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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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2:206 PETITION REVIEW BOARD (PRB)

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TUESDAY,

MARCH 13, 2007

+ + + + +

The proceeding was conducted via  
teleconference 11:00 a.m., George Pangburn, PRB  
Chairman, presiding.

PRESENT:

- GEORGE PANGBURN, PRB Chairman
- GIOVANNA LONGO, Office of General Counsel
- MARIA SCHWARTZ, Office of Enforcement
- PAUL GOLDBERG, Petition Coordinator
- JOE DeCICCO, Petition Manager
- DONALD COOL, FSME
- MARY KAY FAHEY, Office of Investigations
- JAMES SALSMAN
- MARK WROBEL, United States Air Force
- LINO FRAGOSO, United States Navy
- TIM MAKULSKI, United States Army
- BHAT RAMACHANDRA, United States Air Force

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1 P-R-O-C-E-E-D-I-N-G-S

2 11:00 a.m.

3 LT COL WROEBEL: Hello?

4 MS. SCHWARTZ: Hello.

5 LT COL WROEBEL: I was just making sure  
6 someone was there.

7 MS. SCHWARTZ: This is Maria Schwartz. I'm  
8 with the Office of Enforcement.

9 LT COL WROBEL: This is Lieutenant Colonel  
10 Wrobel. I'm from the Air Force Medical Operations  
11 Agency.

12 MS. SCHWARTZ: Okay, I guess we are  
13 waiting for the people that are at the agency to come  
14 on.

15 LT COL WROBEL: Right.

16 CAPTAIN FRAGOSO: This is Captain Fragoso  
17 from the Navy.

18 LT COL WROBEL: Good morning, Captain  
19 Frogoso.

20 CAPTAIN FRAGOSO: How you doing, Mark?

21 LT COL WROBEL: Well, you know, it's  
22 Tuesday.

23  
24 CAPTAIN FRAGOSO: Yes, I know.

25 LT COL WROBEL: Made it to Tuesday, getting

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1 over that early morning rising from --

2 CAPTAIN FRAGOSO: Oh, God, I hate that.

3 LT COL WROBEL: It was tough yesterday.

4 CAPTAIN FRAGOSO: Yes, it was really tough.

5 And, we need to meet?

6 LT COL WROBEL: Yes.

7 CAPTAIN FRAGOSO: John, Greg and I

8 (phonetic).

9 LT COL WROBEL: Yes, I guess somebody is  
10 going to come over, I don't know if he's going to come  
11 over and look at the RAMA (phonetic) system, but, you  
12 are right, it's time to get together again anyway.

13 CAPTAIN FRAGOSO: Uh-huh. I'm going to be  
14 gone next week.

15 LT COL WROBEL: Uh-huh. Well, maybe the  
16 last week of the month.

17 CAPTAIN FRAGOSO: Let me see, yes, how  
18 about on the 29<sup>th</sup>, are you free?

19 LT COL WROBEL: Let's see, yes, it looks  
20 pretty good for me, too.

21 CAPTAIN FRAGOSO: Okay. I'll send an e-  
22 mail to Greg, and we'll plan for that day.

23 LT COL WROBEL: Okay.

24 CAPTAIN FRAGOSO: Are we the only ones on  
25 the line?

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1 MS. SCHWARTZ: I'm on the line, this is  
2 Maria Schwartz, I'm with the Office of Enforcement at  
3 the NRC.

4 CAPTAIN FRAGOSO: Hi, how you doing?

5 MS. SCHWARTZ: Good, how are you?

6 MALE PARTICIPANT: This is (indiscernible)  
7 speaking, good morning, from (indiscernible) Air Force  
8 Base.

9 LT COL WROBEL: Good morning.

10 MALE PARTICIPANT: I'm sorry, what was your  
11 name?

12 DR. ROMBOT (phonetic): Dr. Rombot. He's  
13 from our office.

14 MALE PARTICIPANT: (Indiscernible).

15 MALE PARTICIPANT: Yes.

16 MR. SALSMAN: I'm Jim Salsman here, from  
17 Mountainview (phonetic). I'm wondering if you have  
18 ever met, or corresponded, or talked to John Tashner  
19 (phonetic).

20 MALE PARTICIPANT: Yes, a long time ago.

21 MALE PARTICIPANT: We know John Tashner.  
22 John Tashner is former Air Force.

23 MALE PARTICIPANT: Yes, and former Navy,  
24 too.

25 MALE PARTICIPANT: And former Navy, that's

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1 right.

2 MR. SALSMAN: Actually, he retired from the  
3 Navy as a Captain.

4 MALE PARTICIPANT: Oh, really. He retired  
5 from the Air Force as a Lieutenant Colonel.

6 MALE PARTICIPANT: Yes. He's been around  
7 the block.

8 MALE PARTICIPANT: (Indiscernible)

9 MALE PARTICIPANT: Albuquerque.

10 MALE PARTICIPANT: (Indiscernible) outside  
11 of (indiscernible) next to Albuquerque.

12 MALE PARTICIPANT: Okay.

13 MALE PARTICIPANT: I wasn't able to contact  
14 him in time to ask him to participate in the  
15 teleconference. I just found out less than a month  
16 ago that he was the one responsible for using tungsten  
17 on (indiscernible) system.

18 MALE PARTICIPANT: Yes, I remember some of  
19 the studies that were done at the time, and I think  
20 that they (indiscernible)

21 MALE PARTICIPANT: He was, apparently,  
22 given an award some time in the 1980s for that work.

23 MALE PARTICIPANT: That I didn't know, but  
24 I wouldn't be surprised.

25 MALE PARTICIPANT: I've been trying to read

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1 his biography on (indiscernible), he's in his 80s now.

2 (Indiscernible)

3 MALE PARTICIPANT: Yes, that would make him  
4 about 76 years old.

5 MALE PARTICIPANT: Yes.

6 MALE PARTICIPANT: (Indiscernible)

7 MR. DeCICCO: Hello, is anybody on the  
8 line?

9 MS. SCHWARTZ: Yes.

10 MALE PARTICIPANT: Oh, hello Joe.

11 MR. DeCICCO: Great, great, just a reminder  
12 for everybody who is on the line and everybody here  
13 present, I'm Joe DeCicco, and this line is being  
14 recorded to be transcribed and to make it publicly  
15 available.

16 CHAIRMAN PANGBURN: Okay, this is George  
17 Pangburn. Who all do we have on the line at this  
18 moment?

19 MR. SALSMAN: This is James Salsman, from  
20 Mountainview, California.

21 CHAIRMAN PANGBURN: Good morning, Mr.  
22 Salsman.

23 Others on the line?

24 MS. SCHWARTZ: This is Maria Schwartz with  
25 the Office of Enforcement in the NRC.

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1 CHAIRMAN PANGBURN: Good morning, Maria,  
2 how are you?

3 MS. SCHWARTZ: Good, how are you?

4 CHAIRMAN PANGBURN: Fine, thanks.

5 Anyone else?

6 CAPTAIN FRAGOSO: This is Captain Lino  
7 Fragoso from the Navy.

8 CHAIRMAN PANGBURN: Morning, how are you  
9 doing this morning?

10 CAPTAIN FRAGOSO: Great, thank you.

11 LT COL WROBEL: This is Lieutenant Colonel  
12 Mark Wrobel from the Air Force Medical Operations  
13 Agency.

14 CHAIRMAN PANGBURN: Morning, Mark.

15 LT COL WROBEL: Good morning.

16 MR. RAMACHANDRA: Good morning, Bhat  
17 Ramachandra, from U.S. Air Force, from (indiscernible)  
18 Air Force Base. I work with Colonel Wrobel.

19 CHAIRMAN PANGBURN: I'm sorry, could you  
20 repeat again?

21 MR. RAMACHANDRA: Ramachandra, R-A-M, ram,  
22 C-H-A-N-D-R-A. I'm from the U.S. Air Force.

23 CHAIRMAN PANGBURN: Okay.

24 MR. RAMACHANDRA: Bolling Air Force Base,  
25 (Indiscernible) committee.

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1 CHAIRMAN PANGBURN: Thank you.

2 Is that everyone?

3 MR. MAKULSKI: Actually, Tim Makulski from  
4 the Army Safety Office, representing (indiscernible).

5 CHAIRMAN PANGBURN: Good morning, how are  
6 you this morning?

7 MR. MAKULSKI: Good morning, sir.

8 FEMALE PARTICIPANT: And, some people will  
9 need to sit closer to their phones or speak louder.  
10 Some people I can hear very well, and other people I  
11 cannot hear at all.

12 CHAIRMAN PANGBURN: Okay. This is George,  
13 George Pangburn, and I'll begin at this point. I'm  
14 the Deputy Director of the Office of Federal and State  
15 Materials and Environmental Management Programs, and  
16 I'm the Chairman of this 2:206 Petition Review Board.

17 We are here today to receive information,  
18 additional information, on a petition that was  
19 submitted by Mr. James Salsman on December 2, 2006,  
20 and supplemented by several e-mails related to that  
21 petition since that time.

22 Other members of the board here today, and  
23 I'll go around the table to get their names and  
24 affiliations very quickly.

25 MR. GOLDBERG: I'm Paul Goldberg, I'm

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1 Petition Coordinator for 2:206 Petitions in MNSF  
2 (phonetic), and I'm not actually formally a member of  
3 the board, but I am participating.

4 MR. MOORE: This is Scott Moore, I'm the  
5 Deputy Director of the Division of Material Safety and  
6 State Agreements in George's office.

7 MS. FAHEY: May Kay Fahey, I'm Assistant to  
8 the Director, Office of Investigations.

9 MR. COOL: Donald Cool, I'm the Senior  
10 Advisor to the Director of Division of  
11 Intergovernmental Liaison and Rulemaking.

12 MR. LONGO: Giovana Longo, I'm a Senior  
13 Attorney in the Office of General Counsel, NRC.

14 MR. DeCICCO: I'm Joe DeCicco, I'm the  
15 Petition Manager for this petition.

16 CHAIRMAN PANGBURN: Okay, that's everyone  
17 here. Has anyone else joined us on the phone? Okay,  
18 if not, I'll go ahead.

19 We have about an hour budgeted for this  
20 call with the Operations Center, and I'll get through  
21 this briefly and then turn it over to Mr. Salsman.

22 The 2:206 process provides members of the  
23 public with a means to request that the Commission  
24 take enforcement-related action, that is, to modify,  
25 suspend or revoke a license, or take other appropriate

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1 enforcement action.

2 This policy is in Section 2:206, Title 10  
3 of the Code of Federal Regulations, and the Commission  
4 may grant a request for action in whole or in part, or  
5 take other action that satisfies the concerns by the  
6 requester, or deny the request.

7 After a 2:206 petition is received by the  
8 Office of the Executive Director for Operations, the  
9 Director assigns it to the appropriate office for  
10 evaluation, and in that case it is this office, the  
11 Office of Federal and State Materials and  
12 Environmental Management Programs.

13 The 2:206 process is a public process, in  
14 which the petition and all information in it will be  
15 made public. Our handling of these petitions is  
16 operationally directed by NRC Management Directive  
17 8.11, and it's that directive which provides for the  
18 teleconference which we are having here today.

19 Requests that raise health and safety or  
20 other concerns, without requesting enforcement-related  
21 action, are typically reviewed by means other than the  
22 2:206 processs.

23 The petition presented by Mr. Salsman  
24 requests several actions to modify depleted uranium  
25 munition licenses. All the members of the PRB have a

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1 copy of the petition and its supplements. In brief,  
2 Mr. Salsman has requested that all these such  
3 licenses, that is, depleted uranium munitions  
4 licenses, be modified to impose certain enforceable  
5 conditions.

6 In brief, those modifications would be to  
7 quantify the dates, times, location, quantities and  
8 types of tyroforic (phonetic) [CORR pyrophoric CORR]  
9 munitions used, to determine the amount of uranium  
10 oxide gas for use [CORR produced CORR] under certain  
11 use conditions, to determine the extent of  
12 reproductive and developmental toxicities from typical  
13 combustion product inhalation in at least five diverse  
14 species of animals, using chromosome aberration  
15 analysis, and public in peer review medical and  
16 scientific literature the licensee's estimates and  
17 determinations from the modification of A, B or C  
18 above.

19 As I mentioned earlier, the purpose of  
20 this meeting is for Mr. Salsman, in this case the  
21 petitioner, to provide any relevant additional  
22 information, explanation, and support for the request  
23 that he's made to the NRC in advance of the PRB's  
24 evaluation.

25 This meeting is not a hearing, it is not

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1 intended to provide the petitioner with a mechanism to  
2 either interview, investigate or examine the PRB. The  
3 potentially affected licensees have been invited to  
4 participate, to ensure that they understand the  
5 concerns about either their facilities or their  
6 activities.

7 The PRB members may ask questions of Mr.  
8 Salsman or the licensees as needed to clarify the  
9 request, and licensees may also ask questions to  
10 clarify any issues raised. Any member of the public  
11 may listen in, but at this point we have no such  
12 members on other than the affected parties.

13 This meeting is being recorded, and a  
14 transcription of the recording will be made publicly  
15 available.

16 Unless any of the other PRB members have  
17 a comment at this point, and if there are no  
18 questions, Mr. Salsman, the floor is yours to provide  
19 the board with the information you deem fit.

20 MR. SALSMAN: Thank you, Dr. Pangburn.

21 I have a number of additional pieces of  
22 information that I want to provide, but I first want  
23 to say that the process here is something that I'm  
24 trying certainly to respect, and I will have at least  
25 one question that I've tried to boil everything down

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1 to.

2 The reason I'm asking a question is  
3 because in order for me to provide information I have  
4 to have some idea of how the PRB has understood the  
5 petition as it is submitted. There are a number of  
6 additional pieces of information I could provide in  
7 order to provide the most useful information. I need  
8 to know at least something of how the petition was  
9 comprehended.

10 But, before I get to my question, I just  
11 want to say, thank you for reading the remedies that  
12 I've requested, and pertaining to the second one,  
13 determining the amount of uranium oxide gas produced  
14 during the (indiscernible) gas, something in the  
15 question on the rate of condensation, and this has  
16 come in many discussions on the subject, and I think  
17 that this is probably one of the more important  
18 issues. Uranium oxide gas, according to Carter and  
19 Arch (phonetic), in a 1970 paper that I reference, in  
20 approximately half of their internal (indiscernible)  
21 droplets which burn in air. This gas condenses over  
22 time, and there's a great deal of question about how  
23 quickly it condenses.

24 I just wanted to point that out about the  
25 second of the four remedies that I requested, in

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1 addition to the amount of gas produced it's probably  
2 extremely important, and I'm not aware of any  
3 publication in the literature, other than a Russian  
4 paper that didn't deal, specifically, with uranium,  
5 just talking about metal oxide, ceramic metal oxide,  
6 in general. But, there's plenty of evidence that some  
7 of the gas produced condenses quite quickly, and some  
8 of it lasts for a great length of time, but, you know,  
9 I can't quantify those numbers. This suggests a huge  
10 amount of uncertainty around this, you know, when you  
11 look at the Health Physics Society publications, for  
12 example, on the hps.org website, and you'll find  
13 statements such as, humans have been interacting with  
14 uranium for 200 years, and suggesting that that means  
15 that we have 200 years of experience with it's  
16 toxicological profile.

17 But we don't, because people have not been  
18 burning uranium and breathing the fumes in any major  
19 respect since -- until 1991, until February of 1991,  
20 starting (indiscernible) that time.

21 And, I wanted to make sure that you got  
22 the graph that I recently produced, and I believe I  
23 might have sent to Joe, but looking through my e-mails  
24 this morning I couldn't find that graph entitled,  
25 "Risk of Birth Defects from 1991 War."

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1 MR. DeCICCO: This is Joe DeCicco. Right  
2 off the top of my head, I don't know if I have that  
3 particular graph.

4 MR. SALSMAN: Okay. I wanted to submit  
5 that, and I apologize for not getting that, I thought  
6 I had. I looked through my e-mail and was astonished  
7 to not find it. So, let me just tell you what the url  
8 is, and then I'll send in an e-mail as well.

9 MR. DeCICCO: Okay.

10 MR. SALSMAN: It's vovik.org/du/gwbd [CORR  
11 bovik.org/du/gwbd CORR] for Gulf War birth defects,  
12 .jpg, or joint pictures group.

13 So, this shows the rate reported by the  
14 (indiscernible) [ CORR Basra CORR] University Hospital  
15 for their births from 1990 through 2000,  
16 approximately, and the rate recorded by Dr. Han Kang  
17 (phonetic), who is the epidemiologist with the  
18 Veterans Administration tasked with tracking this  
19 information, and it shows that the (indiscernible)  
20 [CORR Basra CORR] University Hospital trend was much  
21 steeper than what Dr. Kang has seen, but I think that  
22 there's a huge (indiscernible) with the slopes in  
23 those two curves are going to be similar over time,  
24 and I want to make sure that that graph is distributed  
25 to all of the parties in case you might want to

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1 comment on it.

2 I will e-mail that immediately to you,  
3 Joe, after the -- and Dr. Pangburn, after the  
4 teleconference, and I apologize for not sending that  
5 to you earlier.

6 Now, the question that I wanted to ask,  
7 which is, it's so important to the fundamentals here,  
8 is about alternative hypotheses. There have been  
9 these birth defects, and a statistically significant  
10 amount of increases in the congenital malformations of  
11 near-term (phonetic) children of the soldiers who are  
12 combat deployed when compared to the soldiers who were  
13 not combat deployed over the same time period  
14 (indiscernible) military units that were not deployed.

15 (Indiscernible) that there was some cause,  
16 of course, you know, we don't think that this is  
17 statistical proof because of the statistical  
18 significance, so the cause has a number of hypotheses,  
19 and over time those hypotheses have been ruled out.  
20 And, I'm wondering if anyone would like to -- of  
21 course, I cannot -- I cannot do anything more than ask  
22 whether anyone knows of any alternative hypotheses  
23 which are still considered viable, other than  
24 (indiscernible). [CORR uranium oxides corr]

25 You know, of course I'd like, in

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1 particular, licensees to consider this question.

2 CHAIRMAN PANGBURN: This is George speaking  
3 for the PRB here, I'll let others chime in if they  
4 wish, but, you know, at this point I think we don't  
5 want to get into a discussion of the relative merits  
6 of the petition. If the licensees wish to speak to  
7 whether they are aware of information about the birth  
8 defects issue that you raise, I'll allow them to at  
9 this time.

10 When you say birth defects, if I may ask  
11 a question, are you talking about the relative birth  
12 defects in children of soldiers who were deployed in  
13 the Gulf War versus those who were not? Is that  
14 correct?

15 MR. SALSMAN: That's correct.

16 CHAIRMAN PANGBURN: Okay, thank you.

17 MR. SALSMAN: In 2001, Dr. Han Kang  
18 published a report (indiscernible) my petition, in the  
19 Annals of Epidemiology, suggesting what the -- stating  
20 that the risk ratio over the baseline, which I think  
21 is about 2.2 percent from moderate to severe birth  
22 defects, but in terms of the number of times that many  
23 birth defects of the children of the soldiers who wore  
24 (indiscernible) war hats, from males it was 1.8, and  
25 for females it was 2.8 in Dr. Kang's 2001 studies, a

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1 study that was covered for 2001 I should say. A  
2 number of people, and a large number of people,  
3 suggested that this was due to a reporting error  
4 (indiscernible) an epidemiologist in the United  
5 Kingdom, who is studying similar statistics in the  
6 United Kingdom, wrote in a paper published  
7 (indiscernible) that the increase detected in moderate  
8 to severe birth defects for those children  
9 (indiscernible) may have been due to reporting error,  
10 self-selection, with these soldiers who were entering  
11 survey questionnaires, survey questions, I believe,  
12 for both the U.K. and the U.S. epidemiology studies  
13 might have been remembering incorrectly putting their  
14 children birth defects statistics incorrectly, which  
15 I think is ludicrous. But, Dr. Kang diligently went  
16 back and reviewed the records, and then found that by  
17 2003 he had (indiscernible) [CORR reviewed CORR] 700  
18 medical records of children involved, that the actual  
19 rate for males, instead of being -- instead of being  
20 1.8, was 2.2, over that three-year time period -- two-  
21 year time period I should say, there was a 20 percent  
22 increase in that risk ratio.

23 And, I believe when you see the graph, and  
24 you plot that against the (indiscernible) [CORR Basra  
25 CORR] data, it looks like it's going to be matching

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1 the same curvature, and if it does that suggests the  
2 rate could be quite high.

3 Now, about this data, it's been difficult  
4 to obtain this information. The Navy has a --  
5 probably has the best wide birth and infant health  
6 registry, which is run out of San Diego by a doctor  
7 who -- a medical doctor whose name escapes me at the  
8 moment, Ryan, Dr. Margaret Ryan (phonetic). Dr.  
9 Ryan's statistics have not been published since 2001,  
10 after the -- I mean, basically, as soon as there was  
11 an uptake of any kind these statistics were -- they  
12 were published annually, and in several PDF files with  
13 information, but then they suddenly stopped, and there  
14 hasn't been anymore information to that birth and  
15 infant health registry.

16 And, I have (indiscernible) the Freedom of  
17 Information Act, so I have gone to the California  
18 State Medical Licensing Board about Dr. Ryan's  
19 practice, and I have been diligent in my attempts to  
20 obtain this data, but it's been absolutely not  
21 forthcoming at all.

22 So, I urge the Petition Review Board to  
23 use all your power, subpoena, and persuasion to make  
24 that data public, because the citizens of this country  
25 who ultimately decide (indiscernible) and the

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1 government (indiscernible) make a decision about that.

2 One of the things that concerns me is that  
3 I is committed in the supplement, is the fact that  
4 states all over the country are implementing laws and  
5 the Department of Defense has a program to use urine  
6 testing for this kind of exposure. The people that  
7 are coming back from Iraq today, that uranium testing  
8 is probably a good idea, but for the people who were  
9 exposed in 1991 I don't think it is, and I've cited a  
10 number of reports including a gentleman by the name of  
11 Asborough (phonetic) [CORR Ansoborlo CORR] and  
12 Straddling (phonetic) [CORR Stradling CORR], who are  
13 radiation protection researchers working on safety in  
14 various practicing -- I guess fuel practicing  
15 facilities, suggesting that there's (indiscernible) in  
16 terms of a quotation they made in their paper, and as  
17 clearly as I can here, if I just read the, uranium  
18 (indiscernible) [CORR urinary assay after CORR]  
19 uranium inhalation and exposure can be useful  
20 (indiscernible) provided that measurements are made  
21 soon after a known acute intake. The urinary  
22 excretion rate falls substantially after exposure,  
23 particularly, during the first few days. If urine  
24 analysis is carried out on a routine basis, not  
25 related to the pattern of intake, then the errors in

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1 the assessment of intake can be considerable.

2 That's from A-N-S-O-B-O-R-L-O, first  
3 initial E., that was from a 1998 paper entitled,  
4 "Exposure Implications From Uranium Aerosols Formed at  
5 a New Laser Enrichment Facility, Application of the  
6 ICRP Respiratory Tract and Systemic Model," in the  
7 Journal of Radiation, Protection, Dosimetry, Vol. 79,  
8 pgs 23-27.

9 So, the fact is, urine testing has been  
10 used on people who were exposed more than a decade  
11 ago, and I don't think it's (indiscernible) I think  
12 that there's absolutely no question that inhalation of  
13 uranium combustion products, regardless of the  
14 proportions of uranium oxide or soluble (indiscernible)  
15 contains some (indiscernible), and that, to the extent  
16 that it absorbs in the lungs, which is relatively  
17 quickly even for -- it really doesn't -- I think to  
18 some extent it doesn't matter how quickly the gas  
19 condenses, because what it condenses into is still  
20 very soluble for a long time.

21 But, when it is absorbed by the lungs, it  
22 will enter the bloodstream and accumulate in lymph  
23 nodes, according to Dr. -- according to one of the  
24 medical doctors who is treating some of the patients  
25 who have been returning from Iraq and have had

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1 children with birth defects. The doctor's name is  
2 Fasy, F-A-S-Y, first name Thomas, he says that he's  
3 getting good results on urine testing in people who  
4 are coming back right away. So, at any rate, if  
5 there's enough to detect after more than a few days  
6 (indiscernible) then that probably is an exposure  
7 that's considerably more than anything that  
8 (indiscernible) ever anticipated as a likely exposure.

9 All right, moving in, inheritability of  
10 genetic damage is something I've been studying  
11 recently, and I've had the opportunity to talk to some  
12 genetic counselors who offered their services, and  
13 I'll try to mail you that mailing list devoted to  
14 genetic counseling, there's no question that  
15 tremendous damage occurs, whether the child of someone  
16 with this genetic damage has birth defects or not, it  
17 increases their likelihood of having children with  
18 birth defects as well, and I urge you to consider that  
19 when you are considering your responsibility to  
20 protect the health and safety of the citizens of the  
21 United States.

22 We are not talking about something that's  
23 happening in a far-away land, we are talking about  
24 something which seriously impacts the viability of  
25 many generations to come, and affecting those people

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1 who have, for whatever reason, decided to volunteer  
2 their services in the military.

3 I don't think that we want to be setting  
4 ourselves up for that, and the fact that this kind of  
5 genetic damage is inheritable is extremely troubling,  
6 and with the amount of attention being paid to  
7 soldiers in wars these days, I think that it's  
8 extremely relevant, and, you know, not just because  
9 the people that are in the hospital now, but for all  
10 their children, and those people's children.

11 There is a term in genetics called  
12 mutation collapse, let me make sure I got that right,  
13 but there's a situation that can occur and too much  
14 genetic damage occurred, and it's called -- hold on  
15 just a moment please, I apologize, I just want to make  
16 sure I'm not using the wrong term -- it's called  
17 mutational meltdown, I'm sorry, that's actually the  
18 term cited in a number of papers published by people  
19 such as Lynch and Gabriel (phonetic), 1990, in General  
20 Evolution, and Journal of Heredity, by Lynch, Burger,  
21 Butcher and Gabriel, in 1993. I'll give you these  
22 references in the e-mail as well after the conference  
23 (indiscernible) petition.

24 The mutational meltdown refers to the  
25 process of which a small population can accumulate the

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1 (indiscernible) mutations which leads to loss of  
2 fitness and decline of the population size, which may  
3 lead to further accumulation of (indiscernible)  
4 patients due to inbreeding depression, which is  
5 another term in genetics, inbreeding depression.

6 A population experiencing mutational  
7 meltdown is trapped in a downward spiral and will go  
8 extinct if the phenomenon lasts for some time.  
9 Usually, the deleterious mutation would simply be  
10 selected away, but during mutational meltdown the  
11 number of individuals who are suffering an early death  
12 is too large relative to the overall population size,  
13 so that mortality exceeds the birth rate.

14 Now, I hope this doesn't happen to us, but  
15 the fact that it's even a question as to how much  
16 genetic damage can occur from this kind of thing,  
17 after, I mean, the urine line has been used to stain  
18 the DNA molecule since before the structure of the DNA  
19 molecule was even known. We've known that this  
20 molecule has an affinity for chromosomes with  
21 teteranogentic (phonetic) information, that we have,  
22 for whatever reason, not yet determined how dangerous  
23 it is exactly to breathe the combustion products. We  
24 don't even know how dangerous it is if we take  
25 measured quantities of uranol compounds and inject

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1       them into lab animals, which is something that  
2       presumably would be determined if this petition was  
3       granted, as we'd like to know how much of the uranol  
4       is in the combustion (indiscernible).

5               Okay. Back to the epidemiology, and I  
6       talked about the fact that it's so difficult to  
7       determine the birth defect statistics from the Birth  
8       and Infant Health Registry. As you know, Dr. Rita  
9       Hinden (phonetic), wrote a 70+ reference review on the  
10      subject, and has submitted her statements, and, Joe,  
11      did you receive that?

12             MR. DeCICCO: Yes, I did.

13             MR. SALSMAN: Okay. Dr. Hinden says, I'm  
14      not going to quote her in full, but she says that the  
15      use of (indiscernible) uranium emissions [CORR  
16      munitions CORR] is not good science, and that they  
17      should not be manufactured or exploited. And, I  
18      completely agree with her.

19             You know, Dr. Han Kang, I referred to  
20      earlier, has probably more access to this information  
21      than the rest of us, but I don't know -- I don't even  
22      think he's been able to obtain the Birth and Infant  
23      Health Registry data either. So, when you decide what  
24      materials to request from other agencies, I hope you  
25      keep that in mind.

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1 I just want to talk about a few more  
2 things, just four more topics, and then I will be  
3 done. There is a recruiting crisis in the military.  
4 Let's say I'm completely wrong with the statement that  
5 inhalation of uranium combustion products is not a  
6 serious problem, well, we still need to know that.  
7 It's extremely important that we learn that as soon as  
8 possible if that's the case, because the military just  
9 recently has decided to change their recruiting from  
10 what has been over the past several years  
11 (indiscernible) their retention policies. Some of  
12 this is having kind of (indiscernible) negative  
13 feedback because recruiting is sharply down and no  
14 longer -- we used to get statistics about  
15 (indiscernible) we don't anymore.

16 However, there was recently a news item  
17 saying that military agencies have been allowing more  
18 convicted felons in the ranks. I think that's a  
19 serious problem.

20 The question of the health and safety of  
21 the troops is something that was a big question during  
22 the '70s, when Agent Orange was being reviewed, and,  
23 you know, when Agent Orange was first considered as the  
24 pure herbicide that it was supposed to be, it,  
25 apparently, was not teratogenic, which was extremely

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1 (indiscernible) in fact, when you fact that so many  
2 returning veterans of the Vietnam War were  
3 experiencing cancer and birth defect problems,  
4 research has looked further, and finally it was  
5 determined that there was contamination in the barrels  
6 of (indiscernible) that had been used resulting in  
7 small and substantial amounts of toxins and teratogens  
8 in those barrels of Agent Orange, and the other  
9 (indiscernible) that would be used in there.

10 And, that put a very serious question in  
11 the minds of generation recruits, potential recruits,  
12 about whether or not the military was diligently  
13 protecting the health and safety of the troops.

14 And, I am going to raise this issue, and  
15 I will continue to raise this issue, because I believe  
16 it is a very serious issue, and it bears directly on  
17 our country's ability to defend ourselves in a  
18 military crisis.

19 And, some would say that we are already in  
20 a military crisis, and some would say that the reason  
21 that we are in such a military crisis is due in part  
22 because we haven't switched to tungsten (phonetic)  
23 emissions [CORR munitions CORR] yet. Almost all the  
24 skirmishes, I guess I should say, we are in on a daily  
25 basis, are not the kind of battles where having

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1 overwhelming superior fire power is particularly  
2 useful, that is to say, (indiscernible) and for a  
3 situation in which we are not fighting nothing but  
4 asymmetric conflicts I don't think there would be any  
5 disadvantage. Maybe Ken or Dr. Bodder (phonetic) and  
6 Mark might want to address that comment, because they  
7 know something I don't, but my opinion has always been  
8 that we need to solve our conflicts through  
9 negotiation and diplomacy first, an effort that  
10 doesn't require facing secreted uranium emission.

11 Finally, there's the question of public  
12 relations for the other legitimate uses of uranium.  
13 The fact that the Nuclear Regulatory Commission has  
14 been in this position for so long, allowing the  
15 (indiscernible) to transfer the (indiscernible)  
16 ammunition to the military, is not something that the  
17 public, or the municipal officials, or state  
18 officials, or even corporations considering whether or  
19 not they want to get involved in the process of  
20 building more nuclear plants, or researching more  
21 nuclear medicine, are going to be considering, as long  
22 as the Nuclear Regulatory Commission is, essentially,  
23 saying that there's no problem here, that these  
24 munitions can be transferred, then everybody who is  
25 going to think about whether or not they want to have

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1 the Nuclear Regulatory Commission regulating whatever  
2 happens to be in their backyard, or in their local  
3 doctor's office, is going to have those questions in  
4 their mind.

5 And, it would be a good idea, I believe,  
6 to remove that doubt from the public, because as we  
7 face the climate crises, and as we, of course, aging  
8 of the Baby Boomers, and the healthcare crises that  
9 that's going to entail, we need to be able to have  
10 uncluttered access to whether the solutions are the  
11 most appropriate.

12 And, I don't want, you know,  
13 (indiscernible) [CORR our children CORR] to have the  
14 cloud hanging over their heads, knowing that the  
15 nuclear waste industry, which is, basically, you know,  
16 the (indiscernible) based (indiscernible) towards  
17 something that people considered acceptable to burn in  
18 the present of living beings, does make it's way into  
19 the in vitro system, whether or not humans are the  
20 ones respirating it initially. I think that that is  
21 a very serious question, and will cause continuing  
22 lingering doubt in the minds of the public about the  
23 competency of the regulators involved.

24 Finally, I just want to say that I'm very  
25 grateful to the Petition Review Board for this

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1 opportunity, and I know we have less than 20 minutes  
2 left, so I'm finished with my statement.

3 CHAIRMAN PANGBURN: Well, thank you for the  
4 information you provided.

5 At this point, what I'd like to do is  
6 offer the licensees and other individuals on the  
7 phone, if they have any questions to ask, or insights  
8 they'd like to offer at this point, this is the  
9 opportunity to do so.

10 MS. SCHWARTZ: This is Maria Schwartz. I  
11 don't have any questions.

12 CHAIRMAN PANGBURN: Thank you, Maria.

13 Okay, hearing nothing, I do appreciate the  
14 time you spent, Mr. Salsman, to provide this  
15 information to us. It's obvious that you've thought  
16 about this a great deal, and we appreciate that.

17 We will take into consideration the  
18 information you provided to us today, as well as the  
19 information in your December 2<sup>nd</sup> petition and  
20 subsequent e-mails and references you've provided to  
21 Mr. DeCicco.

22 What I'd like to do now is have Joe talk  
23 a little bit about the process from this point on, so  
24 that -- earlier I mentioned the Management Directive  
25 and Joe will talk a little bit about the process that

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1 will entail from today forward.

2 MR. DeCICCO: With the information provided  
3 today, what will happen is, the Petition Review Board  
4 will meet in a closed session to discuss the merits of  
5 the petition, and make a recommendation as to how to  
6 proceed and to address the petition.

7 What I will do then, as Petition Manager,  
8 is call you back, Mr. Salsman, and indicate to you  
9 what the recommendation of the board is.

10 If you agree with the recommendation, or  
11 if you disagree with the recommendation, you do have  
12 an opportunity to again address the Petition Review  
13 Board one more time, and if you do address it then,  
14 again, the Petition Review Board will meet again in  
15 closed session to make a final recommendation as to  
16 how to proceed.

17 Is there any other questions on that or  
18 the procedure?

19 CHAIRMAN PANGBURN: We'll seek to hold that  
20 meeting as soon as we possibly can, taking into  
21 account the schedule of the people here around the  
22 table, and as Joe mentioned, he will be back in touch  
23 with you shortly thereafter.

24 MR. SALSMAN: Okay.

25 CHAIRMAN PANGBURN: Okay.

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1 MR. SALSMAN: Thank you.

2 CHAIRMAN PANGBURN: You are welcome.

3 Anything else from the members of the  
4 board here?

5 Okay, thanks for your time today. We are  
6 adjourned.

7 (Whereupon, the above-entitled matter was  
8 concluded.)

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