

At: Jesse McDonald



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 75TH AIR BASE WING (AFMC)
HILL AIR FORCE BASE UTAH

Colonel Ronald E. Jolly, Sr.
Commander
7981 Georgia Street, Bldg 1102 Ste 100
Hill Air Force Base Utah 84056-5137

Mr. Bryce Bird
Director
Utah Division of Air Quality
P.O. Box 144820
Salt Lake City Utah 84114-4820

Dear Mr. Bird

The Utah Test and Training Range Title V Operating Permit requires an annual report be submitted to the Utah Division of Air Quality.

The reporting period covers the period from 1 January 2014 to 31 December 2014.

Pursuant to the Title V Operating Permit conditions for the Thermal Treatment Unit (TTU) Open Detonation, and Open Burning/Open Detonation outside the TTU, attached are records of the net explosive weight (NEW), date, time, hazardous material classification, number of motors detonated for each disposal operation, and the annual NEW total of missile, rocket motor, and munitions disposal operations.

Pursuant to the Title V Operating Permit requirement for a report of investigative efforts to eliminate open burning open detonation, attached is the Alternative Technologies Report.

In accordance with Utah Administrative Code R307-415-5d and based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete.

If you have any questions, or would like to discuss this issue further, my point-of-contact is Glenn Palmer who may be reached at (801) 775-6918 or glenn.palmer.1@us.af.mil.

Sincerely


RONALD E. JOLLY, SR., Colonel, USAF
Commander

3 Attachments:

1. Records of Open Detonation TTU
2. Records of Open Burn or Detonation Outside TTU
3. Alternative Technologies Report

REVIEWED

Initials: Mr

Date: 2-5-15

14 January 2015

Compliance Status: ✓

File# 10127-5-2
11284

UTAH DEPARTMENT OF
ENVIRONMENTAL QUALITY

JAN 27 2015

DIVISION OF AIR QUALITY

SCANNED

DATE: 3-12-15

EDOC#: DAQ-2015-002921

Attachment 1

Records of Open Detonation TTU

1 January 2014 through 31 December 2014

UTTR OB/OD

Start: 11/1/2014
End: 12/31/2014

Open Detonation @ TTU

Annual NEW: 1,113,213

Limit: 6,552,000

% of Limit: 16.99%

Month: 2014/03

<u>Det Date:</u> 3/18/2014	<u>Day Total:</u> 141.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 0.17%
<u>Det Time:</u> 1:00:00 PM	<u>Net Explosive Weight:</u> 141.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> UTTRIP3146	<u>Item</u> D ADR/MISC OD	<u>Material Type</u> DETONATION ADR/MISC OD (NO CHLORINE EMISSIONS)
			<u>Qty (lbs)</u> 141 <u>UOM</u> LBS

<u>Det Date:</u> 3/19/2014	<u>Day Total:</u> 262.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 0.31%
<u>Det Time:</u> 11:39:00 AM	<u>Net Explosive Weight:</u> 262.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> UTTRIP3146	<u>Item</u> D SCRAP PROP	<u>Material Type</u> OPEN DETONATION SCRAP PROPELLANT 1.1C
			<u>Qty (lbs)</u> 262 <u>UOM</u> LBS

Month: 2014/04

<u>Det Date:</u> 4/16/2014	<u>Day Total:</u> 15,095.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 17.97%
<u>Det Time:</u> 11:24:00 AM	<u>Net Explosive Weight:</u> 7,440.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> UTTRIP3146	<u>Item</u> D MINUTE MAN	<u>Material Type</u> DETONATION MINUTE MAN OD (NO CHLORINE EMISSIONS)
			<u>Qty (lbs)</u> 7440 <u>UOM</u> LBS

<u>Det Time:</u> 1:53:00 PM	<u>Net Explosive Weight:</u> 7,655.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> UTTRIP3146	<u>Item</u> D MINUTE MAN	<u>Material Type</u> DETONATION MINUTE MAN OD (NO CHLORINE EMISSIONS)
			<u>Qty (lbs)</u> 7655 <u>UOM</u> LBS

<u>Det Date:</u> 4/21/2014	<u>Day Total:</u> 7,296.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 8.69%
<u>Det Time:</u> 12:36:00 PM	<u>Net Explosive Weight:</u> 7,296.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> UTTRIP3146	<u>Item</u> AEI C4_OD_STAGE3	<u>Material Type</u> TRIDENT MISSILE MOTORS 1.1C, STAGE 3
			<u>Qty (lbs)</u> 7296 <u>UOM</u> LBS

<u>Det Date:</u> 4/30/2014	<u>Day Total:</u> 7,394.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 8.80%
<u>Det Time:</u> 11:53:00 AM	<u>Net Explosive Weight:</u> 7,394.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE3	TRIDENT MISSILE MOTORS 1.1C, STAGE 3	7394 LBS

Month: 2014/05			
<u>Det Date:</u> 5/5/2014	<u>Day Total:</u> 17,500.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 20.83%
<u>Det Time:</u> 11:57:00 AM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	17500 LBS

<u>Det Date:</u> 5/12/2014	<u>Day Total:</u> 35,000.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 41.67%
<u>Det Time:</u> 11:52:00 AM	<u>Net Explosive Weight:</u> 35,000.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	35000 LBS

<u>Det Date:</u> 5/13/2014	<u>Day Total:</u> 17,500.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 20.83%
<u>Det Time:</u> 11:48:00 AM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	17500 LBS

<u>Det Date:</u> 5/19/2014	<u>Day Total:</u> 35,000.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 41.67%
<u>Det Time:</u> 12:30:00 PM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	17500 LBS

<u>Det Date:</u> 5/19/2014	<u>Day Total:</u> 17,500.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 20.83%
<u>Det Time:</u> 1:58:00 PM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	17500 LBS

Month: 2014/06									
<u>Det Date:</u>	6/4/2014	<u>Day Total:</u>	35,000.00	<u>Daily Limit:</u>	84,000	<u>% of Daily Limit:</u>		41.67%	
<u>Det Time:</u>	3:11:00 PM	<u>Net Explosive Weight:</u>	35,000.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA	
<u>Process Code</u>		<u>Location</u>	<u>Item</u>	<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>		
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2		35000	LBS		
<u>Det Date:</u>	6/9/2014	<u>Day Total:</u>	34,901.00	<u>Daily Limit:</u>	84,000	<u>% of Daily Limit:</u>		41.55%	
<u>Det Time:</u>	1:40:00 PM	<u>Net Explosive Weight:</u>	34,901.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA	
<u>Process Code</u>		<u>Location</u>	<u>Item</u>	<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>		
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2		34901	LBS		
<u>Det Date:</u>	6/16/2014	<u>Day Total:</u>	42,362.00	<u>Daily Limit:</u>	84,000	<u>% of Daily Limit:</u>		50.43%	
<u>Det Time:</u>	11:17:00 AM	<u>Net Explosive Weight:</u>	3,648.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA	
<u>Process Code</u>		<u>Location</u>	<u>Item</u>	<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>		
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI_C4_OD_STAGE3	TRIDENT MISSILE MOTORS 1.1C, STAGE 3		3648	LBS		
<u>Det Time:</u>	1:25:00 PM	<u>Net Explosive Weight:</u>	38,714.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA	
<u>Process Code</u>		<u>Location</u>	<u>Item</u>	<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>		
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE1	TRIDENT MISSILE MOTORS 1.1C, STAGE 1		38714	LBS		
<u>Det Date:</u>	6/23/2014	<u>Day Total:</u>	73,914.00	<u>Daily Limit:</u>	84,000	<u>% of Daily Limit:</u>		87.99%	
<u>Det Time:</u>	11:50:00 AM	<u>Net Explosive Weight:</u>	38,914.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA	
<u>Process Code</u>		<u>Location</u>	<u>Item</u>	<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>		
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE1	TRIDENT MISSILE MOTORS 1.1C, STAGE 1		38914	LBS		
<u>Det Time:</u>	1:30:00 PM	<u>Net Explosive Weight:</u>	35,000.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA	
<u>Process Code</u>		<u>Location</u>	<u>Item</u>	<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>		
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2		35000	LBS		

<u>Det Date:</u> 6/24/2014	<u>Day Total:</u> 73,714.00		<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 87.75%
<u>Det Time:</u> 1:02:00 PM	<u>Net Explosive Weight:</u> 17,500.00		<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	17500 LBS
<u>Det Time:</u> 2:07:00 PM	<u>Net Explosive Weight:</u> 17,500.00		<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	17500 LBS
<u>Det Time:</u> 3:56:00 PM	<u>Net Explosive Weight:</u> 38,714.00		<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	AEI-C4_OD_STAGE1	TRIDENT MISSILE MOTORS 1.1C, STAGE 1	38714 LBS
Month: 2014/07				
<u>Det Date:</u> 7/7/2014	<u>Day Total:</u> 73,914.00		<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 87.99%
<u>Det Time:</u> 12:08:00 PM	<u>Net Explosive Weight:</u> 38,914.00		<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	AEI-C4_OD_STAGE1	TRIDENT MISSILE MOTORS 1.1C, STAGE 1	38914 LBS
<u>Det Time:</u> 1:41:00 PM	<u>Net Explosive Weight:</u> 35,000.00		<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	35000 LBS
<u>Det Date:</u> 7/8/2014	<u>Day Total:</u> 38,914.00		<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 46.33%
<u>Det Time:</u> 12:36:00 PM	<u>Net Explosive Weight:</u> 38,914.00		<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	AEI-C4_OD_STAGE1	TRIDENT MISSILE MOTORS 1.1C, STAGE 1	38914 LBS

<u>Det Date:</u> 7/9/2014	<u>Day Total:</u> 35,000.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 41.67%
<u>Det Time:</u> 11:28:00 AM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> OBOD - DETS AT TTU UTTRIP3146	<u>Item</u> AEI-C4_OD_STAGE2	<u>Material Type</u> TRIDENT MISSILE MOTORS 1.1C, STAGE 2
<u>Qty (lbs)</u>	17500	<u>UOM</u>	LBS
<u>Det Time:</u> 12:40:00 PM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> OBOD - DETS AT TTU UTTRIP3146	<u>Item</u> AEI-C4_OD_STAGE2	<u>Material Type</u> TRIDENT MISSILE MOTORS 1.1C, STAGE 2
<u>Qty (lbs)</u>	17500	<u>UOM</u>	LBS
<u>Det Date:</u> 7/15/2014	<u>Day Total:</u> 77,628.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 92.41%
<u>Det Time:</u> 1:02:00 PM	<u>Net Explosive Weight:</u> 38,714.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> OBOD - DETS AT TTU UTTRIP3146	<u>Item</u> AEI-C4_OD_STAGE1	<u>Material Type</u> TRIDENT MISSILE MOTORS 1.1C, STAGE 1
<u>Qty (lbs)</u>	38714	<u>UOM</u>	LBS
<u>Det Time:</u> 2:27:00 PM	<u>Net Explosive Weight:</u> 38,914.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> OBOD - DETS AT TTU UTTRIP3146	<u>Item</u> AEI-C4_OD_STAGE1	<u>Material Type</u> TRIDENT MISSILE MOTORS 1.1C, STAGE 1
<u>Qty (lbs)</u>	38914	<u>UOM</u>	LBS
<u>Det Date:</u> 7/16/2014	<u>Day Total:</u> 22,731.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 27.06%
<u>Det Time:</u> 10:55:00 AM	<u>Net Explosive Weight:</u> 7,440.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> OBOD - DETS AT TTU UTTRIP3146	<u>Item</u> AEI_MM_OD_STAGE3	<u>Material Type</u> OPEN DETONATION MINUTEMAN STAGE 3 MISSILE
<u>Qty (lbs)</u>	7440	<u>UOM</u>	LBS
<u>Det Time:</u> 1:26:00 PM	<u>Net Explosive Weight:</u> 7,851.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> OBOD - DETS AT TTU UTTRIP3146	<u>Item</u> AEI_MM_OD_STAGE3	<u>Material Type</u> OPEN DETONATION MINUTEMAN STAGE 3 MISSILE
<u>Qty (lbs)</u>	7851	<u>UOM</u>	LBS
<u>Det Time:</u> 3:36:00 PM	<u>Net Explosive Weight:</u> 7,440.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u> IWP18743146--33024	<u>Location</u> OBOD - DETS AT TTU UTTRIP3146	<u>Item</u> AEI_MM_OD_STAGE3	<u>Material Type</u> OPEN DETONATION MINUTEMAN STAGE 3 MISSILE
<u>Qty (lbs)</u>	7440	<u>UOM</u>	LBS

<u>Det Date:</u> 7/21/2014	<u>Day Total:</u> 38,914.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 46.33%
<u>Det Time:</u> 1:25:00 PM	<u>Net Explosive Weight:</u> 38,914.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE1	TRIDENT MISSILE MOTORS 1.1C, STAGE 1	38914 LBS
<u>Det Date:</u> 7/28/2014	<u>Day Total:</u> 73,914.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 87.99%
<u>Det Time:</u> 12:05:00 PM	<u>Net Explosive Weight:</u> 35,000.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	35000 LBS
<u>Det Time:</u> 1:35:00 PM	<u>Net Explosive Weight:</u> 38,914.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE1	TRIDENT MISSILE MOTORS 1.1C, STAGE 1	38914 LBS
<u>Det Date:</u> 7/30/2014	<u>Day Total:</u> 3,648.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 4.34%
<u>Det Time:</u> 4:26:00 PM	<u>Net Explosive Weight:</u> 3,648.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI_C4_OD_STAGE3	TRIDENT MISSILE MOTORS 1.1C, STAGE 3	3648 LBS
Month: 2014/08			
<u>Det Date:</u> 8/6/2014	<u>Day Total:</u> 73,914.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 87.99%
<u>Det Time:</u> 12:23:00 PM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	17500 LBS
<u>Det Time:</u> 1:46:00 PM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE2	TRIDENT MISSILE MOTORS 1.1C, STAGE 2	17500 LBS
<u>Det Time:</u> 4:05:00 PM	<u>Net Explosive Weight:</u> 38,914.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u> <u>Item</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU UTTRIP3146 AEI-C4_OD_STAGE1	TRIDENT MISSILE MOTORS 1.1C, STAGE 1	38914 LBS

<u>Det Date:</u> 8/11/2014	<u>Day Total:</u> 73,914.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 87.99%
<u>Det Time:</u> 11:35:00 AM	<u>Net Explosive Weight:</u> 38,914.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE1
			TRIDENT MISSILE MOTORS 1.1C, STAGE 1
			38914 LBS
<u>Det Time:</u> 12:57:00 PM	<u>Net Explosive Weight:</u> 35,000.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE2
			TRIDENT MISSILE MOTORS 1.1C, STAGE 2
			35000 LBS
<u>Det Date:</u> 8/12/2014	<u>Day Total:</u> 35,000.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 41.67%
<u>Det Time:</u> 1:26:00 PM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE2
			TRIDENT MISSILE MOTORS 1.1C, STAGE 2
			17500 LBS
<u>Det Time:</u> 2:40:00 PM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE2
			TRIDENT MISSILE MOTORS 1.1C, STAGE 2
			17500 LBS
<u>Det Date:</u> 8/18/2014	<u>Day Total:</u> 38,914.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 46.33%
<u>Det Time:</u> 12:47:00 PM	<u>Net Explosive Weight:</u> 38,914.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE1
			TRIDENT MISSILE MOTORS 1.1C, STAGE 1
			38914 LBS
<u>Det Date:</u> 8/25/2014	<u>Day Total:</u> 35,000.00	<u>Daily Limit:</u> 84,000	<u>% of Daily Limit:</u> 41.67%
<u>Det Time:</u> 11:48:00 AM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE2
			TRIDENT MISSILE MOTORS 1.1C, STAGE 2
			17500 LBS
<u>Det Time:</u> 1:10:00 PM	<u>Net Explosive Weight:</u> 17,500.00	<u>Det Limit:</u> NA	<u>% of Det Limit:</u> NA
<u>Process Code</u>	<u>Location</u>	<u>Material Type</u>	<u>Qty (lbs)</u> <u>UOM</u>
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE2
			TRIDENT MISSILE MOTORS 1.1C, STAGE 2
			17500 LBS

Month: 2014/09									
<u>Det Date:</u>	9/8/2014	<u>Day Total:</u>		77,828.00	<u>Daily Limit:</u>	84,000	<u>% of Daily Limit:</u>		92.65%
<u>Det Time:</u>	11:39:00 AM	<u>Net Explosive Weight:</u>		38,914.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA
<u>Process Code</u>		<u>Location</u>	<u>Item</u>		<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>	
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE1		TRIDENT MISSILE MOTORS 1.1C, STAGE 1		38914	LBS	
<u>Det Time:</u>	1:12:00 PM	<u>Net Explosive Weight:</u>		38,914.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA
<u>Process Code</u>		<u>Location</u>	<u>Item</u>		<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>	
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE1		TRIDENT MISSILE MOTORS 1.1C, STAGE 1		38914	LBS	
<u>Det Date:</u>	9/23/2014	<u>Day Total:</u>		17,401.00	<u>Daily Limit:</u>	84,000	<u>% of Daily Limit:</u>		20.72%
<u>Det Time:</u>	3:34:00 PM	<u>Net Explosive Weight:</u>		17,401.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA
<u>Process Code</u>		<u>Location</u>	<u>Item</u>		<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>	
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	AEI-C4_OD_STAGE2		TRIDENT MISSILE MOTORS 1.1C, STAGE 2		17401	LBS	
Month: 2014/10									
<u>Det Date:</u>	10/9/2014	<u>Day Total:</u>		250.00	<u>Daily Limit:</u>	84,000	<u>% of Daily Limit:</u>		0.30%
<u>Det Time:</u>	1:32:00 PM	<u>Net Explosive Weight:</u>		250.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA
<u>Process Code</u>		<u>Location</u>	<u>Item</u>		<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>	
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	D ADR/MISC OD		DETONATION ADR/MISC OD (NO CHLORINE EMISSIONS)		250	LBS	
Month: 2014/11									
<u>Det Date:</u>	11/20/2014	<u>Day Total:</u>		1,250.00	<u>Daily Limit:</u>	84,000	<u>% of Daily Limit:</u>		1.49%
<u>Det Time:</u>	11:11:00 AM	<u>Net Explosive Weight:</u>		1,250.00	<u>Det Limit:</u>	NA	<u>% of Det Limit:</u>		NA
<u>Process Code</u>		<u>Location</u>	<u>Item</u>		<u>Material Type</u>		<u>Qty (lbs)</u>	<u>UOM</u>	
IWP18743146--33024	OBOD - DETS AT TTU	UTTRIP3146	D SCRAP PROP		OPEN DETONATION SCRAP PROPELLANT 1.1C		1250	LBS	

Attachment 2

Records of Open Burn

1 January 2014 through 31 December 2014

Compiled 31 December 2014

Start: 1/1/2014
End: 12/31/2014

UTTR OB/OD

Open Burn or Detonation Outside TTU

Month:	2014/05
Date:	5/6/2014

Time: 12:54:00 PM

<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty</u>	<u>UOM</u>
IER18192438--33045	UTTRIP2438	D SCRAP PROP	OPEN DETONATION SCRAP PROPELLANT 1.1C	0.237	LBS

Date: 5/21/2014

Time: 3:20:00 PM

<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty</u>	<u>UOM</u>
IER18192438--33045	UTTRIP2438	B MINUTE MAN	BURN MINUTE MAN 1.3C PROPELLANT	54875	LBS

Month: 2014/06

Date: 6/25/2014

Time: 3:10:00 PM

<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty</u>	<u>UOM</u>
IER18192438--33045	UTTRIP2438	B MINUTE MAN	BURN MINUTE MAN 1.3C PROPELLANT	54720	LBS

Month: 2014/08

Date: 8/20/2014

Time: 1:21:00 PM

<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty</u>	<u>UOM</u>
IER18192438--33045	UTTRIP2438	B MINUTE MAN	BURN MINUTE MAN 1.3C PROPELLANT	59269	LBS

Month: 2014/09
Date: 9/17/2014

Time: 12:18:00 PM

<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty</u>	<u>UOM</u>
IER18192438--33045	OBOD - OPEN BURNING AT UTTR AND DETS NOT AT TTU	UTTRIP2438	B SCRAP PROP	114	LBS

Month: 2014/10
Date: 10/15/2014

Time: 1:08:00 PM

<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty</u>	<u>UOM</u>
IER18192438--33045	OBOD - OPEN BURNING AT UTTR AND DETS NOT AT TTU	UTTRIP2438	B SCRAP PROP	176	LBS

Month: 2014/11
Date: 11/19/2014

Time: 12:40:00 PM

<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty</u>	<u>UOM</u>
IER18192438--33045	OBOD - OPEN BURNING AT UTTR AND DETS NOT AT TTU	UTTRIP2438	B SCRAP PROP	91.8	LBS

Month: 2014/12
Date: 12/16/2014

Time: 2:32:00 PM

<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty</u>	<u>UOM</u>
IER18192438--33045	OBOD - OPEN BURNING AT UTTR AND DETS NOT AT TTU	UTTRIP2438	B 20MM SMOKELESS GUN POWDER	116328	LBS

Date: 12/17/2014
<u>Time:</u> 11:31:00 AM

<u>Process Code</u>	<u>Location</u>	<u>Item</u>	<u>Material Type</u>	<u>Qty</u>	<u>UOM</u>
IER18192438--33045	OBOD - OPEN BURNING AT UTTR AND DETS NOT AT TTU	UTTRIP2438	B SCRAP PROP	58	LBS

Attachment 3

Alternative Technologies Report

Updated by Keith A. Clift, PhD, Army Defense Ammunition Center, December 2014

ALTERNATIVE TECHNOLOGIES REPORT

**Keith A. Clift PhD
Senior Physical Scientist
Engineering and Technology Division
Logistics Integration Directorate
Joint Munitions Command
Updated December 2014**

Technologies other than open burn/open detonation (OB/OD) for the destruction of rocket propellants contained in large rocket motors are being developed and managed by the Department of Army Explosive Demilitarization Technology Program. This report provides an update of the status of the various alternative technologies. Prior to proceeding to full-scale development of an alternative technology a successful development and testing program must be completed and documented.

Two basic approaches for solid rocket motor disposal are being studied. The first is, burning the propellant while still in the motor casing (confined burn), and the other is to remove the propellant from the casing and dispose of through re-use, recycling or incineration.

At the same time, the Department of Defense (DoD) has continued to allocate resources to finalize air emission data for ordnance detonation. DoD has completed and initiated many historic and recent air emission characterization efforts to include open atmosphere range testing and chamber testing. Within the past five years, several efforts have been completed and/or initiated with project teams including EPA, U.S. Army Corps of Engineers Construction Engineering Research Laboratory, Defense Ammunition Center, Naval Air Warfare Center Weapons Division, and Universities. In addition to the air emission characterization efforts, DoD has worked with the EPA at Research Triangle Park to initiate publishing of these emission factors in EPA's database according to EPA procedures and requirements. Decades of such results and operational experience have continued to demonstrate OB/OD as a safe and effective method for disposal of waste military munitions.

PROPELLANT BURNING WHILE IN MOTOR CASING

Confined Burn with Exhaust Scrubber

Technology for confined burn of rocket motors (within their case) was developed for tactical rocket motors containing less than 10 pounds of propellant. These facilities could be scaled up to accommodate larger rocket motors. In FY08, a Multiple Launched Rocket System (MLRS) rocket motor was burned in a confined chamber to collect gas emissions with the intent of development a confined burn system for demil of MLRS motors. During FY08 a business case analysis (BCA) was conducted on various closed disposal capabilities. The BCA indicated confined burn and removal/incineration were the most viable alternatives. A study was initiated in late FY09 to examine these two alternatives comprehensively. Early in FY 10, the AP Rocket Motor Destruction Integrated Product Team (ARMD IPT) formally down selected a confined burn approach

as the optimal approach for processing MLRS motors and the motor segments of several other service motors (OSMs) in the demil account. The ARMD IPT determined that it would be feasible to pursue empirical testing on various MLRS motor configurations and OSM motor segments to determine optimal design parameters for the confined burn system as well as the systems overall feed and pollution abatement systems. After initial testing and modeling was concluded it became apparent that additional testing would be warranted in order to refine the design parameters of the system, especially regarding the pollution abatement technology that would be needed to address the overpressures and temperatures generated from the rapid combustion of this quantity of energetic material. A series of open air tests were conducted at Redstone Technical Center in January 2011 to determine plume species and combustion dynamics associated with the burning of large AP rocket motors. This eventually led to a series of "proof of concept tests" that were conducted in April 2011 at China Lake's Modified Contained Burn Assessment Test Facility. These empirical tests led to the successful completion of a viable Concept Design for the ARMD that was completed in December 2011. The Intermediate Design of the ARMD was tentatively completed in FY12. However, due to changes in the missile demil stockpile, a new requirement for a capacity to handle a wider variety of OSMs was realized, thus causing a need for more empirical testing to be done in order to better characterize the burn dynamics of the newly added OSMs. The first round of this testing was conducted at China Lake toward the end of FY12 and is currently expected to finish early in FY13. Once these tests have been completed, a final design for the ARMD pollution abatement system will be finalized and construction of the prototype AP Rocket Motor Destruction system at LEMC will begin in earnest. The process is expected to come on line for demil production sometime in FY15-16 timeframe.

PROPELLANT REMOVAL TECHNOLOGIES

High Pressure Water Jet Washout

This alternative uses a high-pressure water jet as a solid rocket motor propellant cutting agent. The system uses multiple water jet lances coupled with an automated control system. The automated control system is a multi-tasking computer that monitors and controls the lance maneuvers and operations.

High pressure water washout of HC 1.3 propellants in MLRS rocket motors was demonstrated in full-scale testing using 10K, 20K and 40K psi during FY09. Testing showed that washout is most effective at 10K psi. This process is production capable. Water washout technology for HC 1.1 propellants is not currently being pursued. Technology for washout of HC 1.1 propellants was discontinued in FY06 to focus on HC 1.3 propellant washout.

Cryogenic Washout

Development of this technology has ended at this time. Safety issues were raised during development that has not been resolved. This technology is not considered a viable option for near term development.

Machining

Machining of HC 1.3 propellants was demonstrated in full-scale demonstrations with sectioned MLRS rocket motors in FY08. Machining of several complete MLRS motors have been demonstrated at Redstone Arsenal. However, safety assessments determined that milling of whole motors in a production environment may be too risky due to concerns surrounding the prospect of increased cutter wobble when milling complete (long) rocket motors. During FY09, rocket motor segmenting techniques prior to milling were evaluated, down-selected and tested for MLRS and other Service motors. Machining approaches, though viable, are not being pursued at this time as a viable demil option for larger rocket motors such as MLRS due to the paucity of markets for the recovered energetic. As such, confined destruction demil processes such as the AP Motor Destruction Process have gained momentum over the past year as a more preferred means of demilling large AP rocket motors.

PROPELLANT DISPOSAL TECHNOLOGIES BEING DEVELOPED

Near Critical and Supercritical Water Oxidation of Propellant Ingredients

This technology has been transitioned to production for treatment of waste streams containing propellant ingredients. It is unlikely that this process will become viable for bulk quantities and is being developed primarily for waste stream applications. Award of a pilot-scale prototype system was made and limited testing was conducted from 1996-2005. Recent demonstrations include the successful treatment of TNT contaminated "pink water" and successful treatment of a limited quantity of a 20 percent TNT slurry. Operational demonstrations of this technology for treatment of TNT contaminated "pink water" were conducted in FY 2006-2007.

Propellant Aqueous Waste Stream Biodegradation

The Air Force proposes to use this processing method for treatment of propellant ingredients. During 1997 biodegradation of propellant components was developed from a prototype unit to full-scale demonstration. Operation of this technology for HC 1.3 (ammonium perchlorate) has been continuous since 1998. Biodegradation has been successfully demonstrated for propellant contaminated water. It is unlikely that this process will become viable for bulk quantities and was developed primarily for waste stream applications.

Propellant Incineration with an Attached Pollution Control Device

In late FY08, this method was selected as the primary method for destruction of MLRS rocket motors. Rocket motors will be segmented to appropriate size and fed into a closed incinerator. Development began in early FY09 and is planned to extend through FY12. A comprehensive study was initiated in late FY09 to examine this process in comparison to a confined burn process. The MLRS Integrated Product Team determined the final technology to be pursued and is currently pursuing empirical testing on various MLRS

motor configurations to determine design parameters for the confined burn systems and supporting pollution abatement system. The Bulk Energetic Disposition System (BEDS) at HWAD is another incineration technology where propellants are removed, slurried with water and then fed into a waste incinerator. BEDS is currently configured to handle SB, DB and TB propellant feed stocks but with modifications to both the slurry feed equipment and pollution abatement system it was determined that this technology could also be used for the demil of AP composite propellants. This application is not currently being pursued.

Critical Fluid Demilitarization and Reclamation

The proposal for critical fluid demilitarization consists of a three step continuous process. Once the propellant has been removed through milling the process begins. Step one extracts the oxidizer or energetic materials and separates the liquid from the insoluble binder residue. Step two recovers the oxidizers and/or energetic materials by evaporating the liquefied ammonia. Step three condenses the vapor and recycles the liquefied ammonia for continuation of the extraction process.

Current development efforts center on ingredient recovery from propellant removed from the Tube-launched Optically-tracked Wire-guided (TOW) and Multiple Launch Rocket System (MLRS) by machining. Critical fluid technology will be used to reclaim propellant for reuse as perchloric acid. Development for use in slurry explosive formulations was terminated due to environmental concerns. The process was modified to include a semi-continuous feed system during FY09 in preparation for transition to production operations.

Open Burn/Open Detonation Emission Testing

During the latter part of FY11, a series of open air tests were conducted at Tooele Army Ammunition Depot in an effort to better characterize emissions arising from OB/OD activities conducted on a wide range of Army demil ranges throughout the US. The testing targeted a spectrum of munition items and energetic materials that are routinely processed on ranges, including single base, double base and composite propellants (including the static firing of rocket motors containing ammonia perchlorate propellant formulations). The testing was not only conducted using collection and sampling techniques endorsed by the Environmental Protection Agency, but the actual operations of the collection/sampling equipment during the testing was conducted by EPA researchers. At present, the overall results of the testing are helping to verify the use of OB/OD (including static fire) as a viable and environmentally compliant approach for demilling of propellants and other energetic materials. Further testing is expected to ensue in FY14 and FY15.

obtained from the Executive Secretary. [Origin: DAQE-AN0112840021-10]. [R307-401-8(1)(a)(BACT)]

II.B.2.a.1 Monitoring:

The permittee shall monitor the NEW, date, time, hazard material classification, and number of motors detonated for each disposal operation and calculate a new 12-month total by February 28 of each year using data from the previous calendar year.

II.B.2.a.2 Recordkeeping:

Records of missile, rocket motor, and/or munitions detonations, including the NEW, date, time, hazard material classification, and number of motors detonated for each disposal operation, shall be kept and maintained on a daily basis and records for annual total of NEW shall be kept for the duration of the missile, rocket motor, or/and munitions disposal operation and maintained as described in Provision I.S.1 of this permit.

II.B.2.a.3 Reporting:

Records required for this permit condition shall be submitted to UDAQ by February 28 of each year for the preceding year. In addition, a report of investigative efforts to eliminate open burning/open detonation must be submitted to UDAQ by February 28 of each year.

II.B.2.b Condition:

The permittee shall use the most current sound focusing mitigation plan for all detonations greater than or equal to 10,000 lbs Net Explosive Weight at the TTU area. The plan shall outline the procedures that will be used for each detonation that will minimize the effects of overpressure on large populations of people located in Tooele, Grantsville, and Wasatch Front cities. The plan shall contain specific criteria that will be used to decide whether or not to detonate. If the plan proves inadequate to predict adverse focus conditions in areas off of UTTR property, i.e., there are complaints of excessive focusing of noise, the detonation operation shall be terminated until the focusing criteria or the plan shall be adjusted. Adequacy of any plan adjustment shall be determined by the executive secretary in coordination with UTTR/Hill Air Force Base Staff. If the plan needs to be changed, a copy of the new plan shall be submitted to the Executive Secretary for approval. [Origin: DAQE-AN0112840021-10]. [R307-401-8(1)(a)(BACT)]

II.B.2.b.1 Monitoring:

Adherence to the most recently approved sound focusing mitigation plan shall be monitored to demonstrate that appropriate measures are being implemented to control noise.

II.B.2.b.2 Recordkeeping:

Records of measures taken to control noise shall be maintained to demonstrate adherence to the most recently approved sound focusing mitigation plan. Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.2.b.3 Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.a

Condition:

The permittee is not allowed the open burning of any waste containing beryllium or other highly toxic materials except when meteorological conditions are such that the resulting products of combustion will traverse over unoccupied areas only. A description and evaluation of the quantities of highly toxic material to be emitted to the atmosphere must be submitted to the Executive Secretary prior to each burning. [Origin: DAQE-AN0112840021-10]. [R307-401-8(1)(a)(BACT)]

II.B.3.a.1

Monitoring:

Records required for this permit condition will serve as monitoring.

II.B.3.a.2

Recordkeeping:

Records of the day, time, place, and quantity of each burn and type of material burned each year shall be kept and maintained as described in Provision I.S.1 of this permit.

II.B.3.a.3

Reporting:

Records required for this permit condition shall be submitted to UDAQ by February 28 of each year for the preceding year. In addition, a report of investigative efforts to eliminate open burning/open detonation must be submitted to UDAQ by February 28 of each year.