

ABL-00222-1.02-9/20/88

EPA Region III/Hercules OB/OD Permit Meeting

September 20, 1988

Purpose:

Establish dialogue between EPA and Hercules/ABL.

Provide an overview of the ABL physical facility and the operations conducted.

Review current OB/OD practices.

Discuss preparation of the permit application for OB/OD.

Hercules Representatives:

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Don Pfeiffer	ABL Environmental Specialist	304-726-5686
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Allegany Ballistics Laboratory History and Facility Description

- 0 Originally built in 1942 by Kelly Springfield for the Army to load 50 caliber ammunition.
- 0 Operated by George Washington University for rocket research in 1943 through 1945.
- 0 In 1946 operated by Hercules for the Navy.
- 0 Original land area - 425 acres.
- 0 1962 land acquisition increased Navy land to 1570 acres and Hercules owned land to 65 acres.
- 0 Current facility comprises three developed areas: Plant 1, Navy owned is the original site; Plant 2, Hercules owned is a composite propellant production plant; and the 500 area, Navy owned is the explosive storage area.
- 0 Propellants and explosives are produced and processed at both Plant 1 and Plant 2.
- 0 The total facility has in excess of 300 buildings and a current work force in excess of 1000 people, all Hercules employees.

ABL Operations

- 0 ABL's primary activity is research, development and production of solid propellant rocket motors.
- 0 Other activities include warhead manufacture, composite structures manufacture, consumer product (automotive) testing and engineering services.
- 0 Rocket motors developed (Typical)

Talos, Tarter, TARRIER, Nike, Deacon	Cast Double Base
Sprint, Polaris, Altar, Antones	Composite Modified Double Base
Chaparrel, TOW II, Hellfire, ADATS	Cross Linked Double Base
Sparrow, SFW, SRAM II	Composite
- 0 Warheads produced (Typical)

Harm, Maverick, AMRAAM	PBX
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- 0 Explosive materials used

NG, NC, BTTN, HMX, RDX, AP, Al

Explosive Waste Streams

- 0 Off specification rocket motors/warheads.
- 0 Cured propellant/explosive - Physical test samples, machining scrap test specimens, disassembly residue.
- 0 Uncured propellant/explosive - Excess mixed propellant, mix/cast cleanup residue.
- 0 Propellant/explosive contaminated materials - Paint paddles, tongue depressors, rags, gloves.

OB/OD Operations

- 0 OB/OS conducted on eight clay covered pads.
- 0 Waste is picked up daily and burned the same day, concern for possible instability is the reason for minimizing the time from waste generation to burning.
- 0 Waste is transported directly from the generation area to the disposal (treatment) area.
- 0 Waste is spread to preclude detonable explosive depth.
- 0 Waste is prepared for ignition using "starting powder", a granulated gun powder, as a powder train and an electric match/black powder igniter. Kerosene on sawdust is also utilized.
- 0 Waste is ignited electrically (blasting machine) from a remote location.
- 0 Pads are ignited one at a time.
- 0 Pads are spaced 100 to 150 feet apart.
- 0 Burning is done in late afternoon. Pads are revisited the following morning. Residue is collected and moved to the "inert" pad.

Operating Philosophy

- 0 Scrap PEP is not a well characterized material.
- 0 Materials may include some unstable constituents, this waste PEP is not allowed to remain in operating buildings over night. Processing areas have scrap sheds separate from the operating building. Laboratory buildings have scrap picked up on the last pickup trip during the day.
- 0 Known incompatible materials are segregated in scrap containers at the generation point and are kept segregated during transportation and burning.
- 0 A concerted effort is made to prevent all detonations by controlling PEP waste depth and by dilution of liquid explosive scrap.
- 0 Where doubt exists, assume contamination and treat as an explosive.