From: Norma Garcia-Santos
Sent: Monday, August 04, 2008 11:17 AM
To: Rolonda Jackson; Jennifer Valencia
Cc: Jeff Clark; Mahendra Shah
Subject: FW: Status of Petition PRM-20-26

Good morning,

Please, include this e-mail in ADAMS package ML082050139 - Mr. Salsman petition.

Thanks,
Norma

-----Original Message-----
From: Norma Garcia-Santos
Sent: Thursday, July 24, 2008 1:44 PM
To: Jeff Clark; Mahendra Shah
Subject: FW: Status of Petition PRM-20-26

Good afternoon,

Peter Habighorst sent this information to me today.

Norma Garcia
Project Manager
Office of Nuclear Material Safety and Safeguards

-----Original Message-----
From: Peter Habighorst
Sent: Thursday, July 24, 2008 10:11 AM
To: Norma Garcia-Santos
Subject: FW: Status of Petition PRM-20-26

Norma,
I promised Mr. Salsman that for question number 3 today that we would add to this to his petition request from a couple of weeks ago...This petition probably went to HLW....could you ensure that it gets incorporated.....

The other questions were discussed at our public meeting on soluble uranium earlier today..

Give me a call at 492-3136 with any questions...thanks

-----Original Message-----
From: James Salsman [mailto:jsalsman@gmail.com]
Sent: Tuesday, July 22, 2008 10:19 AM
To: Yawar Faraz; Peter Habighorst; Frank Cardile
Subject: Re: Status of Petition PRM-20-26

Dear Mr. Faraz,

Thank you for your help. Here are the questions I intend to ask and material that I ask be included in the record:

1. Research by Alexandria C. Miller published in the Journal of Inorganic Biochemistry in 2002 suggests that the chemical toxicity of the uranyl ion is

a million times more hazardous than the radioactivity. We are spending $15-450 million to convert depleted
UF6 stockpiles to insoluble UO2 (http://web.ead.anl.gov/uranium/faq/mgmt/faq27.cfm). However, 10 CFR 20 has said for decades and still says that the effluent and inhalation concentrations for soluble forms of U-238 are allowable in quantities about an order of magnitude more than insoluble forms.
What do we stand to lose when regulations do not reflect the emperical reality of scientific experiments?

2. Further work by Miller with McClain in the 2007 Reviews of Environmental Health has reviewed the mutagenicity and teratogenicity of the uranyl ion, as well as carcinogenic and behaviorial effects of uranyl, one of the few ions used by microscopists to stain DNA. When regulations, including the allowed effluent and air concentrations of hazardous waste, are aligned to emperical observations, what do we stand to gain?

3. Does the increasing storm strength predicted by NOAA constitute an emergency basis for approval of the Yucca Mountain application of the Department of Energy? Why or why not?

I ask that the following some quotes from Alexandria C. Miller and David McClain (2007) "A Review of Depleted Uranium Biological Effects:
In Vitro and In Vivo Studies" Rev Environ Health 22(1) 75-89 be included in the written record of the meeting in support of my questions.

"Miller et al (1998) observed the transformation of human osteoblast cells to a tumorigenic phenotype after exposure to uranyl chloride....
The DU-treated cells also demonstrated anchorage-independent growth, increased levels of the of the k-ras oncogene, and decreased levels of the Rb tumor suppressor protein... the transformed cells formed tumors in nude mice.

"Whereas studies using rat models showed that DU causes solid-state induction of solid tumors.... 76% of all mice implanted with DU pellets ... developed leukemia [in 200 days, after injection with murine hematopoietic cells.] In contrast, only 10% of control mice developed leukemia.

"Martin el al (1991) reported that levels of chromosomal aberration, sister chromatid exchange, and dicentrics measured in nuclear fuel workers increase proportionally with uranium exposure. McDairmid et al (2004), in their 10-year follow-up of 39 veterans exposed to DU in friendly fire incidents during the 1991 Gulf war, reported that the study participants exposed to the highest levels of DU showed a statistically significant increase in chromosomal aberrations as compared with low-exposure groups.

"Pellmar et al (1999) ... the kidneys adapted to the high levels [of DU from pellets implanted in rats' muscles] during chromic exposure.

"Neuman and colleagues (1948) [found that] uranium has a high affinity to bone.... young growing rats or rats deficient in dietary calcium incorporated greater amounts of uranium than did the controls" (which can support delayed action, as seen in 1991-1998 Iraq.)

"The neurophysiological effect of uranium exposure has been under investigation for many decades.... in frogs, uranyl ions potentiate the twitch response of ... muscles.

"Pellmar et al (1999) demonstrated that DU crosses the blood brain barrier and accumulates in the hippocampus, causing electrophysiological changes for up to 18 months post-exposure.
Briner and Murray (2005) tested behavioral effects and brain lipid peroxidation.... Open-field behavior was altered [as soon as] 2 weeks of exposure [in males] and female rats demonstrated behaviorial changes after six months of exposure.... Barber et al (2005) ... found that uranium content in all areas of the brain tested increased rapidly after injection and remained elevated....

"In exposure scenarios including exposure to DU, the observation that the chemical toxic effects from uranium compounds ... occur at exposure levels lower than those causing radiological toxicity effects is thought to be true for reproductive effects as well.

"The BEIR IV report (1988) ... cautions against minimizing the risk until more studies become available."

On Tue, Jul 22, 2008 at 6:47 AM, Yawar Faraz <Yawar.Faraz@nrc.gov> wrote:
> Dear Mr. Salsman,
>
> I am one of two NRC contacts for the public meeting with industry on soluble uranium intake criteria for integrated safety analyses scheduled for this Thursday July 24 from 8:30 am to 12:30 pm. To participate via phone you may call 1-888-790-3353 and enter 46419#.
>
> best regards
>
> Yawar Faraz
> Sr. Project Manager
> Division of Fuel Cycle Safety and Safeguards Office of Nuclear
> Material Safety and Safeguards ph 301-492-3207
>
> -----Original Message-----
> From: James Salsman [mailto:jsalsman@gmail.com]
> Sent: Tuesday, July 15, 2008 9:08 PM
> To: Peter Habighorst
> Cc: Kelli Markham; Yawar Faraz
> Subject: Re: Status of Petition PRM-20-26
>
> Dear Mr. Habighorst,
>
> The meeting on the 24th to discuss 10 CFR Part 70 Soluble Uranium
> Intake Criteria for Integrated Safety Analyses is not listed as a
> teleconference on:
> http://www.nrc.gov/public-involve/public-meetings/index.cfm
>
> Would you please ask that it be made a teleconference and provide
> instructions so that I can call in?
>
> Thank you.
>
> James Salsman
>
>
>
> On Wed, Jul 9, 2008 at 4:08 AM, Peter Habighorst

> <Peter.Habighorst@nrc.gov> wrote:
>> Thanks
>> Yes, the meeting is scheduled for the 24th at 8:30 a.m. in Washington at our Executive Blvd building...It is found on our public website under public meetings...
>>
>> -----Original Message-----
>> From: James Salsman [mailto:jsalsman@gmail.com]
>> Sent: Tuesday, July 08, 2008 8:29 PM
>> To: Peter Habighorst
>> Subject: Re: Status of Petition PRM-20-26
>>
>> Dear Mr. Habighorst,
>>
>> Will the public be invited to participate in the Uranium Solubility
>> Working Group? I don't see a teleconference scheduled for the 17th.
>>
>> James Salsman
>>
>> On Mon, Jul 7, 2008 at 8:51 AM, Peter Habighorst
>> <Peter.Habighorst@nrc.gov> wrote:
>>> Dear Mr. Salsman
>>>
>>> For Radiation teratogenicity, there are no specific units other than quantifying the exposure and correlating that to the effect under study.
>>>
>>>
>>> -----Original Message-----
>>> From: James Salsman [mailto:jsalsman@gmail.com]
>>> Sent: Wednesday, July 02, 2008 7:56 AM
>>> To: Albert Wong; Frank Cardile; Peter Habighorst
>>> Cc: Michael Weber; Michael Lesar; Merri Horn; Catherine Haney;
>>> George Pangburn; Robert Pierson; Michael Tschiltz; Robert OConnell;
>>> Betty Golden; Kevin Hsueh
>>> Subject: Re: Status of Petition PRM-20-26
>>>
>>> Dear Mr. Wong:
>>>
>>> Thank you very much for your help.
>>>
>>> Dear Drs. Habighorst and Carlyle:
>>>
>>> Do you have Miller A.C. and McClain D. (2007 Jan-Mar). "A review of
>>> depleted uranium biological effects: in vitro and in vivo studies".
>>> Rev Environ Health 22 (1): 75-89? I would like to refer to pages
>>> 84+, especially, and to publications cited there. It was the second
>>> most difficult medical paper I've ever obtained. If you don't have
>>> access I want to provide my electronic copy for the purposes of
>>> petitioning from http://www.uraniumfire.com.
>>>
>>> I have these two questions:
>>>
>>> 1. What units are you most familiar with for measuring teratogenicity?
>>>
>>> 2. What units do you use to measure neurotoxicity?
>>>
>>> Thank you all.

>>>
>>> James Salsman
>>>
>>>
>>> On Fri, Jun 20, 2008 at 8:02 AM, Albert Wong <Albert.Wong@nrc.gov> wrote:
>>>> Dear Mr. Salsman:
>>>>
>>>>
>>>>
>>>> Good morning and greetings! My name is Albert Wong and I am Mr.
>>>> Mike Weber's technical assistant. I am writing this e-mail to you
>>>> in response to your phone call with Mr. Weber yesterday. With
>>>> respect to the status of PRM-20-26, here is a response provided by
>>>> Mr. Frank Cardile, the cognizant senior Project Manager handling your
petition:
>>>>
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>>>>
>>>> Mr Salsman:
>>>>
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>>>>
>>>> Thank you for your request regarding an update of the current
>>>> status of PRM-20-26. The petition is under review in NRC's Office
>>>> of Federal and State Materials and Environmental Management
>>>> Programs. As part of the review, we are considering documents
>>>> referenced in your interfaces with NRC and comments made by others during
the petition public comment process.
>>>>
>>>>
>>>>
>>>> Frank Cardile, Senior Project Manager
>>>>
>>>> Office of Federal and State Materials and Environmental Management
>>>> Programs
>>>>
>>>> Frank.Cardile@nrc.gov
>>>>
>>>>
>>>>
>>>> On a separate but related note, Mr. Peter Habighorst is the chair
>>>> of the Uranium Solubility Working Group (WG) in NRC. The WG is
>>>> planning to hold a public meeting (tentatively scheduled on July 17,
2008) in Rockville, MD.
>>>> If you're interested in learning more about the WG's activities,
>>>> please contact Mr. Habighorst directly.
>>>>
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>>>>
>>>> Peter Habighorst
>>>>
>>>> Branch Chief, Fuel Manufacturing Branch
>>>>
>>>> Fuel Facility Licensing Directorate
>>>>
>>>> Division of Fuel Cycle Safety and Safeguards
>>>>

>>>> Office of Nuclear Material Safety and Safeguards
>>>>
>>>> (301) 492-3136
>>>>
>>>> Peter.Habighorst@nrc.gov
>>>>
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>>>>
>>>> Finally, please feel free to contact me at any time if you have
>>>> other general questions. Thank you and have a good weekend,
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>>>>
>>>>
>>>> w/r
>>>>
>>>> Albert Wong
>>>>
>>>> Technical Assistant
>>>>
>>>> Office of Nuclear Material Safety and Safeguards
>>>>
>>>> (301) 492-3238
>>>>
>>>> albert.wong@nrc.gov
>>>
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