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DNF SAFETY BOARD

June 12, 2013

The Honorable Peter S. Winokur
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW, Suite 700
Washington, DC 20004

Dear Mr. Chairman:

**PUBLIC HEARING AND MEETING REGARDING SAFETY CULTURE,
EMERGENCY PREPAREDNESS, AND NUCLEAR EXPLOSIVE OPERATIONS AT
PANTEX**

After reviewing the transcript of the Pantex Public Meeting, it has come to my attention that responses to questions provided regarding Emergency Management at Pantex require additional information to ensure clarity. In response, Babcock & Wilcox Technical Services Pantex, LLC (B&W Pantex) conducted an extensive evaluation of all responses to questions on Emergency Management and has prepared clarifying information in Enclosure 1. My staff has also reviewed the responses provided in the public meeting and the clarifying information provided by B&W. I request that the enclosed clarifying information be added to the public record.

In addition, on April 24, 2013, David Jonas, DNFSB General Counsel, issued ten supplemental written questions concerning Emergency Management at Pantex requesting responses to be included in the public record. B&W Pantex has prepared detailed responses to those supplemental questions which are in Enclosure 2. I thank you for the opportunity to provide this supplemental information which clarifies the testimony provided in the public hearing.

As the NNSA Administrator has discussed with you, we both recognize and value the importance of public trust and the role these Public Meetings play in sustaining that trust. In that vein, it is vital that communication on these critical topics be clear and complete. I look forward to continuing to work with you, the Board members, and your staff on our common goal of ensuring adequate protection of public and worker health and safety, and the environment.

If you have any questions, please contact me at (865) 576-0752 or Teresa Robbins at (865) 576-0841.

A handwritten signature in black ink, appearing to read 'Steve Erhart', written in a cursive style.

Steven C. Erhart

Manager

NNSA Production Office

Enclosures:

As stated

cc:

N. Miller, NA-1, FORS

M. Lempke, NA-00, FORS

J. McConnell, NA-00, FORS

G. Podonsky, HS-1, FORS

D. Nichols, NA-SH-1, FORS

A. Anderson, HS-1.1, FORS

K. Waltzer, 00-NPO-01, Pantex

G. Wisdom, 00-NPO-20, Pantex

Location (Page #/Line)	DNFSB Question	Location (Page #/Line)	Response (Original Text)	Clarification
<p>Page 187 Lines 15- 23</p>	<p>Two Part Question: Part 1: Thank you, Mr. Chairman. Mr. Woolery, last July here at the Pantex Plant, there was a site-wide drill simulating a response to an earthquake, and I've seen two after action reports, one that was dated last August and another one that was dated here in January 20 of 2013. The first one said that the event was highly successful, and the second one said the response was marginal. Would you please explain what happened there, why there are two after action reports?</p>	<p>Page 187 Lines 24</p>	<p>24 MR. WOOLERY: Yes, Mr. Sullivan. The 25 exercise that you are referring to in preparation for the 1 exercise the Pantex -- at B&W Pantex, the contractor at 2 the plant prepared some specific objectives that we were 3 measuring our performance against during the exercise, and 4 we did not do a good job of coordinating with our 5 counterparts at the site office to make sure that we 6 walked through those objectives, and there was a clear 7 understanding between both parties as to everything that 8 we were going to look at and evaluate. 9 We ended up evaluating a limited set of 10 objectives as a contractor, and as we prepared that and 11 submitted it to our counterparts at the site office, they 12 identified some additional objectives that we should have 13 been looking at and, in fact, did not do quite as well in, 14 and as a result, our overall performance was assessed as</p>	<p>Reference response to Supplemental Written Question # 1</p>

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Location (Page #/Line)	DNFSB Question	Location (Page #/Line)	Response (Original Text)	Clarification
<p>Page 188 Lines 23- 25 and Page 189 Line 1-2</p>	<p>Part 2: Okay. Well, marginal sounds like there's plenty of room for improvement, just by nature of the term. So if that's correct, what are some of the areas that need improvement?</p>	<p>Page 189 Lines 3 -23</p>	<p>15 being marginal as opposed to excellent. 16 And that's something that I've worked with 17 Mr. Campbell on and I've discussed with Mr. Erhart. And 18 our responsibility is to make sure we do a better job of 19 communicating and collaborating with our counterparts in 20 preparation for the drills so it's very clear what it is 21 that we're going to look at and how we are going to assess 22 our performance.</p> <p>3 MR. ERHART: Yes. Yes, sir. I was 4 responsible for submitting that report. The thing that 5 Mr. Woolery just spoke of was one of the issues that I 6 didn't get the proper coordination with the site office 7 before officially submitting the report, and after they 8 read the report, we incorporated those comments. 9 In addition to that, the grading scheme 10 that we initially had was somewhat subjective, so we 11 looked at that scheme. We adopted a more -- a better way 12 of grading our exercises, a better way to quantify the 13 results. We looked at the Y-</p>	<p>This was attributed to Mr. Erhart but it is Campbell speaking/responding.</p> <p>Reference responses to Supplemental Written Question # 3 regarding AAR January 31, 2013 findings, and Question #1 for lines 15-16 and 17-23</p>

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			<p>12 Plant and the way that 14 they did it. We adopted their grading scheme, and so when 15 we added those objectives, plus we adopted the new grading 16 scheme, it brought the score way down. 17 In particular, some of the things that we 18 did not take a look at that site office wanted us to go 19 back and review were having the emergency action levels to 20 cover such things as floods. When we initially submitted 21 that and we initially went through that exercise, that was 22 not in place, so that was one of the things that they 23 wanted us to do.</p>	
<p>Page 189, Lines 24- 25</p>	<p>Continuation of dialogue above:</p> <p>Part 3: So was there a simulated flooding in this drill? I'm confused.</p>	<p>Page 190 Lines 1 - 6</p>	<p>MR. ERHART: No, sir. There were two; 2 there were floods and earthquakes, so -- I meant to say. 3 So that was the concern, that we didn't have the action 4 levels for earthquakes in there, and we also needed to add 5 floods, so it was adding some action levels for a spectrum 6 of severe events.</p>	<p>This was attributed to Mr. Erhart but it is Campbell speaking/responding.</p> <p>Reference response to Supplemental Written Question # 2</p>
<p>Page 189, Lines 7-12</p>	<p>Continuation of dialogue above:</p> <p>All right. But on the actual exercise, people ran around and responded</p>	<p>Page 190 Line 13-25 and;</p> <p>Page 191 Lines 1 & 2</p>	<p>13 MR. ERHART: Yes, sir. Yes, sir. Most of 14 the additional actions or needs that we identified was in 15 the area of communication, making sure that the</p>	<p>This was attributed to Mr. Erhart but it is Campbell speaking/responding</p> <p>After reviewing the response, the original testimony was related to the October 2011</p>

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	<p>to the simulated casualty. Was your performance, in fact, marginal? Were there things that needed to be done better by the people who were responding to the simulated casualty? That's what I'm trying to get to.</p>		<p>16 communication between the event scene and the folks back 17 at the emergency op center, making sure that we had the 18 correct communication. 19 We did have some gaps in communication when 20 we were trying to assess the number of casualties that we 21 were simulating, the status of those folks, whether they 22 were on site or whether they had actually been transported 23 to the medical facilities. We had a couple of times where 24 those numbers didn't match. So there were various areas 25 of communication that were the primary reasons -- well,</p> <p>Pg 191 1 constituted most of the things that we needed to go back 2 and look at.</p>	<p>exercise. The response was unrelated to the question and the issues discussed in the response were identified in the October 2011 AAR.</p> <p>In response to the public hearing question, the objectives of the exercise for response to the simulated casualty was limited to the ability of the emergency responders to triage casualties, direct walking wounded to the onsite medical facility, and simulate transport to the offsite medical facility. The performance in this area demonstrated the ability of the emergency responders and medical personnel to triage casualties. This resulted in no findings and did not affect the overall outcome of performance evaluation of the exercise.</p>
<p>Page 191, Lines 3-5</p>	<p>Continuation of dialogue above:</p> <p>Okay. That sounds to me like command and control. Is that what you're talking about?</p>	<p>Page 191 Lines 6 - 7</p>	<p>6 MR. ERHART: Yes, sir. Yes, sir, that was 7 exactly it.</p>	<p>This was attributed to Mr. Erhart but it is Campbell speaking/responding</p> <p>Command and control was identified as a finding in the January 31, 2013 AAR developed for the July 2012 exercise.</p>
<p>Page 191, Lines 6-11</p>	<p>Continuation of dialogue above:</p> <p>All right. Now, since the</p>	<p>Page 191 Lines 12-17</p>	<p>12 MR. ERHART: Yes, sir. There were several 13 corrective actions that were identified. All of those</p>	<p>This was attributed to Mr. Erhart but it is Campbell speaking/responding.</p>

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	second report was just dated in January, relatively recently for an exercise that happened last July, have we fixed the things that were wrong? Have we upgraded yet?		14 corrective actions were completed. There were additional 15 corrective actions that had come from other limited scope 16 drills that we had done that were related to that, and 17 some of those corrective actions are still in process.	Reference response to Supplemental Written Question # 3
Page 191, Lines 18-19	All right. And when is the next exercise going to be run?	Page 191 Line 20	20 MR. ERHART: I believe it's June, sir.	This was attributed to Mr. Erhart but it is Campbell speaking/responding.
Page 191, Lines 23-25 and Page 192, Line 1	Let me just add before I turn it over to Mr. Bader. Can you be a little more Specific about the exercise itself? What were the -- what was the scenario you were dealing with?	Page 192 Line 2 -3	2 MR. ERHART: It was an earthquake that 3 resulted in a chemical release.	This was attributed to Mr. Erhart but it is Campbell speaking/responding. Reference response to Supplemental Written Question # 4
Page 192, Lines 4-6	How would you rate that in terms of some of the more challenging events that the site might actually face?	Page 192 Lines 7-14	7 MR. ERHART: That was one of our more 8 challenging exercises. We were attempting to address some 9 of the severe event scenarios, so when we had the 10 simulation of an earthquake that resulted in the actual 11 collapse of a building and dealing with that and the added 12 release of chemicals and dealing with that issue, we were 13 trying to also address the issue of cascading events, so 14 it made it one of our more complicated exercises.	This was attributed to Mr. Erhart but it is Campbell speaking/responding Reference response to Supplemental Written Question # 4
Page 192,	Did the release -- did the collapse lead to the	Page 192	18 MR. ERHART: No, sir. I think it was just	This was attributed to Mr. Erhart but it is

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Lines 15-17	release of radiological materials?	Line 18-19	19 chemical.	Campbell speaking/responding.
Page 192, Lines 20-21	Now, that would have been a little more challenging, do you think?	Page 192 Line 22	22 MR. ERHART: Yes, sir. Yes, sir.	This was attributed to Mr. Erhart but it is Campbell speaking/responding.
Page 196, Lines 22-23	What was the termination point of the last two exercises?	Page 196, Lines 24-25 and Page 197, Lines 1-3	24 MR. CAMPBELL: It was at the point where we 25 would have made the decision to evacuate the plant. Once 197 1 we did an accountability and then the decision was made 2 that we needed to get non-essential personnel offsite, 3 that's where we stopped the exercise.	No Change
Page 197, Lines 7-9	Are you considering another exercise where you look at triage after the event has terminated and then recovery?	Page 197 Line 10-18	10 MR. CAMPBELL: Yes, sir. Our current plans 11 are for one of the scenarios that we want to run for the 12 rest of the year is to pick up exactly where the previous 13 exercise left off. That was something that we had not 14 done routinely previously, but when we picked that 15 scenario and we laid out that plan, it was with the intent 16 to do the first exercise up to that point and then for a 17 later exercise to pick up at that point and go all the way 18 to recovery.	To clarify the response, we considered conducting an evacuation drill (no recovery) in August 2012 to pick up after the July exercise termination point. Due to contributing factors, the drill was not conducted. A recovery exercise will be included in the five year exercise plan.
Page 197, Lines 23-25 and Page 19, Lines 1-2	Mr. Campbell, was the July exercise, July 2012 exercise, a full deployment field exercise? I mean, did you actually	Page 198, Lines 3	3 MR. CAMPBELL: Yes, sir. Yes, sir, we did.	Reference response to Supplemental Written Question # 5

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	put fire trucks out? Did you actually put people in uniform out there and move them around?			
Page 198, Lines 4-5	So it was truly an exercise of all your people and all your equipment that you used to --	Page 198, Line 7	7 MR. CAMPBELL: Yes, sir.	Reference response to Supplemental Written Question # 5
Page 198, Lines 8-10	Is it your conclusion that B&W is appropriately staffed for the range of emergency response and recovery operations you'll have to do?	Page 198 Lines 11-17	11 MR. CAMPBELL: Yes, sir, we are. In 12 addition to the primary emergency management personnel, we 13 do have the emergency response organization that are 14 staffed to primary, secondary and tertiary levels, so at 15 any point in time that we have a full group, a full 16 complement of ERO volunteers ready to come in, there's two 17 more sets that are on standby.	Pantex Emergency Response Organization has the capability to respond appropriately to the emergency events identified in the technical planning basis and other events that may occur. Previous drills and exercises have identified areas that require additional staffing. Corrective actions include assigning managers the responsibility to appoint personnel to staff the ERO vacancies.
Page 198, Lines 18-23	And some questions about your staff. I'm sure that you ensure that they have adequate levels of knowledge and experience and expertise, but what about retention? Can you keep people with your emergency response organization for considerable parts of their career?	Page 198, Lines 24-25 and Page 199, Lines 1-9	24 MR. CAMPBELL: Yes, sir, we believe we can. 25 We have several folks which comprise the core of the 1 emergency management team that are emergency management 2 professionals that we brought in, and that's what they do. 3 We also complemented that team with other folks from 4 across the site. So there are some positions where we on 5 purpose bring people in, teach them the emergency	Reference response to Supplemental Written Question # 6

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			<p>6 management philosophies and protocols and groom them, if 7 you will, in emergency management and intentionally deploy 8 them to other places in the site that they will be 9 responsible for operations and those type things.</p>	
Page 199, Lines 10-11	And these would be the management people?	Page 199, Line 12	12 MR. CAMPBELL: Yes, sir. Yes, sir.	Reference response to Supplemental Written Question # 6
Page 199, Lines 13-14	Okay. And are they - do you get them fully qualified?	Page 199, Line 15	15 MR. CAMPBELL: Yes, sir.	Reference response to Supplemental Written Question # 6
Page 199, Lines 16-17	And how long does it take to get emergency management --	Page 199, Lines 18-25 and Page 200, Lines 1-3	<p>18 MR. CAMPBELL: I would say approximately 19 six months or so. Many of the courses are dependent on 20 availability. Some of them are self-study type courses 21 for the Incident Command System. The National Incident 22 Management System, we have a series of courses in each one 23 of those that we send each person to, and that's in 24 addition to any of their position-specific training, such 25 as if they were going to be a RAD responder, they need 1 some level of radiation safety training. If they are 2 going to be an incident commander, they need that</p>	<p>To clarify, this response reflects the qualification process of the ERO not the emergency management staff.</p> <p>Reference response to Supplemental Written Question # 6</p>

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			<p>specific 3 training. So approximately six months, sir.</p>	
<p>Page 200 Lines 4-10</p>	<p>And you don't have any concerns about stability of your management organization below you? I don't mean the actual responders, but the team leaders and that sort of thing? They stay with you long enough that you don't have to worry about the workforce losing confidence in the team leaders and things like that?</p>	<p>Page 200, Line 11-12</p>	<p>11 MR. CAMPBELL: No, sir, I don't have any 12 issues.</p>	<p>Reference response to Supplemental Written Question # 6</p>
<p>Page 200, Lines 13-18</p>	<p>Okay. Is this a career path for anybody but the people that you mentioned at first that were -- that are permanent emergency management personnel? Do you expect people to move away? Is this part -- is this part of an executive development program for --</p>	<p>Page 200, Lines 19-25 and Page 201, Lines 1-2</p>	<p>19 MR. CAMPBELL: We do expect 20 people to move 21 on. We just had recently one 22 of our section managers in 23 emergency management who was 24 just promoted to go to the 25 next level of management, which is department manager, and 26 he will be running the 27 Radiation Safety Department. So 28 having him being in 29 emergency management for a 30 couple of 31 years and learning that 32 process and now going on to 33 201 34 1 another part of the business 35 which we heavily rely on 36 2 those responders is extremely 37 helpful for us.</p>	<p>No Change</p>

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Page 201, Lines 3-7	Okay. If you had any concerns about the adequacy of the people that you get and the amount of time you have to retain them and how qualified you can manage to get them, is there any issue about making that very visible to management?	Page 201, Line 8	<p>8 MR. CAMPBELL: No issue at all, sir.</p> <p>9 MR. WOOLERY: I'm personally involved in</p> <p>10 staffing analysis reviews with Mr. Campbell and</p> <p>11 Mr. Baumgardner, who is the division manager, and although</p> <p>12 we've attritted approximately 300 people since</p> <p>13 October 1st</p> <p>14 of 2011, we're focused on safety and security as far as</p> <p>15 approval of backfills and the critical skills that are</p> <p>16 necessary there. But I would have a personal involvement</p> <p>17 in reviewing Alonzo's staffing analysis, his requests for</p> <p>18 resources, and I'm confident that safety and security are</p> <p>19 our first priorities, and I'll ask some hard questions,</p> <p>20 but we're going to adequately resource those areas of the</p> <p>21 plant.</p>	No Change
Page 201, Lines 23-25 and Page 202, Lines 1-13	Three Part Question: Part 1: Well, I mentioned in my testimony that there was obviously a terrible accident in Japan, and as a result of that, the Secretary of Energy wrote a safety bulletin in March, and he asked each site to look at whether they could respond to severe events or what we	Page 202, Lines 14-16	<p>14 MR. WOOLERY: I believe it was an F5</p> <p>15 tornado followed by a wildland fire.</p> <p>16 MR. CAMPBELL: That was the top two.</p>	Reference response to Supplemental Written Question # 7

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AND	<p>call beyond design bases events, meaning events that you haven't initially planned for; they are beyond the sets of controls you put in place to handle the hazards in facilities. And the Secretary, I think, was looking for a gap analysis to understand, you know, how those severe events might impact the plant and where you were, and what your ability was to respond to those. And you had to respond as a site to that -- I'll ask you, Mr. Woolery -- and you considered two events. What were those two events you considered when you looked at severe events?</p>			
Page 202, Lines 17-20 AND	<p>Part 2: Well, I may not understand, but I'm looking at the response, and it looks to me like it was a seismic event and tornado high winds. Did I misunderstand that?</p>	Page 202, Lines 21-25 and Page 203, Lines 1-10	<p>21 MR. CAMPBELL: That's included, as well, 22 sir. What we did is we looked at what we considered was 23 at least a spectrum of events. We updated our hazard 24 analysis, our hazard assessment. We included a chapter on 25 severe events. We looked at the spectrum of severe 1 events, and we paired them by those that were -- that we 2 believed that we would have</p>	Reference response to Supplemental Written Question # 7

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Page 203, Lines 11-14	Part 3: So I just looked at the documentation and didn't understand. So when you responded to the Secretary, those were all the beyond design bases of severe events you looked at?	Page 203, Lines 15-16	<p>to deal with from a cascading 3 perspective where we had one that initiated the other or 4 ones that were liable to happen simultaneously. 5 We made a list of those. The tornado and 6 wildland fire was the one that made the top of the list, 7 but we also had an earthquake, flood and several other 8 things that were paired together that we recognized we 9 need to start developing drills and exercises on for those 10 specific events.</p> <p>15 MR. CAMPBELL: Yes, sir. We looked at more 16 than I just mentioned.</p>	Reference response to Supplemental Written Question # 7
Page 203, Lines 17-18	Okay. Okay. I didn't realize that. Okay.	Page 203 Line 19	19 MR. CAMPBELL: Yes, sir.	No Change
Page 203, Lines 20-22	Because I was concerned you might not have looked at flooding, even though you had had a flooding event. But you did look at flooding?	Page 203 Line 23	MR. CAMPBELL: Yes, sir. We did.	Though not considered for the HSS Safety Bulletin, flooding was analyzed in response to the flood event that occurred at Pantex. Flooding was included in the Pantex EPHA revision 9 submitted to NPO and an EAL was developed.
Page 203,	Okay. Now, one of the	Page	7 MR. CAMPBELL: For the HEVR	HEVR and IND are analyzed as part of safety

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Lines 24-25 and Page 204 Line 1-6	things that makes Pantex, in my opinion, very unique is that, let's face it, you've got operational accidents here that really outweigh almost any natural phenomenon event, right? We talked about it quite a bit today, high explosive violent reactions and inadvertent nuclear detonation. Were those considered as part of the beyond design bases events in the response to the Secretary?	204, Lines 7-11	(High Explosive 8 Violent Reaction) piece, yes, sir, we did. We -- previous 9 to that direction, we had included in previous drills how 10 we would respond to HEVR events, high explosive violent 11 reaction events.	basis. Emergency Management exercises HEVR. Reference response to Supplemental Written Question # 8
Page 204, Lines 12-16	Oh, I didn't know that. So you have, you've done some planning for high -- can you give me a sense of how you -- what you learned from that event? I mean, are we talking about an explosion and a spread of radiological material?	Page 204, Lines 17-25 and Page 205 Line 1-4	17 MR. CAMPBELL: Yes, sir. Yes, sir. We've 18 done several scenarios where we did just that. One of the 19 things in one of the previous drills that was pretty 20 recent that we did is we had a chemical release that 21 prompted the emergency response organization to activate, 22 and we were responding to that, and while that response 23 was ongoing in the simulation, we also had an explosion 24 that we had to respond to. 25 And the lessons that we got out of that was that we need to be able to respond to simultaneous events, 2 and in that scenario we had the explosion in the 3 simulation take out some of	The drill referred to by Mr. Campbell on page 204 line 19 was the October 2011 FPE 11-1, "Double Dare" exercise. Lessons learned from previously conducted HEVR drills and exercises included the importance of the interface between Pantex and state and local offsite officials, private industry, and other federal agencies. This lesson learned resulted a "day two" facilitated discussion following the October 2011 HEVR exercise involving over one hundred representatives from the previously mentioned organizations to open dialogue and response planning to a HEVR spreading radiological material both onsite and offsite.

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			the first responders that we 4 sent in, so we took them out.	
Page 205, Lines 5-7	So you've actually considered scenarios here with high explosive violent reactions, right?	Page 205 Line 8	8 MR. CAMPBELL: Yes, sir.	No Change

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Pantex does not rely on (and the State does not provide) consequence assessment support.

<p>Page 205, Lines 9-12</p>	<p>And how challenging was the radiological portion of that? Your radiological folks that come in to control the situation, I mean, did you think they did well on that?</p>	<p>Page 205 Lines 13-22</p>	<p>13 MR. CAMPBELL: I think we did well. I 14 think we learned a lot of lessons from that. We also 15 learned, not just for ourselves, the coordination that we 16 would have to make with offsite entities so that if we had 17 those situations where -- and in a couple of the 18 scenarios, the situation took to us where we were beyond 19 the fence line with some of the PU modeling, and not only 20 did we have to do some of the radiological assessment, but 21 we had to rely on the State to come in and assist us on 22 that.</p>	<p>The radiological portion of the FY 2011 FPE, "Double Dare", contained a radiological dispersal involving offsite consequences and is considered one of the more challenging radiological scenarios for Pantex.</p> <p>Pantex does not rely on (and the State does not provide) consequence assessment support.</p> <p>Reference response to Supplemental Written Questions # 4 & 8</p>
<p>Page 205, Lines 23-25 and Page 206 Lines 1-2</p>	<p>Do you feel confident that the offsite responders -- I mean, are they trained to handle the situation of the release of this radiological material? Are you confident they know what they are up against and they can deal with it?</p>	<p>Page 206 Line 3</p>	<p>3 MR. CAMPBELL: Yes, sir.</p>	<p>No Change</p>
<p>Page 206, Lines 4-6</p>	<p>Okay. So what is the -- what is the worst case operational event you plan for? Do you stop at HEVR, or do you consider anything else?</p>	<p>Page 206 Line 7-9</p>	<p>7 MR. CAMPBELL: We're looking at -- we have 8 not exercised a drill just yet, but we're also looking at 9 the inadvertent nuclear detonation.</p>	<p>An HEVR with a radiological dispersal is currently the worst case operational event that is planned for by EMD. We have no plans to exercise IND at this time.</p>
<p>Page 206, Lines 10-11</p>	<p>And what keeps you up at night?</p>	<p>Page 206 Line 12</p>	<p>12 MR. CAMPBELL: That, sir.</p>	<p>No Change</p>
<p>Page 206</p>	<p>All right. I mean, you've</p>	<p>Page 206</p>	<p>16 MR. CAMPBELL: Yes, sir.</p>	<p>No Change</p>

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Lines 13-15	really got some operational events here that would cause people to pause, right?	Line 16		
Page 206 Lines 17-22	And I just wanted to make the point that although many sites worry about the natural phenomenon hazards, the earthquakes, the tornadoes, the floods, you've got one or two what you call pinnacle events here, you call them, that really are sobering and really require your attention.	Page 206 Line 23	23 MR. CAMPBELL: Yes, sir.	No Change
Page 206 Line 24	And you're confident?	Page 206 Line 25	25 MR. CAMPBELL: Yes, sir, I am.	No Change
Page 207 Lines 1-4	Do you need other exercises to get more proficient in this, or do you like where you are right now? I mean, is there room for improvement?	Page 207 Lines 5-11	5 MR. CAMPBELL: There's plenty of room for 6 improvement. We'll use our -- 7 we'll use additional 8 exercises and drills to get 9 better. We know that we have 10 some improvements to make, 11 based on the drills and 12 exercises that we've had. I'm 13 confident that we could 14 respond, but I'm also 15 confident there's still more 16 lessons 17 to be learned as we do more 18 drills and exercises.	No Change
Page 207 Lines 14-17	I'd like to follow up and spend a little bit of time on the period after the event has happened, the triage or prioritization and the recovery. Could you tell me, either Mr. Woolery or Mr. Campbell --	Page 207 Line 18	18 MR. CAMPBELL: Yes, sir.	No Change
Page 207 Lines 19-	-- how you are training and preparing people to	Page 208 Lines 1-16	1 MR. CAMPBELL: Yes, sir. Our 2 prioritization, of course we	No Change

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<p>25</p>	<p>respond to some of these events, in terms of what - - how they should prioritize and in determining how they need to prepare for recovery and execute recovery, particularly with response -- particularly with regard to the support you may need or the notifications you may need to make off the site.</p>		<p>follow the protocol of first 3 protect human life, then -- which for us is also securing 4 our unique assets, making sure that those assets are 5 secure, stabilizing the event and then protecting the 6 environment. 7 We had one sort of a recent exercise where 8 we held recovery discussions with some of our offsite 9 entities, as well as some of the businesses in the local 10 area, and we talked through -- it was a facilitated 11 discussion about what some of the concerns would be that 12 we would need to address. 13 We also have a recovery team that we train 14 on developing recovery plans and how to execute those 15 plans and making sure that those things take that priority 16 in perspective.</p>	
<p>Page 208 Lines 17- 19</p>	<p>Do those recovery teams then work with their counterparts in the state or in the city or the county?</p>	<p>Page 208 Line 20</p>	<p>20 MR. CAMPBELL: Yes, sir. Yes, sir.</p>	<p>Offsite emergency response organizations (state, counties and city) do not include Recovery Team Counterparts; however the Pantex consequence assessment team does work with Offsite authorities at the state, county and city levels.</p>
<p>Page 208 Lines 21- 22</p>	<p>And work as an entity to develop their own broader plan?</p>	<p>Page 208 Lines 23-25</p>	<p>23 MR. CAMPBELL: Yes, sir, that's exactly how 24 that would work. That is something that we need to 25 exercise, though.</p>	<p>Pantex does not incorporate the site recovery plan into a broader recovery plan with the offsite officials. The Pantex Recovery Plan would identify request for support or special services from offsite entities or mutual aid agreements.</p>
<p>Page 209, Lines 1-4</p>	<p>And the exercises you talked about before that are going to be held that go into that period of</p>	<p>Page 209 Line 5</p>	<p>5 MR. CAMPBELL: Yes, sir. Yes, sir.</p>	<p>A Recovery Exercise will be included in the Five Year Exercise Plan. Offsite organizations do not participate in Recovery Exercises since the</p>

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	time, that will be held on a broad basis with the state and county and city people?			focus is onsite recovery.
Page 209, Lines 6-8	What are -- are you codifying this training for people like your incident commanders and emergency directors?	Page 209, Lines 9-19	<p>9 MR. CAMPBELL: Yes, sir. Each person in</p> <p>10 emergency management, as well as our emergency response</p> <p>11 organization, they have a training curriculum that's</p> <p>12 assigned to them that's maintained in our plant</p> <p>13 training</p> <p>14 process. That's monitored on a monthly basis. We have</p> <p>15 all of the courses listed that they need, the periodicity</p> <p>16 of those courses, and any time a person does not take a</p> <p>17 course when they are supposed to, if they drop off the</p> <p>18 list, that will show up on what we call the unqualified</p> <p>19 list, and that person has to come out of that position</p> <p>until they complete the training.</p>	The Recovery Team reports to the ES&H Director of the Executive Team. The ES&H Director is responsible for recovery planning until the emergency is terminated and enters the Recovery Phase at which time a Recovery Manager will be appointed and assume responsibility for recovery operations. Recovery training is limited to the Recovery Team.
Page 209, Lines 20-22	Have you already proceeded to the point where you prioritized your facility responses for various situations?	Page 209, Lines 23-25 and Page 210 Lines 1-4	<p>23 MR. CAMPBELL: Somewhat, sir. Yes, sir, we</p> <p>24 have. We've looked at and what we plan for is ensuring</p> <p>25 that our nuclear explosive facilities are stabilized,</p> <p>210</p> <p>1 making sure that our explosive facilities are not</p> <p>2 affected, and then looking at the other high hazard</p> <p>3 facilities where we have bulk chemicals and those type</p> <p>4 situations.</p>	No Change
Page 210,	I have one additional question, and I think we	Page 210,	11 MR. CAMPBELL: Yes, sir.	No Change

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Lines 6-10	may be done with the panel. We started out the questioning talking about an accident which was an earthquake followed by a chemical release, and I think the final scoring on that was marginal, right?	Line 11		
Page 210, Lines 12-13	How did you score on the one with the high explosive violent reaction?	Page 210, Lines 14-15	14 MR. CAMPBELL: I don't recall. I think 15 that one was good.	Reference response to Supplemental Written Question # 9
Page 210, Lines 16-21	Okay. If it had been looked at a little more critically with the same standards and the same kinds of metrics that we later used to rate the one we talked about earlier, do you think it would have been good, or do you think it would have moved into the marginal category?	Page 210, Lines 23-25 and Page 211, Lines 1-10	22 MR. CAMPBELL: It may have been something 23 different. I know that if we take the grading criteria 24 that we use today and we apply that to any of our past 25 exercises, we will get a more conservative result. 1 MR. WOOLERY: Okay. Dr. Winokur, we will 2 take that question for an action, and we will reevaluate 3 our performance against the criteria that we're referring 4 to - 6 MR. WOOLERY: -- and we'll give you the 7 feedback as far as what our overall - 9 MR. WOOLERY: -- rating would be. That's a 10 good question.	No Change
Page 211, Lines 11-12, 13-15, 18-20	Okay. I mean, this is a very challenging accident, right? To say the very least. So I think you'll be doing a lot of work on that - -- before you can convince	Page 211, Lines 13-14 and 17	13 MR. CAMPBELL: Yes, sir. 14 MR. WOOLERY: Yes. 17 MR. CAMPBELL: Yes, sir.	No Change

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	<p>yourself you were really in great shape, but okay.</p>			
<p>Page 211, Lines 24-25 and Page 212, Lines 1-3</p>	<p>Continuation of dialogue above.</p> <p>Have you looked at your portable equipment that's required for these cases, including the so-called beyond design bases event and come to -- what conclusion have you come to as to whether you have enough portable generators and stockpiles of fuel?</p>	<p>Page 212 Line 4-12</p>	<p>4 MR. CAMPBELL: Yes, sir, we have. We have 5 looked at portable equipment. We're not done analyzing 6 that. One of the first things that we tackled was 7 portable communications equipment. We do employ a 8 self-sufficient communication system, that was one of the 9 first things that we made sure that we had, that could 10 operate independent of any other communication system at 11 the plant, and that's a mobile capability, and the intent 12 is to look at other areas like that.</p>	<p>Although we have not analyzed all portable equipment needed for beyond design basis events, we are in the process of including beyond design basis planning and will further analyze equipment and support needed for response.</p>



Subject: DNFSB Supplemental Written Questions - Pantex Public Hearing Emergency Preparedness and Response Session

Following the public hearing that was held on March 14, 2013 the Defense Nuclear Facilities Safety Board (DNFSB) requested that additional follow-up Emergency Management questions be addressed. Those questions and the corresponding answers are provided below.

Supplemental Question 1: What additional objectives did NPO request that B&W evaluate?

Reference: Testimony transcript [Page 188/Woolery; Page 194/Erhart].

Response to Supplemental Question 1: NPO did not request any additional objectives as referenced in the March 14th hearing testimony. An additional *finding* related to the absence of a specific Emergency Action Level (EAL) in regard to earthquakes was added by the exercise control/evaluation organization to the final submission of the AAR to identify the need for an EAL. The original exercise planning was based on the use of EAL 2.03 "Significant Structure Damage" and was designed to validate the need for an earthquake EAL as previously identified in a self-assessment conducted by EMD. The reference to an additional objective throughout the hearing testimony is incorrect.

Supplemental Question 2: How was flooding associated with the 2012 Site-wide exercise EXE-12-1, and how is it addressed in the objectives and corrective actions of this exercise, as noted in the response provided in the Public Hearing and Meeting?

Reference: Testimony transcript [Page 189/Campbell], Draft EPHA Rev 9

Response to Supplemental Question 2: Flooding was not associated with the 2012 Site-wide exercise EXE-12-1. The exercise focused on a simulated earthquake with structural damage to a facility containing chemicals. In regard to the March 14th hearing testimony referenced, Mr. Campbell's response was unrelated to the question being asked.

Supplemental Question 3: What is the current status of corrective actions associated with Findings and Opportunities for Improvement (OFIs) identified in the ARR for the July 11, 2012 full-participation emergency exercise?

- a. What was the status of these corrective actions on the date of the Public Meeting and Hearing (March 14, 2013)?
- b. Given the repeat Finding with Executive Team communication/command and control, are there any corrective actions for Findings or OFIs from these previous exercises that need to be reconsidered?

References: Testimony transcript [Page 191/ Campbell; Page 195-196/Erhart], FPE 2011 Corrective Action Plan [table 4, page 14], FPE 2012 Corrective Action Plans [27-Aug, 19-Oct]

Response to Supplemental Questions 3 & 3a: B&W submitted a proposed Corrective Action Plan (CAP) resulting from the July 11, 2012 Annual Emergency Exercise, on February 28, 2013. The CAP is currently under review by NPO, and as a result the following numbers are based upon the number of proposed corrective actions. Based upon six (6) Findings and six (6) Opportunities For Improvement, B&W developed forty-six (46) corrective actions. Of these, at the time of the Public Hearing (March 14, 2013), thirty-three (33) were open and thirteen (13) were closed. As of May 31, 2013, thirty-one (31) of the actions remain open and fifteen (15) are closed.

Response to Supplemental Question 3b: The following table of corrective actions is composed of findings associated with communications/command and control identified during the evaluation of the 2011 Full Participation Exercise, “Double Dare. These corrective actions were re-evaluated for effectiveness in light of the similar repeated issues identified during the July 11, 2012 exercise and additional actions were determined to be appropriate to increase effectiveness.

		Status	Completion
Finding 9	FINDING: The Plant Shift Superintendent upgraded the classification from Site Area Emergency to a General Emergency and then presented to the Executive Team for review. Related to Objectives: Pan-EXEC.5, Pan-PXSO.4		
	Develop team specific training for PSSs including update to PX-5521	Closed	08/28/2012
	Conduct PSS training	Closed	11/01/2012
Finding 10	FINDING: The Plant Shift Superintendent conducted notifications for the upgraded classification instead of the Emergency Response Organization. Related to Objectives: Pan-EXEC.8, Pan-PXSO.8		
	Updated HNDBK-0015	Closed	02/28/2012
	PX-4978 for HNDBK-0015	Closed	03/15/2012
	Published HNDBK-0015	Closed	05/31/2012

Supplemental Question 4: How was this exercise more challenging than previous exercises?

What were the cascading elements of the exercise?

Reference: Testimony transcript [Page 194/Erhart]

Response to Supplemental Question 4: The 2011 Exercise was a high consequence, low probability event and is among the most challenging scenarios for Pantex. Though the 2012 Annual Site Exercise was not the most challenging event that the site might actually face, the exercise presented challenges to responders in areas that have not been evaluated. Because this exercise was not a full participation exercise, the plant was provided the opportunity to test the onsite organization's ability respond to a higher probability and lower consequence event (in comparison with the probability/consequence for the 2011 Exercise event) not resulting in an offsite release.

The reference to cascading events in the 2012 Annual Site Exercise was incorrect. The event was an earthquake with a resulting onsite chemical release. The exercise did not include any further cascading events.

Supplemental Question 5: What do you consider a "full deployment" exercise? (i.e., what criteria or other requirements need to be met?)

Reference: Testimony transcript [197-198/Campbell]

Response to Supplemental Question 5: In reviewing the transcript, the original response took the term at face value, considering the clarification statements provided in connection with the question ("did you actually put fire trucks out? Did you actually put people in uniforms out there and move them around?"). As a result, the original response was "yes", that this was a "full deployment" exercise.

If, however, the intent of the question regarding "full deployment" was to determine if all elements of the emergency response capabilities were demonstrated in the 2012 exercise, the response would have been "no", because the exercise was not a full participation exercise and did not include offsite participation. The focus of the 2012 exercise was testing onsite emergency response capabilities including the appropriate on scene response.

Supplemental Question 6: What are the credentials that qualify your staff as emergency management professionals? What are the qualifications of the emergency management staff? What is the process for getting them qualified, and where is this documented?

Describe the process that you use to complement your staff with personnel from other organizations? What selection criteria do you use to identify these personnel? Do they supplement the response organization or the emergency management department?

What is the basis and process for training these supplemental personnel? What qualifications do they achieve?

When these temporary staff deploy to new organizations, how do they continue to act in the role of emergency management specialists or response personnel?

Reference: Testimony transcript [199 Campbell]

Response to Supplemental Question 6: Though some emergency management staff have multiple years of experience at Pantex, currently the emergency management staff has no personnel with specific emergency management credentials. However, EMD has posted a position for an Emergency Management Department Manager with the requirement for specific emergency management credentials to include a minimum of eleven years' experience in DOE Emergency Management.

Separate from Emergency Response Organization training which is completed as assigned, the EMD staff is currently only required to complete all Pantex General Employee Training (GET) and Pantex Essential Training (PET) as the qualification process. In addition to GET and PET, those EMD staff within the Continuity and Emergency Planning section are required to complete Emergency Communications Network training in the Alternate Emergency Operations Center, the Emergency Operations Center, and the Incident Command Vehicle, Formality of Operations, Classified Cyber Security training, and Classified Matter Protection training.

The process for obtaining qualification follows plant employee training guidelines and requirements developed by the Pantex Technical Training Department and managed through the plant training tracking system, PLATEAU. As individuals are received into the department, training codes which contain general employee training are assigned in PLATEAU and completed by the individuals until qualification is reached. This process is documented in the Pantex Process Document (PD) 02.03.02.03 which describes the process by which Pantex conducts training.

EM is complemented with staff from other organizations to supplement the EMD. This is accomplished by a transfer of personnel to the EM staff to perform a specific need or role. This entails a request from the division manager for EM to the division manager where the resource resides. The supplemental personnel are recruited specifically for skills which they already possess and have demonstrated their ability. A few of examples of this are 1) When EM was in need of a project manager to manage and maintain a department Kaizen schedule a Project Management Professional (PMP) was requested and transferred from the training department; 2) When it was discovered that EM needed assistance in document management a degreed Records Management Professional was requested and transferred from the Safety Department;

and 3) When EM was in need of first-line supervisor, a Section Manager who had previous emergency response experience was requested and transferred from the Radiation Safety department. These personnel were trained and experienced in the tasks that were required of them in EMD prior to recruitment and needed no further emergency management training to complete the tasks.

Supplemental personnel used to complement the EMD staff receive all required general employee training, emergency response organization (ERO) position training (if assigned to a position within ERO), and any other plant required training not specific to the EMD to achieve qualification.

Supplemental personnel are not required to achieve any EM qualification.

As supplemental staff transition to new organizations, they retain assigned ERO positions. They may remain assigned to their ERO position until more suitable personnel may be assigned to the ERO and trained (perhaps by other EMD personnel).

Supplemental Question 7: The response to the Secretary's safety bulletin from other sites included reviews of both operational and natural phenomena events; the Pantex response to Action #1 only included natural phenomena. Why were beyond design basis operational events not addressed in your response?

What beyond design basis operational events has Pantex analyzed for emergency preparedness?

When was issue/revision 9 of the Pantex Plant Emergency Planning Hazards Assessment (MNL-190881) drafted and has it been approved? Is this the revision on which the response to the Secretary's safety bulletin is based?

Where in the SOE safety bulletin response do you discuss a review of flooding?

Reference: Testimony transcript [203-203Woolery & Campbell]

Response to Supplemental Question 7: The highly unlikely worst case operational events at Pantex could involve either High Explosive Violent Reaction (HEVR) or Inadvertent Nuclear Detonation (IND). Both are evaluated as required in the Safety Basis. The Pantex Emergency Management program periodically conducts exercises involving HEVR and the Emergency Action Levels (EALs) that exist to guide expected actions and responses. B&W Pantex has no plans to conduct IND emergency preparedness exercises.

The NNSA Production Office (NPO) has instructed B&W Pantex to develop an implementation plan in response to the recently published HSS Operating Experience Level 1, *Improving DOE Capabilities for Mitigating Beyond Design Basis Events*, which requires the consideration of response to beyond design basis events.

Revision 9 of the Pantex Plant Emergency Planning Hazards Assessment (MNL-190881) was drafted between Aug 2011 and Feb 2013 with calculations having been run by Alpha-Trac (a third party analytical services vendor) in Jan 2013. The completed draft was submitted to NPO for review on February 28, 2013. That draft is in the review and approval process.

Previous versions of the EPHA addressed the natural phenomenon tornado event at Pantex, and although Revision 9 of the EPHA was not developed in response to the HSS Safety Bulletin, this revision includes the natural phenomenon seismic event.

Flooding was not considered in the response to the HSS Safety Bulletin. However, Revision 9 of the EPHA which is currently under review, includes the natural phenomenon flood event.

Supplemental Question 8: The SOE safety bulletin response, Action #4, lists explosions with dispersal (i.e. HEVR) as potentially having off-site consequences. Is an HEVR a design basis, or beyond design basis, event at Pantex? Which variations of this accident fall into each respective category? What controls exist to prevent or mitigate (DBE) or only mitigate (BDBE) in each case?

Reference: Testimony transcript [204 Woolery/Campbell]

Response to Supplemental Question 8: Within the Pantex Documented Safety Analysis, both the facility safety analysis reports (SARs) and the weapon program hazard analysis reports (HARs) consider accidents with the potential to result in HEVR consequences as design basis events.

At Pantex, nearly every safety-class Limiting Condition for Operation (LCO), design feature (DF) and administrative control (AC) serves to disrupt or prevent the accident sequence associated with an HEVR consequence. Additionally, specific features of the cell facilities are credited with mitigating the consequence of an HEVR.

Currently there are no variations of HEVR considered as Beyond Design Basis Events.

Supplemental Question 9: Is the drill referred to by Mr. Campbell on page 204, line 19, the October 2011 full participation exercise FPE 11-1, "Double Dare"? If so,

- a. What is the basis of concluding this exercise was satisfactory? (i.e. "I think we did well.").
- b. How would this exercise be graded using the new strategy?
- c. What deficiencies were noted with respect to the radiological response?
- d. Pantex's response to Action 4c of the SOE safety bulletin suggests there are no off-site resources depended on for DBE/BDBE response, yet a lesson learned from this exercise was the need for off-site support. How are these lessons learned incorporated into emergency planning and communicated to DOE?

Reference: Testimony transcript [204-205/Campbell]

Response to Supplement Question 9: Yes, the drill referred to by Mr. Campbell on page 204 line 19 was the October 2011 FPE 11-1, "Double Dare" exercise.

The basis for the conclusion that the exercise was considered satisfactory was the successful completion of 114 out of 133 objectives. In addition, the exercise was the first full participation exercise conducted by Pantex in over seven years. Offsite organizations fully participated including the Office of the Governor of the State of Texas. Overall, the organization demonstrated the ability to protect the health and safety of the public despite some issues identified in association with risk significant objectives. Immediately following the exercise, participants conducted a critical self-evaluating hot wash discussing their performance and identifying issues and areas for improvement. In addition, a formal critique was conducted with participation by the entire controller and evaluator organizations to evaluate the emergency response.

Applying the scoring scheme adopted for the FPE 12-1 exercise yielded a rating of unsatisfactory. Pantex learned that the formula used is heavily weighted regarding number of findings without respect to their significance, and objectives have equal weight in this formula without respect to their importance. As a result prior to the next conducted exercise, Pantex will develop acceptance criteria that will provide an objective based evaluation of performance giving the proper weight to risk significant objectives.

Deficiencies noted with respect to the radiological response included a delay in getting Contamination Control Station (CCS) materials to the scene for use by Radiation Safety Technicians (RSTs), which resulted in a poorly established and managed radiation safety hot-line. In addition, RSD did not have the equipment and manpower required to perform full Field Monitoring Team (FMT) functions in support of the ERO, the Emergency Response Treatment Facility, and perform personnel decontamination.

The October 2011 full participation exercise FPE 11-1, "Double Dare" did not result in issuance of a lesson learned regarding the need for assistance from off-site entities in the area of consequence assessment. Pantex does not rely on (and the State does not provide) consequence assessment support.

Typically, Emergency Management lessons learned are captured as corrective actions through the development of Corrective Actions Plans and the corporate lessons learned program. This process includes the identification of superior performances, near misses, and low risk significant observations which are assigned to personnel for development and review by identified members of the organization. Lessons learned are reviewed by the corporate lessons learned program and incorporated into the DOE Lessons Learned program as applicable. Lessons learned and corrective actions are validated through subsequent drills and or exercises to determine the effectiveness of the action, if applicable.

Supplemental Question 10: What are the results of your commitment to re-grade the 2011 Full-participation exercise FPE 11-1 "Double Dare"?

Reference: Testimony transcript [211/Campbell]

Response to Supplemental Question 10: Applying the scoring scheme adopted for the FPE 12-1 exercise yielded a rating of unsatisfactory. Pantex learned that the formula used is heavily weighted regarding number of findings without respect to their significance, and objectives have equal weight in this formula without respect to their importance. As a result prior to the next conducted exercise, Pantex will develop acceptance criteria that will provide an objective based evaluation of performance giving the proper weight to risk significant objectives.