

## Strong, Sharleen - NWP

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**From:** Percy, Mark - NWP  
**Sent:** Wednesday, May 28, 2014 2:07 PM  
**To:** Freeman, David - NWP  
**Subject:** RE: Strange

I don't think I will be let go from CCP anytime soon.

Mark Percy  
Central Characterization Program  
Nuclear Waste Partnership LLC  
Contractor for the U.S. Department of Energy  
575-234-7394 (W)

Exemption 6



*A URS-led partnership with B&W and AREVA*

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**From:** Freeman, David - NWP  
**Sent:** Wednesday, May 28, 2014 12:23 PM  
**To:** Percy, Mark - NWP  
**Subject:** RE: Strange

Strange – the procedure was specifically changed for this...note the change bars. And note that Swheat was specifically chosen as it was available, had low dust content, and had no perfumes/other chemicals....

What group are you looking to be the PA manager for? Maybe Engineering? Would be a great addition.

Thanks.

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**From:** Percy, Mark - NWP  
**Sent:** Wednesday, May 28, 2014 12:17 PM  
**To:** Freeman, David - NWP  
**Subject:** RE: Strange

General consensus is that the "organic" designation was a typo that wasn't caught.

Mark Percy  
Central Characterization Program  
Nuclear Waste Partnership LLC  
Contractor for the U.S. Department of Energy  
575-234-7394 (W)

Exemption 6



*A URS-led partnership with B&W and AREVA*

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**From:** Freeman, David - NWP  
**Sent:** Wednesday, May 28, 2014 11:47 AM  
**To:** Percy, Mark - NWP  
**Subject:** Strange

Mark – Does it seem strange that the procedure was revised to specifically require organic kitty litter to process nitrate salt drums?

The use of organic kitty litter was approved in Revision 36 of EP-WCRR-WO-DOP-0233, effective 8/1/12. It was locally approved @ LANL; the use of organic kitty litter was specified for processing nitrate salt drums. The procedure states “..ENSURE an organic absorbent (kitty litter) is added to the waste..”

The nitrate salt containers in Panel 7 were all processed with Swheat, from 8/8/13 until 12/4/13.

Dave Freeman  
Chief Nuclear Engineer  
Nuclear Waste Partnership LLC  
Contractor for the US Department of Energy

## **Strong, Sharleen - NWP**

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**From:** McCormick, James - NWP  
**Sent:** Wednesday, May 28, 2014 10:19 AM  
**To:** 'Menna, John'  
**Subject:** FW: Response; to HA Questions for Sample Collection (2)

*James McCormick*  
*WIPP Nuclear Safety Manager*  
*Nuclear Waste Partnership LLC*  
*Contractor for the U. S. Department of Energy*  
*(575) 234-8035*  
[james.mccormick@wipp.ws](mailto:james.mccormick@wipp.ws)

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**From:** Nelson, Robert C [<mailto:robert.nelson@rl.doe.gov>]  
**Sent:** Wednesday, May 28, 2014 10:17 AM  
**To:** Basabilvazo, George - DOE; Nelson, Robert C; Chiou, Hung-Cheng - FedNet  
**Cc:** McCormick, James - NWP; Hutton, James; Lapointe, Todd - EMCBC; Wyka, Theodore - DOE EM  
**Subject:** RE: Response; to HA Questions for Sample Collection (2)

The ESS utilizes statements such as "There is no indication to date of any unexpected or unanalyzed chemicals." "It is postulated that an energetic chemical condition could result if an untreated nitrate compound came into contact with cellulosic material that is also present in the waste drums." and "These protective measures are considered similar to those specified in DOE-STD-5506 for waste container(s) deflagrations, which describe lid restraints on suspect containers..." I think we might have unexpected compounds, neutralization agents mixed with nitrates that could result in unstable mixtures, and hazards beyond the hydrogen deflagration hazards that STD-5506 is generally based on. Not sure if we have a deficiency in the ESS or not, but should be closely evaluated. The NWP/CBFO Safety Basis folks should be included in further discussions with respect to the sampling evolution.

Bob

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**From:** Basabilvazo, George - DOE [<mailto:George.Basabilvazo@wipp.ws>]  
**Sent:** Wednesday, May 28, 2014 8:51 AM  
**To:** Nelson, Robert C; Chiou, Hung-Cheng - FedNet  
**Subject:** RE: Response; to HA Questions for Sample Collection (2)

LANL is in the process of evaluating this as possible "new information". LANL indicated this was a draft internal memo but they would work with their safety basis folks to evaluate this in regards to if it was "new information" or not and if this will go through their PISA / USQ process. LANL will provide us information/results on their internal safety basis process/evaluation today.

George T. Basabilvazo  
Director, Office of Environment, Safety & Health  
DOE/Carlsbad Field Office  
P.O. Box 3090  
Carlsbad, New Mexico 88221  
Ph: (575) 234-7488



## Exemption 6

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**From:** Nelson, Robert [<mailto:Robert.Nelson@em.doe.gov>]  
**Sent:** Wednesday, May 28, 2014 9:31 AM  
**To:** Chiou, Hung-Cheng - FedNet  
**Cc:** Basabilvazo, George - DOE  
**Subject:** RE: Response; to HA Questions for Sample Collection (2)

I have been reviewing the hazards a assessment on pages 20 and 21 of ESS 3. Not sure we can say it is still reflective of hazards with the new information at hand.

-----Original Message-----

**From:** Hung-Cheng Chiou [[hung-cheng.chiou@cbfo.doe.gov](mailto:hung-cheng.chiou@cbfo.doe.gov)]  
**Sent:** Wednesday, May 28, 2014 11:08 AM Eastern Standard Time  
**To:** Nelson, Robert  
**Subject:** FW: Response; to HA Questions for Sample Collection (2)

FYI. The conference call with LASO took place this morning at 0700 that I was not informed. I cannot tell you what was happening at that meeting. The entry to waste face today is suspended pending further lanl evaluation.

Hung

Sent with Good ([www.good.com](http://www.good.com))

-----Original Message-----

**From:** Dana Bryson  
**Sent:** Wednesday, May 28, 2014 08:44 AM Mountain Standard Time  
**To:** Hung-Cheng Chiou; Jose Franco  
**Cc:** George Basabilvazo - WIPPNet; Lina Pacheco; Hutton, James; Kim Davis Lebak ([kimdavis.lebak@nnsa.doe.gov](mailto:kimdavis.lebak@nnsa.doe.gov)); Peter Maggiore - LANL NNSA  
**Subject:** RE: Response; to HA Questions for Sample Collection (2)

Hung

CBFO Management fully supports the free and open distribution of critical information and concerns like this. We will continue to encourage LANL to provide us with timely information.

Thank you for bringing this to our attention.

Dana

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**From:** Hung-Cheng Chiou  
**Sent:** Wednesday, May 28, 2014 8:30 AM  
**To:** Dana Bryson; Jose Franco  
**Cc:** George Basabilvazo - WIPPNet; Lina Pacheco  
**Subject:** FW: Response; to HA Questions for Sample Collection (2)  
**Importance:** High

Joe and Dana,



Given the critical information that DNFSB LANL Site Rep already had last Thursday yet we were not knowing until yesterday afternoon, it is disappointing that the person that relayed the information to me got the reprimand this morning by the LASO management. This is direct contradiction of DOE/NNSA policy and what we believed in.

It is most important that we have the information (regardless official or unofficial) so that we as CBFO can make better informed decisions as best as we could. However, it may not work that way as it seems. For example, the USQ determinations (see attached email) related to sampling plan to the drums (for both mitigated or un-mitigated drums) came up positive yet we do not have the information. When NWP performed its USQD/ESS or other related safety basis evaluations, the quality of those documents will suffer due to the lack of information.

I hope that we can do better in getting relevant information from LANL so we can make a better decision for the WIPP project. Thank you.

Hung

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**From:** Lebak, Kim Davis [<mailto:KimDavis.Lebak@nnsa.doe.gov>]

**Sent:** Tuesday, May 27, 2014 10:34 PM

**To:** 'Blankenhorn, Jim - NWP'; Dana Bryson; Peter Maggiore - LANL NNSA; Lina Pacheco; Hung-Cheng Chiou; O'Neil, James E.

**Cc:** Jose Franco; George Basabilvazo - WIPPNet; J.R. Stroble - WIPPNet; Mike Brown; Casey Gadbury; Tom Teynor; Theodore Wyka - AIB; Krepps, John A.; Hutton, James

**Subject:** RE: Response; to HA Questions for Sample Collection (2)

We will get with you all in the a.m. as early as we can get the right folks together

Kim Davis Lebak, Manager  
Los Alamos Field Office  
[kimdavis.lebak@nnsa.doe.gov](mailto:kimdavis.lebak@nnsa.doe.gov)  
505.667.5105 front office  
Exemption 6

-----Original Message-----

**From:** Blankenhorn, Jim - NWP [[Jim.Blankenhorn@wipp.ws](mailto:Jim.Blankenhorn@wipp.ws)]

**Sent:** Tuesday, May 27, 2014 11:36 PM Eastern Standard Time

**To:** Bryson, Dana; Maggiore, Peter; Pacheco, Lina - FedNet; Chiou, Hung-Cheng - FedNet; O'Neil, James E.

**Cc:** Franco, Jose - FedNet; Basabilvazo, George (CBFO); Stroble, J. R. - DOE; Brown, Mike - FedNet; Gadbury, Casey - FedNet; 'Tom Teynor'; 'Theodore Wyka - AIB'; Lebak, Kim Davis; Krepps, John A.; Hutton, James

**Subject:** RE: Response; to HA Questions for Sample Collection (2)

Our team is evaluating as well and we'll get together early to discuss. We'll be prepared to discuss with the LANL team in the morning. We can delay the entry teams for a bit in the morning before we lose the window.  
Sent with Good ([www.good.com](http://www.good.com))

-----Original Message-----

**From:** Dana Bryson [[Dana.Bryson@cbfo.doe.gov](mailto:Dana.Bryson@cbfo.doe.gov)]

**Sent:** Tuesday, May 27, 2014 09:29 PM Mountain Standard Time

**To:** Maggiore, Peter - LANL NNSA; Pacheco, Lina - FedNet; Chiou, Hung-Cheng - FedNet; O'Neil, James E.'

**Cc:** Franco, Jose - FedNet; Basabilvazo, George - DOE; Stroble, J. R. - DOE; Brown, Mike - FedNet; Gadbury,

Casey - FedNet; Tom Teynor; Blankenhorn, Jim - NWP; Theodore Wyka - AIB; 'Lebak, Kim Davis'; 'Krepps, John A.'; 'Hutton, James'

**Subject:** RE: Response; to HA Questions for Sample Collection (2)

Jim B

Not sure this will support a 0930 entry. Do you have other options for resolution?

Thanks.

Dana

Sent with Good ([www.good.com](http://www.good.com))

-----Original Message-----

**From:** Maggiore, Peter [[Peter.Maggiore@nnsa.doe.gov](mailto:Peter.Maggiore@nnsa.doe.gov)]

**Sent:** Tuesday, May 27, 2014 09:11 PM Mountain Standard Time

**To:** Dana Bryson; Lina Pacheco; Hung-Cheng Chiou; O'Neil, James E.

**Cc:** Jose Franco; George Basabilvazo - WIPPNet; J.R. Stroble - WIPPNet; Mike Brown; Casey Gadbury; Tom Teynor; 'jim.blankenhorn@wipp.ws'; Theodore Wyka - AIB; Lebak, Kim Davis; Krepps, John A.; Hutton, James

**Subject:** Re: Response; to HA Questions for Sample Collection (2)

Dana - I would like to shoot for 0800 - I simply don't know if I can get the right folks on the phone at 0630. I will make sure that I invite the folks you have listed below.

Pete

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**From:** Bryson, Dana

**Sent:** Tuesday, May 27, 2014 09:01 PM

**To:** Maggiore, Peter; Lina Pacheco <[lina.pacheco@cbfo.doe.gov](mailto:lina.pacheco@cbfo.doe.gov)>; Hung-Cheng Chiou <[hung-cheng.chiou@cbfo.doe.gov](mailto:hung-cheng.chiou@cbfo.doe.gov)>; O'Neil, James E.

**Cc:** Jose Franco <[jose.franco@cbfo.doe.gov](mailto:jose.franco@cbfo.doe.gov)>; Basabilvazo, George (CBFO); J.R. Stroble - WIPPNet <[j.r.stroble@wipp.ws](mailto:j.r.stroble@wipp.ws)>; Mike Brown <[mike.brown@cbfo.doe.gov](mailto:mike.brown@cbfo.doe.gov)>; Casey Gadbury <[casey.gadbury@cbfo.doe.gov](mailto:casey.gadbury@cbfo.doe.gov)>; Tom Teynor <[Tom.Teynor@cbfo.doe.gov](mailto:Tom.Teynor@cbfo.doe.gov)>; 'jim.blankenhorn@wipp.ws' <[jim.blankenhorn@wipp.ws](mailto:jim.blankenhorn@wipp.ws)>; Theodore Wyka - AIB <[Theodore.Wyka@cbfo.doe.gov](mailto:Theodore.Wyka@cbfo.doe.gov)>; Lebak, Kim Davis; Krepps, John A.; Hutton, James

**Subject:** RE: Response; to HA Questions for Sample Collection (2)

How about a 0630 call with CBFO (Me, Tom T, George B, etc) and NWP (Jim B, etc)?

Sent with Good ([www.good.com](http://www.good.com))

-----Original Message-----

**From:** Maggiore, Peter [[Peter.Maggiore@nnsa.doe.gov](mailto:Peter.Maggiore@nnsa.doe.gov)]

**Sent:** Tuesday, May 27, 2014 08:52 PM Mountain Standard Time

**To:** Dana Bryson; Lina Pacheco; Hung-Cheng Chiou; O'Neil, James E.

**Cc:** Jose Franco; George Basabilvazo - WIPPNet; J.R. Stroble - WIPPNet; Mike Brown; Casey Gadbury; Tom Teynor; 'jim.blankenhorn@wipp.ws'; Theodore Wyka - AIB; Lebak, Kim Davis; Krepps, John A.; Hutton,



James

**Subject:** Re: Response; to HA Questions for Sample Collection (2)

Dana - I think the best we can do at this point is to convene a conference call between CBFO, NA-LA and LANS in the morning to discuss the apparent concerns raised by the memo. Please let me know who from CBFO should be on the call and I will round up the appropriate NA-LA and LANS participants.

Thanks -

Pete

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**From:** Bryson, Dana

**Sent:** Tuesday, May 27, 2014 08:23 PM

**To:** Maggiore, Peter; Lina Pacheco <[lina.pacheco@cbfo.doe.gov](mailto:lina.pacheco@cbfo.doe.gov)>; Hung-Cheng Chiou <[hung-cheng.chiou@cbfo.doe.gov](mailto:hung-cheng.chiou@cbfo.doe.gov)>; O'Neil, James E.

**Cc:** Jose Franco <[jose.franco@cbfo.doe.gov](mailto:jose.franco@cbfo.doe.gov)>; Basabilvazo, George (CBFO); J.R. Stroble - WIPPNet <[j.r.stroble@wipp.ws](mailto:j.r.stroble@wipp.ws)>; Mike Brown <[mike.brown@cbfo.doe.gov](mailto:mike.brown@cbfo.doe.gov)>; Casey Gadbury <[casey.gadbury@cbfo.doe.gov](mailto:casey.gadbury@cbfo.doe.gov)>; Tom Teynor <[Tom.Teynor@cbfo.doe.gov](mailto:Tom.Teynor@cbfo.doe.gov)>; 'jim.blankenhorn@wipp.ws' <[jim.blankenhorn@wipp.ws](mailto:jim.blankenhorn@wipp.ws)>; Theodore Wyka - AIB <[Theodore.Wyka@cbfo.doe.gov](mailto:Theodore.Wyka@cbfo.doe.gov)>; Lebak, Kim Davis; Krepps, John A.; Bryson, Dana; Hutton, James

**Subject:** RE: Response; to HA Questions for Sample Collection (2)

Pete

We have a formal letter on LANL letterhead implying there is a real and present danger in the WIPP underground. This is contrary to everything I have seen from LANL on this issue. The email you sent from LANL implied there might be more of these hidden yet formal warnings. Please have a LANL manager explicitly characterize the evaluated risk of the LANL waste at WIPP and WCS to support our planned entry to the waste face in the morning.

Thanks. I appreciate you working to set this straight.

Dana

Sent with Good ([www.good.com](http://www.good.com))

-----Original Message-----

**From:** Maggiore, Peter [[Peter.Maggiore@nnsa.doe.gov](mailto:Peter.Maggiore@nnsa.doe.gov)]

**Sent:** Tuesday, May 27, 2014 08:05 PM Mountain Standard Time

**To:** Dana Bryson; Lina Pacheco; Hung-Cheng Chiou; O'Neil, James E.

**Cc:** Jose Franco; George Basabilvazo - WIPPNet; J.R. Stroble - WIPPNet; Mike Brown; Casey Gadbury; Tom Teynor; 'jim.blankenhorn@wipp.ws'; Theodore Wyka - AIB; Lebak, Kim Davis; Krepps, John A.

**Subject:** Re: Response; to HA Questions for Sample Collection (2)

Dana - I can attempt to arrange for a conference call with Terry in the morning if that would be helpful.

Please let me know.

Pete

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**From:** Bryson, Dana

**Sent:** Tuesday, May 27, 2014 07:48 PM



**To:** Lina Pacheco <[lina.pacheco@cbfo.doe.gov](mailto:lina.pacheco@cbfo.doe.gov)>; Hung-Cheng Chiou <[hung-cheng.chiou@cbfo.doe.gov](mailto:hung-cheng.chiou@cbfo.doe.gov)>; O'Neil, James E.; Maggiore, Peter  
**Cc:** Jose Franco <[jose.franco@cbfo.doe.gov](mailto:jose.franco@cbfo.doe.gov)>; Basabilvazo, George (CBFO); J.R. Stroble - WIPPNet <[j.r.stroble@wipp.ws](mailto:j.r.stroble@wipp.ws)>; Mike Brown <[mike.brown@cbfo.doe.gov](mailto:mike.brown@cbfo.doe.gov)>; Casey Gadbury <[casey.gadbury@cbfo.doe.gov](mailto:casey.gadbury@cbfo.doe.gov)>; Tom Teynor <[Tom.Teynor@cbfo.doe.gov](mailto:Tom.Teynor@cbfo.doe.gov)>; 'jim.blankenhorn@wipp.ws' <[jim.blankenhorn@wipp.ws](mailto:jim.blankenhorn@wipp.ws)>; Theodore Wyka - AIB <[Theodore.Wyka@cbfo.doe.gov](mailto:Theodore.Wyka@cbfo.doe.gov)>  
**Subject:** RE: Response; to HA Questions for Sample Collection (2)

Please be aware that we are taking this seriously and have requested clarification from LANL.

Sent with Good ([www.good.com](http://www.good.com))

-----Original Message-----

**From:** Lina Pacheco  
**Sent:** Tuesday, May 27, 2014 07:31 PM Mountain Standard Time  
**To:** Hung-Cheng Chiou; Dana Bryson; 'James.ONeil@nnsa.doe.gov'; Peter Maggiore - LANL NNSA  
**Cc:** Jose Franco; George Basabilvazo - WIPPNet; J.R. Stroble - WIPPNet; Mike Brown; Casey Gadbury; Tom Teynor; 'jim.blankenhorn@wipp.ws'; Theodore Wyka - AIB  
**Subject:** RE: Response; to HA Questions for Sample Collection (2)

Hung,

Thanks f

Or all the updates. I am concerned with the quality of the hazards analysis and all the sidebar correspondence.

The request from LANL was. Formal hazards analysis and requisite controls.

Lina

Sent with Good ([www.good.com](http://www.good.com))

-----Original Message-----

**From:** Hung-Cheng Chiou  
**Sent:** Tuesday, May 27, 2014 05:25 PM Mountain Standard Time  
**To:** Dana Bryson; O'Neil, James E. ([James.ONeil@nnsa.doe.gov](mailto:James.ONeil@nnsa.doe.gov)); Peter Maggiore - LANL NNSA  
**Cc:** Jose Franco; George Basabilvazo - WIPPNet; J.R. Stroble - WIPPNet; Mike Brown; Casey Gadbury; Lina Pacheco; Tom Teynor; [jim.blankenhorn@wipp.ws](mailto:jim.blankenhorn@wipp.ws); Theodore Wyka - AIB  
**Subject:** RE: Response; to HA Questions for Sample Collection (2)

Dana,

The LANL letter from Jim was sent today on 4:42 pm to you. Hung

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**From:** Dana Bryson  
**Sent:** Tuesday, May 27, 2014 5:23 PM

**To:** Hung-Cheng Chiou; O'Neil, James E. ([James.ONeil@nnsa.doe.gov](mailto:James.ONeil@nnsa.doe.gov)); Peter Maggiore - LANL NNSA  
**Cc:** Jose Franco; George Basabilvazo - WIPPNet; J.R. Stroble - WIPPNet; Mike Brown; Casey Gadbury; Lina Pacheco; Tom Teynor; [jim.blankenhorn@wipp.ws](mailto:jim.blankenhorn@wipp.ws); Theodore Wyka - AIB  
**Subject:** RE: Response; to HA Questions for Sample Collection (2)  
**Importance:** High

Jim

Why didn't we get this letter when it came out? Please send me the LANL letter ASAP! This is contrary to all the information I have seen from LANL.

Pending review of this letter we may need to defer tomorrows entry.

Dana

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**From:** Hung-Cheng Chiou  
**Sent:** Tuesday, May 27, 2014 4:39 PM  
**To:** Dana Bryson  
**Cc:** Jose Franco; George Basabilvazo - WIPPNet; J.R. Stroble - WIPPNet; Mike Brown; Casey Gadbury; Lina Pacheco; Tom Teynor  
**Subject:** FW: Response; to HA Questions for Sample Collection (2)

If you have not heard of the following new information, please be aware and have the lead person for proper follow up to see if it may have impacts to the safety and health of reentry team and activity. Hung

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**From:** O'Neil, James E. [<mailto:James.ONeil@nnsa.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 3:52 PM  
**To:** Hung-Cheng Chiou  
**Subject:** RE: Response to HA Questions for Sample Collection (2)

Hung,

Johnathan Plaue, presented to us last week, a letter from the LANL chemistry group here that stated that putting the type of kitty litter of sorts mixed with the nitrate salts created a patented explosive mixture. This is my third hand information that is relatively close, but may be missing some more details. Also, not sure how a "D" type drum, which does not meet the WIPP WAC even got shipped to you guys. The daughter, labeled a "D" drum did not come from a parent "D" classified drum, thus the mystery continues.

*Jim O'Neil*

U.S. Department of Energy (DOE)  
National Nuclear Security Administration (NNSA)  
Los Alamos Field Office (NA-LA)  
[james.oneil@nnsa.doe.gov](mailto:james.oneil@nnsa.doe.gov)

(505) 606-2173

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**From:** Hung-Cheng Chiou [<mailto:hung-cheng.chiou@cbfo.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 2:45 PM  
**To:** O'Neil, James E.  
**Subject:** RE: Response to HA Questions for Sample Collection (2)

Wow, that is the news to me. How can the explosive mixture be in the drum content that could be sent to WIPP? Hung

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**From:** O'Neil, James E. [<mailto:James.ONeil@nnsa.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 2:37 PM



**To:** Hung-Cheng Chiou  
**Subject:** RE: Response to HA Questions for Sample Collection (2)

Sounds good to me. (I didn't see the cooling vest defined)

Good luck on the sample.

Also, have you heard that we at the lab have confirmed that the material used in the drum DOES create an explosive mixture????

*Jim O'Neil*

U.S. Department of Energy (DOE)  
National Nuclear Security Administration (NNSA)  
Los Alamos Field Office (NA-LA)  
[james.oneil@nnsa.doe.gov](mailto:james.oneil@nnsa.doe.gov)

(505) 606-2173

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**From:** Hung-Cheng Chiou [<mailto:hung-cheng.chiou@cbfo.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 2:29 PM  
**To:** O'Neil, James E.  
**Subject:** RE: Response to HA Questions for Sample Collection (2)

Thank you. For the PAPR with coverall PPE, the worker has the stay time limit of 90 minutes and also with the cooling vest under the coverall so the heat stress will be adequately managed.

Hung

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**From:** O'Neil, James E. [<mailto:James.ONeil@nnsa.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 1:56 PM  
**To:** Hung-Cheng Chiou  
**Subject:** RE: Response to HA Questions for Sample Collection (2)

Hung,

At a quick glance most everything looks to be covered. My only question(s) are the following;

#10 is confusing to me as #5 talks about contamination being an issue (which I am guessing means no dose concerns) and # 9 states that the PAPR with a PF = 1000 is OK rather than requiring SCBA units with a PF = 10000 which would not only protect against anything but in the "Positive" demand mode could provide cooling to the worker (thus reducing significantly #6 concern too), which is all good but then why the statement in #10 that says we don't know what radiological hazards there are or may be with the "sampling activity" (kind of contradictory).

Item #4 under General Safety suggestions; is vague on the exact suitable material needed to avoid static discharge and light concerns and also, what exactly is needed to minimize an "unexpected reaction of the material during handling and transport". This entire sentence is what I would call a "Motherhood and Apple Pie" sentence in that what is really saying is "Do the best you can not to get hurt" or screw up the samples, with no specifics at all on how to accomplish this.

Not sure my two thoughts help but more than willing to talk further if need be.

Thanks,



*Jim O'Neil*

U.S. Department of Energy (DOE)  
National Nuclear Security Administration (NNSA)  
Los Alamos Field Office (NA-LA)  
[james.oneil@nnsa.doe.gov](mailto:james.oneil@nnsa.doe.gov)

(505) 606-2173

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**From:** Hung-Cheng Chiou [<mailto:hung-cheng.chiou@cbfo.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 1:12 PM  
**To:** O'Neil, James E.  
**Subject:** FW: Response to HA Questions for Sample Collection (2)

Jim,

Here is the LANL hazard analysis provided to NWP for its collection of samples (from drum #660) tomorrow. Do you see any cautions that I may need to know? Thank you.

Hung

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**From:** Kennedy, Scott - NWP [<mailto:Scott.Kennedy@wipp.ws>]  
**Sent:** Tuesday, May 27, 2014 11:47 AM  
**To:** 'robert.nelson@em.doe.gov'  
**Cc:** Hung-Cheng Chiou  
**Subject:** FW: Response to HA Questions for Sample Collection (2)

Hung – found his address.

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**From:** Kennedy, Scott - NWP  
**Sent:** Tuesday, May 27, 2014 11:45 AM  
**To:** Chiou, Hung-Cheng - FedNet  
**Subject:** Response to HA Questions for Sample Collection (2)

Input from LANL.

Hung – can you forward to Dr. Nelson for me.

**Strong, Sharleen - NWP**

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**From:** Freeman, David - NWP  
**Sent:** Wednesday, May 28, 2014 9:26 AM  
**To:** Garcia, John - NWP  
**Subject:** Emerging info

EnergySolutions bought 1149 containers of kitty litter for nitrate salt processing, of which 1135 were Swheat. The others were also organic kitty litter.

The use of organic kitty litter was approved in Revision 36 of EP-WCRR-WO-DOP-0233, effective 8/1/12. It was locally approved @ LANL; the use of organic kitty litter was specified for processing nitrate salt drums. The procedure states “..ENSURE an organic absorbent (kitty litter) is added to the waste..”

The nitrate salt containers in Panel 7 were all processed with Swheat, from 8/8/13 until 12/4/13.

It has also been determined that during this step, a neutralizing agent was used to obtain a neutral pH – though not in the procedure and not documented. The approved neutralizing agent was Spilfyter Kolorsafe Liquid Acid Neutralizer. This finding resulted in a WIPP Form that states:

After reviewing the CCP acceptable knowledge (AK) documents that discuss the packaging processes for this S3000 waste at the WCCRF it was noted that the chemicals used for neutralizing the acids or bases have not been considered in the AK record. These chemicals not being considered could lead to an incomplete AK record which could be a violation of the WIPP hazardous waste facility permit requirements.

In a phone call with LANL, they indicated that there is a possibility that any sampling of the kitty litter/drum contents could cause an another event. The sampling activity was cancelled for today.

Dave Freeman  
Chief Nuclear Engineer  
Nuclear Waste Partnership LLC  
Contractor for the US Department of Energy

## Strong, Sharleen - NWP

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**From:** Hung-Cheng Chiou <hung-cheng.chiou@cbfo.doe.gov>  
**Sent:** Wednesday, May 28, 2014 9:31 AM  
**To:** McCormick, James - NWP  
**Subject:** FW: Response to HA Questions for Sample Collection (2)

FYI and Do not forward this email. Hung

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**From:** O'Neil, James E. [<mailto:James.ONeil@nnsa.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 3:52 PM  
**To:** Hung-Cheng Chiou  
**Subject:** RE: Response to HA Questions for Sample Collection (2)

Hung,

Johnathan Plaue, presented to us last week, a letter from the LANL chemistry group here that stated that putting the type of kitty litter of sorts mixed with the nitrate salts created a patented explosive mixture. This is my third hand information that is relatively close, but may be missing some more details. Also, not sure how a "D" type drum, which does not meet the WIPP WAC even got shipped to you guys. The daughter, labeled a "D" drum did not come from a parent "D" classified drum, thus the mystery continues.

*Jim O'Neil*

U.S. Department of Energy (DOE)  
National Nuclear Security Administration (NNSA)  
Los Alamos Field Office (NA-LA)  
[james.oneil@nnsa.doe.gov](mailto:james.oneil@nnsa.doe.gov)

(505) 606-2173

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**From:** Hung-Cheng Chiou [<mailto:hung-cheng.chiou@cbfo.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 2:45 PM  
**To:** O'Neil, James E.  
**Subject:** RE: Response to HA Questions for Sample Collection (2)

Wow, that is the news to me. How can the explosive mixture be in the drum content that could be sent to WIPP? Hung

---

**From:** O'Neil, James E. [<mailto:James.ONeil@nnsa.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 2:37 PM  
**To:** Hung-Cheng Chiou  
**Subject:** RE: Response to HA Questions for Sample Collection (2)

Sounds good to me. (I didn't see the cooling vest defined)

Good luck on the sample.

Also, have you heard that we at the lab have confirmed that the material used in the drum DOES create an explosive mixture????



*Jim O'Neil*

U.S. Department of Energy (DOE)  
National Nuclear Security Administration (NNSA)  
Los Alamos Field Office (NA-LA)  
[james.oneil@nnsa.doe.gov](mailto:james.oneil@nnsa.doe.gov)

(505) 606-2173

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**From:** Hung-Cheng Chiou [<mailto:hung-cheng.chiou@cbfo.doe.gov>]

**Sent:** Tuesday, May 27, 2014 2:29 PM

**To:** O'Neil, James E.

**Subject:** RE: Response to HA Questions for Sample Collection (2)

Thank you. For the PAPR with coverall PPE, the worker has the stay time limit of 90 minutes and also with the cooling vest under the coverall so the heat stress will be adequately managed.

Hung

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**From:** O'Neil, James E. [<mailto:James.ONeil@nnsa.doe.gov>]

**Sent:** Tuesday, May 27, 2014 1:56 PM

**To:** Hung-Cheng Chiou

**Subject:** RE: Response to HA Questions for Sample Collection (2)

Hung,

At a quick glance most everything looks to be covered. My only question(s) are the following;

#10 is confusing to me as #5 talks about contamination being an issue (which I am guessing means no dose concerns) and # 9 states that the PAPR with a PF = 1000 is OK rather than requiring SCBA units with a PF = 10000 which would not only protect against anything but in the "Positive" demand mode could provide cooling to the worker (thus reducing significantly #6 concern too), which is all good but then why the statement in #10 that says we don't know what radiological hazards there are or may be with the "sampling activity" (kind of contradictory).

Item #4 under General Safety suggestions; is vague on the exact suitable material needed to avoid static discharge and light concerns and also, what exactly is needed to minimize an "unexpected reaction of the material during handling and transport". This entire sentence is what I would call a "Motherhood and Apple Pie" sentence in that what is really saying is "Do the best you can not to get hurt" or screw up the samples, with no specifics at all on how to accomplish this.

Not sure my two thoughts help but more than willing to talk further if need be.

Thanks,

*Jim O'Neil*

U.S. Department of Energy (DOE)  
National Nuclear Security Administration (NNSA)  
Los Alamos Field Office (NA-LA)  
[james.oneil@nnsa.doe.gov](mailto:james.oneil@nnsa.doe.gov)

(505) 606-2173

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**From:** Hung-Cheng Chiou [<mailto:hung-cheng.chiou@cbfo.doe.gov>]

**Sent:** Tuesday, May 27, 2014 1:12 PM

**To:** O'Neil, James E.

**Subject:** FW: Response to HA Questions for Sample Collection (2)

Jim,

Here is the LANL hazard analysis provided to NWP for its collection of samples (from drum #660) tomorrow. Do you see any cautions that I may need to know? Thank you.

Hung

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**From:** Kennedy, Scott - NWP [<mailto:Scott.Kennedy@wipp.ws>]

**Sent:** Tuesday, May 27, 2014 11:47 AM

**To:** 'robert.nelson@em.doe.gov'

**Cc:** Hung-Cheng Chiou

**Subject:** FW: Response to HA Questions for Sample Collection (2)

Hung – found his address.

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**From:** Kennedy, Scott - NWP

**Sent:** Tuesday, May 27, 2014 11:45 AM

**To:** Chiou, Hung-Cheng - FedNet

**Subject:** Response to HA Questions for Sample Collection (2)

Input from LANL.

Hung – can you forward to Dr. Nelson for me.

## Strong, Sharleen - NWP

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**From:** Blankenhorn, Jim - NWP  
**Sent:** Wednesday, May 28, 2014 7:06 AM  
**To:** Kennedy, Scott - NWP  
**Subject:** FW: Kolorsafe memo  
**Attachments:** C-DO-14-128 - Kolor-safe.docx

Sent with Good ([www.good.com](http://www.good.com))

-----Original Message-----

**From:** Dana Bryson [[Dana.Bryson@cbfo.doe.gov](mailto:Dana.Bryson@cbfo.doe.gov)]  
**Sent:** Tuesday, May 27, 2014 05:52 PM Mountain Standard Time  
**To:** Theodore Wyka - AIB; Blankenhorn, Jim - NWP  
**Cc:** Jackson, TJ - EMCBC; Hutton, James; Franco, Jose - FedNet; Teynor, Thomas K  
**Subject:** FW: Kolorsafe memo

I am appalled that LANL didn't provide us this information!

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**From:** O'Neil, James E. [<mailto:James.ONeil@nnsa.doe.gov>]  
**Sent:** Tuesday, May 27, 2014 4:15 PM  
**To:** Hung-Cheng Chiou  
**Cc:** George Basabilvazo - WIPPNet; Jose Franco; Dana Bryson; 'Jones, Gregory L (Greg) RL Safety'  
**Subject:** FW: Kolorsafe memo

Hung,

So as I stated, I may not have all the details, but regardless, here is the letter dated 5-21-14. So obviously, the lab did not know at the time of mediation or until last week of this finding.

Thanks,

*Jim O'Neil*

U.S. Department of Energy (DOE)  
National Nuclear Security Administration (NNSA)  
Los Alamos Field Office (NA-LA)  
[james.oneil@nnsa.doe.gov](mailto:james.oneil@nnsa.doe.gov)

(505) 606-2173

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**From:** Jonathan Plaue [<mailto:JonP@dnfsb.gov>]  
**Sent:** Tuesday, May 27, 2014 4:06 PM  
**To:** O'Neil, James E.  
**Subject:** FW: Kolorsafe memo



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**From:** Jonathan Plaue  
**Sent:** Thursday, May 22, 2014 5:53 PM  
**To:** John A. Krepps ([john.krepps@nnsa.doe.gov](mailto:john.krepps@nnsa.doe.gov))  
**Cc:** Richard Verhaagen  
**Subject:** Kolorsafe memo

John-

The referenced memo is attached. I asked Clemmons about it and suggested that he ensure the FOD was aware of its contents and any implications from a New Information standpoint. I separately mentioned directly to Steve Henry and provided copy to Angelo as part of some follow-up hallway discussion. I spoke with the author, Mark McCleskey, this afternoon. He indicated he was pursuing the experiments mentioned in the memo and thought that the safety folks were aware of its potential implications. Unfortunately, I didn't ask who he thought was aware.

Some other potentially relevant facts:

Drum 68660 (the find at WIPP that triggered LANL's PISA) had 2 gallons of free liquid at pH = 0 and then had Kolorsafe added to neutralize the free liquid. There is no record of how much Kolorsafe was added, but there are records indicating Kolorsafe was added to the many drums. The sister drum at Area G did not have Kolorsafe added (all parent free liquid went into 68660).

Thanks-  
-jplaue

Jonathan Plaue  
DNFSB Site Representative at LANL  
Entrust: [Jonathan.Plaue@nnsa.doe.gov](mailto:Jonathan.Plaue@nnsa.doe.gov)  
LANL: [jplaue@lanl.gov](mailto:jplaue@lanl.gov)  
Office: 505.667.1355  
**Exemption 6**  
Pager: 505.664.2482

## memorandum



Chemistry Division

To/MS: Steve Clemmons, LTP, J910  
From/MS: Thomas M. McCleskey, C-DO, J515  
Phone/Fax: 7-4457/Fax 5-8978  
Symbol: C-DO-14-128?  
Date: May 21, 2014

**SUBJECT: CHEMICAL REACTIVITY CONCERNS WITH KOLOR-SAFE NEUTRALIZER**

In the process of assessing the impact of the use of Kolor-safe acid neutralizer I have found patent information that discusses energetic formulations that can include mixtures of triethanolamine nitrate, alkali nitrates, and a fuel such as sawdust or flour. US patent 5507892 describes watergel explosive compositions, US patent 3401067 describes aqueous slurry type explosive compositions sensitized with at least one alkanolamine nitrate, and US patent 3049453 describes a plastic explosive and method of making it. In all of these patents explosive compositions requiring an initiator for energetic release are made from mixtures comprising an alkanolamine nitrate as a sensitizer, a nitrate salt and a fuel with varying amounts of water present. Typically, ammonium nitrate is preferred with mixtures of ammonium nitrate and sodium nitrate cited in the defined examples and sodium nitrate included in the patent claims. Flour and sawdust are both used as fuels in examples. Triethanolamine nitrate is used as a sensitizer in multiple examples.

These patents suggest a hypothesis that an energetic mixture could be made by combining triethanolamine nitrate as a sensitizer, sodium nitrate as the oxidizer, Swheat as the fuel and up to 12% water present. Less water may lead to a more sensitive material. None of the patents has tested this mixture, although all of the required components included in the patent claims would be present. In the processing of drums, liquid of  $\text{pH} < 2$ , and in some cases noted as  $\text{pH} 0$ , were decanted off the nitrate salts and treated with Kolor-safe acid neutralizer that is a mixture of triethanolamine and water with an indicator. The initial decanted solution would have been an acidic saturated solution containing sodium nitrate. Upon mixing with Kolor-safe a mixture of sodium nitrate and triethanolamine nitrate would be formed. The resulting liquid was then mixed with the absorbent in approximately a 1:2 volume ratio. If the water content of this final mixture were allowed to fall below 20%, it would contain a sensitizer, a nitrate oxidant, and a fuel. To test if this process could generate an energetic mixture, a saturated solution of nitric acid and sodium nitrate at  $\text{pH} 0$  could be treated with Kolor-safe to a neutral  $\text{pH}$ . This solution could then be mixed with absorbent in a 1:2 ratio and allowed to dry. The final product with  $<20\%$  water content could be tested by DSC, for sensitivity and thermal stability. If such a mixture is energetic it would not require nitration of the organic and have almost no signature.

All of the products in the patents still require initiation of some kind for energetic release. The higher the water content the less flammable the resulting mixture.



## Strong, Sharleen - NWP

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**From:** Ramirez, Mike - NWP  
**Sent:** Wednesday, June 25, 2014 3:57 PM  
**To:** james.landmessersr@em.doe.gov  
**Subject:** FW: Need info from LANL  
**Attachments:** Panel 7 Heat Evaluation Markup.docx

I don't know if this is of any use to you so I will let you decide.

Mike Ramirez  
Central Characterization Project  
Nuclear Waste Partnership LLC  
Contractor for the U.S. Department of Energy  
(575)-234-7034

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**From:** Menna, John - URS  
**Sent:** Friday, June 20, 2014 1:24 PM  
**To:** Ramirez, Mike - NWP  
**Subject:** FW: Need info from LANL

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**From:** Menna, John - URS  
**Sent:** Friday, June 20, 2014 1:22 PM  
**To:** Pearcy, Mark - NWP  
**Cc:** McQuinn, Bob - NWP; Hitchler, Michael - URS; Stahl, Sheldon - URS; Blankenhorn, Jim - NWP; Chester, Curtis - NWP; Vandekraats, John - NWP; Stubbs, Brian - NWP; MacMillan, Walter - NWP; Stafford, Jim - URS  
**Subject:** Need info from LANL

Mark,

Not sure your the right person for my request.

In order to develop a safety basis to accomplish Project Reach objectives, workers need to work in the exhaust drift of Room 7. The attached report from LANL implies that, if such an event were to occur again with workers present, the effected waste drum and adjacent drums could reach temperatures of hundreds of degrees C. There are some of the infracted LANL drums located close to the exhaust drift bulkhead, and therefore would be in close proximity to workers.

I am trying to determine the feasibility of crediting in situ temperature measurements (placed thermocouple or thermography) as an indicator of an eminent reaction in a new drum, assuming there would be sufficient time to detect and evacuate workers a safe distance away. For the specific drums located close to the bulkhead, I need LANL to provide any test or modelling results of the transient that can produce the high temperatures and releases. Thus, I would be interested in the chemical reaction, pressure and thermal transients, and predicted temperature map around the reacted drum (including the bulkhead). The temperature map would tell me how precise I have to be in scanning areas or locating sensors to detect a problem (may not need a direct line of sight). I am hoping that the chemical/oxidation reactions proceed slow enough for us to detect a problem and have sufficient time to take action. As the pressure transient within the drum develops, release of radiological material may also provide a trigger as well.

If LANL does not have the ability to model these transients, then information on the time it takes for the reaction to proceed based on test results, or specific drum loading/chemistry, would be helpful. An instantaneous reaction would be difficult to protect against. A steady-state analysis to obtain a temperature map, using the temperatures in the attached report as the boundary condition, would be helpful as well.



# Evaluation of the Effect of Elevated Temperatures on the Waste Containers in Panel 7 to Determine if an Additional Reaction Hazard Has Been Introduced

Christopher J. Chancellor  
Los Alamos National Laboratory, Carlsbad Operations  
Environmental Programs – Repository Science & Operations (EP-RSO)

## Summary

The Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) Difficult Waste Team has evaluated the effect of a heat generating event on the adjacent waste containers in Panel 7 to determine if a heat event could have chemically or physically changed the waste and introduced a reaction hazard. This assessment relies on upon documentation available to the Carlsbad Operations Office and physical evidence in Room 7 of Panel 7. Los Alamos National Laboratory has not conducted testing to support these analyses. Unreacted drums of nitrate salt waste stream, LA-MIN02-V.001, continue to pose a potential reaction hazard in Panel 7. The other waste streams present in Panel 7 are not likely to have developed reaction hazards as a result of heating.

## Background

On May 1, 2014, NWP declared a potentially inadequate safety analysis (PISA) based on the possibility that a container of nitrate salt bearing waste had contributed to the release of radioactivity in the WIPP underground. Recent entries into underground Panel 7 have confirmed that at least one nitrate salt bearing waste container from Los Alamos National Laboratory is breached and is a likely source of the radioactive release.<sup>1</sup> Photographs from the May 12, 2014 entry into Panel 7 showed evidence of melted plastic and rubber on 55-gallon drums and standard waste boxes, indicating the production of heat likely occurred in the room.<sup>2</sup> Subsequent entries into Panel 7 showed heat damage on the nitrate salt bearing waste drum and surrounding waste drums. As part of the continuing investigation Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) was tasked by the Carlsbad Field Office (CBFO) to evaluate the effect of heat and elevated temperature in Panel 7 on the waste containers emplaced there to determine if the heat has chemically or physically changed the waste and introduced a reaction hazard causing the waste to spontaneously combust, self-heat, autoignite, or explode.

Based on a review of the information available to date regarding the release in Panel 7, Room 7, the event did not appear to involve an explosion. Damage to surrounding containers, backfill bags, shrink wrap and slip sheets was likely due to the heat generated and not direct burning of the plastic materials.

<sup>1</sup> Waste Isolation Pilot Plant Nitrate Salt Bearing Waste Container Isolation Plan, Department of Energy and Nuclear Waste Partnership, May 30, 2014

<sup>2</sup> WIPP UPDATE: May 12, 2014, U.S. Department of Energy,  
[http://www.wipp.energy.gov/Special/WIPP%20Update%205\\_12\\_14.pdf](http://www.wipp.energy.gov/Special/WIPP%20Update%205_12_14.pdf), Accessed June 2, 2014

Based on the photographic evidence<sup>3</sup> of the color of the steel on the breached LANL drum, a small area of the drum reached a minimum temperature of 340°C<sup>4</sup>. The maximum surface temperature of the drum is bounded by the critical temperature of low-carbon steel<sup>5,6</sup> (700-870°C)<sup>7</sup> due to the apparent lack of structural deformation on the site of the discoloration. The immediately adjacent drums do not show signs of radiant heat damage that would exceed 230°C, the auto ignition temperature of paper<sup>8</sup>. The damage to container gaskets, polypropylene backfill bags, shrink wrap, and slip sheets indicate a room wide temperature sufficient to cause the polymers in these items to flow or melt without burning which will happen at approximately 170°C<sup>9</sup>. Based solely on the photographic information it appears that some surfaces on the LANL drum may have reached temperatures of up to 700-870°C<sup>10</sup> and the waste in a large portion of the room reached temperatures up to 170°C<sup>11</sup> to 230°C<sup>12</sup>. The evaluation that follows is based on this temperature range.

#### **Containers from Waste Stream LA-MIN02-V.001**

<b>Container Type</b>	<b>Total Number of Containers in Panel 7</b>	<b>Number of Containers Overpacked in SWBs</b>
55 Gallon Drum	43	1
POC 12-in	12	0

The fifty-five containers that represents LANL's LA-MIN02-V.001 waste stream in Panel 7 contain nitrate salts, an oxidizer, mixed with Swheat Scoop – a wheat-based organic kitty litter – that LANL used as an absorbent in remediation/repackaging activities. Some of these drums also contain other organic compounds such as neutralizers added to treat the free liquids during remediation/repackaging activities. Photographs from Panel 7 verify that at least one container from this waste stream has reacted, is breached, possibly due to a chemical reaction, and is a likely source of the radioactive release.

<sup>3</sup> Lee, Ronnie. "Fwd" (Contains attachment "Effects of Reactive Payloads in a DOT Type A Container(A).pdf") Message to Mike Sensibaugh, J. R. Stroble, James Rhoades, Mark Pearcy, Ed Gulbransen, Farok Sharif, Kathryn W. Johns-Hughes, and Murthy Devarakonda. May 16, 2014. E-mail.

<sup>4</sup> Oberg, Erik Jones, Franklin D. Horton, Holbrook L. Ryffel, Henry H. Machinery's Handbook (29th Edition) & Guide to Machinery's Handbook. Industrial Press, 2012. Accessed at:

<http://app.knovel.com/hotlink/toc/id:kpMHEGMH24/machinerys-handbook-29th>, Accessed June 11, 2014

<sup>5</sup> Reference "ASTM A1008", Skolnik Industries, Inc., 55 Gallon Open Head Drum Tech Drawing, [http://www.skolnik.com/images/drawings/CQ5508Q\\_A3.pdf](http://www.skolnik.com/images/drawings/CQ5508Q_A3.pdf), Accessed June 11, 2014.

<sup>6</sup> ASTM Standard A568/A568M, 2013, "Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for" ASTM International, West Conshohocken, PA, 2013

<sup>7</sup> Oberg, Erik Jones, Franklin D. Horton, Holbrook L. Ryffel, Henry H. Machinery's Handbook (29th Edition) & Guide to Machinery's Handbook. Industrial Press, 2012

<sup>8</sup> Weyerhaeuser Writing and Printing Paper MSDS, <http://www.weyerhaeuser.com/pdfs/msds/453.pdf>, Accessed June 11, 2014

<sup>9</sup> "Polypropylene." *Hawley's Condensed Chemical Dictionary* -14<sup>th</sup> Ed. New York: John Wiley & Sons, Inc., 2001.

<sup>10</sup> Oberg, Erik Jones, Franklin D. Horton, Holbrook L. Ryffel, Henry H. Machinery's Handbook (29th Edition) & Guide to Machinery's Handbook. Industrial Press, 2012

<sup>11</sup> "Polypropylene." *Hawley's Condensed Chemical Dictionary* -14<sup>th</sup> Ed. New York: John Wiley & Sons, Inc., 2001.

<sup>12</sup> Weyerhaeuser Writing and Printing Paper MSDS, <http://www.weyerhaeuser.com/pdfs/msds/453.pdf>, Accessed June 11, 2014



Because of the mixture of organics (fuel) and nitrate salts (oxidizer) in these drums they continue to pose a potential hazard. There may be some of these containers that have not reacted, even within the main heat zone. However the higher-170-230°C temperatures likely experienced by some of the other LA-MIN02-V.001 drums may have dried out some of the unreacted oxidizer-organic mixtures increasing their potential for spontaneous reaction. This dehydration of the fuel-oxidizer mixtures caused by the heating of the drums is recognized as a condition known to increase the potential for reaction.<sup>13,14,15</sup>

Reactions may have occurred within some of these drums at levels insufficient to lead to detectable visible evidence.

#### Containers from Waste Stream LA-MHD01.001

Container Type	Total Number of Containers in Panel 7	Number of Containers Overpacked in SWBs
55 Gallon Drum	18	10
POC 12-in	2	0
SWB	1	N/A

An evaluation of the contents of the twenty-one containers that represent LANL's LA-MHD01.001 waste stream in Panel 7 was conducted and the results of the evaluation are included in the table on the next page.

<sup>13</sup> Fire, Frank L. *The Common Sense Approach to Hazardous Materials*, Saddle Brook, NJ: Penn Well Publishing Company, 1986, p 188-189

<sup>14</sup> Wyman, Charles E. et al. "43 Hydrolysis of Cellulose and Hemicellulose", *Polysaccharides - Structural Diversity and Functional Versatility*, 2<sup>nd</sup> Edition, New York: CRC Press, 2004.

<sup>15</sup> Bretherick, L. *Handbook of Reactive Chemical Hazards*. 4th ed. Boston, MA: Butterworth-Heinemann Ltd., 1990, p. 1338



Container	Contents
LA00000054517	Metal debris, metal cans, electrical equipment, plastic bags, leaded-rubber apron, hose
LA00000066775	Metal can with material, glass, lead, plastic debris, homogeneous solids (0.6 kg)
LA00000066776	Metal can with material, glass, plastic debris, homogeneous solids (1.0 kg)
LA00000066912	Metal cans with material, glass, plastic debris, homogeneous solids (1.1 kg)
LA00000067039	Metal cans with material, glass, lead, plastic debris, homogeneous solids (5.7 kg)
LA00000067040	Metal cans with material, glass, lead, plastic debris, homogeneous solids (3.5 kg)
LA00000067171	Plastic bags/bottles/plugs, rubber hose/gloves, aluminum probes, cheese cloth, glass jar, vinyl tape
LA00000067318	Leaded rubber gloves, metal cans/lids/scrap
LA00000067396	Metal cans/lids/scrap, glass, cheese cloth, electrical cord, vinyl tape, plastic debris
LA00000069023	Metal debris, leaded rubber gloves, plastic containers/debris
LA00000083715	Metal cans, lead shielding, ceramics, plastic debris, cheese cloth
LA00000083725	Metal debris, plastic bottles/debris, rubber debris, cheese cloth, lead lined gloves
LA00000085273	HEPA filter, metal debris, plastic bag
LA00000087907	Metal can with material, glass, plastic debris
LA00000088053	Open 20 gallon drum with material, metal lids/scrap, lead, rubber gloves, plastic containers/debris
LA00000092644	plastic debris, metal cans, ceramics, lead shielding
LA00000092777	plastic debris, metal cans, lead, rocks, ash
LA00000092840	Metal cans with material, metal 5 gallon bucket, metal lids/scrap, glass, lead, plastic, cloth, homogeneous solids (18.0 kg)
LA00000092974	Metal cans with material, metal lids, lead, glass, plastic bags, homogeneous solids (7.3 kg)
LA00000094127	room trash, cemented waste, rusty cans, plastic
SB10147	Vented 55 gallon drums, open 30 gallon drum, metal cans with material, scrap metal, glass, coveralls, wood, plastic debris, homogeneous solids (1.0 kg)

These twenty-one containers have been compared to a list of containers provided by LANL and CCP to LANL-CO which contain homogeneous solids identified as nitrate salt waste.<sup>16</sup> None of the twenty-one containers listed above are found on the list; therefore, based on the best available information, the conclusion is that the homogeneous solids in these containers are not nitrate salt waste. Heat generated in Panel 7 would not create a reaction hazard in these containers.

<sup>16</sup> Email Communication: Davis Christensen, "Final number 707", May 23, 2014.

**Containers from Waste Stream LA-CIN01.001**

Container Type	Total Number of Containers in Panel 7	Number of Containers Overpacked in SWBs
55 Gallon Drum	60	55

The sixty containers that represent LANL's LA-CIN01.001 waste stream in Panel 7 consists of cemented inorganic homogeneous TRU waste generated in LANL's Plutonium Facility (TA-55).

Waste Lock 770 (sodium polyacrylate), an organic absorbent, was used on top of the cement in remediation/repackaging activities on all of these drums. The cemented waste contains nitrate salts, but does not pose a reaction hazard because they the nitrates are solidified in cement and Waste Lock 770 will not combust under normal circumstances.<sup>17</sup> Heat generated in Panel 7 would not create a reaction hazard in these containers.

**Containers from Waste Stream LA-MHD03.001**

Container Type	Total Number of Containers in Panel 7
SWB	1

An evaluation of the single SWB (LA00000068005) that represents LANL's LA-MHD03.001 waste stream in Panel 7 was conducted using packaging paperwork and radiography. Information on the contents of the SWB shows it to contain waste from three drums repackaged into the SWB. The contents of these drums include: absorbent, cardboard, cloth coveralls, paper, plastic debris, glass debris, metal scrap, rubber aspirator bulbs, and wood. This container and its three parent drums have been compared to a list of containers agreed on by LANL and CCP to contain homogeneous solids identified as nitrate salt waste.<sup>18</sup> Neither the SWB nor the three drums overlap with the list; therefore, based on the best available information, there are no nitrate salts in this container.

Based on the description of the contents of this single SWB, this container does not pose a reaction hazard in Panel 7. Heat generated in Panel 7 would not create a reaction hazard in this container.

<sup>17</sup> Waste Lock 770® MSDS, [http://www.m2polymer.com/pdf/MSDS\\_Waste\\_Lock\\_770.pdf](http://www.m2polymer.com/pdf/MSDS_Waste_Lock_770.pdf), Accessed June 12, 2014

<sup>18</sup> Email Communication: Davis Christensen, "Final number 707", May 23, 2014.



**Containers from Waste Stream LA-MHD04.001**

Container Type	Total Number of Containers in Panel 7
SWB	9

An evaluation of the nine containers that represents LANL's LA-MHD04.001 waste stream in Panel 7 was conducted and the results of the evaluation are included in the table below.

Container	Contents
LA00000068119	scrapped glovebox and ductwork
LA00000068120	scrapped glovebox and ductwork
LA00000068121	scrapped glovebox and ductwork
LA00000068229	wood chips, rad-trash, and air filters
LA00000068231	rad-trash and foam
LA00000068235	scrapped glovebox
LA00000068237	scrapped pencil tank and bag-out bag
LA00000068240	pipe and rad-trash/PPE
LA00000068241	pipe and conduit

Based on the description of the contents of the nine containers of the LA-MHD04.001 waste stream, these containers do not pose a reaction hazard in Panel 7. Heat generated in Panel 7 would not create a reaction hazard in these containers.

**Containers from Waste Stream BN510.2**

Container Type	Total Number of Containers in Panel 7
100 Gallon Drum	6
SWB (overpacked drums)	3

The BN510.2 debris waste stream is generated at Idaho National Laboratory's (INL) Advanced Mixed Waste Treatment Project (AMWTP) from the supercompaction of 55-gallon containers of debris waste. With a force of 2,000 tons, or 4 million pounds, the Supercompactor can compact a 55-gallon drum to roughly one-fifth its original size. The compacted drum is called a puck. Up to 6 pucks are placed in a 100-gallon drum. If 100-gallon drums become damaged, they are overpacked into SWBs. The uncompacted waste consists of various combustible and noncombustible debris materials that originated from Argonne National Laboratory-East (AE), Materials and Fuels Complex (AW), Battelle Columbus (BC), Mound (MD), and Rocky Flats (RF), as well as AMWTP self-generated (i.e., BN item description codes (IDCs)) non-polychlorinated biphenyl (non-PCB) debris waste within the AMWTP Waste Treatment Facility (WMF-676).

This waste stream does not pose a reaction hazard. Supercompaction removes air volume and doubly encapsulates the waste – rendering it unlikely to burn even when exposed to fire. Heat generated in Panel 7 would not likely create a reaction hazard in these containers.



### Containers from Waste Stream BN510.3

Container Type	Total Number of Containers in Panel 7
100 Gallon Drum	15

The BN510.3 newly generated debris waste stream is generated at INL's AMWTP from the supercompaction of 55-gallon containers of debris waste. With a force of 2,000 tons, or 4 million pounds, the Supercompactor can compact a 55-gallon drum to roughly one-fifth its original size. The compacted drum is called a puck. Up to 6 pucks are placed in a 100-gallon drum. Waste Stream BN510.3 is almost identical to BN510.2 except that it contains pre-1980 INL-Exhumed Subsurface Disposal Area (SD) debris waste and hexachlorobutadiene (hazardous waste number D033) that is not in the BN510.2 waste stream. With these two exceptions BN510.3 is the same as BN510.2.

This waste stream does not pose a reaction hazard. Hexachlorobutadiene is present in extremely low concentrations in this debris waste stream and does not autoignite until 610°C (1,130°F)<sup>19</sup>.

Supercompaction removes air volume and doubly encapsulates the waste – rendering it unlikely to burn even when exposed to fire. Heat generated in Panel 7 would not create a reaction hazard in these containers.

### Containers from Waste Stream IN-BNINW216

Container Type	Total Number of Containers in Panel 7	Number of Containers Overpacked in SWBs	Number of Containers Overpacked in TDOPs
55 Gallon Drum	19	12	0
85 Gallon Drum	36	N/A	36
SWB	27	N/A	0

All of the containers in Panel 7 from waste stream IN-BNINW216 consist of aqueous sludge waste from Rocky Flat's Building 774 that was solidified with Portland cement or a diatomite/Portland cement mixture. The First/Second Stage Sludge waste stream consists of >50% by volume secondary sludge or filter cake from wastewater treatment processes or heavy metal sludges from recovery processes. Nine of the containers are sludge that was placed into a 55-gallon drum that had Portland cement but were not mixed. The excess liquid in the sludge was immobilized, but a solid monolith was not formed. Seventy-three of the containers are sludge that was co-fed into a 55-gallon drum with a diatomite and Portland cement mixture, which formed a solid monolith after curing.

The following inorganic absorbents were used during remediation/repackaging activities: Aquaset (sodium montmorillonite clay material), Aquaset II-G (granular sepiolite clay), and Micro-Cel E (synthetic calcium silicate).

This waste stream does not pose a reaction hazard because all eighty-two containers are cemented metal oxides and only inorganic absorbents were used during remediation/repackaging activities. Heat generated in Panel 7 would not create a reaction hazard in these containers.

<sup>19</sup> Pohanish, Richard P. (2012). Sittig's Handbook of Toxic and Hazardous Chemicals and Carcinogens (6th Edition). Elsevier. Accessed at: [http://app.knovel.com/web/toc.v/cid:kpSHTHCC12/viewerType:toc/root\\_slug:sittigs-handbook-toxic-3/url\\_slug:sittigs-handbook-toxic-3/?](http://app.knovel.com/web/toc.v/cid:kpSHTHCC12/viewerType:toc/root_slug:sittigs-handbook-toxic-3/url_slug:sittigs-handbook-toxic-3/?)

**Containers from Waste Stream IN-ID-RF-S3114**

Container Type	Total Number of Containers in Panel 7	Number of Containers Overpacked in TDOPs
55 Gallon Drum	328	328

The three-hundred and twenty-eight containers of waste stream IN-ID-RF-S3114 in Panel 7 consist of immobilized organic liquids produced in the Rocky Flats Grease Plant. In this process, the organic liquids were processed through an extruder with Micro-Cel E (synthetic calcium silicate).

The following inorganic absorbents were used: Micro-Cel E (synthetic calcium silicate), Oil-Dri<sup>TM</sup> (clay absorbent), and vermiculite.

This waste stream does not pose a reaction hazard. Contained within the waste matrix is a considerable quantity of organic material that could be considered as fuel; however, it is adsorbed onto an inorganic matrix. There are no oxidizers in waste stream IN-ID-RF-S3114. The effect of heat generated in Panel 7 would increase the diffusion rate of radiolysis products and the VOC evaporation rate from the waste during the temperature excursion. But these rates would have returned to the room temperature equilibrium levels near those seen at certification, once the waste cooled. Heat generated in Panel 7 would not create a reaction hazard in these containers.

**Containers from Waste Stream SR-221H-PuOx**

Container Type	Total Number of Containers in Panel 7
POC 12-in	51

The fifty-one containers of the Savannah River Site (SRS) waste stream SR-221H-PuOx in Panel 7 are comprised of plutonium oxide blended with a non-hazardous inorganic material to facilitate termination of safeguards. The exact composition of the inorganic blending material is Unclassified Controlled Nuclear Information (UCNI); therefore, it is not explicitly listed in this document.

This waste stream does not pose a reaction hazard. It contains neither fuel nor oxidizer. Heat generated in Panel 7 would not create a reaction hazard in these containers.



### Containers from Waste Stream SR-MD-PAD1

Container Type	Total Number of Containers in Panel 7
SLB2	4

An evaluation of the four Standard Large Box 2 (SLB2) that represent SRS SR-MD-PAD1 waste stream in Panel 7 was conducted and the results of the evaluation are included in the table below.

Container	Contents (per Radiography Data)
SR46019	Metal debris, tools, wood, rubber debris, plastic, cloth
SR46020	Metal debris, wood, rubber debris, plastic, absorbent, Plexiglas
SR46021Z	Metal debris, absorbent, wood, plastic
SR46029Z	Metal debris, absorbent, wood, rubber debris, plastic debris, tools, batteries, electrical devices

Containers present in Panel 7 of waste stream SR-MD-PAD1 consist of heterogeneous debris with organic absorbent. There are no nitrates or other oxidizers in the contents. Based on the description of the contents of the four containers of the SR-MD-PAD1 waste stream, this waste stream does not pose a reaction hazard in Panel 7. Heat generated in Panel 7 would not create a reaction hazard in these containers.

### Containers from Waste Stream SR-W027-HBL-BOX

Container Type	Total Number of Containers in Panel 7
SLB2	4

An evaluation of the contents of the four SLB2s that represents SRS SR-W027-HBL-BOX waste stream in Panel 7 was conducted and the results of the evaluation are included in the table on the next page.

Container	Contents (per Radiography Data)
SR57167702	Metal debris, absorbent, wood, plastic, motors, wood
SR57170918	Metal debris, tools, absorbent, wood, rubber debris, plastic
WMAPSLB007	Metal debris, tools, absorbent, wood, cardboard, rubber debris, plastic, Plexiglas, electrical cord
WMAPSLB046	Metal debris, HEPA filters, wood, cardboard, rubber debris, plastic, absorbent, Plexiglas

Based on the description of the contents of the four containers of the SR-W027-HBL-BOX waste stream and the use of inorganic absorbents, this waste stream does not pose a reaction hazard. Heat generated in Panel 7 would not create a reaction hazard in these containers.



## Strong, Sharleen - NWP

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**From:** Mike Papp <mj\_papp@msn.com>  
**Sent:** Friday, May 23, 2014 11:44 AM  
**To:** Percy, Mark - NWP; Sensibaugh, Mike - NWP  
**Cc:** Greenwood, Trey  
**Subject:** RE: Evaluation Path Forward

Hello,

I have completed my response to the below statements (please disregard my previous email). Please call me if you have any questions. Thank you.

Michael J. Papp, CCP AKE  
Technical Specialists  
Nuclear Waste Partnership, LLC Subcontractor  
Work #: 720-872-8184

### Exemption 6

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**From:** Percy, Mark - NWP [<mailto:Mark.Percy@wipp.ws>]  
**Sent:** Friday, May 23, 2014 8:11 AM  
**To:** Papp, Michael  
**Cc:** Sensibaugh, Mike - NWP; Greenwood, Trey  
**Subject:** FW: Evaluation Path Forward  
**Importance:** High

Mike,  
Take a look at these statements and see what holes we might have in the argument.

---

**From:** Dana Bryson [<mailto:Dana.Bryson@cbfo.doe.gov>]  
**Sent:** Friday, May 23, 2014 7:40 AM  
**To:** Blankenhorn, Jim - NWP; Percy, Mark - NWP  
**Cc:** Tom Teynor; Stroble, J. R. - DOE; Franco, Jose - FedNet  
**Subject:** Evaluation Path Forward  
**Importance:** High

Jim

With the focus now clearly on the 660 drum, we need to be able to confirm that each of the following statements regarding that drum are or are not true:

1) This drum and its siblings contain the processed waste that started with the contents of a 5 gallon container that was at the bottom of an evaporator -- which also was dismantled and disposed of in other drums.

According to AK, the evaporator salts were precipitated out of the bottom of the evaporator into cooling trays. The salts would have been washed, vacuum dried, double- (triple-) bagged in plastic bags, and placed into a 55-gallon drum. The salts, plastic bags, and secondary waste would have been disposed of in the daughter containers. Therefore, a 5-gallon container was not present in the parent or daughter containers (verified by RTR).

2) There are \_\_\_\_ siblings and they are located (at LANL) (In panel 6).

There is one sibling 68685 and it is located at LANL.

3) In addition to the contents of the 5 gallon container, the following waste is also contained in Drum 660 and its siblings

Please see above response to statement 1. In addition to the nitrate salts, container 68660 includes leaded rubber gloves, plastic bags, the original liner lid (normally cut into pieces), and plastic containers (verified by RTR). In addition to the nitrate salts, container 68685 includes scrap metal, scrap lead (typically used for shielding), and plastic bags (verified by RTR).

4) This was liquid waste that started with a pH of 0

According to the container paperwork, the starting pH of approximately 2-gallons of liquid present in parent container S855793 was zero. The bulk of the waste in the container was nitrate salts (a solid).

5) The first step was to neutralize the material, which was done with \_\_\_\_\_.

The closure date for container 68660 was 12/04/13. According to information provided by Miles Smith from Energy solutions on 05/19/14, Spilfyter Chemical Neutralizer 3CNW8 (common name Kolersafe Liquid Acid Neutralizer) would have been used to neutralize any acidic liquid. The Kolersafe Liquid Acid Neutralizer is a triethanolamine (weak caustic) based neutralization chemical.

6) The neutralization process went to far, and it reached a pH of \_\_\_\_\_.

If the manufacturer's directions were followed, the liquid would have been neutralized to a pH of approximately 7. However, the final pH of the liquid was not included on the repackaging paperwork.

7) In order to neutralize, the (citric acid)(other????) was then added to material to bring it to a pH of 7

Spilfyter Chemical Neutralizer 3CNW8 (common name Kolersafe Liquid Acid Neutralizer) would have been used to neutralize the acidic liquid. The Kolersafe Liquid Acid Neutralizer is a triethanolamine (weak caustic) based neutralization chemical. If the manufacturer's directions were followed, the liquid would have been neutralized to a pH of approximately 7.

8) As part of the process, kitty litter was added to absorb the liquids

According to the container paperwork, kitty litter was used to absorb the liquids. Kitty litter would have also been mixed with the nitrate salts.

9) This was the organic kitty litter, which has been in use at LANL since October 2012.

According to information provided by Miles Smith from Energy solutions on 05/15/14, organic kitty litter was received in the facility on 09/28/12. Therefore, it may have been used as early as September 2012.

10) When finally disposed, the material was (dry)(powdery)(of a consistency that could reasonably be expected to be caught up in the air flow and carried down the E-300 corridor for 1/2 mile and up the 2100 foot air shaft)(insert accurate statement)

The final waste form is expected to have a pellet or grain like consistency (not powder). However, it is wheat based and is expected to be relatively light in weight.

Note: the appearance of the final waste form may need to come from the LANL repackaging folks.



11) The sibling(s) of Drum 660 are held at LANL. They have not been opened. The plan is to do the following as part of the investigation\_\_\_\_\_.

Sibling container 68685 is currently at LANL. It will be reprocessed and mixed with a stabilizing agent (e.g., Portland cement).

Note: we have no information indicating the container has been opened since it was repackaged on 12/04/13.

It is important that verify with certainty that each of these statements is true. Please update CBFO on what we do and do not know in the areas above.

Thanks.

Dana

## Strong, Sharleen - NWP

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**From:** Sensibaugh, Mike - NWP  
**Sent:** Friday, May 09, 2014 11:16 AM  
**To:** Greenwood, Trey (4dc.consulting@gmail.com)  
**Cc:** Mager, Donavan - WTS (donavan.mager@wipp.ws)  
**Subject:** FW: See if this is correct?  
**Attachments:** WIPP Form discription.docx

Trey,

Would you please assist Donavan in the preparation of a statement to describe the WF14-117 condition.

Thanks,

Mike Sensibaugh  
Operations Manager  
Central Characterization Program  
Nuclear Waste Partnership LLC  
- Contractor for US DOE -  
Exemption 6

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**From:** Mager, Donavan - NWP  
**Sent:** Friday, May 09, 2014 11:12 AM  
**To:** Sensibaugh, Mike - NWP  
**Subject:** See if this is correct?

Mike,

Please take a quick look and be sure this is accurate?



As we were going back and forth with the company doing the treatment of the 3000 waste, we realized the neutralizers they used were not listed as part of the AK record. Because they were not listed, we requested a list of all the neutralizing agents they used. It was discovered that some of the agents might not be chemically compatible with the waste stream and the organic kitty litter. It is also a potential permit violation since all the neutralizing agents were not listed as part of the procedure and AK.

## Strong, Sharleen - NWP

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**From:** Kirkes, Creta - NWP  
**Sent:** Thursday, May 15, 2014 8:18 AM  
**To:** Biedscheid, Jennifer - NWP; Devarakonda, Murthy - NWP  
**Subject:** FW: New WIPP Form: WF14-117

Morning ☺

Below is the WIPP Form WF14-117 that Mike asked me to forward to each of you.

Please let me know if you have any questions.

Thanks ☺

*Creta Kirkes  
Central Characterization Programs  
Nuclear Waste Partnership, LLC  
Contractor for the U.S. Department of Energy  
Waste Isolation Pilot Plant  
575.234.7477 (w)  
[Creta.kirkes@wipp.ws](mailto:Creta.kirkes@wipp.ws)*

## New WIPP Form

Click the WIPP Form number below to view the WIPP Form in more detail.

<b>WIPP Form Number</b>	<u><a href="#">WF14-117</a></u>
<b>Originator</b>	Mike Sensibaugh
<b>Location</b>	N/A
<b>Identification Date</b>	5/8/2014
<b>Entry Date</b>	5/8/2014
<b>Equipment</b>	N/A
<b>Description</b>	<p>During the processing/repackaging of the LA-MIN02-V.001 (absorbed liquid waste) waste stream at the LANL WCCRF Waste Characterization Glovebox when liquids above WIPP allowable limits were encountered WCCRF procedure EP-WCRR-WO-DOP-0233 required the operator to perform the following steps:</p> <p>C. PERFORM a pH test of the liquid using Litmus Paper.</p> <ul style="list-style-type: none"><li>• Acid (less than 7)</li><li>• Caustic (base – greater than 7)</li></ul>



	<p>D. OBTAIN the appropriate absorbing agent, and PLACE the absorbent into a compatible container (e.g., bottle or bag) that has a volume of less than 4 Liters.</p> <p>During recent discussions with LANL personnel it has been stated on numerous occasions that not only did the packaging personnel absorb the liquids, but prior to absorbing them they were neutralized using various neutralizing agents.</p> <p>After reviewing the CCP acceptable knowledge (AK) documents that discuss the packaging processes for this S3000 waste at the WCCRF it was noted that the chemicals used for neutralizing the acids or bases have not been considered in the AK record. These chemicals not being considered could lead to an incomplete AK record which could be a violation of the WIPP hazardous waste facility permit requirements.</p>
<b>Immediate Actions</b>	<ol style="list-style-type: none"> <li>1) Collected documentation from LANL on the neutralizing agents that where used for S3000 waste at the WCCRF.</li> <li>2) LANL S3000 Waste Streams will be "expired" in WDS to ensure certification and shipment are on hold.</li> <li>3) All LANL Waste Shipments have been suspended.</li> </ol>
<b>Recommended Actions</b>	<ol style="list-style-type: none"> <li>1) Evaluate documentation on neutralizing agents provided by LANL for incorporation into AK Summary Reports for S3000 waste.</li> <li>2) Evaluate Interface Documents for enhanced communication from Host sites to AKEs and SPMs on remediation processes and notifications of process changes</li> </ol>

## **Strong, Sharleen - NWP**

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**From:** Cook, Dennis - NWP  
**Sent:** Friday, May 16, 2014 5:05 PM  
**To:** Hellstrom, George - DOE; Chavez, Rick - RES  
**Cc:** Basabilvazo, George - DOE; Kehrman, Bob - RES; Cook, Dennis - NWP  
**Subject:** RE: NMED Requested Documents

I'll be available to discuss whenever you want. I will be at the site tomorrow morning for a meeting. Should be free after lunch time.

Dennis

Dennis N. Cook  
General Counsel  
Nuclear Waste Partnership LLC  
Contractor for the U.S. Department of Energy  
P.O. Box 2078, GSA-202  
Carlsbad, New Mexico 88221

Phone: (575) 234-7116

Fax: (575) 234-7047

Exemption 6

e-mail: [dennis.cook@wipp.ws](mailto:dennis.cook@wipp.ws)

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**From:** Hellstrom, George - DOE  
**Sent:** Friday, May 16, 2014 4:56 PM  
**To:** Chavez, Rick - RES; Cook, Dennis - NWP  
**Cc:** Basabilvazo, George - DOE; Kehrman, Bob - RES  
**Subject:** RE: NMED Requested Documents

I think the information needs to be gathered. Let me know when you want to discuss.

George W. Hellstrom  
Legal Counsel  
U.S. Department of Energy  
Carlsbad Field Office  
P.O. Box 3090  
4021 National Parks Highway  
Carlsbad, New Mexico 88220  
Business: (575) 234-7010  
Fax: (575) 234-7027  
Exemption 6  
[george.hellstrom@wipp.ws](mailto:george.hellstrom@wipp.ws)

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in direct or indirect anticipation of litigation. It is not releasable outside the Department of Energy without the specific approval of the originator or higher legal authority. It is exempt from release under P.L. 93-502, 5 U.S.C. 552(b)(5).

Sent with Good ([www.good.com](http://www.good.com))

-----Original Message-----

**From:** Chavez, Rick - RES  
**Sent:** Friday, May 16, 2014 04:46 PM Mountain Standard Time  
**To:** Cook, Dennis - NWP; Hellstrom, George - DOE  
**Cc:** Basabilvazo, George - DOE; Kehrman, Bob - RES  
**Subject:** FW: NMED Requested Documents

Please advise how to address these requests. I think that we should discuss.

Rick Chavez, Manager  
NWP LLC Regulatory Environmental Services  
Contractor to the Department of Energy  
4021 National Parks Highway MS GSA-109  
Carlsbad, NM 88220  
575-234-7405

---

**From:** Oba Vincent [<mailto:oba.vincent@cbfo.doe.gov>]  
**Sent:** Friday, May 16, 2014 4:42 PM  
**To:** Kliphuis, Trais; Basabilvazo, George - DOE  
**Cc:** Chavez, Rick - RES; 'Stone, Nick ([stone.nick@epa.gov](mailto:stone.nick@epa.gov))'; 'Tom Peake ([Peake.Tom@epamail.epa.gov](mailto:Peake.Tom@epamail.epa.gov))'; 'Kielling, John, NMENV'; 'Blaine, Tom, NMENV'  
**Subject:** RE: NMED Requested Documents

Hi Trais

I will see what we can do. Some of this will need to come from LANL. We should be able to discuss on Monday.

Have a great weekend.

Oba

-----Original Message-----

**From:** Kliphuis, Trais, NMENV [[trais.kliphuis@state.nm.us](mailto:trais.kliphuis@state.nm.us)]  
**Sent:** Friday, May 16, 2014 04:15 PM Mountain Standard Time  
**To:** George Basabilvazo - WIPPNet; Oba Vincent  
**Cc:** Chavez, Rick - RES; Stone, Nick ([stone.nick@epa.gov](mailto:stone.nick@epa.gov)); Tom Peake ([Peake.Tom@epamail.epa.gov](mailto:Peake.Tom@epamail.epa.gov)); Kielling, John, NMENV; Blaine, Tom, NMENV  
**Subject:** NMED Requested Documents

Here is a list of the documents NMED would like. Please let me know if you have any questions or concerns about this request.

- Suspect Drum(s) identification with date(s) of treatment, dates of shipping and date(s) of emplacement
- Identification, description and origin of "parent drum"
- Identification and location of "siblings" of suspect drum(s)
- Access to the WCRRF at LANL for the next audit: The WCRRF has been off limits to the audit team during the last two LANL audits (2012 and 2013) due to LANL Rad Worker training requirements. The next LANL audit is currently scheduled for July 15-17, 2014. NMED/CTAC must be able to audit the activities there.
- A copy of RTR videos and BDR's for the suspect and sibling containers
- A copy of the procedure that uses kitty litter for both INL and LANL
- A copy of the procedure used for repackaging/addition of kitty litter LANL
- A list of the chemicals used in neutralization for the identified waste streams and associated MSDS's and other analyses
- Access to the shared drive mentioned in the 8:30 AM call or agreement that the files in that drive will be posted on ICLN
- Information regarding any perceived anomalies in the suspect drum(s)
- A copy of the full ORPS report
- A copy of the LANL HSG sampling data and any associated reports including identification of what test method(s) are being used
- Copies of SRNL analysis reports for swipes and any other samples
- Copies of Progress Report(s) mentioned in 8:30 AM call
- A RLSO of AK documentation changes as a result of the WIPP Form on S3000 waste from LANL. (AK Summary Report, AK Supporting Docs, etc.)
- Records of treatment for the suspect and sibling drums from LANL

Thanks,

Trais Kliphuis  
WIPP Staff Manager  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive E, Building 1  
Santa Fe, New Mexico 87505

Office: 505-476-6051  
Front Desk: 505-476-6000



## **Strong, Sharleen - NWP**

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**From:** Sharif, Farok -NWP  
**Sent:** Monday, May 19, 2014 4:31 PM  
**To:** Blankenhorn, Jim - NWP; Reynolds, Tammy - NWP; Stroble, J. R. - DOE; Rhoades, James - DOE  
**Subject:** FW: NRC Call on Radiological Event

FYI. Thanks.

-----Original Message-----

**From:** Sellmer, Todd - NWP  
**Sent:** Monday, May 19, 2014 02:26 PM Mountain Standard Time  
**To:** Sharif, Farok -NWP  
**Subject:** NRC Call on Radiological Event

Farok,

On 05/19/14 at 1300 hours a phone call took place with the NRC to answer some questions that the NRC had relative to the release vent in Panel 7 Room 7. In attendance on the call was James Rhoades (CBFO), Bernie White (NRC, Senior Project Manager) and myself. The following is a recap of the conversation;

- Bernie asked if the use of the alternate "kitty Litter" had been authorized by NWP. I answered that it was not, NWP authorized "X" for use and LANL used "Y". Bernie was satisfied with that answer.
- Bernie asked if we were reviewing for impacts to our TRAMPAC (specifically cited in our CoC) if an alternate compound was used. I answered that we are currently in the process of performing that review and would report anything that would be considered a violation of our CoC in accordance with 10CFR71.95. Bernie was satisfied with that answer.
- James Rhoades explained to Bernie the process for remediating the waste at LANL for the waste stream in question.
- Bernie asked what our current plans for shipments were from LANL to WCS. I answered that until we can say definitively what was the cause of the release in the underground (the whole waste stream or a sub-set of the population) no shipments will be made, James Rhoades concurred with that position. Bernie was satisfied with that answer.
- Bernie asked if we planned on filing a 71.95 report once we have determined what caused the specific drum in the underground to react and release. I answered that if the results of the investigation clearly identified that we performed a shipment that was not compliant with our CoC that we would file a report in accordance with 10CFR71.95. Bernie was pleased with that answer and reminded me that we had 60 days after we have identified what the actual violation was to file the report.

I believe that the phone call went well and the NRC is satisfied with the responses given and the actions we are taking. Additionally Bernie stated that "they were working with WCS on their permit request".

Let me know if you have any questions or require additional information.

Thanks,

Todd

Todd Sellmer, NWP Manager  
Transportation Packaging  
ASNT Level III  
Contractor for the U.S. Department of Energy  
Office Phone (575) 234-7396  
Office Fax (575) 234-7055  
Cell Phone Exemption 6



## Strong, Sharleen - NWP

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**From:** Willison, James  
**Sent:** Monday, May 05, 2014 7:10 AM  
**To:** Williams, Fran - URS  
**Subject:** RE: P7R7 recent photo's

Plenty in Panel 7, some in Panel 6, a few at WCS, and several still at LANL

-----Original Message-----

From: Williams, Fran [<mailto:fran.williams@urs-ps.com>]  
Sent: Monday, May 05, 2014 7:05 AM  
To: Willison, James  
Subject: Re: P7R7 recent photo's

Wow. How bad is that?

Sent from my iPhone

> On May 5, 2014, at 8:54 AM, "Willison, James" <[James.Willison@wipp.ws](mailto:James.Willison@wipp.ws)> wrote:

>

> LANL used a wheat-based kitty litter rather than clay-based kitty litter as a stabilizer. They fessed up after we nailed down the general area, but at the same time Dr. Hayes and I limited it to 5 drums based on the presence of CM-243 and AM-243. At least, now we know

>

> -----Original Message-----

> From: Williams, Fran [<mailto:fran.williams@urs-ps.com>]  
> Sent: Sunday, May 04, 2014 1:27 PM  
> To: Willison, James  
> Subject: Re: P7R7 recent photo's

>

> Got your message. Been super busy. Sorry. I saw the daily report that suspects nitrates untreated in LANL waste. Wow. Good thing they has the design features they had. Everyone I take to who is there is really struggling with the pressure of the situation. Hope you are well.

>

> Sent from my iPhone

>

>> On May 1, 2014, at 6:43 PM, "Willison, James" <[James.Willison@wipp.ws](mailto:James.Willison@wipp.ws)> wrote:

>>

>>

>>

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>> \_\_\_\_\_  
>> From: Hayes, Robert - NWP

>> Sent: Thursday, May 01, 2014 3:36 PM

>> To: MacMillan, Walter - NWP; McKamey, Eric - URS; Willison, James; Goff, Thomas - NWP; Akbarzadeh, Mansour; Doherty, John - NWP

>> Subject: P7R7 recent photo's

>>

>>

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