Plum Island Animal Disease Center
Operation & Maintenance Challenges
1st International Biosafety and Biocontainment Symposium

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Plum Island Animal Disease Center

Mission: To protect U.S. livestock from the accidental or deliberate introduction of high-consequence foreign animal diseases (FADs).

Work Conducted:

• Train Veterinarians in the Diagnosis of FADs
• Laboratory Identification of FADs
• Maintain the North American FMD Vaccine Bank
• Research FADs
• Develop Vaccines for FADs
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Operational Activities

- Major operational activities needed to support the mission include:
  - Electrical generation and utilities
  - Wastewater treatment
  - Security program and systems
  - IT and communications systems
  - Environmental, health, and safety programs
  - Transportation (marine and land)
  - Infrastructure including buildings and grounds
  - Administrative and management programs
  - Emergency preparedness and response (fire, rescue, and emergency)
Plum Island Animal Disease Center Operation & Maintenance Challenges

- Meet safety, security and environmental requirements to support work with high consequence FAD agents including FMD
- Maximize operational resources to support research
- Comply with Federal and State requirements
- Conduct operations on an island location
- Ensure maintenance for aging facility and equipment
- Sustain positive and constructive community relationships
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Operation & Maintenance Challenges

Challenge: Meet safety, security, and environmental requirements

- FMD has unique requirements for biocontainment and biosecurity
- Regulatory select agent oversight by USDA and CDC are increasing for facility select agent certificate
- Evolving DHS security requirements
- Environmental oversight is increasing for waste removal and treatment and air emissions from biocontainment facilities
Challenge: Maximize operations resources to support current and future research

- Original BSL 3 Ag rooms can hold only pigs or a few cattle
- New rooms built in 1985 are larger and two can hold up to 25 cattle each
- 2 new rooms just being completed can hold 25 cattle each so double the number of cattle in a vaccine trial
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Challenge: Maximize operations resources to support current and future research

- Two new animal rooms for vaccine development
- Expanded and upgraded necropsy
- Convert storage to BSL-3 laboratory space for forensic and high throughput laboratory support
- Enhancements in water supply, electric distribution, and air conditioning systems
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Challenge: Maximize operations resources to support current and future research

• Increase in Science staff and research conducted today at PIADC require reviews of operational resources due to:
  – Increased space requirements because of new science programs (ARS, APHIS & DHS)
  – Increased operational support for waste treatment
  – Increased operational support for animal handling
  – Increased operational support for animal disposal
  – Increased space requirements for storage of supplies, freezers and animal feed
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Challenge: Comply with Federal and State requirements

• Biosurety and personnel reliability requirements
• Select Agent and Biosafety requirements
• Environmental regulatory requirements
• Occupational Health and Safety requirements
• Emergency response and fire safety requirements
• Animal welfare statutory requirements
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**Challenge: Island location**

- Marine vessels required for staff, cargo, and animals
- Response time considerations for ill/injured transportation
- Interruption of work schedules (staff, delivery of materials, etc.) due to weather (wind) conditions
- Fuel transfer and management in a marine environment
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Challenge: Maintenance of aging facility and equipment

- Requires continued infrastructure investment to sustain the mission (until NBAF facility is operational)
- Implement state-of-the-art security, including security hardening and intrusion detection
- Provide modern IT Infrastructure and meet evolving IT policies
- Upgrade liquid waste transfer piping and decontamination/sterilization facility
Challenge: Building and Sustaining Public Trust

• Promote openness and transparency
• Community Forum and other events for interested members of general public
• Organizational group tours
• Special tours geared toward youth
• Special interest groups
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