



Bureau of Waste Management

# PA Permitting Perspectives - OBOD at Letterkenny Army Depot

The National Academies of Science, Engineering, and Medicine

Committee on Alternatives for the Demilitarization of Conventional Munitions

Linda Houseal, Facilities Supervisor  
Southcentral Regional Office -Waste Management Program  
December 11, 2017

Tom Wolf, Governor

Patrick McDonnell, Secretary

# PA DEP – Central Office

- Develop regulations
- Technical Guidance
- Program Oversight (6 regional offices)

## Bureau of Waste Management

- Hazardous Waste
- Municipal Waste
- Residual Waste
- Waste Min & Planning (Recycling)
- Reporting & Fee Collection

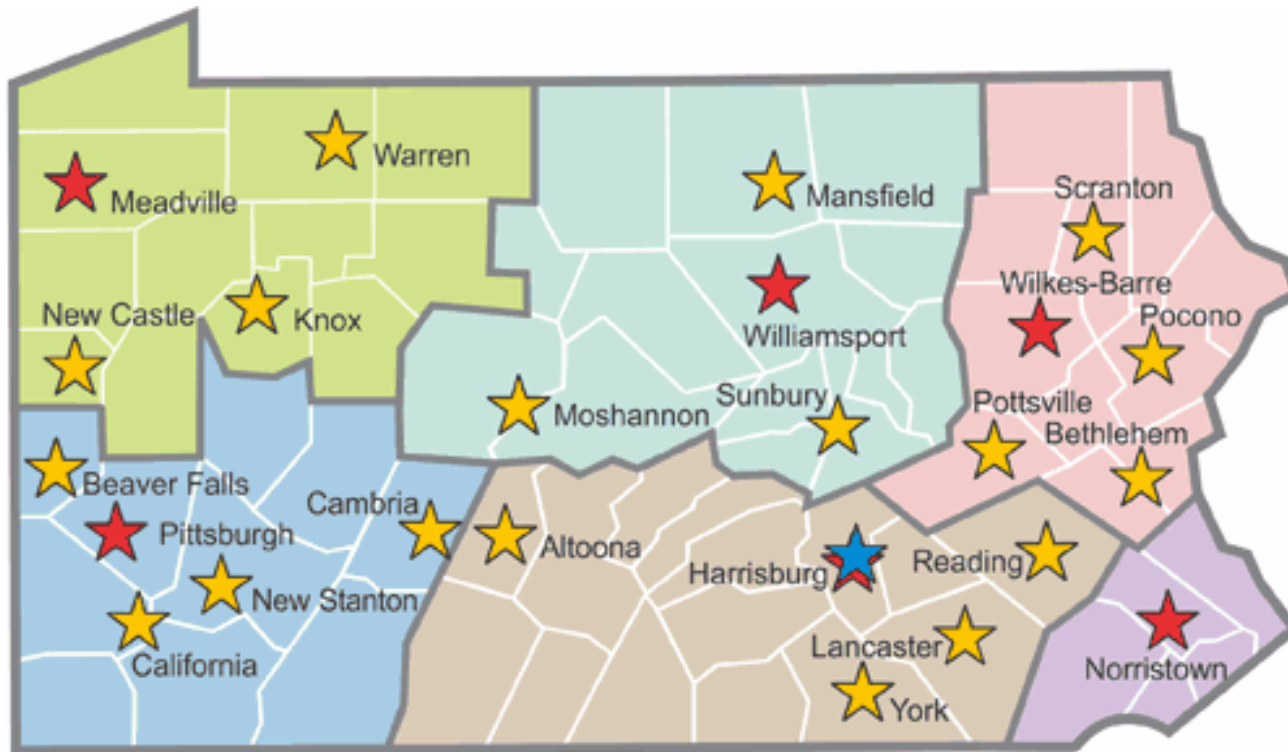
# PA DEP – Regional Offices

## 6 Regional Offices

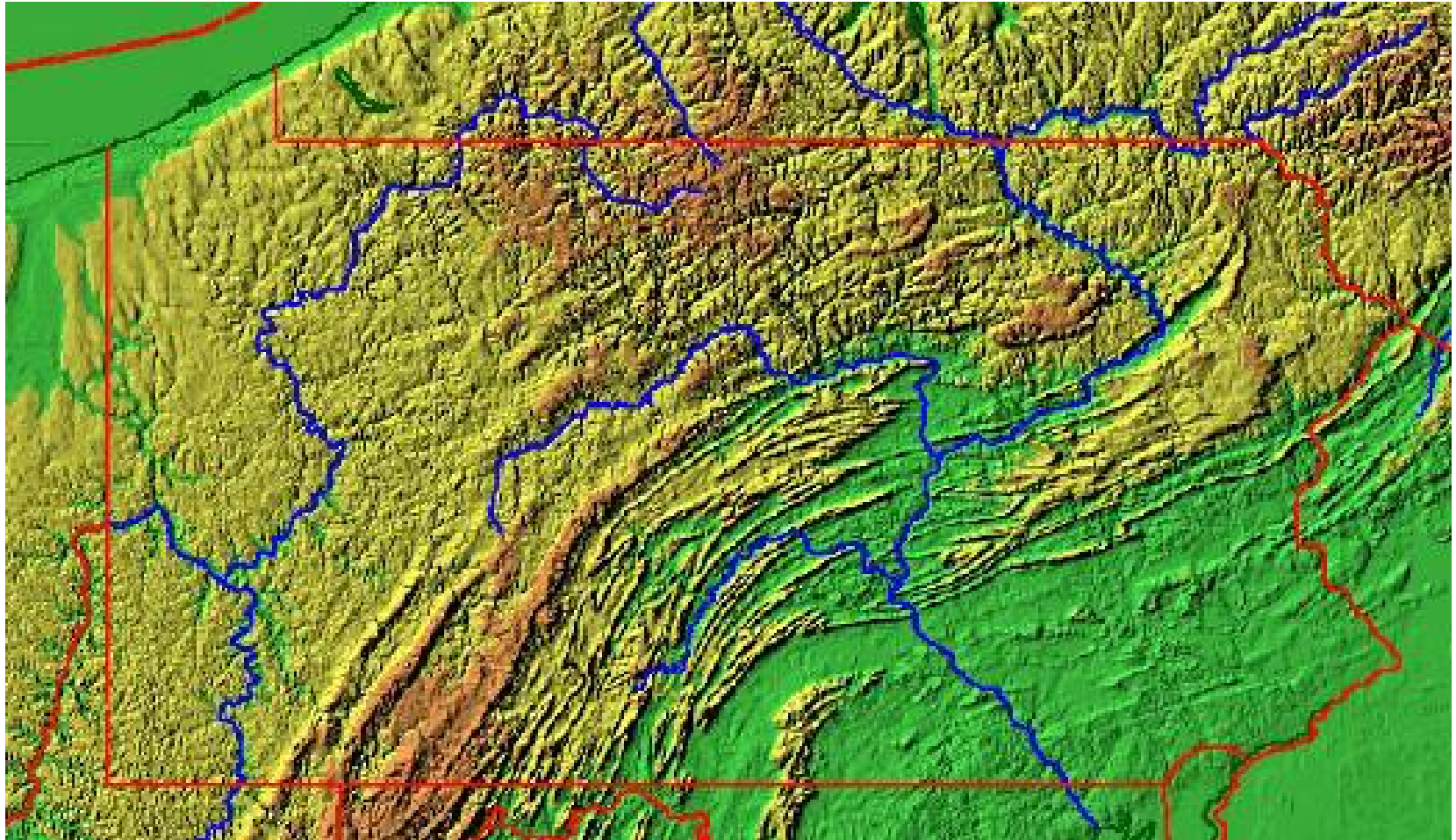
### Permit & Inspect Regulated Facilities

- Waste Management Program
- Air Quality Program
- Clean Water Program
- Safe Drinking Water Program
- Radiation Protection

# PA DEP - Southcentral Region

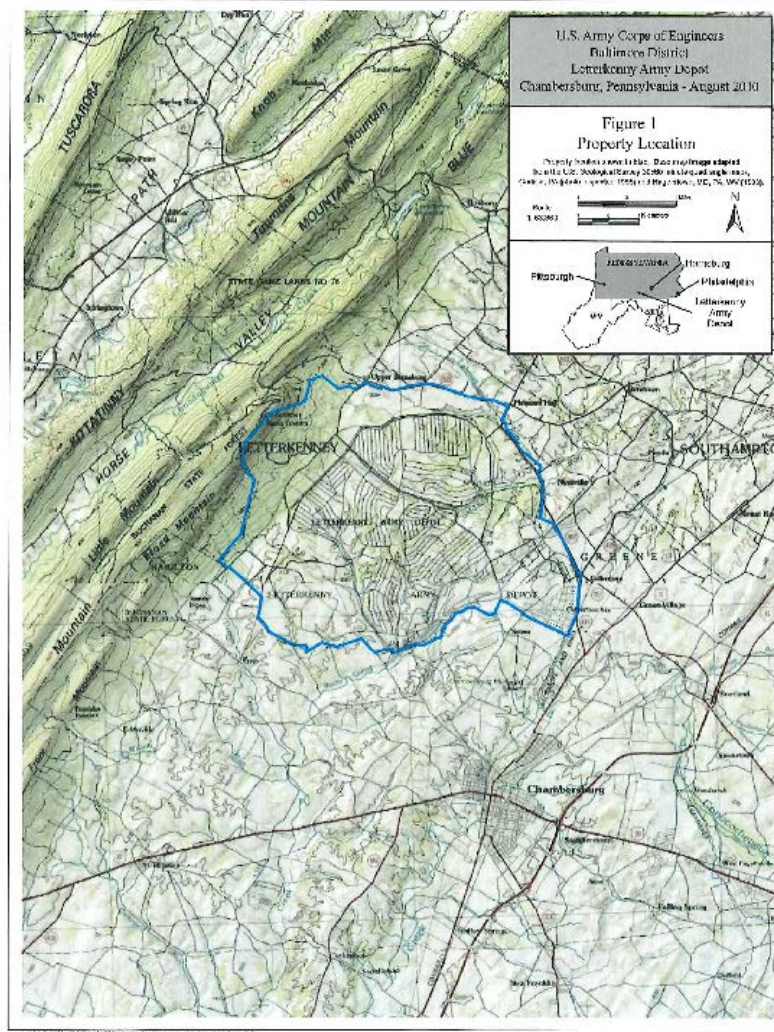


# PA DEP – SCRO Franklin County





# LEAD Site Location



# LEAD – LEMC OBOD

<http://www.depgis.state.pa.us/emappa/>



# Overview of PA Solid Waste Law & Regulations

- Pennsylvania Solid Waste Management Act comprehensively regulates solid wastes – 35 P.S. §§6018.101 – 6018.1003
  - Hazardous wastes
  - Residual wastes
  - Municipal wastes
- SWMA established in 1980
- SWMA requires permits for processing, treating or disposing of wastes

# PA Solid Waste Regulations

1988 - Municipal Waste Regulations

1992 - Residual Waste Regulations

1999 - Hazardous Waste Regulations

- Incorporation of Federal RCRA regulations by reference
- Subpart X

# OBOD Permit at LEAD

- March 4, 1996 - RCRA Part B Permit (CSAs)
- 2001 – LEAD Prepares to Submit amendment for OBOD
- Nov 2001 – Pre-Application Public Meeting
  - Apx 25 concerned citizens attended
  - Many letters of concern
  - Citizens Environmental Committee

# OBOD Permit at LEAD (cont)

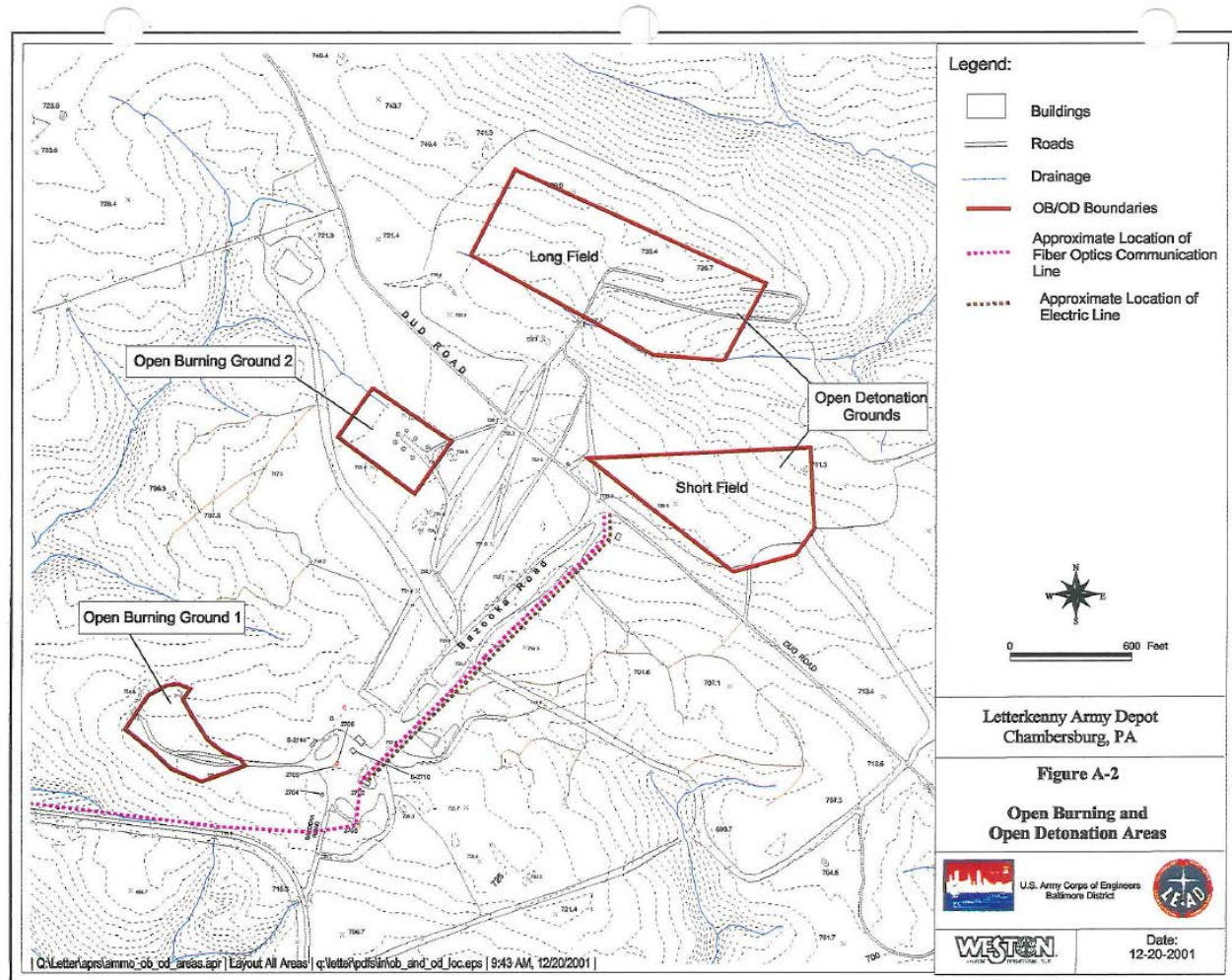
## Concerns:

- Physical effects of OB/OD
- Population ↑
  - 1950 – 75,927
  - 2000 – 129,253 (2016 – 153,851)
- Proposed increase of OD limits - 500#  
NEW/detonation to 1500# NEW

## OBOD Permit at LEAD (cont)

- Dust, contaminants
  - LEAD not responding to phone calls
  - LEAD not being a good steward
- 
- August 5, 2008 – OBOD Permit issued  
NEW reduced back to 500# for OD

# LEAD - OBOD Permit Area



# LEAD – Open Burning Unit 1

- Burn Cages – flashing of items contaminated by propellant residues, explosives residues, pyrotechnic residues
- Burn Pans – flashing of items contaminated by propellant residues, explosives residues, pyrotechnic residues
- Thermal Battery Activation



# LEAD - Open Burning Unit 1



# LEAD - OB 1



## LEAD – Open Burning Unit 2

- Burn Pans – for propellants and incendiary materials. Each pan may be used no more than once/day. Each pan shall not exceed NEW of 1,000 pounds/burn
- Rocket Motor Static Firing Tubes – static firing of rocket motors. Each rocket motor shall not exceed NEW 375 pounds/firing
- Thermal Battery Activation



# LEAD - OB 2



# LEAD - OB 2





# LEAD – OB 2



# LEAD – OB 2





# LEAD – OB 2



# LEAD OB-2





# LEAD OB-2



# LEAD OB-2



# LEAD Open Detonation Long Field

- Demil high explosives, pyrotechnics, incendiaries, bombs, grenades, fuzes, conventional warheads, mines, rocket motors, rockets, demolition material and other military munitions by detonation
- Each detonation shall not exceed 500 pounds NEW/detonation
- Limited to no more than 28 detonations/day



# LEAD Open Detonation Long Field



# LEAD - OD Long Field





# LEAD - OD Long Field



# LEAD - OD Long Field





# LEAD - OD Long Field



# LEAD – OD Short Field





# LEAD – OD Short Field



# LEAD – OD Area



# ARMD Permit at LEAD

- 2011 – First prelim meetings held re: LEAD's proposed Ammonium Perchlorate Rocket Motor Destruction Facility (ARMD)
- Proposed confined burn chamber with emissions control to treat solid propellant rocket motors currently treated at Open Burning grounds (10 year mission to demil MLRS rocket motors/others)



# ARMD Facility Permitting Timeline

- February 4, 2014 – Pre-Application Public Meeting (lightly attended)
- February 27, 2014 – LEAD submits Class 3 Permit Mod for ARMD
- December 8, 2014 – Permit issued
- November 14, 2016 - Construction Certification Submitted
- January 2017 – first firings MLRS

# ARMD Facility Permit Limits

- Approved to treat solid-propellant rocket motors
- Based on largest motors to be treated, max daily amount of propellant (NEW) treated shall not exceed 32,100 pounds/day
- Maximum number of firings – no > 60/day

# ARMED Facility Components

- Prep Building
- Segmentation Building (when required)
- RAMSLIC (Remote Automated Motor Sealing, Loading and Ignition Completion) Shelter
- Thermal Treatment System Chamber
- Pollution Abatement System (PAS)
- Effluent Handling System

# ARMD Facility



# ARMD Facility





# ARMD Facility



# ARMD Facility



# ARMD Facility





# ARMD Facility



# ARMD Facility



# ARMD Facility



# ▶ LEAD – Flash Furnace Application

Thermal treatment of items containing small quantities of propellants, explosives and pyrotechnics (PEP) materials such as:

- Small caliber ammunition (up to 30-mm)
- Fuzes
- Mortars
- Grenades
- Missile components (PEP)

Recycle remaining metal



# LEAD Flash Furnace

- Up to 425 tons/year (< 2 tons/day)

# ➤ LEAD – Flash Furnace Permitting Timeline

- July 25, 2017 - Pre-Application Public Meeting
- July 26, 2017 – Application Received
- August 7, 2017 – Admin Incomplete
  - September 8 & 21 – additional info provided
- October 3, 2017 – Admin Complete & under Technical Review

# LEAD – OB 1 Flash Furnace



# Questions

1. Compliance Record re: Permit limits – exceedances of quantity amounts (OBOD & Alternative Tech)?
2. Does the State have any policies that support streamlined permitting processes for destruction technologies that may reduce the use of OB/OD units at Letterkenny?
3. Public Opposition to OBOD operations? Permitting of ARMD?





**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Waste Management

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