or not. Which it came
22 back at that point that no, there was not. And
23 there was talk about doing protective fencing, which
24 happened, and then that we would monitor it
25 long-term as part of this site. Because it was

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1 historical, it may be from Centredale, and we were
2 committed to keeping that under a long-term
3 monitoring at the site. And currently various
4 stakeholders are working with the city, and possibly
5 bike path expansion, and using that bike path as a
6 cap to that area. And with going back and looking
7 at the new science to say, is this an issue that
8 would trigger action; and the answer is no.

9 AUDIENCE MEMBER: Is there monitoring below the
10 Lyman Dam?

11 MS. GREENDLINGER: No, not currently. But that
12 was what we were talking about is working with the
13 Rhode Island Department of Environmental Management
14 for some limited monitoring downstream of the river.

15 Okay, I had promised that we would try to
16 switch gears around 8:00. Are there other

17 questions? And again, we will be here after the
18 formal comment period.

19 Okay. So, I am going to close out the
20 informational portion of tonight's meeting. We are
21 going to shift into the formal hearing. And again,
22 the hearing's purpose is to take public comment on
23 the new science, and how it's modified the proposed
24 cleanup. Those modifications are the human health
25 risk assessment, and with new science on the

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1 non-cancer dioxin impact, the proposed lower cleanup
2 level for residential soil from 1,000 parts per
3 trillion to 50 parts per trillion, and for the
4 recreational, from 1,000 parts per trillion to 680
5 parts per trillion; and the resulting shift in scope
6 of potential areas that would need to be
7 reevaluated, and the potential impact on cost. So,
8 those are the aspects of the modifications that have
9 happened because of the dioxin reassessment, that's
10 what we're opening comments on.

11 Again, if you would like to know more about the
12 general cleanup plan, you can seek that from the
13 public library or from me. I'll get you a copy of
14 that proposed plan after the formal hearing.

15 So, I'd like to open up the formal hearing. I
16 will ask -- I'll bring the mic to you, or perhaps

17 you might have to meet me halfway. I will ask you
18 to state your name and your address so that the
19 stenographer can capture that. And I need you to
20 provide your comment; and again, we will not be able
21 to respond to that.

22 So, I would like to open the formal public
23 comment hearing for the proposed plan amendment. Do
24 I have anybody who would like to start us off with a
25 comment? I'll wait a minute, just in case someone

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1 is getting your thoughts together. Yes?

2 MS. CARLINO: I have one comment.

3 MS. GREENDLINGER: Name and address, please.

4 MS. CARLINO: Marie Carlino, C-A-R-L-I-N-O;

5 Johnston. My comment basically is, I did not get

6 enough information about when you cap an area, and

7 what we're planning to do with this area, what we're

8 going to do, have we done it before, and how long

9 has that been in existence: ten years/fifteen years?

10 Because when you look out thirty to forty years, you

11 have an area that's been capped, and you have

12 dioxin, and I don't know how that poses a threat to

13 health thirty or forty years later. Because we're

14 so concerned about the water and the fish, and we're

15 removing it to help them right now to keep it

16 contained, but I don't know if there are statistics

17 available that would show us in thirty or forty or

18 fifty years down the road, after capping of the
19 soil, what that does for the health of the
20 community.

21 MS. GREENDLINGER: Thank you, Marie. Are there
22 any other comments? Yes, sir?

23 MR. DESNOYERS: A. Desnoyers,
24 D-E-S-N-O-Y-E-R-S. This is being run by the EPA,
25 yes?

40

1 MS. GREENDLINGER: I can't respond. At this
2 point we can't respond to comments. Go ahead and
3 provide your comment, and we'll be here afterwards.

4 MR. DESNOYERS: It seems that it was run by the
5 EPA. The EPA in recent years has done a lot of
6 stupid things countrywide, nationwide. And I think
7 this is another one of those boondoggles. It's just
8 a waste of money. The EPA is trying to justify its
9 existence by stupid things like this.

10 MS. GREENDLINGER: Okay, thank you for your
11 comment. Yes?

12 MR. SCHULER: I wasn't going to comment, but my
13 name is Barry Schuler, and I just want to defend the
14 EPA. And I'm not a scientist to judge the
15 appropriate level per trillion, I don't really
16 understand the human health effect that you're
17 savings us from as well as I would like, but I don't

18 think the EPA has done stupid things. And I think
19 they've protected us from pollution, especially as
20 we're downwind to a lot of power plants. And it's
21 very important for Rhode Islanders to support the
22 EPA, because the upwind power plants threaten our
23 health. So, I just don't want the record to
24 indicate that North Providence people don't
25 appreciate the EPA. Most of us do.

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1 MS. GREENDLINGER: Are there others that have
2 comment for the record? Okay, I am going to
3 formally close out the public hearing portion of it.
4 Again, we are here to answer any questions that you
5 have, and we're very appreciative of your time.
6 Thank you for coming this evening.

7 (Meeting adjourned at 8:07 p.m.)

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1 C E R T I F I C A T E

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3 I, Jane F. Cormier, do hereby certify
4 that the foregoing contains a true, accurate
5 and complete transcript of my notes taken at
6 the above-entitled proceeding.

7

8 IN WITNESS WHEREOF I have hereunto set my
9 hand this 15th day of August, 2012.

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16 _____
17 JANE F. CORMIER, CSR
18 NOTARY PUBLIC
 MY COMMISSION EXPIRES: 1/19/2014

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