

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hormigueros Pyrotechnics - Removal Polrep  
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region II

**Subject:** POLREP #3  
Final  
Hormigueros Pyrotechnics  
A25M  
Hormigueros, PR  
Latitude: 18.1295900 Longitude: -67.1091500

**To:** Walter Mugdan, 2ERRD, Director  
Eric Mosher, 2ERRD-RPB, Chief  
James Daloia, US EPA, 2ERRD-RPB  
Jose Font, R2-CEPD, Director  
Ramon Torres, R2-CEPD  
Hector Velez, US EPA, CEPD  
Brenda Reyes, R2-CEPD  
Mark Pane, 2ERRD-RAB  
Beckett Grealish, US EPA, 2ERRD-RAB  
George Zachos, 2ERRD  
Tim Grier, EPA-HQ  
Gilberto Irizarry, EPA-HQ  
Juan Baba, EQB, Director of Superfund & Emergency Response  
Luis Rodriguez, EQB - Mayaguez

**From:** Dilshad Perera, On-Scene Coordinator

**Date:** 9/30/2015

**Reporting Period:** 08/05/2015 to 09/30/2015

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A25M	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	9/30/2015
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Emergency
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	6/28/2015	<b>Start Date:</b>	6/24/2015
<b>Demob Date:</b>	8/13/2015	<b>Completion Date:</b>	8/12/2015
<b>CERCLIS ID:</b>	PRN000201799	<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

Emergency Response

#### 1.1.2 Site Description

On May 26<sup>th</sup> 2015, a fire and explosion occurred at an illegal pyrotechnics storage warehouse. The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) attributed the cause of the fire to be as a result of improper installation that may have influenced the overload, arcing and causing the molten material to be expelled.

The warehouse is divided into three bays and suffered significant damage, particularly the middle bay which housed the illegal pyrotechnics. The middle bay's roof is all but nonexistent as are the front and side walls.

Pyrotechnics contain salts of heavy metals such barium, strontium, lithium and copper to generate specific colors. In addition older pyrotechnics may also contain lead salts as a primer. The resultant ash – estimated at approximately 100 cubic yards – may contain these heavy metals.

##### 1.1.2.1 Location

The warehouse is located in Hormigueros, Puerto Rico. Within 100 yards of the warehouse is a large

residential development as well as a large supermarket. Directly across the street is an unnamed stream to which storm-drain water discharges into. This unnamed stream drains into a second unnamed stream – at the confluence of which a school of large fish was observed.

**1.1.2.2 Description of Threat**

There is potential of heavy metals such as barium, copper, lead, strontium and lithium being present in the ash. Barium and lead also have the potential of exhibiting Toxicity Characteristic. Copper can, even in low concentrations be acutely toxic to all aquatic life.

Significant portion of the ash – approximately 100 cubic yards – is stockpiled in the middle bay which no longer has a roof or side and front falls, there is a potential for the ash to migrate through wind and tropical rainfalls.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

EPA obtained written access agreement from property title holder on June 16th, 2015. On June 17th, 2015, EPA, RST and EQB met on site to collect five (5) samples. The samples were analyzed for Toxicity Characteristics, Total Metals (TAL) and semi-volatile organics.

The results indicated elevated levels of copper between 80mg/kg and 23,000mg/kg. Elevated levels barium was also detected - between 1,630mg/L and 2,800mg/L. The Toxicity Characteristic results for barium, however, were well below RCRA levels

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

**2.1.2 Response Actions to Date**

- On afternoon of August 5<sup>th</sup>, 2015, the Contracting Officer verbally notified the ERRS contractor that the Task Order Ceiling will be increased by \$50,000 to a total of \$200,000
- ERRS immediately began the process of binding to a subcontract – previously identified through the three bidding process – for transport and disposal.
- The ERRS crew – consisting of a Response Manager, an equipment operator and a clean-up technician – was mobilized to Puerto Rico on Sunday, August 9<sup>th</sup>, 2015, in anticipation of off-site disposal.
- 5 roll-off containers (20 cubic yard capacity) were delivered to the site on the morning of Monday, August 10<sup>th</sup>, 2015.
- The selected industrial landfill obtained commonwealth approvals to accept the waste from the Hormigueros site on the afternoon of August 10<sup>th</sup>, 2015.
- On the morning of August 11<sup>th</sup>, 2015, the off-site shipment was begun.
- On the afternoon of August 12<sup>th</sup>, 2015, the shipping was completed and heavy equipment demobilized.
- On August 13<sup>th</sup>, 2015, ERRS crew demobilized from Puerto Rico.
- On August 13<sup>th</sup>, 2015, EPA coordinated a meeting with Agents from the Puerto Rico Police Department Bomb-Squad, EQB and landfill operators. The primary purpose of the meeting was to discuss:
  - o To describe EPA's observations and findings
  - o The rationale for shipping the waste to a local industrial landfill as non-RCRA hazardous waste.
  - o For the group to begin discussing operational protocols to deal with the various scenarios encountered by the PRPD as it relates to pyrotechnics.
  - o The Landfill arranged for tour of the sludge pits to show the actual solidification process of the Hormigueros waste.
  - o The ultimate goal of the technical group – consisting of EPA, PRPD, EQB and landfill – is to develop an operational protocol and then have each agency approve the plan, since there are commonwealth and Federal laws involved.

On August 12th, 2015 all site operations authorized in the Action Memorandum was completed

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Spent Pyrotechnics/copper	Solid	128cubic yards	RO-01 through 08	None	Penuelas Valley Landfill Km 4/5 Rr 385, Penuelas, PR 00624

**2.2 Planning Section**

No information available at this time.

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$200,000.00	\$150,000.00	\$50,000.00	25.00%
<b>Intramural Costs</b>				
USEPA - Direct	\$50,000.00	\$20,000.00	\$30,000.00	60.00%
<b>Total Site Costs</b>				
	\$250,000.00	\$170,000.00	\$80,000.00	32.00%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

No information available at this time.

**4. Personnel On Site**

No information available at this time.

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.