# **CY 2009**

Operations and Maintenance Trip Reports and Quarterly Effectiveness Evaluation Reports Time Critical Response Action for the Rocket Ridge Area at RVAAP-004-R-01 Open Demolition Area #2



Prime Contract No:				Report No.	3	
PIKA JOB #:	09-46-169			Date:	12-21-09	
Project:	Operation and Maintenance of t		ne San	d Creek Barrier	System	
<b>Environmental Conditions:</b>						
	Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Cloudy			
Temperature:	·		29° F			
Wind (Still, Moderate, High):		Still				
Humidity (Dry, Moderate, Humid):		Dry				
		•				

#### **Field Activities:**

Description of debris inspection & removal activities: Removed leaves, sticks, mud and some ice/snow from barrier. No MEC/MD found.

Barrier Integrity: Barrier is intact. Slight bend in both screens however; barrier integrity has not been compromised.

Assessment of any changes since previous visit: Silt is starting to accumulate in front of the down stream screen (see picture).

Repairs made or need to be made: None

12/21/2009 1 of 10



Prime Contract No:				Report No.	2	
PIKA JOB #:	09-46-169			Date:	11-24-09	
Project:	Operation and Maintenance		ne San	d Creek Barrier	System	
<b>Environmental Conditions:</b>						
	Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Cloudy			
Temperature:	Temperature:		48° F			
Wind (Still, Moderate, High):		Still				
Humidity (Dry, Moderate, Humid):		Dry				

#### **Field Activities:**

**Description of debris inspection & removal activities:** Removed leaves, sticks and mud from barrier. No MEC/MD found.

Barrier Integrity: Barrier is intact. Slight bend in both screens however; barrier integrity has not been compromised.

Assessment of any changes since previous visit: None

Repairs made or need to be made: None

11/24/2009 1 of 10



			Report No.	1
09-46-169			Date:	10-29-09
Operation and Maintenance of t		ne San	d Creek Barrier	System
<b>Environmental Conditions:</b>				
(Bright Sun, in, Snow):	Cloudy			
	53° F			
Wind (Still, Moderate, High):		Still		
Humidity (Dry, Moderate, Humid):		Dry		
	Operation and Monditions:  (Bright Sun, n, Snow):	Operation and Maintenance of the conditions:  (Bright Sun, n, Snow):  53° F  Te, High):  Still	Operation and Maintenance of the Sanonditions:  (Bright Sun, Cloudy 53° F  Te, High):  Still	Operation and Maintenance of the Sand Creek Barrier  onditions:  (Bright Sun, n, Snow):  Cloudy  53° F  Te, High):  Still

#### **Field Activities:**

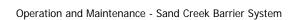
Description of debris inspection & removal activities: Removed leaves, sticks and mud from barrier. No MEC/MD found.

**Barrier Integrity:** Barrier is slightly bent however; barrier integrity has not been compromised.

Assessment of any changes since previous visit: None

Repairs made or need to be made: None

10/29/2009 1 of 10





Remarks:					
Visitors: None					
		-	-		
Health and Safety					
Conducted health and safety meetings and task order meetings every morning, prior to commencement of activities.					
Were there an	v lost time ac	cidents this week?	No x Yes	7.	
	_	mary of incident or (		<b>_</b> '	
,		•	·		
Quality Control					
Inspections Pe	rformed	Non-Conformances	Corrective Action (CA)	Follow-up on CA	
Major Problems an	d Resolution:	None			
Schedule for Next N	Month: Follo	ow on inspection o	of barrier		
SUXOS	Lew Kovarik	Proje	ct Manager B	Brian Stockwell	

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### PHOTO LOG

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PICTURES SHOWING SAND CREEK BARRIERS UPON ARRIVAL

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PICTURE SHOWING UXO TECHNICIAN REMOVING ACCUMULATED LEAVES FROM SCREEN.



VIEW OF SLIGHT "BEND" NOTED IN THE UPSTREAM BARRIER.

10/29/2009 5 of 10







PICTURES SHOWING BARRIERS UPON DEPARTURE

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## Safety Training Attendance Log

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Date	: 10/29/09	Instructor(s):	Mei Lau		Time	:1230	Log No.: 1		
Site I	Name & Locatio	n: Ravenna Arı	my Ammunition F	Plant, Ravenna, Ol	1				
Cont	ract No.:			Task Order Numb	er:				
Site 9	Supervisor or St	JXOS: Lew Kov	arik	SSHO: Mel Lau					
Train	ing Provided: 🛚	Initial Site Haza	rd Training 🗵 Dail	y Safety Briefing		⊠Other:_			
		Weekly Safety 7	Fraining 🔲 Tas	k/Hazard-specific Tra	aining				
	I. TRAINING TOPICS COVERED								
Х	Planned Site Acti	vities	Chemical Haz	ards		Respirator U	Jse		
	Physical Safety H	lazards	Routes of Ch	emical Exposure		Decontamin	ation Procedures		
	Biological Hazard	ls	Chemical Exp	osure Symptoms	X	Emergency			
	Heat or Cold Stre	ess	Level of PPE		X	First Aid Pro	ocedures		
	Site Controls		Types of PPE		乂	Buddy Tean	n Procedures		
Other	Topics:								
							***************************************		
				URSE ATTENDEES	3				
	Name (prin	ited)	Sign	ature ·		Orgai アエド	nization		
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	T cording that the	re personnernsted 1 – G	OH THIS TOSTEL HOVE IT	ACTIVED THE SOLETY AND	ncaut ) /	Turning descri	100000		
	Mark	and Upplith Officer			Cr LIVA	Supervisor or S	Sita Supanisar		
	Site Sarety	and Health Officer			or oxo	Supervisor of S	orce outpervisor		



# Visitor Sign-In Log

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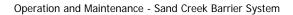


### Visitors Sign-In Log

PROJECT LOC	ATION:	RVAAP, OHIO			
PROJECT SITE:	O&M Sar	d Creek Barrier System	PROJECT NO:	09-46-169	

Date	Name	Representing	Equipment and	Time		
	,		PPE Level	IN	Out	
	NO Utsitors					
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Comments:	
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Remarks:			(011 501)					
Visitors: Mark Pat	Visitors: Mark Patterson (Facility Manager), Eileen Mohr (Ohio EPA)							
Health and Safety								
Conducted health and commencement of ac		ngs and task order r	neetings every morning	g, prior to				
	Were there any lost time accidents this week? No x Yes							
<b>Quality Control</b>								
Inspections Pe	erformed	Non-Conformances	Corrective Action (CA)	Follow-up on CA				
Major Problems ar	nd Resolution:	None						
Schedule for Next	Month: Follo	ow on inspection of	of barrier					
SUXOS	Lew Kovarik	Proie	ct Manager B	rian Stockwell				
UXO Safety Officer	Mel Lau		<b>.</b>					

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### PHOTO LOG

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PICTURES SHOWING SAND CREEK BARRIERS UPON ARRIVAL

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PICTURE SHOWING UXO TECHNICIAN REMOVING ACCUMULATED LEAVES FROM SCREEN.

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PICTURES SHOWING BARRIERS UPON DEPARTURE

11/24/2009 6 of 10



## Safety Training Attendance Log

11/24/2009 7 of 10

Date	e: 11/24/09 Instructor(s):	Mel Lau		Time	: <i>10:0</i> 0	Log No.: 2			
<u></u>	Name & Location: Ravenna Arı	my Ammunition							
Cont	tract No.:		Task Order Num	ber:					
Site	Supervisor or SUXOS: Lew Kov	arik	SSHO: Mel Lau						
Trair	ning Provided:   Initial Site Haza	rd Training 📈 Dai	y Safety Briefing		⊠Other:_				
	☐ Weekly Safety 7		k/Hazard-specific Tr	raining					
	I. TRAINING TOPICS COVERED								
7	Planned Site Activities	Chemical Ha	zards		Respirator U	Jse			
¥	Physical Safety Hazards	Routes of Ch	emical Exposure		Decontamin	ation Procedures			
	Biological Hazards	Chemical Exp	oosure Symptoms		Emergency	Procedures			
X	Heat or Cold Stress	Level of PPE			First Aid Pro	ocedures			
	Site Controls	Types of PPE	•		Buddy Tean	n Procedures			
Othe	r Topics:								
			OURSE ATTENDEE	<u> </u>					
<u> </u>	Name (printed)	Sign	ature		Orgai	nization			
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				<u> </u>					
<u> </u>			VERIFICATION	1111		11-1-1-1-1			
	I certify that the personnel listed	on this roster have r	eceived the safety and	nealth t	raining descr	iped above			
	Mahla		Die	سرر	90-				
	Site Safety and Health Officer			Sr. UXO	Supervisor or S	ite Supervisor			



# Visitor Sign-In Log

11/24/2009 9 of 10

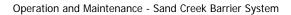


### Visitors Sign-In Log

PROJECT LOCATION: SAND PROJECT SITE: KAVENKA	CREEK	84M
PROJECT SITE: KAVENA A		PROJECT NO:

Date	Name	Representing	Equipment and	Time		
			PPE Level	IN	Out	
11/24	Mark Patterson Eiken Mohr	RVAAP	Level D	1000	1030	
11/24	Elken Mohr	Ohio EPA	Level D	1000		
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Comments		
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Remarks:				
Visitors: Mark Pat	terson (Facility	y Manager)		
Health and Safety				
Conducted health and commencement of ac		ngs and task order n	neetings every mornir	ng, prior to
	_	cidents this week? mary of incident or (	No x Yes C	<u></u> .
<b>Quality Control</b>				
Inspections Pe	erformed	Non-Conformances	Corrective Action (CA)	Follow-up on CA
Major Problems ar	nd Resolution:	None		
Sahadula far Navt	Month. Follo	ou on increation o	of harriar	
Schedule for Next	WOITH: FOIL	ow on inspection c	n barrier	
SUXOS	Lew Kovarik	Proje	ct Manager E	Brian Stockwell
UXO Safety Officer	Mel Lau			

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### PHOTO LOG

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PICTURES SHOWING SAND CREEK BARRIERS UPON ARRIVAL.

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PICTURE SHOWING UXO TECHNICIAN REMOVING ACCUMULATED DEBRIS FROM SCREENS.

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PICTURE SHOWING SILT BEGINNING TO ACCUMULATE ALONG DOWN STREAM SCREEN (LEFT).



PICTURES SHOWING BARRIERS UPON DEPARTURE.

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## Safety Training Attendance Log

12/21/2009 7 of 10

Date	e: 12/21/09	: Mel Lau		Time	3:	Log No.: 3
Site	Site Name & Location: Ravenna Army Ammunition Plant, Ravenna, OH					
Cont	Contract No.: Task Order Number:					
Site	Supervisor or SUXOS: Lew Ko	varik	SSHO: Mel Lau			Management of the Control of the Con
Trair	ning Provided: 🔲 Initial Site Haz		ly Safety Briefing		⊠Other:	
	☐ Weekly Safety		sk/Hazard-specific Tr	aining		<u> </u>
		I. TRAINING T	OPICS COVERED		_	
人	Planned Site Activities	Chemical Ha	zards		Respirator L	Jse
	Physical Safety Hazards	Routes of Ch	nemical Exposure		Decontamination Procedures	
	Biological Hazards	<del></del>	posure Symptoms	人	Emergency	
	Heat or Cold Stress	Level of PPE		<u> </u>	First Aid Procedures	
	Site Controls	Types of PPE	<u> </u>		Buddy Team	n Procedures
Othe	er Topics:					
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			VERIFICATION			
	I certify that the personnel listed	d on this roster have r	eceived the safety and	health	training descri	ibed above.
	Mil K ka		Zei		E	/
	Site Safety and Health Officer			Sr. UXC	Supervisor or S	ite Supervisor



# Visitor Sign-In Log

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### Visitors Sign-In Log

PROJECT LOC	ATION:	RVAAP, OHIO			
PROJECT SITE:	O&M Sand	d Creek Barrier System	PROJECT NO:	09-46-169	

Date	Name	Representing	Equipment and PPE Level	Tiı IN	me Out
13/21	MARK PATTEUSON	BRAC-RUAAP	N	1045	1100
Commo	ntai				
Comme	nts:				
				•	
	******				



Prime Contract No:				Report No.	1
PIKA JOB #:	09-46-169			Date:	10-29-09
Project:	Operation and Maintenance of the		ne San	d Creek Barrier	System
<b>Environmental Conditions:</b>					
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Cloudy			
Temperature:		53° F			
Wind (Still, Moderate, High):		Still			
Humidity (Dry, Moderate, Humid):		Dry			

#### **Field Activities:**

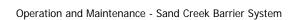
Description of debris inspection & removal activities: Removed leaves, sticks and mud from barrier. No MEC/MD found.

**Barrier Integrity:** Barrier is slightly bent however; barrier integrity has not been compromised.

Assessment of any changes since previous visit: None

Repairs made or need to be made: None

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Remarks:							
Visitors: None							
Health and Safety							
	Conducted health and safety meetings and task order meetings every morning, prior to commencement of activities.						
Were there an	v lost time ac	cidents this week?	No x Yes	7.			
	-	mary of incident or (	<u> </u>	<b></b> '			
-			•				
Ovelity Control							
Quality Control			I				
Inspections Pe	rformed	Non-Conformances	Corrective Action (CA	) Follow-up on CA			
Major Problems an	d Resolution:	None					
Schedule for Next I	Month: Follo	ow on inspection o	of barrier				
SUXOS	Lew Kovarik	Proje	ct Manager	Brian Stockwell			
UXO Safety Officer	Mel Lau						

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### PHOTO LOG

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PICTURES SHOWING SAND CREEK BARRIERS UPON ARRIVAL

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PICTURE SHOWING UXO TECHNICIAN REMOVING ACCUMULATED LEAVES FROM SCREEN.



VIEW OF SLIGHT "BEND" NOTED IN THE UPSTREAM BARRIER.

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PICTURES SHOWING BARRIERS UPON DEPARTURE

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## Safety Training Attendance Log

10/29/2009 7 of 10

Date: 10/29/09 Instructor(s): Mel Lau			Time	:1230	Log No.: 1		
Site I	Name & Locatio	n: Ravenna Arı	my Ammunition F	Plant, Ravenna, Ol	1		
Cont	ract No.:			Task Order Numb	er:		
Site 9	Supervisor or St	JXOS: Lew Kov	arik	SSHO: Mel Lau			
Train	ing Provided: 🛚	Initial Site Haza	rd Training 🗵 Dail	y Safety Briefing		⊠Other:_	
		Weekly Safety 7	Fraining 🔲 Tas	k/Hazard-specific Tra	aining		
			I. TRAINING T	OPICS COVERED			
Х	Planned Site Acti	vities	Chemical Haz	ards		Respirator U	Jse
	Physical Safety H	lazards	Routes of Ch	emical Exposure		Decontamin	ation Procedures
	Biological Hazard	ls	Chemical Exp	osure Symptoms	X	Emergency	
	Heat or Cold Stre	ess	Level of PPE		X	First Aid Pro	ocedures
	Site Controls		Types of PPE		X	Buddy Tean	n Procedures
Other	Topics:						
							***************************************
				URSE ATTENDEES	3		
	Name (prin	ited)	Sign	ature ·		Orgai アエド	nization
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	I cortify that th	na narconnal lictod		eceived the safety and	health	training descr	ihed above
	T cording that the	re personnernsted 1 – G	OH THIS TOSTEL HOVE IT	ACTIVED THE SOLETY AND	noanii )	Turning descri	100000
	Mark	and Upplith Officer			Cr LIVA	Cunondoor or C	Sita Supanisar
	Site Safety and Health Officer Sr. UXO Supervisor or Site Supervisor						



# Visitor Sign-In Log

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## Visitors Sign-In Log

PROJECT LOC	ATION:	RVAAP, OHIO			
PROJECT SITE:	O&M Sar	d Creek Barrier System	PROJECT NO:	09-46-169	

Date	Name	Representing	Equipment and	1	me
	,		PPE Level	IN	Out
	NO Utsitors				
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Comments:	
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#### **Trip Report**

			Report No.	2
09-46-169			Date:	11-24-09
Project: Operation and M		ne San	d Creek Barrier	System
<b>Environmental Conditions:</b>				
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):				
Temperature:		48° F		
Wind (Still, Moderate, High):		Still		
Humidity (Dry, Moderate, Humid):				
	Operation and Monditions:  (Bright Sun, n, Snow):	Operation and Maintenance of the conditions:  (Bright Sun, n, Snow):  (Bright Sun, Cloudy 48° F Still	Operation and Maintenance of the San  Inditions:  (Bright Sun, n, Snow):  Cloudy 48° F  Te, High):  Still	Operation and Maintenance of the Sand Creek Barrier  onditions:  (Bright Sun, n, Snow):  Cloudy 48° F  Te, High):  Still

#### **Field Activities:**

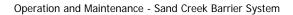
**Description of debris inspection & removal activities:** Removed leaves, sticks and mud from barrier. No MEC/MD found.

**Barrier Integrity:** Barrier is intact. Slight bend in both screens however; barrier integrity has not been compromised.

Assessment of any changes since previous visit: None

Repairs made or need to be made: None

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Remarks:			
Visitors: Mark Patterson (Fa	cility Manager), Eileen	Mohr (Ohio EPA)	
Health and Safety			
ricaltif and Safety			
Conducted health and safety m commencement of activities.	eetings and task order r	meetings every morning	, prior to
Were there any lost tim	e accidents this week?	No x Yes .	
If "yes", refer attached	summary of incident or	OSHA report.	
Quality Control			
Inspections Performed	Non-Conformances	Corrective Action (CA)	Follow-up on CA
Major Problems and Resolut	ion: None		
Schedule for Next Month: F	Follow on inspection (	of barrier	
SUXOS Lew Kov	arik Proje	ect Manager Bri	ian Stockwell
UXO Safety Officer Mel Lau	•	Ü	

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## PHOTO LOG

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PICTURES SHOWING SAND CREEK BARRIERS UPON ARRIVAL

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PICTURE SHOWING UXO TECHNICIAN REMOVING ACCUMULATED LEAVES FROM SCREEN.

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PICTURES SHOWING BARRIERS UPON DEPARTURE

11/24/2009 6 of 10



# Safety Training Attendance Log

11/24/2009 7 of 10

Date	e: 11/24/09 Instructor(s):	Mel Lau		Time	: <i>10:0</i> 0	Log No.: 2
<u></u>	Name & Location: Ravenna Arı	my Ammunition				
Cont	tract No.:		Task Order Num	ber:		
Site	Supervisor or SUXOS: Lew Kov	arik	SSHO: Mel Lau			
Trair	ning Provided:   Initial Site Haza	rd Training 📈 Dai	y Safety Briefing		⊠Other:_	
	☐ Weekly Safety 7		k/Hazard-specific Tr	raining		
		I, TRAINING T	OPICS COVERED			
7	Planned Site Activities	Chemical Ha	zards		Respirator U	Jse
¥	Physical Safety Hazards	Routes of Ch	emical Exposure		Decontamin	ation Procedures
	Biological Hazards	Chemical Exp	oosure Symptoms		Emergency	Procedures
X	Heat or Cold Stress	Level of PPE			First Aid Pro	ocedures
	Site Controls	Types of PPE	•		Buddy Tean	n Procedures
Othe	r Topics:					
			OURSE ATTENDEE	<u> </u>		
<u> </u>	Name (printed)	Sign	ature		Orgai	nization
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<u> </u>			VERIFICATION	1111		11-1-1-1-1
	I certify that the personnel listed	on this roster have r	eceived the safety and	nealth t	raining descr	iped above
	Mahla		Die	سرر	90-	
	Site Safety and Health Officer			Sr. UXO	Supervisor or S	ite Supervisor



# Visitor Sign-In Log

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## Visitors Sign-In Log

PROJECT LOCATION: SAND PROJECT SITE: KAVENKA	CREEK	84M
PROJECT SITE: KAVENA A		PROJECT NO:

Date	Name	Representing	Equipment and	Tir	ne
			PPE Level	IN	Out
11/24	Mark Patterson Eiken Mohr	RVAAP	Level D	1000	1030
11/24	Elken Mohr	Ohio EPA	Level D	1000	
					·

Comments		
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## **Operations and Maintenance Trip Reports** and Quarterly Effectiveness Evaluation Reports

**Time Critical Response Action for the** Rocket Ridge Area of Open Demolition Area #2 (RVAAP-004-R-01 Open Demolition Area #2 MRS) **Military Munitions Response Program Ravenna Army Ammunition Plant** Ravenna, Ohio







# OPERATIONS AND MAINTENANCE TRIP PREPORTS and QUARTERLY EFFECTIVENESS EVALUATION REPORTS

# TIME CRITICAL RESPONSE ACTION for the ROCKET RIDGE AREA OF OPEN DEMOLITION AREA #2 (RVAAP-004-R-01 Open Demolition Area #2 MRS)

### MILITARY MUNITIONS RESPONSE PROGRAM RAVENNA ARMY AMMUNITION PLANT RAVENNA, OHIO

Submitted To:

US ARMY CORPS OF ENGINEERS
OMAHA DISTRICT
CENWO-PM
1616 Capitol Avenue, Suite 9000
OMAHA, NE 68102-4901

#### Prepared By:

HDR | engineering-environmental Management, Inc. 2751 Prosperity Avenue, Suite 200 Fairfax, Virginia 22031

Contract Number DACA-63-03-D0009
Task Order No.: DK01

August 2008 – September 2009



## **Distribution List**

	Our an institut	Format and Number of Copies		
Recipient	Organization/ Title	Electronic/ Email	Electronic/ CD	Print
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Katie Elgin	OHARNG/ Env. Specialist	1	0	1
Eileen Mohr	Ohio EPA/ PM	1	0	1
Doug Simpleman	USACE Omaha/ PM	1	0	1
Daniel Zugris	e <sup>2</sup> M/ PM	1	0	1

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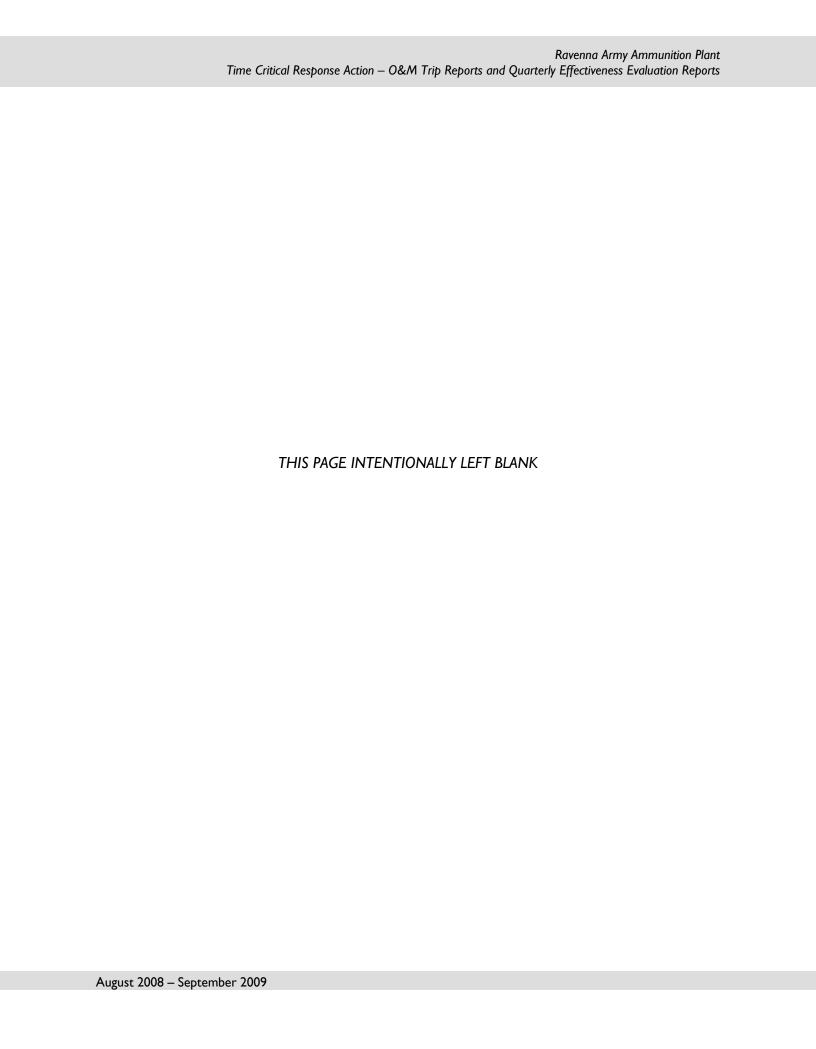
SECTION
SECTION A – OPERATIONS AND MAINTENANCE REPORTS
SECTION B – QUARTERLY EVALUATION AND EFFECTIVENESS REPORTS

Abbreviations and Acronyms					
CCR	Construction Completion Report				
DMM	Discarded Military Munitions				
e <sup>2</sup> M	engineering-environmental Management, Inc.				
MC	Munitions Constituents				
MD	Munitions Debris				
MEC	Munitions and Explosives of Concern				
MMRP	Military Munitions Response Program				
MRS	Munitions Response Site				
ODA2	Open Demolition Area #2				
OE	Ordnance and Explosives				
OHARNG	Ohio Army National Guard				
Ohio EPA	Ohio Environmental Protection Agency				
O&M	Operations and Maintenance				
PIKA	PIKA International				
RAB	Restoration Advisory Board				
RVAAP	Ravenna Army Ammunition Plant				
SI	Site Inspection				
TCRA	Time Critical Response Action				
USACE	United States Army Corps of Engineers				
USAEC	United States Army Environmental Command				
UXO	Unexploded Ordnance				



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	Time Critical Response Action — O&M	Trip Reports and Quarterl	Ravenna Army Ammunition Plant y Effectiveness Evaluation Reports
SECTION A OPERATION	S AND MAINTENAI	NCE REPORTS	S





#### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	12
PIKA JOB #:	08-53-134			Date:	9/02/09
Project:	Operation and Maintenance of th		ne San	d Creek Barrier	System
<b>Environmental Conditions:</b>					
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Sunny			
Temperature:		51°			
Wind (Still, Moderate, High):		Still			
Humidity (Dry, Moderate, Humid):		Low Humidity			
Project:	laintenance of th	ne San	d Creek Barrier	System	

#### **Field Activities:**

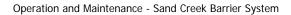
**Description of debris inspection & removal activities**: Removed very small amount of leaves and sticks and some mud from barrier. No MEC/MD found. Performed Schonstedt assisted surface sweep up stream approximately 150-200 feet. No MEC/MD found.

Barrier Integrity: Barrier still intact no changes since last O&M inspection.

Assessment of any changes since previous visit: None.

**Repairs made or needed to be made**. HDR/e<sup>2</sup>M and Cuyahoga Fence on site to perform scheduled repairs and modifications.

9/02/09 1 of 9





Remarks:			
Visitors: Jim McGee			
Health and Safety			
risaitii ana saisty			
Conducted health and safety meet	ing prior to commend	ement of activities.	
j			
Were there any lost time a		No X Yes .	
If "yes", refer attached sur	nmary of incident or (	OSHA report.	
Quality Control			
Inspections Performed	Non-Conformances	Corrective Action (CA)	Follow-up on CA
Major Problems and Resolution	: None		
Schedule for Next Month: Cond	duct monthly O&M.		
SUXOS Lew Kovarii	c Proje	ct Manager Br	ian Stockwell

9/02/09 2 of 9



## PHOTO LOG

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View of barriers upon arrival.

9/02/09 4 of 9







View of screens after cleaning and upon departure.

9/02/09 5 of 9



# Safety Training Attendance Log

9/02/09 6 of 9

				Kouarta		e: 8800 Log No.: 12	
	Name & Location: I		mmunition	Plant, Ravenna, C			
				33444	DCI.		
oite	Supervisor or SUX	55: Lew Kovarik		SSHO: Mel Lau			
Train		itial Site Hazard Tr eekly Safety Traini		aily Safety Briefing ask/Hazard-specific T	raining	Other: SAND Creek	
		I.	TRAINING	TOPICS COVERED			
Planned Site Activities Chemica		Chemical H	azards		Respirator Use		
K	Physical Safety Haza	ards	Routes of C	hemical Exposure	4	Decontamination Procedures	
X	Biological Hazards		Chemical Ex	kposure Symptoms	X	Emergency Procedures	
			Level of PPI	E	First Aid Procedures		
	Site Controls		Types of PP	E		Buddy Team Procedures	
the	r Topics:					×	
		II. T	RAINING C	OURSE ATTENDE	S		
	Name (printed	d)	Signature		Organization		
Lew Kovarik		6	Ken	1		PIKA	
Damel Zugris			Shul Fry		HDR/eZM		
	le Sizyson	14	land	Delh		sychone Fence	
-	ON ZADON	10744	Won a	Tudores		shogs Fence	
-	Mel LAGA	02/07	mil	7_ /	1	Pika	
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_							
		III	. TRAININ	G VERIFICATION			
	I certify that the p	ersonnel listed on th	is roster have	received the safety and	health	training described above.	
	Site Safety and	Health Officer		- <del>(</del> \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Sr. UXC	Supervisor or Site Supervisor	



# Visitor Log

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## Visitors Sign-In Log

PROJECT SITE: <u>O&M Sand Creek Barrier System</u> PROJECT NO: <u>08-53-134</u>

Date	Name	Representing	Equipment and PPE Level	IN Ti	me Out
7/2/09	Jim McGee	Vista	ρ	0846	0900
- 5-2					
				-	
				-	





#### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	11
PIKA JOB #:	08-53-134			Date:	7/29/09
Project:	Operation and Maintenance of th		ne San	d Creek Barrier	System
Environmental Co					
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Rain			
Temperature:		71°			
Wind (Still, Moderate, High):		Still			
Humidity (Dry, Moderate, Humid):		Humid			
Project:	laintenance of the	ne San	d Creek Barrier	System	

#### **Field Activities:**

**Description of debris inspection & removal activities**: Removed very small amount of leaves and sticks and some mud from barrier. No MEC/MD found.

**Barrier Integrity:** Barrier still intact no changes since last O&M inspection.

Assessment of any changes since previous visit: None.

**Repairs made or needed to be made**. No new repairs need to be made at this time. However, the repairs identified on previous inspections still need to be addressed.

Remarks:

Visitors: None

7/29/09 1 of 9



Health and Sa	afety			
Conducted hea	llth and safety meeti	ng prior to commend	cement of activities.	
Were th	nere any lost time ac	ccidents this week?	No X Yes	
If "yes"	, refer attached sum	nmary of incident or (	OSHA report.	
Quality Contr	rol			
Inspect	tions Performed	Non-Conformances	Corrective Action (CA)	Follow-up on CA
Maior Drobl	ana and Daadution	Nana		
Major Proble	ems and Resolution:	None		
Schedule for	Next Month: Cond	uct monthly O&M.		
SUXOS	Lew Kovarik	Proje	ct Manager Br	ian Stockwell

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## PHOTO LOG

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View of barriers upon arrival.

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View of screens after cleaning and upon departure.

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# Safety Training Attendance Log

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### PIKA SAFETY TRAINING ATTENDANCE LOG

Dat	e: 7/29/09 Instructor(	s): Mel Lau		Tim	e: 1400	Log No.: 11
Site	Name & Location: Ravenna	Army Ammunition	Plant, Ravenna, C	ЭН		
Con	tract No.: E2M-S08-039		Task Order Num	ber:		
Site	Supervisor or SUXOS: Lew I	Covarik	SSHO: Mel Lau			
Trair	ning Provided:   Initial Site H  Weekly Safe		aily Safety Briefing ask/Hazard-specific T	raining	⊠Other:	
			TOPICS COVERED			
	Planned Site Activities	Chemical H			Respirator	Use
Y	Physical Safety Hazards	Routes of C	Chemical Exposure			nation Procedures
X	Biological Hazards		xposure Symptoms		Emergency	/ Procedures
	Heat or Cold Stress	Level of PP	<del></del>		First Aid Pi	
X	Site Controls	Types of PF	PE	1	Buddy Tea	m Procedures
Othe	er Topics:					
		II. TRAINING C	OURSE ATTENDES	S		
	Name (printed)	Sig	nature		Orga	nization
	tm Bourter				PEKI	4
	995 ENNIS	A STATE S	7	-	PIKK	2
	W KOUANTE	dies -	ton	+	PIKA	
-	the think the	1000	/		12101	
		1. P. T. T.				
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		4				
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_		+		-		
1		4				
		III. TRAININ	G VERIFICATION			
	I certify that the personnel lis			d health	training desc	cribed above.
-	Site Safety and Health Office	er		Sr. UX	O Supervisor or	Site Supervisor



# Visitor Log

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### **Visitors Sign-In Log**

PROJECT LOCATION: RVAAP, OHIO

PROJECT SITE: <u>O&M Sand Creek Barrier System</u> PROJECT NO: <u>08-53-134</u>

Date	Name	Representing	Equipment and	Ti	me
		1 113 114 114 114	PPE Level	IN	Out
1					
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#### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	10
PIKA JOB #:	08-53-134			Date:	6/24/09
Project:	Operation and Maintenance of the		ne San	d Creek Barrier	System
<b>Environmental Conditions:</b>					
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Sunny			
Temperature:		79°			
Wind (Still, Moderate, High):		Still			
Humidity (Dry, Moderate, Humid):		Humid			
Project:	Operation and Maintenance of the Sand Creek Barrier System			System	

#### **Field Activities:**

**Description of debris inspection & removal activities**: Removed small amount of leaves and sticks and some mud from barrier. No MEC/MD found.

**Barrier Integrity:** Barrier still intact no changes since last O&M inspection.

Assessment of any changes since previous visit: None.

**Repairs made or needed to be made**. No new repairs need to be made at this time. However, the repairs identified on previous inspections still need to be addressed.

#### Remarks:

Visitors: Eileen Mohr (Ohio EPA), Christy Esler (Vista Sciences)

6/24/09 1 of 10



Health and Sa	fety			
Conducted healt	th and safety meetii	ng prior to commend	ement of activities.	
	•	cidents this week? mary of incident or (		].
Quality Contro	ol			
Inspection	ons Performed	Non-Conformances	Corrective Action (CA)	Follow-up on CA
Major Proble	ms and Resolution:	None		
Schedule for N	Next Month: Condu	uct monthly O&M.		
SUXOS	Lew Kovarik	Proje	ct Manager B	rian Stockwell

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## PHOTO LOG

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View of barriers upon arrival.

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Picture showing cleaning of screen.

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Screens after cleaning and upon departure.

6/24/09 6 of 10



# Safety Training Attendance Log

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### PIKA SAFETY TRAINING ATTENDANCE LOG

Site Name & Location: Ravenna Army Ammunition Plant, Ravenna, OH Contract No.: E2M-S08-039  Task Order Number:  Site Supervisor or SUXOS: Lew Kovarik  Training Provided: Initial Site Hazard Training Daily Safety Briefing Weekly Safety Training Total To	No.: 10				
Site Supervisor or SUXOS: Lew Kovarik    Training Provided:					
Training Provided: ☐ Initial Site Hazard Training ☐ Daily Safety Briefing ☐ Weekly Safety Training ☐ Task/Hazard-specific Training ☐ I. TRAINING TOPICS COVERED ☐ Planned Site Activities ☐ Chemical Hazards ☐ Respirator Use ☐ Physical Safety Hazards ☐ Routes of Chemical Exposure ☐ Decontamination ☐ Biological Hazards ☐ Chemical Exposure Symptoms ☐ Emergency Proce ☐ Heat or Cold Stress ☐ Level of PPE ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐					
Weekly Safety Training	SSHO: Mel Lau				
Planned Site Activities  Planned Site Activities  Physical Safety Hazards  Routes of Chemical Exposure  Decontamination  Biological Hazards  Chemical Exposure Symptoms  Emergency Proce  Level of PPE  Site Controls  Types of PPE  Buddy Team Proc  Other Topics:  II. TRAINING COURSE ATTENDEES  Name (printed)  Signature  Organizati  Christy Faley  First Aid Procedul  Signature  Organizati  RVAAP  ALLY  FALEY					
Planned Site Activities  Physical Safety Hazards  Routes of Chemical Exposure  Biological Hazards  Chemical Exposure Symptoms  Emergency Procedure Site Controls  Site Controls  Types of PPE  Types of PPE  Signature  Chemical Exposure  First Aid Procedure  Buddy Team Procedure  Signature  Organizati  Chemical Exposure  First Aid Procedure  First Aid Procedure  Buddy Team Procedure  Signature  Organizati  Chemical Exposure  First Aid Procedure  Fir					
Physical Safety Hazards  Biological Hazards  Chemical Exposure Symptoms  Emergency Procedure  Heat or Cold Stress  Level of PPE  Site Controls  Types of PPE  Buddy Team Procedure  Types of PPE  Name (printed)  Signature  Charisty Esley  First Aid Procedure  Buddy Team Procedure  Signature  Organizati  RVAAP  Filed Topic  First Aid Procedure  First Aid Procedure  Buddy Team Procedure  First Aid Procedure					
Biological Hazards Chemical Exposure Symptoms Heat or Cold Stress Level of PPE Lovel A First Aid Procedur Site Controls Types of PPE Buddy Team Proc Other Topics:  II. TRAINING COURSE ATTENDEES Name (printed) Signature Organizati Christy Faley Filed Many Kew Kovan K Filed M Filed Many Kew Kovan K Filed Many Kew Kovan K Filed M F					
Heat or Cold Stress   Level of PPE   Level D   First Aid Procedure					
Site Controls  Types of PPE  Buddy Team Proceed Topics:  II. TRAINING COURSE ATTENDEES  Name (printed)  Signature  Organization  Christy Eslev  Filed Make  Filed Make  RVAAP  Eslev  RVAAP					
Dither Topics:  II. TRAINING COURSE ATTENDEES  Name (printed)  Signature  Organizati  Christy Faler  Freed Mahr  Eggy  Note Eigh  No					
II. TRAINING COURSE ATTENDEES  Name (printed) Signature Organizati Christy Eslev Freed Mahr Esley War Sha BIKA  FILE KOVANIK  FILE KOVANIK  SIGNATION ON STREET  FILE KOVANIK  FILE KOVANIK  FILE KOVANIK  FILE KOVANIK  FILE KOVANIK  FILE KOVANIK  STREET  FILE KOVANIK  F	cedures				
Name (printed) Signature Organizati Christy Eslev Freed Mohr Eslev RVAAP Ohroty Eslev Freed Mohr Eslev RVAAP Ohroty Eslev RVAAP					
Name (printed) Signature Organizati Christy Eslev Fleed Mohr Esley RVAAP Ohio E'A FLEW KOVANIK  PIKA					
Name (printed) Signature Organizati Christy Eslev Freed Mohr Eslev RVAAP Ohroh Eslev Freed Mohr Kew Kovarik PIKA					
Christy Esler Christy Esler RUAAP Esler Mohr Est Mill Olio ErA LEW KOVANIK KEUN PIKA					
Free Mohr Ed My Ohio ETA LEW KOVARIK KEU KU PIKA	ion				
Lew KOVARIK Ker AT PIKA					
Mel Lyn Milla Pika					
III. TRAINING VERIFICATION					
I certify that the personnel listed on this roster have received the safety and health training described a	bove.				
mlZ For Ken					
Site Safety and Health Officer Sr. UXO Supervisor or Site Sup	pervisor				



# Visitor Log

6/24/09 9 of 10



### Visitors Sign-In Log

PROJECT	LOCATION:	RVAAP, OHIO

PROJECT SITE: <u>O&M Sand Creek Barrier System</u> PROJECT NO: <u>08-53-134</u>

Date	Name	Representing	Equipment and		me
			PPE Level	IN	Out
6/24/00			Level A	1	_
0/25/05	Eleen Mohr	OLIO SPA	Level D	10:04	10.50
6/24/09	Christy Esler	OLIO E PA RVAAP	11	10:04	10:50

omments:		



### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	9
PIKA JOB #:	08-53-134			Date:	5/27/09
Project:	Operation and Maintenance of the		ne San	d Creek Barrier	System
<b>Environmental Conditions:</b>					
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Overcast			
Temperature:		76°			
Wind (Still, Moderate, High):		Still			
Humidity (Dry, Moderate, Humid):		Humid			
Project:	Operation and Maintenance of the Sand Creek Barrier System			System	

#### **Field Activities:**

Description of debris inspection & removal activities: Removed small amount of leaves and sticks and some mud from barrier. No MEC/MD found.

Barrier Integrity: Barrier still intact no changes since last O&M inspection.

Assessment of any changes since previous visit: none.

Repairs made or need to be made. No new repairs need to be made at this time. However, the repairs identified on previous inspections still need to be addressed.

#### Remarks:

Visitors: Mark Patterson - RVAAP FM, Christy Esler - Vista Sciences, Todd Fisher - Ohio EPA.

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Health and	Safety
------------	--------

**SUXOS** 

Health and Safety					
Conducted health and safety meetings and task order meetings every morning, prior to commencement of activities.					
Were there any lost time ac	cidents this week?	No X Yes .			
If "yes", refer attached sum	mary of incident or (	OSHA report.			
Quality Control					
Inspections Performed	Non-Conformances	Corrective Action (CA)	Follow-up on CA		
Major Problems and Resolution:	None				
Schedule for Next Month: Conduct monthly O&M.					

Project Manager

Brian Stockwell

Lew Kovarik

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## PHOTO LOG

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View of barriers upon arrival.

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Picture showing cleaning of screen.



Screens after cleaning and upon departure.

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# Safety Training Attendance Log

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### PIKA SAFETY TRAINING ATTENDANCE LOG

Date	e: 5/27/09	Instructor(s):	: Mel Lau		Time	: 1000	Log No.: 9	
Site	Name & Locati	on: Ravenna Aı	rmy Ammunition I	Plant, Ravenna, O	Н			
Con	tract No.: E2M	-S08-039		Task Order Num	ber:			
Site Supervisor or SUXOS: Lew Kovarik			SSHO: Mel Lau					
Trair		☐ Initial Site Haz	ard Training 🖄 Dail	y Safety Briefing k/Hazard-specific T	raining	⊠Other:_		
		Weekly Salety			allilig			
I. TRAINING TOPICS COVE  Planned Site Activities Chemical Hazards				T	Respirator L	Ise		
-	Physical Safety		Estate Action of Action	emical Exposure			ation Procedures	
	Biological Haza			oosure Symptoms	1	Emergency		
	Heat or Cold St		Level of PPE	occure cymptoms	1	First Aid Pro		
	Site Controls		Types of PPE		1		Procedures	
Othe	er Topics:		1.775					
			II. TRAINING CO	URSE ATTENDEE	S			
	Name (pr	inted)	Sign	ature 0		Organ	Organization	
le	W KOVANIK	*	when of	or /	PIKA		2	
	amel Zugn		Damil &	PIKA				
-)	ames Blu	VIER	7		1	IKA		
			-					
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_								
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_								
		)	III. TRAINING	VERIFICATION				
	Lcertify that	the personnel listed	d on this roster have re		health	training descri	bed above.	
1		1		- Lei	-	ki	1	
1	Site Safe	ty and Health Officer			Sr. UXC	Supervisor or S	ite Supervisor	



# Visitor Log

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### Visitors Sign-In Log

<b>PROJECT</b>	LOCATION:	RVAAP,	OHIO

PROJECT SITE: <u>O&M Sand Creek Barrier System</u> PROJECT No: <u>08-53-134</u>

Date	Name	Representing	Equipment and PPE Level	Tim IN	e Out
5/27/09	Mark Palle	US Army (BrAC)	Level D	1015	
5/27/09	Christin Esfer	VISTA	le le	of .	
5/27/19	The Refres	US Army (BrAC) VISTA 6140 E84	LEVEL D	1013	
	*				





#### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	8
PIKA JOB #:	08-53-134			Date:	04-28-09
Project:	Operation and Maintenance of the Sand Creek Barrier System			System	
Environmental Co					
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Overcast			
Temperature:		74°			
Wind (Still, Moderate, High):		Still			
Humidity (Dry, Moderate, Humid):		Moderate			
Project:	Operation and M	Maintenance of the Sand Creek Barrier System			

#### **Field Activities:**

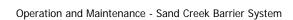
Description of debris inspection & removal activities: Removed heavy accumulation leaves and sticks and some mud from barrier. No MEC/MD found.

Barrier Integrity: The upstream screen is intact, however general repairs are required, as recommended by e<sup>2</sup>M in the 25 March 2009 Supplemental Effectiveness Evaluation (SEE) Report (including reducing the height of the central panels to 10-12 inches, which will also remove the damaged top two wires of the second panel). Both the north and south ends of the downstream screen have washed out of the bank. The installation of two new posts at the north and south ends of the barrier, recommended in the SEE Report, will address this problem.

Assessment of any changes since previous visit: See above.

Repairs made or need to be made. The bolts of the post clamping system were tightened at all posts. The SEE Report recommendations for repairs and improvements will address all issues noticed during the present O&M visit.

4/28/2009 1 of 10





Remarks:					
Visitors: None					
Health and Safety					
Conducted health and safety meeti commencement of activities.	ngs and task order n	neetings every morning	, prior to		
Were there any lost time accidents this week? No X Yes					
<b>Quality Control</b>					
Inspections Performed	Non-Conformances	Corrective Action (CA)	Follow-up on CA		
Major Problems and Resolution:	None				
Schedule for Next Month: Cond	duct monthly O&M				
SUXOS Lew Kovarik	Proje	ct Manager Bri	ian Stockwell		

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## PHOTO LOG

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View of barriers upon arrival.

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Picture showing north end of the bottom screen detached from stream bank.



Picture showing south end of the bottom screen detached from stream bank.

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Close-up of top screen after cleaning.



Picture showing both screens after cleaning.

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# Safety Training Attendance Log

4/28/2009 7 of 10



### PIKA SAFETY TRAINING ATTENDANCE LOG

Date	: 4/28/09	Instructor(s)	): Mel Lau		Time	: 1000	Log No.: 8
Site	Name & Locat	ion: Ravenna A	rmy Ammunition	Plant, Ravenna, O	Н		
Cont	ract No.: E2M	-S08-039		Task Order Num	ber:		
Site	Supervisor or	SUXOS: Lew Ke	ovarik	SSHO: Mel Lau			
Train			zard Training 🔲 Dai	ily Safety Briefing sk/Hazard-specific T	raining	⊠Other:_	
			I. TRAINING	OPICS COVERED			
X	Planned Site A	ctivities	Chemical Ha	zards		Respirator	Use
4	Physical Safety	Hazards	Routes of Ch	nemical Exposure		Decontami	nation Procedures
X	Biological Haza	ards	Chemical Ex	posure Symptoms	X	Emergency	Procedures
	Heat or Cold S	tress	Level of PPE		X	First Aid Pr	ocedures
	Site Controls		Types of PPI	E		Buddy Tea	m Procedures
Othe	r Topics:						
	Name (n	rinted)	_	OURSE ATTENDEE	S	Over	wination
1	Name (pr	7 72	Sigi	nature		PIKI	nization
Mel Lau		ml 2		P. Fr			
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			TIT TOATAITAL	VERIFICATION			
	I certify that	the personnel lists		eceived the safety and	health	training desc	rihed above
	M	die personner iiste	a on this roater have i			1/	ibcd above.
_	Site Safe	ty and Health Officer		_ Oxe		Supervisor of	ite Supendeor
	Site Sale	cy und ricaldi Officer			JI. UNC	Juhel AISOL OF	JILE JUPEI VISUI



# Visitor Log

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### Visitors Sign-In Log

PROJECT LOCA	ATION: _	RVAAP, OHIO			
PROJECT SITE:	O&M Sar	nd Creek Barrier System	PROJECT NO:	08-53-134	

Date	Name	Representing	Equipment and PPE Level	IN Ti	me Out
	No visitors				
	Market Company of the				
-5 10					

Comments:			



#### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	7
PIKA JOB #:	08-53-134			Date:	03-25-09
Project:	Operation and M	laintenance of th	ne San	d Creek Barrier	System
<b>Environmental Conditions:</b>					
Weather Conditions Clear, Overcast, Ra	. 0	Rain			
Temperature:		40°			
Wind (Still, Modera	te, High):	Moderate			
Humidity (Dry, Moderate, Humid):		Moderate			
Project:	Operation and M	laintenance of th	ne San	d Creek Barrier	System

#### Field Activities:

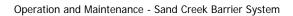
Description of debris inspection & removal activities: Removed small amount of leaves sticks and mud from barrier. No MEC/MD found.

Barrier Integrity: The upstream screen panels are bowed but the barrier is operable. The downstream barrier needs repairs: the south panel has detached from the bank and the north panel is no longer keyed tightly into the bank.

Assessment of any changes since previous visit: See above.

Repairs made or need to be made: The gap between south screen panel and bank was filled with rocks to about 10-12 inches above creek bottom. PIKA will tighten the bolts on all posts. E2M will coordinate the repairs to the barrier system.

3/25/2009 1 of 9





Remarks:				
Visitors: No	one			
Health and Sa	ifety			
Conducted heal commencement	th and safety meeti t of activities.	ngs and task order n	neetings every mornin	g, prior to
	ere any lost time ac refer attached sum	cidents this week? mary of incident or 0	No  Yes	
Quality Contro	ol			
Inspecti	ons Performed	Non-Conformances	Corrective Action (CA)	Follow-up on CA
Major Proble	ms and Resolution:	None		
Schedule for I	Next Month: Cond	luct monthly O&M		
SUXOS	Lew Kovarik	Proje	ct Manager E	Brian Stockwell
		•	-	
Ĺ				

3/25/2009 2 of 9



## PHOTO LOG

3/25/2009 3 of 9







Barrier upon arrival.

3/25/2009 4 of 9







Pictures showing section of bottom screen detached from bank.

3/25/2009 5 of 9





View showing degree of bowing on bottom screen.

3/25/2009 6 of 9





Barrier upon departure

3/25/2009 7 of 9



# Safety Training Attendance Log

3/25/2009 8 of 9



### PIKA SAFETY TRAINING ATTENDANCE LOG

at	e: 3/25/09	Instructor(s)	: Mel Lau		Time	e: 1000	Log No.: 7
ite	Name & Locati	on: Ravenna A	rmy Ammunition	Plant, Ravenna, O	Н		
on	tract No.: E2M	-S08-039		Task Order Num	ber:		
ite	Supervisor or 5	SUXOS: Lew Ko	varik	SSHO: Mel Lau			
rair	ning Provided: [	☐ Initial Site Haz	ard Training   Da	ily Safety Briefing	-	⊠Other:	
		☐ Weekly Safety		sk/Hazard-specific T	raining		
			I. TRAINING	OPICS COVERED			
X	Planned Site Ad	ctivities	Chemical Ha	zards	NE.	Respirator	Use
	Physical Safety	Hazards	Routes of Cl	nemical Exposure		Decontami	nation Procedures
	Biological Haza	rds	Chemical Ex	posure Symptoms	V	Emergency	Procedures
X	Heat or Cold St	ress	Level of PPE			First Aid Pi	ocedures
	Site Controls		Types of PP	E	K	Buddy Tea	m Procedures
the	er Topics:						
				OURSE ATTENDEE	S		
7	Name (pr	inted)	//	nature	-	Orga	nization
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1	milel Zua		James 2	mil	F	HEA E	am
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					-		
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					-		
			III. TRAINING	G VERIFICATION			
	I certify that	the personnel liste	d on this roster have	received the safety and	d health	training desc	ribed above.
	Site Safe	ty and Health Officer		Kar	Sr. LIXO	O Supervisor or	Site Supervisor
	Site Sale	cy and reduit office			JI. UN	Supervisor Of	orce ouper visor





#### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	6	
PIKA JOB #:	08-53-134			Date:	02-05-09	
Project:	Operation and M	laintenance of th	intenance of the Sand Creek Barrier System			
Environmental Co	onditions:					
Weather Conditions Clear, Overcast, Ra	` •	Sunny				
Temperature:		3°				
Wind (Still, Modera	te, High):	Moderate				
Humidity (Dry, Moderate, Humid):		Dry				
Project:	Operation and M	laintenance of th	ne San	d Creek Barrier	System	

#### **Field Activities:**

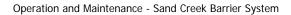
Description of debris inspection & removal activities: Barriers are frozen over with snow and ice. Removed snow from top of fourth panel to measure how much bowing has occurred.

Barrier Integrity: The barriers appear to be intact under the snow and ice.

Assessment of any changes since previous visit: Complete assessment could not be conducted due to heavy snow and ice cover over the majority of the barriers. Exposed section of lower barriers was inspected. No major increase in deflection/bowing was noted.

Repairs made or need to be made: No repairs required or made during this visit.

2/5/2009 1 of 9





Remarks: Visitors: Daniel Zugr	is						
Health and Safety							
	Conducted health and safety meetings and task order meetings every morning, prior to commencement of activities.						
<del>_</del>		cidents this week? mary of incident or (					
<b>Quality Control</b>							
Inspections Perfor	med	Non-Conformances	Corrective Action (CA)	Follow-up on CA			
Major Problems and R	Resolution:	None					
Schedule for Next Mo	nth						
SUXOS Le	ew Kovarik	Proje	ct Manager Bri	an Stockwell			

2/5/2009 2 of 9



## PHOTO LOG

2/5/2009 3 of 9







Barriers upon Arrival

2/5/2009 4 of 9





Measuring the bowing of screen



Photo depicts the thickness of ice at Sand Creek

2/5/2009 5 of 9



# Safety Training Attendance Log

2/5/2009 6 of 9



### PIKA SAFETY TRAINING ATTENDANCE LOG

Date	e: 2/05/09 Instructor(s	): Mel Lau		Tim	e: /030	Log No.: 6
Site	Name & Location: Ravenna	Army Ammunition	n Plant, Ravenna, C	Н		
Cont	ract No.: E2M-S08-039		Task Order Num	ber:		
Site	Supervisor or SUXOS: Lew K	ovarik	SSHO: Mel Lau			
Train	ning Provided:		aily Safety Briefing ask/Hazard-specific T	raining	⊠Other:_	
		the state of the same of the same of the same of	TOPICS COVERED			
x	Planned Site Activities	Chemical H			Respirator	Use
X	Physical Safety Hazards	Routes of 0	Chemical Exposure			nation Procedures
	Biological Hazards		xposure Symptoms	X	Emergency	Procedures
X	Heat or Cold Stress	Level of PP	E	×	First Aid Pr	ocedures
	Site Controls	Types of PI	PE		Buddy Tea	m Procedures
Othe	r Topics:					
	Name (printed)		COURSE ATTENDES	S	Orga	nization
	Name (printed)	Sig	gnature			nization
	Mel Lou	Lew	4	-	Pika	
- 5	Daniel Zuaris	The face	Fall -	124		
- ×	Daniel 20011	Trender (	XIII	101	1	
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		TIT TOATMITA	IG VERIFICATION	1		
	I certify that the personnel list			t health	n training doc	rihed ahove
	M / 7	ed off this foster flave	received the salety and	ı nealti	i danning desc	incu audve.
	//hha		- de	2		Site Survey
	Site Safety and Health Office		-7	or. UX	O Supervisór or	site Supervisor



# Visitor Sign-In Log

2/5/2009 8 of 9



### Visitors Sign-In Log

PROJECT LOCA	ATION:	RVAAP, OHIO		
PROJECT SITE:	O&M San	d Creek Barrier System	PROJECT NO:	08-53-134

Date	Name	Representing	Equipment and PPE Level	IN Ti	me Out
2/5/09	Danielzugris	e <sup>2</sup> M	Y Level	10.30	11:30
10/01	Danierzogris	- /1		10,70	11. 50
:					





#### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	5	
PIKA JOB #:	08-53-134		Date:	12-16-08		
Project:	Operation and Maintenance of th			d Creek Barrier	System	
<b>Environmental Conditions:</b>						
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Overcast				
Temperature:		22° F				
Wind (Still, Moderate, High):		Moderate				
Humidity (Dry, Mod	lerate, Humid):	Dry				

#### **Field Activities:**

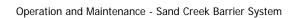
Description of debris inspection & removal activities: Removed leaves, sticks and mud from barrier. Numerous amounts of leaves on both screens. No MEC/MD found.

Barrier Integrity: Barrier is operable, there are no gaps that would allow MEC/MD to pass through.

Assessment of any changes since previous visit: Both screens appear to be bent more than at the previous inspection.

Repairs made or need to be made: None at this time.

12/16/2008 1 of 12





Remarks:				
Visitors: None				
Health and Safety				
Conducted health and commencement of ac		ngs and task order n	neetings every morning	g, prior to
	•	cidents this week? Imary of incident or (		
<b>Quality Control</b>				
Inspections Pe	rformed	Non-Conformances	Corrective Action (CA)	Follow-up on CA
Major Problems an	d Resolution:	None		-
Schedule for Next I	Vonth: Folio	ow on inspection o	of barrier	
		•		
SUXOS	Lew Kovarik	Proje	ct Manager Br	ian Stockwell
UXO Safety Officer	Mel Lau			

12/16/2008 2 of 12



## PHOTO LOG

12/16/2008 3 of 12







Overview of Screens upon arrival

12/16/2008 4 of 12





Overview of Screens upon arrival

12/16/2008 5 of 12







Screens bowing

12/16/2008 6 of 12







Cleaning Screens

12/16/2008 7 of 12







Overview of barriers following cleaning operations. Note: Remaining debris seen on screens is frozen to the screens.

12/16/2008 8 of 12



# Safety Training Attendance Log

12/16/2008 9 of 12



### PIKA SAFETY TRAINING ATTENDANCE LOG

Date	e: 16 Dec 08 Instructor(	s): /	nelvin Lan	Tim	e: 1300	Log No.: 5	
Site	Name & Location: Ravenna						
	tract No.: E2M-508-039	7	Task Order Nu				
ite	Supervisor or SUXOS: Lea	, Ke	SSHO: M.	o/vin	244		
	ning Provided: 🗌 Initial Site F				⊠Other:		
	☐ Weekly Safe	ty Train	ing   Task/Hazard-specific	Training	)		
		I.	TRAINING TOPICS COVERE	D			
C	Planned Site Activities		Chemical Hazards		Respirator Use		
4	Physical Safety Hazards		Routes of Chemical Exposure		Decontami	ination Procedures	
	Biological Hazards		Chemical Exposure Symptoms	5 6	Emergency	y Procedures	
L	Heat or Cold Stress	1	Level of PPE	L	First Aid P	rocedures	
	Site Controls	1	Types of PPE	-	Buddy Tea	m Procedures	
the	er Topics:						
_		II.	RAINING COURSE ATTEND	EES			
_	Name (printed)		Signature	7	Orga	Organization	
a	w Kovanik		Lew Mrt		PIKK		
1	= 101 HORMUZDT		7037 No.		121211-1		
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			I. TRAINING VERIFICATIO	17	nanara e		
	I certify that the personnel lis	sted on t	nis roster have received the safety	and health	n training des	cribed above.	
	Mal & to		_ X	Eu	a ff	//	
	Site Safety and Health Office	cer	V	Sr. UX	O Supervisor or	Site Supervisor	



# Visitor Sign-In Log

12/16/2008 11 of 12



### Visitors Sign-In Log

PROJECT LOCATIO	V:	RV:	AAP,	OHI	0				
PROJECT SITE: Oo	15	and Cv	eek i	Barrier	SystemPROJE	CT NO:	08-53-1	34	

Date	Name	Representing	Equipment and PPE Level	Time IN Out		
12/16/08	Lew Kovarit	PIKA	Level D	0900	1700	
12/16/08	YEZDI HORMUZDI	PIKA	Level D	0900	1700	
12/16/08	Justin Rue	Acrotale	Leval D	0900	1700	
16 Dec 08	Melvin Lan	Pika	Level D	0900	1700	

mments			



#### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	4	
PIKA JOB #:	08-53-134			Date:	11-19-08	
Project:	Operation and M	ne San	d Creek Barrier	System		
<b>Environmental Conditions:</b>						
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Overcast				
Temperature:		26° F				
Wind (Still, Moderate, High):		Moderate				
Humidity (Dry, Mod	Humidity (Dry, Moderate, Humid):		Dry			

#### **Field Activities:**

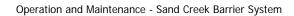
Description of debris inspection & removal activities: Removed numerous amounts of leaves and sticks from barrier. Recommend for future inspection/cleaning in late fall/early winter assign two additional persons to help with cleanup.

Barrier Integrity: Both screens slightly bent, but no breaks or cracks.

Assessment of any changes since previous visit: Both screens are bent more than the previous inspection.

Repairs made or need to be made: None at this time.

11/19/08 1 of 10





Remarks:				
Visitors: None				
Health and Safety				
Conducted health and commencement of ac		ngs and task order n	neetings every morni	ng, prior to
			No x Yes L	
it "yes", refer	attached sum	mary of incident or (	ЭЅНА герогт.	
<b>Quality Control</b>				
Inspections Pe	rformed	Non-Conformances	Corrective Action (CA	) Follow-up on CA
Major Problems an	d Resolution:	None		
Schedule for Next N	Month: Follo	ow on inspection o	of barrier	
SUXOS	Lew Kovarik	Proje	ct Manager	Brian Stockwell
UXO Safety Officer	Mel Lau			

11/19/08 2 of 10



## PHOTO LOG

11/19/08 3 of 10







Overview of barrier upon arrival

11/19/08 4 of 10





Screens bowing.

11/19/08 5 of 10







Overview of barriers before demobilization

11/19/08 6 of 10



# Safety Training Attendance Log

11/19/08 7 of 10



#### PIKA SAFETY TRAINING ATTENDANCE LOG

e Name & Location: Ravenna ntract No.:					
			Task Order Numl		
Site Supervisor or SUXOS: Lew KOUANIK SSHO: MEL LAU					
aining Provided:   Initial Site H					⊠Other:
			sk/Hazard-specific Tr	aining	
	I.	TRAINING	TOPICS COVERED		
∠ Planned Site Activities	- 1	Chemical Ha	azards		Respirator Use
Physical Safety Hazards		Routes of C	hemical Exposure	12.	Decontamination Procedures
Biological Hazards		Chemical Ex	posure Symptoms	Y	Emergency Procedures
Heat or Cold Stress	K	Level of PPE		X	First Aid Procedures
Site Controls		Types of PP	E	X	Buddy Team Procedures
her Topics:					
Name (printed)	11.		OURSE ATTENDEES nature		Organization
Name (printed)	11.				Organization
iew Kontrik		Low	in little		PIKA
MEL GAU		Mul To	_	PIKA	
lezdi Hormozdi		4.201 x 1100	1		PIKA
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	TT	TDATMIN	G VERIFICATION		
I certify that the personnel lis				hoalth	training described above
1 certify that the personner is	ceu on ti	no rooter riave	received the salety diff	ricaid	daming described above.



# Visitor Sign-In Log

11/19/08 9 of 10



### Visitors Sign-In Log

<b>PROJECT</b>	LOCATION:	RVAAP, OHIO	

PROJECT SITE: <u>O&M Sand Creek Barrier System</u> PROJECT NO: <u>08-53-134</u>

Date	Name	Representing	Equipment and	Time		
			PPE Level	IN	Out	
11/19	No visitors					
					1	
-						
-					-	
-						
-						

Comments:			



#### **Trip Report**

E2M-S08-039			Report No.	3	
08-53-134			Date:	10-23-08	
Operation and Maintenance of the Sand Creek Barrier System				System	
<b>Environmental Conditions:</b>					
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Clear, sunny			
	47° F				
te, High):	Still				
Humidity (Dry, Moderate, Humid):			Dry		
	08-53-134 Operation and Monditions: (Bright Sun, in, Snow):	O8-53-134 Operation and Maintenance of the conditions:  (Bright Sun, in, Snow):  47° F  te, High): Still	O8-53-134  Operation and Maintenance of the San onditions:  (Bright Sun, in, Snow):  47° F  Ste, High):  Still	O8-53-134  Operation and Maintenance of the Sand Creek Barrier and Creek Barrier Conditions:  (Bright Sun, In, Snow):  47° F  Ste, High):  Still	

#### **Field Activities:**

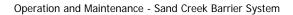
Description of debris inspection & removal activities: Leaves, branches, silt/mud, and sticks. Removed debris from both screens.

**Barrier Integrity: Good** 

Assessment of any changes since previous visit: Slight washout. Erosion on southern ends of both barriers.

Repairs made or need to be made: Placed rocks at south ends of both barriers to stop erosion.

10/23/2008 1 of 12





Remarks:						
Visitors: Mark Patterson (RVAAP), and Daniel Zugris (e2M)						
Health and Safety						
Conducted health and safety meetings and task order meetings every morning, prior to commencement of activities.						
	_		No x Yes	].		
If "yes", refer	attached sum	mary of incident or (	OSHA report.			
Quality Control						
Inspections Pe	rformed	Non-Conformances	Corrective Action (CA)	Follow-up on CA		
Major Problems an	d Resolution:	None				
Schedule for Next N	Month: Folio	ow on inspection o	of barrier			
SUXOS	Lew Kovarik	Proje	ct Manager E	Brian Stockwell		
UXO Safety Officer	Mel Lau					

10/27/2008 2 of 12



## PHOTO LOG

10/23/2008 3 of 12







Overview of Screens upon arrival

10/23/2008 4 of 12





Cleaning Screen

10/23/2008 5 of 12





Washout area at barrier



Washout area reinforced with rocks

10/23/2008 6 of 12





Washout area at barrier



Washout area reinforced with rocks

10/23/2008 7 of 12







Overview of barriers before demobilization

10/23/2008 8 of 12



# Safety Training Attendance Log

10/23/2008 9 of 12



### PIKA SAFETY TRAINING ATTENDANCE LOG

Date	e: 10/23/08 Instructor(	(s): Mel	Lau	Time	1030	Log No.: 3
Site	Name & Location: Ravenna	Army A	mmunition Plant, Ravenna, (	Н		
Cont	ract No.: E2M-S08-039		Task Order Num	ber:		
Site	Supervisor or SUXOS: Lew	Kovarik	SSHO: Mel Lau			
Train	ning Provided:   Initial Site F  Weekly Safe		raining Daily Safety Briefing ng Task/Hazard-specific T	raining	⊠Other:	
		I.	TRAINING TOPICS COVERED			
	Planned Site Activities		Chemical Hazards		Respirator	Use
X	Physical Safety Hazards		Routes of Chemical Exposure		Decontam	ination Procedures
X	Biological Hazards		Chemical Exposure Symptoms		Emergency	y Procedures
	Heat or Cold Stress	X	Level of PPE	X	First Aid P	rocedures
,	Site Controls	V	Types of PPE	X	Buddy Tea	m Procedures
Othe	r Topics:	1 11				
		II. T	RAINING COURSE ATTENDER	S		
	Name (printed)		Signature	/	Orga	anization
	w Kouarla	- 6	Levy Cong	4	BI K	11
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		III	. TRAINING VERIFICATION			
-	I certify that the personnel li	sted on th	is roster have received the safety an	d health	training des	cribed above.
	Mul & my	25.7	<u>Zer</u>		n	
	Site Safety and Health Offi	cer		Sr. UXO	Supervisor or	Site Supervisor



# Visitor Sign-In Log

10/23/2008 11 of 12



### Visitors Sign-In Log

PROJECT LOCATION: \_\_\_\_ RVAAP, OHIO

PROJECT SITE: <u>O&M Sand Creek Barrier System</u> PROJECT NO: <u>08-53-134</u>

Date	Name	Representing	Equipment and	Time		
			PPE Level	IN	Out	
10/33/00 4	ew Kovant	PIKA	MOD D	1030	12:00	
10/23/00 1	mel Lag	PIKA	MOD D	1030	12:00	
10/23/08 D	mel Lau aniel Zugris	e <sup>2</sup> M	Mod D	10:30	12:00	

Comments:		



#### **Trip Report**

08-53-134			•	2
00-55-154			Date:	9-22-08
Operation and Maintenance of the Sand Creek Barrier System				System
Environmental Conditions:				
Weather Conditions (Bright Sun, Clear, Overcast, Rain, Snow):		Clear, sunny		
	68° F			
erate, High): Still				
erate, Humid):	Dry			
(	(Bright Sun, , Snow):	(Bright Sun, , Snow):  Clear, sunny  68° F  High):  Still	(Bright Sun, , Snow):  Clear, sunny  68° F  High):  Still	(Bright Sun, , , Snow):  Clear, sunny  68° F  High):  Still

#### **Field Activities:**

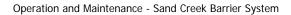
Description of debris inspection & removal activities: Leaves, branches, mud, sticks and rocks. Removed debris from both screens.

Barrier Integrity: Both Barriers bowed slightly due to branches and leaves approximately 3-5" thick on the screens from bottom to top.

Assessment of any changes since previous visit: Barrier screens slightly more bowed (no breaks or cracks in screen).

Repairs made or need to be made: None.

9/22/2008 1 of 10





Remarks:						
Visitors: Mark Patterson (RVAAP), Eileen Mohr (Ohio EPA)						
	•		,			
Health and Safety						
Conducted health and safety meetings and task order meetings every morning, prior to commencement of activities.						
	Were there any lost time accidents this week? No x Yes .  If "yes", refer attached summary of incident or OSHA report.					
<b>Quality Control</b>						
Inspections Pe	erformed	Non-Conformances	Corrective Action (CA)	Follow-up on CA		
Major Problems ar	d Resolution:	None				
Schedule for Next	Month: Follo	ow on inspection o	of barrier			
		-				
CLIVOS	Low Voyer!!	Den!	ot Monagor	dan Staakwall		
SUXOS	Lew Kovarik	Proje	ct Manager Br	ian Stockwell		
UXO Safety Officer	Mel Lau					

9/22/2008 2 of 10



## PHOTO LOG

9/22/2008 3 of 10







Overview of Screens upon arrival

9/22/2008 4 of 10





Cleaning Screen



Bowing of barrier

9/22/2008 5 of 10







Overview of barriers before demobilization

9/22/2008 6 of 10



# Safety Training Attendance Log

9/22/2008 7 of 10



#### PIKA SAFETY TRAINING ATTENDANCE LOG

Date: 9/23/08 Instructor(				10:00	Log No.: 2
Site Name & Location: Ravenna	<b>Army Ammunitio</b>				
Contract No.:		Task Order Numi	er:		
Site Supervisor or SUXOS: Le	a kovanit	SSHO: Me/	49		
Fraining Provided:   Initial Site H	lazard Training 🛭 🕻			⊠Other:	
☐ Weekly Safe	ety Training 🔲 🗆	Task/Hazard-specific Tr	aining		
	I. TRAINING	TOPICS COVERED			
/ Planned Site Activities	Chemical I	Hazards	1 -	Respirator	
Physical Safety Hazards		Chemical Exposure		7 TO 10 TO 1	nation Procedures
Biological Hazards		Exposure Symptoms	X		Procedures
Heat or Cold Stress	Level of P		X	First Aid Pi	
Site Controls	Types of F	PPE	100	Buddy Tea	m Procedures
Other Topics:					
Name (printed)		COURSE ATTENDEES	S	Over	mization
Mame (printed)	I An I	gnature	-	Pot	nization
hea Kouring	Kein	-		PERA	
Mark Patterson	Mal P	that		RVAA	P
ELLEN T. MOHR	Ele 11	We.		3 0H10	PA
	Tu				
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	77				
		NG VERIFICATION			
I certify that the personnel lis	sted on this roster hav	re received the safety and	health	training des	cribed above.
m/7		La		/	/
Site Safety and Health Office	cer	- New	Sr. UXC	Supervisor or	Site Supervisor



# Visitor Sign-In Log

9/22/2008 9 of 10



### Visitors Sign-In Log

PROJECT LOCATION: _ RUARP Ohio		
PROJECT SITE: O+M	PROJECT NO: 08-53-	134

Date	Name	Representing	Equipment and PPE Level	IN	ne Out
22 Sepor	Molore Lau	Pika	Level D	1000	
2250por	how towner to	Pita	Level B	1000	
27500	Mark Patterson	RVAAP	11	1015	1030
225ep08	Molule hays how town to Mark Patterson Elevent nour	OHO EPA	LEVEL D	10 20	1050
-					

John Henris,		



#### **Trip Report**

Prime Contract No:	E2M-S08-039			Report No.	1
PIKA JOB #:	08-53-134			Date:	8-19-08
Project:	Operation and M	laintenance of the Sand Creek Barrier System			
Environmental Co	onditions:				
Weather Conditions Clear, Overcast, Ra		Overcast, light rain			
Temperature:		71° F			
Wind (Still, Modera	Wind (Still, Moderate, High):		moderate		
Humidity (Dry, Mod	lerate, Humid):	moderate			

#### **Field Activities:**

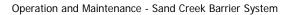
Description of debris inspection & removal activities: Leaves, branches, sticks and rocks. Removed debris from both screens.

Barrier Integrity: Second Barrier bowed slightly due to leaves, branches etc. Debris built up due to high water. Debris was up to top of both screens at the high water mark. North side of barrier had slight washout.

Assessment of any changes since previous visit: N/A

Repairs made or need to be made: Repaired washout with available rocks.

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Remarks:  Visitors: Mark Patterson (RVAAP), Irv Venger (RVAAP) Todd Fisher (Ohio EPA)	
TOURS MAIN FAILEISUH (KVAAF). HV VEHUEL (KVAAF) TUUU FISHEL (UHIU FFA)	
Visitors: Mark Fattorson (KVVIII ), IIV Volliger (KVVIII ) Fodd Fisher (eine 2171)	
Health and Safety	
Conducted health and safety meeting and task order meeting prior to commencement of activ	ities.
Were there any lost time accidents this week? No x Yes .	
If "yes", refer attached summary of incident or OSHA report.	
in you prove attached canimary or mordent of occurreports	
Quality Control	
Quality Control  Inspections Performed Non-Conformances Corrective Action (CA) Follow-up or	CA
	CA
Inspections Performed Non-Conformances Corrective Action (CA) Follow-up or	CA
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Inspections Performed Non-Conformances Corrective Action (CA) Follow-up or Major Problems and Resolution: None	CA
Inspections Performed Non-Conformances Corrective Action (CA) Follow-up or Major Problems and Resolution: None	CA
Inspections Performed Non-Conformances Corrective Action (CA) Follow-up or Major Problems and Resolution: None	CA

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## PHOTO LOG

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Overview of Screens upon arrival

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Cleaning Screen



Washout area at second barrier

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Washout area reinforced with rocks



Ohio EPA inspection of Sand Creek Barrier

8/26/2008 6 of 11







Overview of barriers before demobilization

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## Safety Training Attendance Log

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### PIKA SAFETY TRAINING ATTENDANCE LOG

Dat	e: $9/19/08$ Instructor(s		Tim	e: 0945	Log No.: /		
Site	Name & Location: Ravenna	Army A	Ammunition				
	tract No.:			Task Order Num	ber:		
Site	Supervisor or SUXOS:	Kour	MK	SSHO: MEL	LA	V	
	ning Provided: 🛛 Initial Site H				1.1.	⊠Other:	
	☐ Weekly Safe	ty Train	ing 🗆 Ta	ask/Hazard-specific T	raining	)	
		I.	1	TOPICS COVERED			
X	Planned Site Activities		Chemical H			Respirator U	
X				Chemical Exposure		Decontamina	ation Procedures
X				xposure Symptoms		Emergency I	
	Heat or Cold Stress X Level of PPE			E		First Aid Pro	cedures
	Site Controls Types of PP			PE	X	Buddy Team	Procedures
Othe	er Topics:		Co. do 1.0 1.0				
_							
		II. 7	RAINING C	OURSE ATTENDEE	S		
	Name (printed)		Λ Sig	națure /		, Organ	ization
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m	elvin hau		me	Ten		TIKA	
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			I. I. I. I. I.				
		II	I. TRAININ	G VERIFICATION			
	I certify that the personnel lis	1 8 2 1 7			d healt	h training descr	ibed above.
	- m 17	437, 234, 3	THE PART OF STREET	La			1
	Site Safety and Health Office	or		- See	Cr IIV	O Supervisor or S	ita Sunaniicar
	Site Salety and riealth Offic	,CI			JI. UX	O Supervisor of S	ite Supervisor



## Visitor Sign-In Log

8/26/2008 10 of 11



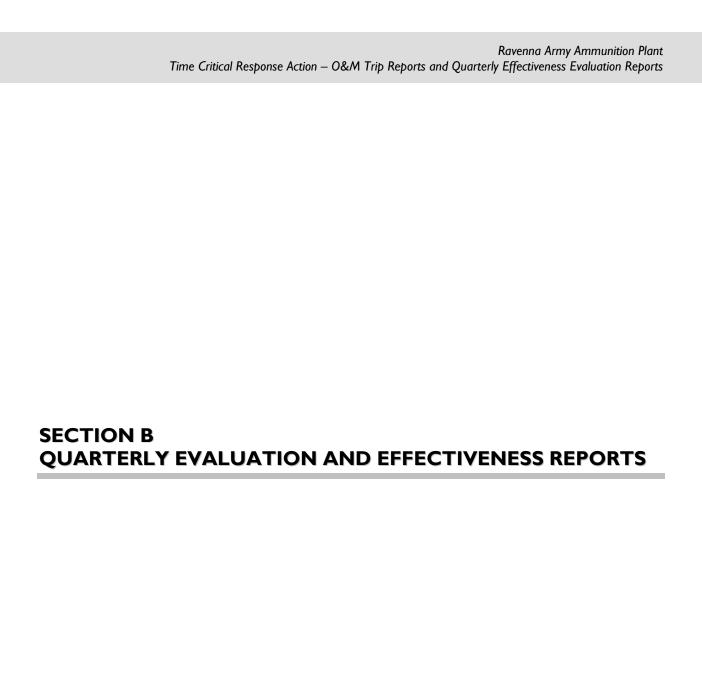
### Visitors Sign-In Log

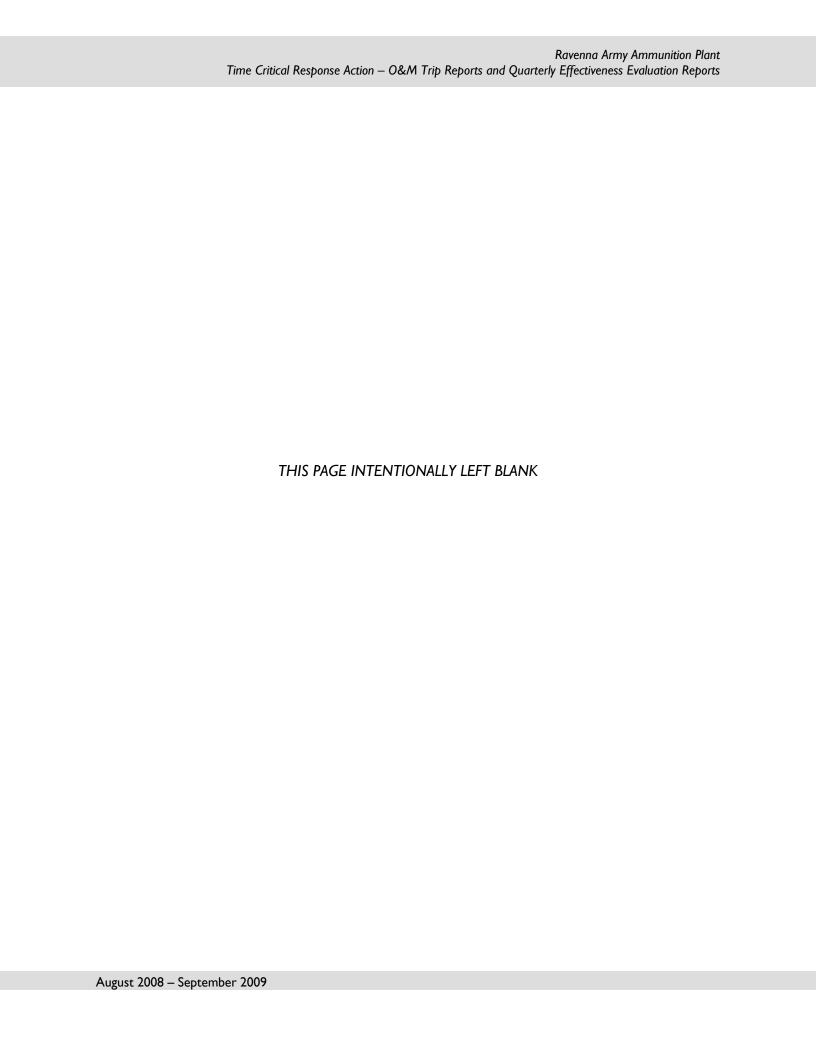
PROJECT LOCATION:	RVAAP	Sand	Creek	Barrier	DEM
PROJECT SITE:				PROJECT NO:	
***************************************					

Date	Name	Representing	Equipment and PPE Level	IN Ti	me Out
08/19/08 A	evin Scheren	e <sup>2</sup> M	Δ	0945	1100
- 1 - 1 - 1	Bur Kant	PIKA	0	0945	1100
19 Ano8	MIZ.	PIKA	D	0945	1100
8/19/68	Tode A Lish	OHIOERA	Δ	0945	1100
8/19/08/1	Mark Patterson	RVAAP	D	0945	1030
8/19/0 2	Venger	RUBAP	D	0946	1030
	V				

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## Quarterly Effectiveness Evaluation (QEE) Report Including Summary of Barrier Repairs

# Sand Creek Barrier System Time Critical Response Action (TCRA) for the Rocket Ridge Area of Open Demolition Area #2

Project No:	4100-	979-01		QEE Report No:	4	
Date of QEE Site Visit:	2 Septen	nber 20	009			
Time Period Covered by	From	27 May 2009				
QEE Report:	То:	2 Sep	September 2009			
Dates of O&M Trips During Period Covered by QEE Report:			24 June 2009 (O&M Trip #10)			
			29 July 2009 (O&M Trip #11)			
.,			2 Sep	September 2009 (O&M Trip #12)		

### <u>Summary of O&M Observations and Activities Performed During the QEE Report Period.</u> <u>Prior to the 2 September 2009 Repairs</u>

**Materials found on the screens:** Leaves, branches, sticks, sand and gravel. No munitions-related materials were found at the barrier (see Photo #1 in Attachment 1).

### **Barrier integrity:**

**Upstream (3-inch grid) barrier**: All barrier elements were in place and there were no gaps between the screen panels and creek bed and banks. The ends of the top two horizontal wires of the second panel from the south were observed detached from the post clamping system. The tops of the panels were bowed in the direction of the water flow.

**Downstream (1-inch grid) barrier:** All posts and back braces were intact. The end panels had detached from the creek banks (see Photos #2 and #3). The tops of the panels were bowed in the direction of the water flow. Sand and gravel, approximately 2-3 inches deep, had accumulated in front of the third panel from the south.

**Maintenance performed during O&M Trips:** Inspected the barrier and removed the materials accumulated on the screens.

### Summary of Barrier Repair Activities Conducted on 2 September 2009

On 2 September 2009, HDR/e<sup>2</sup>M mobilized to Ravenna Army Ammunition Plant (RVAAP) to oversee and direct the Sand Creek Barrier System O&M Subcontractor, PIKA International (PIKA), and the Construction Subcontractor, Cuyahoga Fence (Cuyahoga).

Prior to accessing the site, HDR/e<sup>2</sup>M briefed PIKA and Cuyahoga on the specifics of the scope of work, safety and health procedures to be followed, and potential hazards. Copies of the safety and health logs are included in Attachment 2 and the Employee/Visitor Sign-in Roster is

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### in Attachment 3.

PIKA accessed the Barrier System Site first, to determine if any munitions-related materials are present on the screens. After inspecting the site and determining that no munitions-related materials are present, PIKA allowed HDR/e<sup>2</sup>M and Cuyahoga to initiate the repairs. HDR/e<sup>2</sup>M asked PIKA to perform a magnetometer-assisted sweep of approximately 100-150 feet of creek upstream of the Barrier System. PIKA performed the sweep and reported that no munitions-related materials were observed.

The repairs performed at the Barrier System consisted of the following:

- One new post and back brace were installed at the south end of the downstream barrier. The new post is approximately 6.5 feet south of the next post. The screen panel that was detached from the creek bank was attached to the new post. A new panel was installed and keyed into the bank in front (upstream) and at 45 degrees to the barrier line (see Photo #4).
- One new post and back brace were installed at the north end of the downstream barrier. The new post was installed at 3 feet 11 inches from the next post. The screen panel that was detached from the bank was attached to the new post amd keyed into the bank (see Photo #5).
- The height of the central screen panels was reduced. At the upstream barrier, the height of the three central panels was reduced to 12 inches (see Photo #6). At the downstream barrier, the panel height was reduced, from south to north, to: panel 1 height not changed; panel 2 16 inches; panel 3 12 inches; panel 4 11 to 12 inches; panel 5 10 to 16 inches (height varies due to uneven creek bottom); panels 6 and 7 height not changed (see Photo #7).
- The sand and gravel accumulated in front of the downstream barrier was removed (see Photo #8).

The repairs were completed on 2 September 2009. The Daily Quality Control Report is included in Attachment 4.

### **Barrier System Effectiveness Evaluation**

#### System operational effectiveness:

During the QEE Report #4 period (27 May - 2 September 2009), the barrier system continued to be effective in its capacity to trap potential munitions-related debris. Before the 2 September 2009 repairs, the downstream barrier no longer provided full redundancy because of the separation of the end panels from the creek banks.

The repairs performed on 2 September 2009 restored the full redundancy of the downstream barrier and reduced the height of the central panels of both barriers. The benefits of the reduced height include:

- Reduced amount of leaves accumulated on the screens;
- Reduced water pressure on the screens;
- Less bowing of the screens and potential for screen rupture;
- · Less potential for scouring of the creek banks; and
- Reduced need for screen cleaning outside of the regular O&M schedule.

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### Personnel Present During QEE Site Visit and Barrier System Repairs

O&M and Repairs

HDR/e<sup>2</sup>M: Daniel Zugris

PIKA, O&M activities: Lew Kovarik

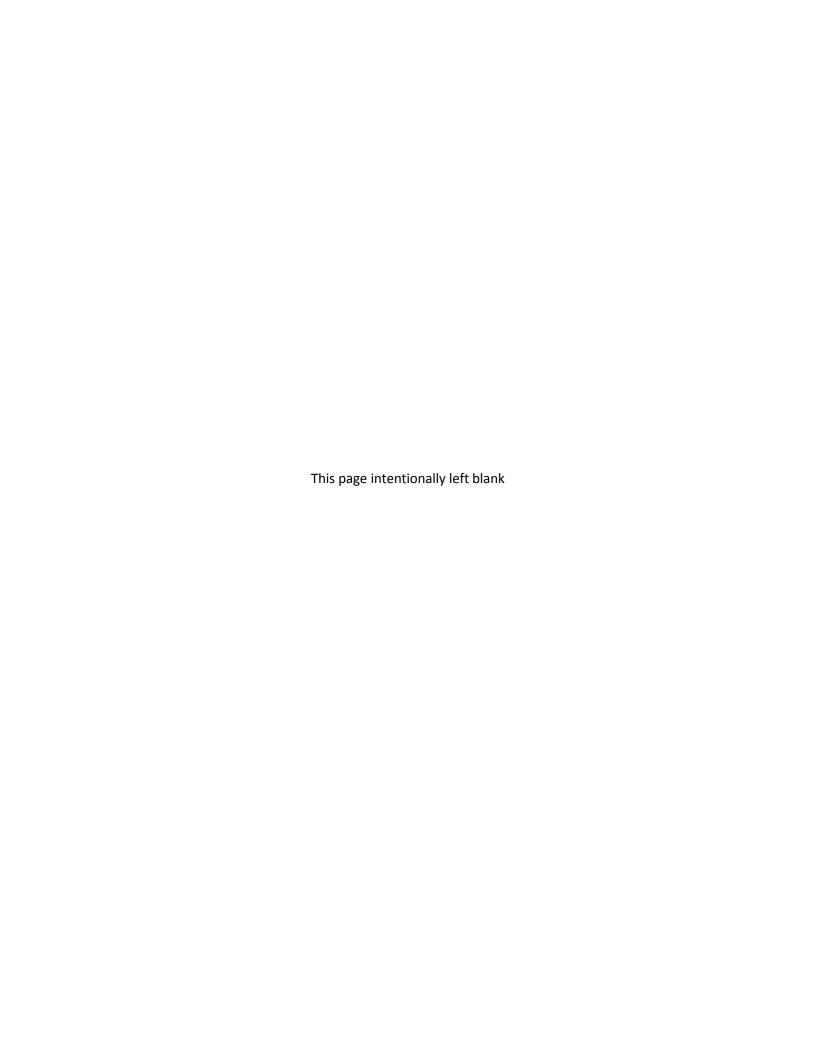
Cuyahoga Fence, Repairs: David Seiler, Merle Bryson, and Don Zadorozny

**Visitors** 

RVAAP: Mark Patterson Ohio EPA: Eileen Mohr

Vista: Jim McGee

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### Attachment 1

Quarterly Effectiveness Evaluation Photographic Log

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Photo 1: Sand Creek Barrier System (2 September 2009, before O&M)



Photo 2: Downstream barrier, south end panel (2 September 2009, before O&M)

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Photo 3: Downstream barrier, north end panel (2 September 2009, before O&M)



Photo 4: New post and panel at south end of downstream barrier (2 September 2009)

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Photo 5: New post at north end of downstream barrier (2 September 2009)



Photo 6: Upstream panels after height reduction (2 September 2009)

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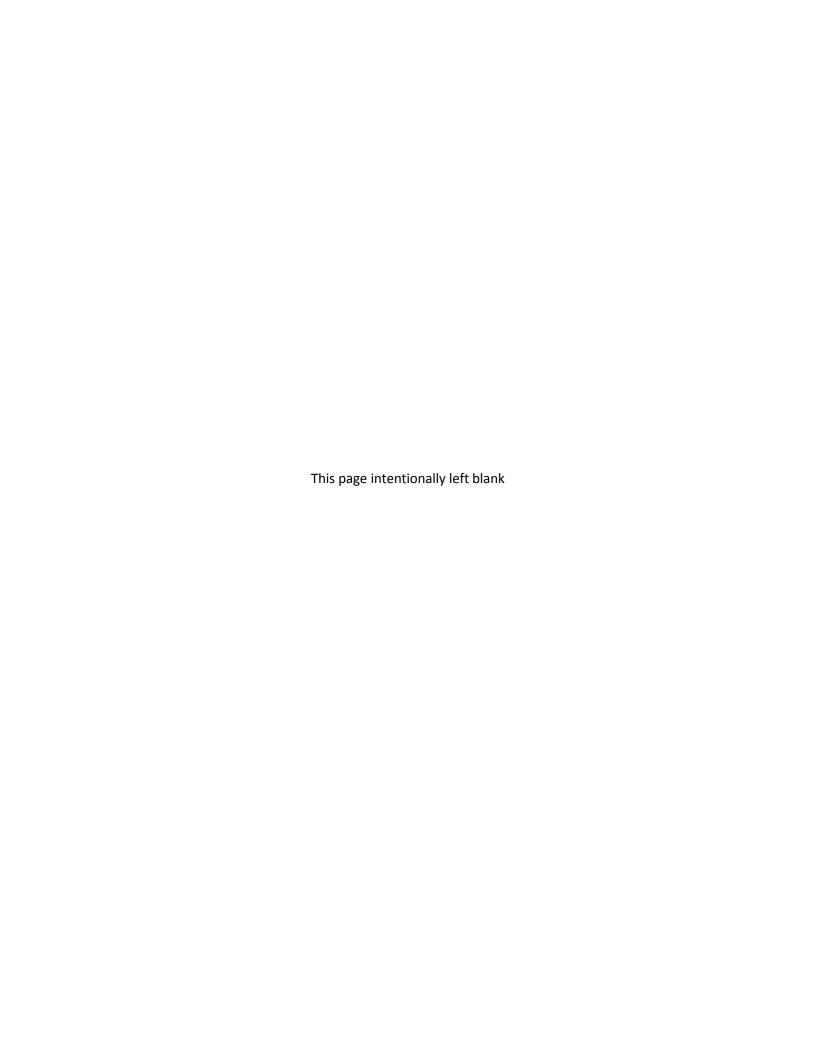


Photo 7: Downstream panels after height reduction (2 September 2009)



Photo 8: Area in front of downstream barrier after the removal of sand and gravel accumulation (2 September 2009)

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### Attachment 2

Safety and Health Logs

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### SITE-SPECIFIC SAFETY AND HEALTH ORIENTATION LOG\*

The undersigned acknowledge, understand, and agree with the following:

I have been briefed as to the nature of work in this project, its potential hazards, required PPE, and the route to the nearest hospital. The Site-specific Safety and Health Plan (SSHP) has been explained to me, and is available to be referenced on site at all times. I agree to abide by the SSHP and all procedures outlined in the SSHP. I understand that noncompliance with the SSHP may lead to my removal from the site.

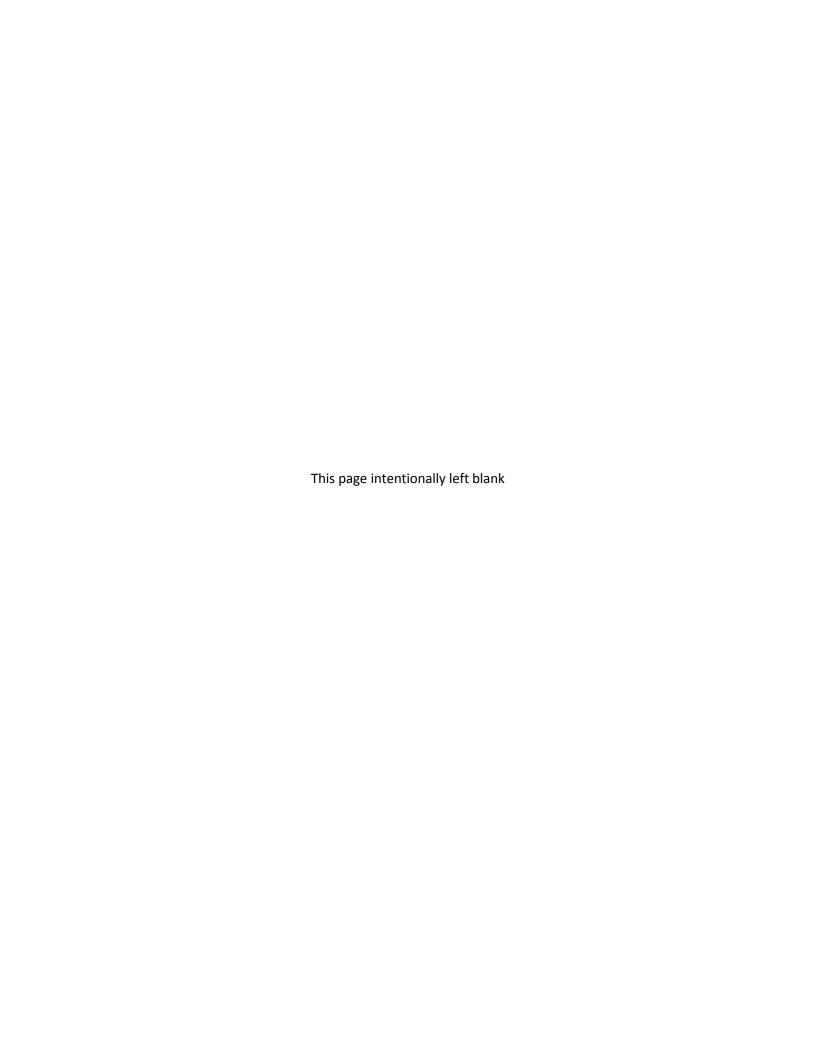
Date	Name	Signature	40 Hr OSHA Cert. No/Expiration (If applicable)	Company
9/2/09	Daniel Zugris	Damil Lups	April 2010	HOR/e2M
9/09	Lew KovariK	Lew /	May 2010	7164
9/2/00	David Seiler	Sech Such	N/A	Cuphono Ferce
9/2/09	Macle Beyson	IS IN	N/A	Enywhog where
c/2-09	DON ZAPOLOTA	Un Jedery	N/A	CUYAHOGA FORCE
			;	



### TAILGATE SAFETY MEETING

PROJECT: RVAAP TCRA	-Upgrades PRO	JECT NO.	4100-979
DATE: 9/2/09		-	8:00
CLIENT: USACE-Oma	ha District	_	
SPECIFIC SITE LOCATION	ON: Sand Creek, approximately 50 feet up	ostream of Geor	ge Road Bridge
TYPE OF WORK:Insta	llation of approved barrier system upgrade	s	
CHEMICAL USED:			
	SAFETY TOPICS PRES	SENTED	
PPE	Modified Level D		
Physical Hazards	Slips, trips, and falls, electric shock, noise, with metal that may be sharp	, manual lifting,	improper use of equipment, working
Health and Safety Plan	The Health and Safety Plan is kept in the e	2M vehicle	
ricaliti and Galety Flan	Stop operations, isolate area where hazard exist		guisher close for preventative purposes.
<b>Emergency Procedures</b>	Summon field project manager. Situation will be		when more than to
	Injured persons will be treated at the place they prevent further injury if it is necessary to move		
	If injury requires more than first aid administer		will be taken to hospital. If injury is seriou
I I a a mital	the field project manager will summon emerger Robinson Memorial Hospital	ncy personnei.	
Hospital	6847 North Chestnut Street, Ravenna OH	44266	
Hospital Address	330-237-0811 or 911		
Special Equipment			
Other			
	ATTENDEED		
Name (Drint)	ATTENDEES		Cianatura
Name (Print)			Signature
Daniel Zugris		Daniel	Dup;
Lew KovarlK		Leu	1
David Seiler		this.	Suli
Mente Bursa			
DON ZADORO	ZNV	Wan I	advicer
		0	
	Daniel Zug	cis	•
Meeting Conducted by:			***************************************

9/24/2009





### Attachment 3

Visitor Log

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### EMPLOYEE/VISITOR DAILY SIGN-IN ROSTER\*

PROJECT NO. 4100-979

SITE NAME: Sand Creek Barrier

DATE: 9/2/09

FIELD PROJECT MANAGER: Daniel Zugris

DATE	NAME	COMPANY	TIME ONSITE	OFFSITE
9/2/09	Daniel Zognis	HDR/e2M	8:00	3:30 pm
7/2/09	Lew Kovarile	PIKA	8:00	11:00
9/2/09	David Seiler	Cuphapa Fence	8:00	3:30 pm
7-2-09		2 Curshages FE	x 8:00	3:30 pm
9-2-09	DONZADOMOR		8:00	9:10
9.2-09	Mark Patterson	,	9:40	10.05
9-2-09	E. lean Mohr	OL.O EPA	9:40	10:05
9-2-09	Jim Mr Gee	Vista	10.45	11:00
				,

<sup>\*</sup>This roster is required for emergency response planning. All personnel arriving to and from the site must sign this roster. This Log does not replace the S&H Orientation.

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### Attachment 4

Daily Quality Control Report

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## Daily port Sand Creek Barrier Repairs, RVAAP, Ravenna, OH

Date: 2 September 2009

Project Information	
Technical Project Manager:	Daniel Zugris
Project:	RVAAP Sand Creek Barrier
Project Number:	4100-979-01

Environmental Conditions	
Weather Conditions (Bright Sun, Clear,	Clear
Overcast, Rain, Snow):	
Temperature:	55 to 73 F
Wind (Still, Moderate, High):	Still
Humidity (Dry, Moderate, Humid):	Moderate

### Personnel (include title and affiliation)

HDR/e<sup>2</sup>M Personnel: Daniel Zugris, Project Manager

Visitors Present: Eileen Mohr (Ohio EPA), Mark Patterson (RVAAP), and Jim McGee (Vista)

PIKA Personnel: Lew Kowarik, SUXOS

Cuyahoga Fence Personnel: Don Zadorozny, Subcontractor Project Manager, Merle Bryson, Technician, and David Seiler, Technician

### **Work Activities**

Daniel Zugris conducted a health and safety meeting at 7:50 am, prior to commencement of site work. PIKA accessed the Barrier System Site first, to determine if any munitions-related materials were present on the screens. After inspecting the site and determining that no munitions-related materials are present, PIKA allowed HDR/e<sup>2</sup>M and Cuyahoga to initiate the repairs. HDR/e<sup>2</sup>M asked PIKA to perform a magnetometer-assisted sweep of approximately 100-150 feet of creek upstream of the Barrier System. PIKA performed the sweep and reported that no munitions-related materials were observed.

The repairs performed at the Barrier System consisted of the following:

- One new post and back brace were installed at the south end of the downstream barrier.
  The new post is approximately 6.5 feet south of the next post. The screen panel that
  was detached from the creek bank was attached to the new post. A new panel was
  installed and keyed into the bank in front (upstream) and at 45 degrees to the barrier
  line.
- One new post and back brace were installed at the north end of the downstream barrier. The new post was installed at 3 feet 11 inches from the next post. The screen panel that was detached from the bank was attached to the new post.
- The height of the central screen panels was reduced. At the upstream barrier, the height of the three central panels was reduced to 12 inches. At the downstream barrier, the



## Daily port Sand Creek Barrier Repairs, RVAAP, Ravenna, OH

panel height was reduced, from south to north, to: panel 1 – height not changed; panel 2 – 16 inches; panel 3 – 12 inches; panel 4 – 11 to 12 inches; panel 5 – 10 to 16 inches (height varies due to uneven creek bottom); panels 6 and 7 – height not changed.

• The sand and gravel accumulated in front of the downstream barrier was removed.

The repairs were completed at 3:30 pm.

Preparer:

**Daniel Zugris** 

Signature





### **Quarterly Effectiveness Evaluation (QEE) Report**

## Sand Creek Barrier System Time Critical Response Action (TCRA) for the Rocket Ridge Area of Open Demolition Area #2

Project No:	4100-	979-01		QEE Report No:	3
Date of QEE Site Visit:	27 Ma	y 2009	)		
Time Period Covered by	From 6 February			009	
QEE Report:	То:	27 May 2009			
					#7)
Dates of O&M Trip During Period Covered by QEE Report:			28 April 2009 (O&M Trip #8)		
			27 Ma	y 2009 (O&M Trip #	9)

### **Summary of O&M Activities Performed During QEE Report Period**

**Materials found on the screens:** Leaves, branches, sticks, sand and gravel. No munitions-related materials were found on the screens (see Photo #1).

#### **Barrier integrity:**

**Upstream (3-inch grid) barrier**: All posts and back braces are intact (see Photo #2). All barrier elements are in place and there are no gaps between the screen panels and creek bed and banks. The ends of the top two horizontal wires of the second panel from the south have detached from the post clamping system (see Photo #3). The tops of the panels are bowed in the direction of the water flow.

**Downstream (1-inch grid) barrier:** All posts and back braces are intact. The end panels have detached from the creek banks (see Photos #4 and #5). The tops of the panels are bowed in the direction of the water flow. Sand and gravel, approximately 2-3 inches deep, has accumulated in front of the third panel from the south.

**Maintenance performed during O&M Trips:** Removed materials from the screens and tightened the bolts on the posts.

### **Barrier System Effectiveness Evaluation**

### System operational effectiveness:

Overall the barrier system continues to be effective in its capacity to trap potential munitionsrelated debris. The downstream barrier no longer provides full redundancy because of the separation of the end panels from the creek banks.

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#### Recommendations

- 1. Reduce the height of the central screen panels to 10-12 inches. The height of the end panels will remain 24 inches. Benefits include:
  - Reduced amount of leaves accumulated on the screens;
  - Reduced water pressure on the screens;
  - Less bowing of the screens and potential for screen rupture;
  - Less potential for scouring of the creek banks:
  - Reduced need for screen cleaning outside of the regular O&M schedule; and
  - If needed, the four two-foot tall spare screen panels could be cut lengthwise into eight one-foot panels, to double the number of spare screen panels available onsite.
- 2. Install new post and back brace at the south end of the downstream barrier. The new post will be installed approximately 4 5 feet south of the existing post. A 24-inch high screen panel will be installed between the new post and the creek bank. The new panel will be keyed into the bank at a point one to three feet in front (upstream) of the barrier line. The angle of this panel will create a component of the stream force that will press the panel against the bank, therefore reducing the potential for the south end of the panel to become loose.
- 3. Install new post and back brace at the north end of the downstream barrier. The new post will be installed as close as possible to the creek bank. Depending on whether the actual location of the new post leaves a gap between the post and the bank or not, an additional piece of screen may or may not be necessary.
- 4. Remove the sand and gravel accumulated in front of the downstream barrier.

### Personnel Present During QEE Site Visit

e<sup>2</sup>M: Daniel Zugris

PIKA, O&M activities: Lew Kovarik and James Bouvier

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# Quarterly Effectiveness Evaluation Photographic Log

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Photo 1: Sand Creek Barrier System (27 May 2009)



Photo 2: Upstream barrier, post and back brace (27 May 2009)

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Photo 3: Upstream barrier, second panel from the south (27 May 2009)



Photo 4: Downstream barrier, south end panel (27 May 2009)

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Photo 5: Downstream barrier, north end panel (27 May 2009)



Photo 6: Downstream barrier, sand and gravel accumulation (27 May 2009)

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### Supplemental Effectiveness Evaluation (SEE) Report

## Sand Creek Barrier System Time Critical Response Action (TCRA) for the Rocket Ridge Area of Open Demolition Area #2

Project No:	4100-979-01			SEE Report No:	I		
Date of SEE Site Visit:	25 Mar	ch 200	9				
Time Period Covered by	From	6 Feb	6 February 2009				
SEE Report:	<b>To:</b> 25 March 2009						
Dates of O&M Trip During Period Covered by SEE Report:			25 March 2009 (O&M Trip #7)				
by SEE Report:							

### **Summary of Findings**

Since the 5 February 2009 site visit, when the barrier system was almost completely covered in ice and snow, the snow melt, rain, breaking ice, wood debris, and high creek water have resulted in damage to the some of the screen panels (see Photo #1).

**Upstream (3-inch grid) barrier**: All posts and back braces are intact. All barrier elements are in place and there are no gaps between the screen panels and creek bed and banks. The ends of the top two horizontal wires of the second panel from the south have detached from the post clamping system (see Photo #2). The tops of the panels are bowed in the direction of the water flow.

**Downstream (1-inch grid) barrier:** All posts and back braces are intact. The end of the first panel from the south has detached from the creek bank and left a gap of several inches between the panel and the creek bank (see Photo #3). During the 25 March 2009 site visit, e<sup>2</sup>M filled the gap with stones from the creek bed. The panel at the north end is no longer keyed firmly into the bank (see Photo #4) but still functional. The tops of the panels are bowed in the direction of the water flow.

### System operational effectiveness

Overall the barrier system continues to be effective in its capacity to trap potential munitionsrelated debris.

#### Recommendations

- 1. Reduce the height of the central screen panels to 10-12 inches. The height of the end panels will remain 24 inches. Benefits include:
  - Reduced amount of leaves accumulated on the screens:
  - Reduced water pressure on the screens;
  - Less bowing of the screens and potential for screen rupture:

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- Less potential for scouring of the creek banks;
- Reduced need for screen cleaning outside of the regular O&M schedule; and
- If needed, the four two-foot tall spare screen panels could be cut lengthwise into eight one-foot panels, to double the number of spare screen panels available onsite.
- 2. Install new post and back brace at the south end of the downstream barrier. The new post will be installed approximately 4 5 feet south of the existing post. A 24-inch high screen panel will be installed between the new post and the creek bank. The new panel will be keyed into the bank at a point one to three feet in front (upstream) of the barrier line. The angle of this panel will create a component of the stream force that will press the panel against the bank, therefore reducing the potential for the south end of the panel to become loose.
- 3. Install new post and back brace at the north end of the downstream barrier. The new post will be installed as close as possible to the creek bank. Depending on whether the actual location of the new post leaves a gap between the post and the bank or not, an additional piece of screen may or may not be necessary.

# Personnel Present During SEE Site Visit

e<sup>2</sup>M: Daniel Zugris

PIKA, O&M activities: Lew Kovarik and Mel Lau

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# Supplemental Effectiveness Evaluation Photographic Log

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Photo 1: Sand Creek Barrier System (25 March 2009)



Photo 2: Upstream barrier, second panel from the south (25 March 2009)

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Photo 3: Downstream barrier, first panel from the south (25 March 2009)



Photo 4: Downstream barrier, north end panel (25 March 2009)

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# **Quarterly Effectiveness Evaluation (QEE) Report**

# Sand Creek Barrier System Time Critical Response Action (TCRA) for the Rocket Ridge Area of Open Demolition Area #2

Project No:	4100-979-01			QEE Report No:	2	
Date of QEE Site Visit:	5 February 2009					
Time Period Covered by QEE Report:	From	24 October 2008				
	То:	5 February 2009				
				19 November 2008 (O&M Trip #4)		
Dates of O&M Trips During Period Covered by QEE Report:			16 December 2008 (O&M Trip #5)			
, 4po.u			5 Feb	February 2009 (O&M Trip #6)		

## Summary of O&M Activities Performed During QEE Report Period

**Materials found on the screens:** Leaves, branches, sticks, sediment, rocks, ice, and snow. No munitions-related materials were found on the screens.

**Barrier integrity:** There is no damage to the barrier elements. Barrier screens are slightly bowed due to water pressure on leaf-covered screens. Photos 1 and 2 (taken on 16 December 2008) show the barrier screens almost completely loaded with leaves. The limited scouring observed and repaired during the 23 October 2008 QEE visit appears to have subsided. This may be due to the bowing of the screens, which creates a preferential water overflow in the central portion of the panels and away from the creek banks. The ice observed during the 5 February 2009 QEE visit covering most of the barriers did not appear to impact the integrity of the system. Photo 3 shows a portion of the downstream screen and a back brace encased in ice. Two posts, back braces, and base plates were uncovered and examined on 5 February 2009. No damage to their integrity or anchoring was observed (Photos 4 and 5).

**Other changes observed:** The water pressure on the screen panels covered with leaves results in the elongation, or bowing, of the panels. During the 5 February 2009 site visit, the length of the forth panel from the south bank (in the 1-inch grid opening barrier) was measured to be approximately 96.75 inches, or 0.75 inches longer than the original size. This represents an elongation of approximately 0.8% or a strain of 0.008.

**Maintenance performed:** Removed materials from the screens (19 November and 16 December 2008). No O&M screen cleaning activities were possible on 5 February 2009 due to the ice and snow covering the barrier system.

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#### **Barrier System Effectiveness Evaluation**

# **Barrier System condition:**

All posts, back braces, and anchor plates appear to be intact and solidly anchored. No gaps have developed between the bottom of the screens and the creek bed. Most of the screen panels have been slightly bowed by water pressure (Photo 6). No significant scouring on the creek banks was observed during the QEE 2 period.

### System operational effectiveness:

In the first six months of operation, the Barrier System has effectively performed as designed. The O&M activities performed during this time period have shown that no munitions-related materials and no large debris, such as tree stumps and rocks, have been found on the screens. The main driver of the O&M effort has been leaf accumulation on the screen panels. Due to the fast accumulation of leaves between October 2008 and January 2009, the O&M team mobilized several times to partially clean the screens between the scheduled O&M trips.

#### Repairs needed:

No repairs are needed for the Barrier System elements. However, the effectiveness and maintainability of the system may be improved by decreasing the height of the screens to 10 – 12 inches. The shorter screens would be as effective in capturing munitions-related materials and would provide the following benefits:

- Reduced amount of leaves accumulated on the screens:
- Reduced water pressure on the screens:
- Less bowing of the screens and potential for screen rupture;
- Less potential for scouring of the creek banks;
- Reduced need for screen cleaning outside of the regular O&M schedule; and
- If needed, the four two-foot tall spare screen panels could be cut lengthwise into eight one-foot panels, to double the number of spare screen panels available onsite.

The procedure for reducing the screen height would consist of cutting the top of the panels in place, without removing the clamps that attach the screens to the posts or back braces. We recommend reducing the screen height in the late spring – early summer timeframe.

### Personnel Present During QEE Site Visit

e<sup>2</sup>M: Daniel Zugris

PIKA, O&M activities: Lew Kovarik and Mel Lau

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# Quarterly Effectiveness Evaluation Photographic Log

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Photo 1: Upstream barrier loaded with leaves (12 December 2008)



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Photo 3: Screen and back brace encased in ice (5 February 2009)



Photo 4: Base plate (12 December 2008)

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Photo 5: Post, back brace, and screen (12 December 2008)



Photo 6: Barrier System after the 16 December 2008 O&M cleaning

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# **Quarterly Effectiveness Evaluation Report**

# Sand Creek Barrier System Time Critical Response Action (TCRA) for the Rocket Ridge Area of Open Demolition Area #2

Project No:	4100-979-01			QEE Report No:	1		
Date of QEE Site Visit:	23 October 2008						
Time Period Covered by QEE Report:	From	17 Ju	17 July 2008 (construction completion)				
	То:	23 O	23 October 2008				
				19 August 2008 (O&M Trip #1)			
Dates of O&M Trips During Period Covered by QEE Report:			22 September 2008 (O&M Trip #2)				
, 4p.o.u	23 Oc		ctober 2008 (O&M Trip #3)				

# Summary of O&M Activities Performed During QEE Report Period

**Materials found on the screens:** Leaves, branches, sticks, sediment, and rocks. No munitions-related materials were found on the screens.

**Barrier integrity:** Barrier screens are slightly bowed due to water pressure on leaves-covered screens. There is no damage to the barrier elements. Some limited scouring was observed at the south end of the barrier screens, on the creek bank.

Other changes observed: None.

**Maintenance performed:** Removed materials from the screens and filled the scoured area with rocks.

### **Barrier System Effectiveness Evaluation**

#### **Barrier System condition:**

All posts, back braces, and anchor plates are intact and solidly anchored (Photos 1 and 2). Most of the screen panels have been slightly bowed by water pressure (Photo 3). During storm events, leaves build up on the screens, generating pressure that increases with water depth. As a result, the maximum screen deflection is observed at the top of the screens. The maximum deflection reaches 2 inches on the 3-inch opening barrier and 4 inches on the 1-inch opening barrier. The difference is due to the larger amount of leaves on the barrier with smaller grid opening. The screen panel deflection appears to have been stabilized within the first couple of months after construction. At the time of the QEE visit, before the O&M debris removal work, the leaves accumulated on the barriers were 7 - 8 inches deep (Photo 4).

Creek bank scouring was observed at the south end of each of the two barriers, where the creek is deeper and the creek bank is steep (Photo 5). The scouring features are located

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approximately at the height of the screens, which indicates that they were produced during storm events. The scouring effects are limited by the rocks present in the bank and the root mass of the vegetation. During the O&M trips the scoured areas have been partially filled with rocks. The rocks and roots present in the creek bank, as well as the O&M repairs, have limited the extent of scouring and its impact on the barrier integrity.

# System operational effectiveness:

In the first three months of operation, the Barrier System has effectively performed as designed (Photos 6 and 7).

### Repairs needed:

No repairs are needed for the Barrier System elements. The monthly O&M trips will continue to focus on removing the debris accumulated on the screens and filling in any scoured areas on the creek banks.

# Personnel Present During QEE Site Visit

e<sup>2</sup>M: Daniel Zugris

Other: Lew Kovarik (PIKA, O&M activities) and Mel Lau (PIKA, O&M activities), and Mark Patterson (RVAAP, Facility Manager)

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# Quarterly Effectiveness Evaluation 23 October 2008 Photographic Log

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Photo 1: Upstream barrier post and back brace



Photo 2: Anchor plate

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Photo 3: Downstream (1-inch grid opening) screen deflection



Photo 4: 7 – 8-inch deep leaves accumulated on the screen

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Photo 5: Scouring at south end of upstream (3-inch grid opening) barrier



Photo 6: Barrier System, looking downstream

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Photo 7: Barrier System, looking upstream

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