

U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

PA'INA HAWAII PROPOSED IRRADIATOR

**DRAFT ENVIRONMENTAL ASSESSMENT
PUBLIC COMMENT MEETING**

February 1, 2007

Honolulu, Hawaii

Meeting Objectives

- Gather comments on Draft Environmental Assessment (EA)
- Briefly review NRC's role and licensing process
- Describe the findings of draft EA

Who is the NRC?

- **INDEPENDENT** Federal agency
- Regulatory **RESPONSIBILITY**
 - Safety and security review
 - Environmental review
 - Licensing
 - Inspection
 - Enforcement



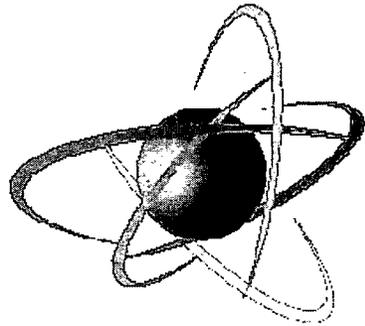
**OUR
MISSION:
Protect
Public
Health and
Safety,
and the
Environment**

NRC's Review Process

- Safety and security review
(license technical review)
- Environmental review



**NRC
strives to
maintain
openness
in our
regulatory
process**



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License Review and Inspection

Anthony D. Gaines
Senior Health Physicist

Licensing Review

- Application is received by the NRC
- Application is reviewed using the criteria in both:
 - 10 CFR Part 36 and
 - NUREG 1556 Volume 6

Sample Criteria Used for Review

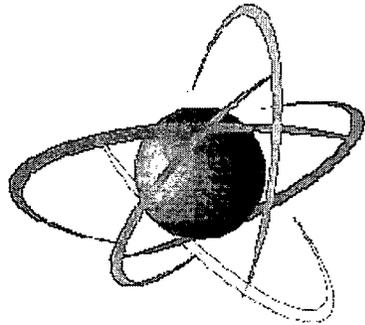
- Radiation safety and monitoring program
- Occupational dosimetry
- Operating and emergency procedures
- Source disposal and transfer
- Shielding to protect workers and the public

Licensing Process

- Two step process:
 - Preoperational license: allows testing, training, dosimetry assessment and radiation surveys
 - Operational License

NRC Inspection Program

- Construction and preoperational inspections:
 - Results incorporated into license
- Periodic inspections:
 - Performance-based inspections that are focused on safety and security



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Environmental Review

Matthew Blevins

Environmental Project Manager

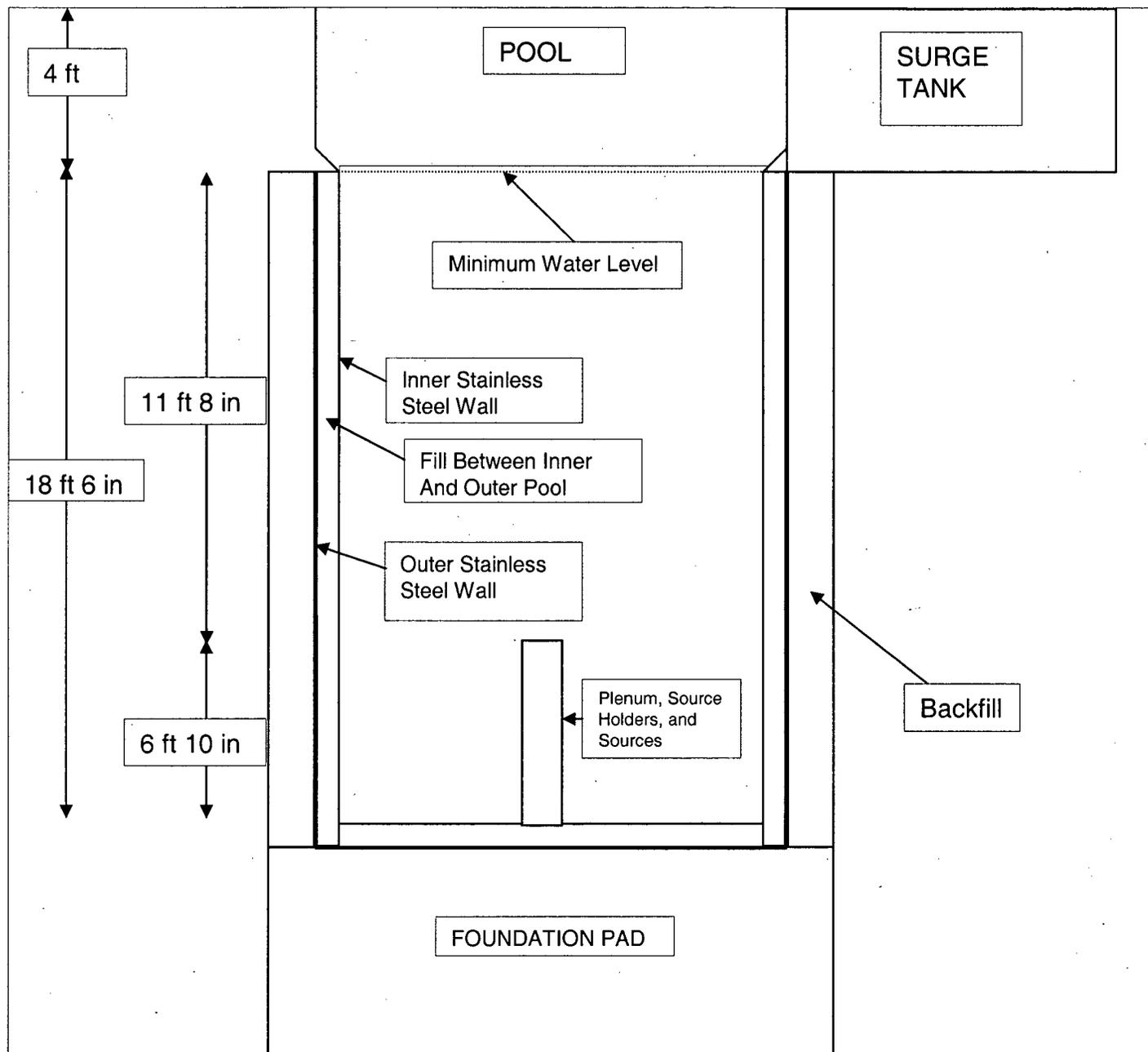
Environmental Overview

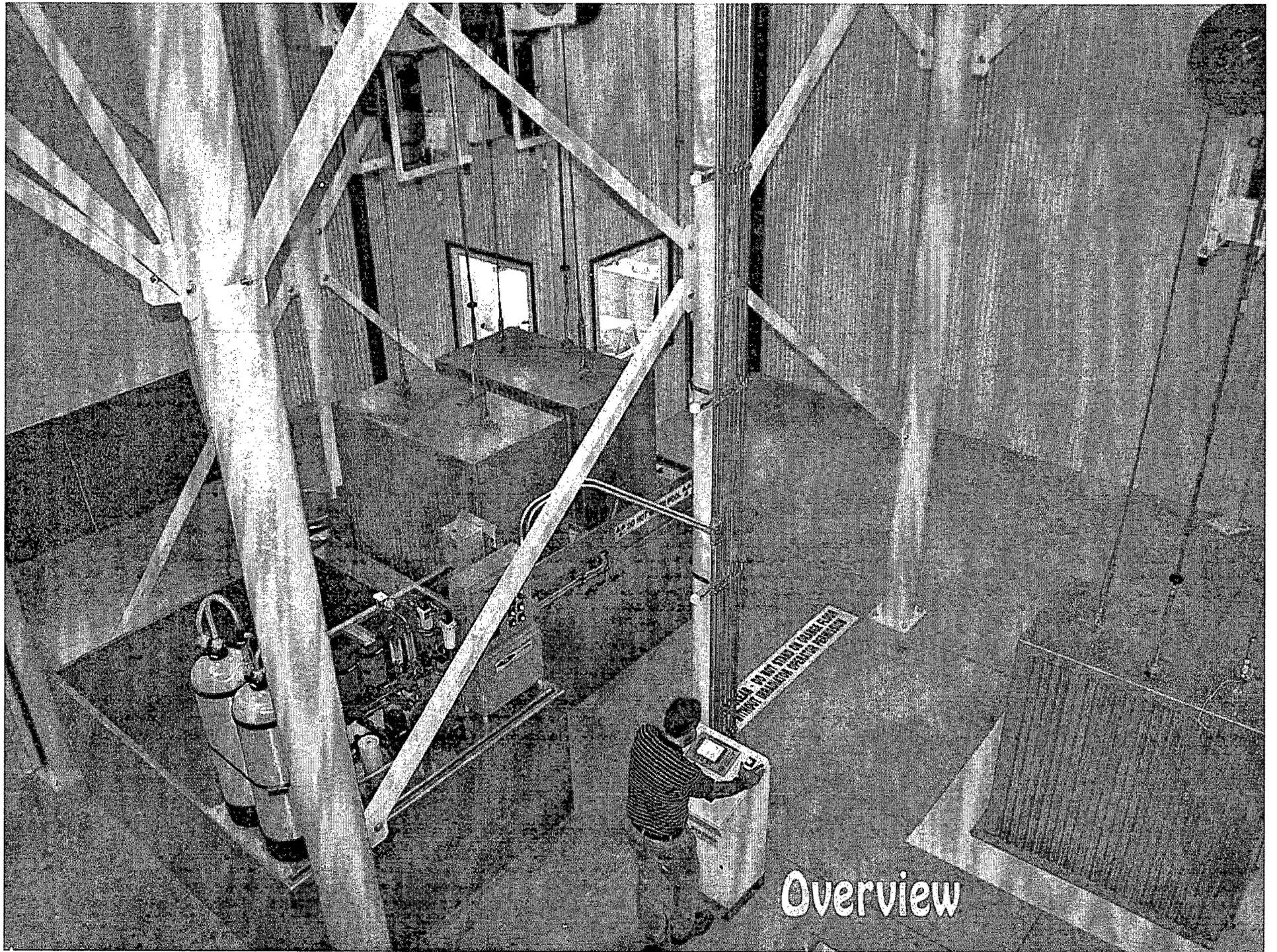
- Proposed Action
 - Pa'ina Irradiator
- Environmental Review Process
- Environmental Impacts
- Contact Information

What is Proposed?

- Underwater pool irradiator
- Radioactive Co-60 placed at bottom of pool
- Co-60 neutralizes various insect and plant pathogens
- Makes produce safe for import/export

Proposed Irradiator

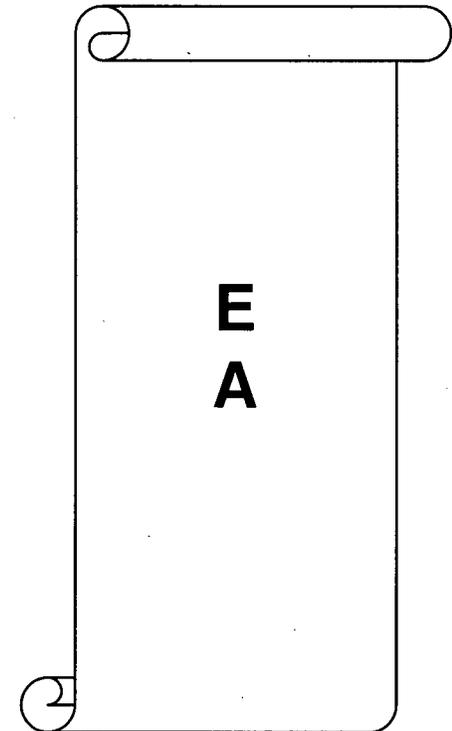
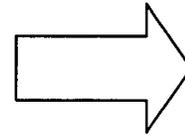




Overview

EA Content

- Proposed Action
- Purpose and Need
- Alternatives
- Environmental Impacts
- Consultations



Areas of Focus

- Water Resources
- Public and Occupational Health
- Transportation
- Ecology
- Aircraft Accidents
- Natural Phenomena

Water Resources

- Irradiator uses very little water
- No routine discharges
- Sources are doubly encapsulated in stainless steel
- Pool water continuously monitored for radiation

Ecology

- Irradiation effective tool in preventing the introduction of invasive species
- No threatened or endangered species would be affected

Transportation

- Analyzed routine radiological impacts from shipment of Co-60 sources from Port of Honolulu to airport location
- Maximum dose to member of public from source shipment would be very small:
0.04 mrem/yr

Public and Occupational Health

- Analyzed radiological impacts for both the public and workers
- Radiological impacts during operations:
 - less than 1 mrem/hr at pool surface
 - At 20—25 feet from pool, dose rate would be indistinguishable from background radiation
 - No measurable dose to members of public

Aircraft Accidents

- Analyzed various scenarios
 - Types of aircraft
 - Number of takeoffs/landings
 - Orientation of runways
 - Prevailing winds
- Accident affecting proposed irradiator:
 - Once every 5,000 years (conservative estimate)
- Conservative estimate of accident rates

Aircraft Accidents (cont.)

- Probability of aviation accident does not reflect the potential for release of radioactive material
 - Sources are 12-18 ft. below ground surface
 - Irradiator pool is very strong
 - Low impact angle crashes at airport
 - Water absorbs both crash energy and acts as a coolant
- Sources have undergone significant testing

Tsunami Impacts

- Fluid dynamic calculations
- Upward velocity necessary to dislodge a Co-60 source = 5.2 ft/sec
- Upward force would be created by wave with a horizontal velocity = 520 ft/sec
- A 33-foot (height) tsunami wave at the shore travels up to 43 ft/sec (horizontal velocity)

Hurricane Impacts

- Reviewed past hurricane activity
- Maximum storm surge = 2.6 feet
- Negligible risk from storm surge

No-Action Alternative

- Deny license application
- Currently use
 - Methyl bromide fumigation
 - Hot-water immersion
- NRC has no regulatory authority to force use of other treatments

EA Comment Period

- Accept oral and written comments tonight
- Provide other comments by **February 8, 2007**
- Consider all comments
- Final EA will be issued by April 2007

NRC Addresses for Comments

- Please note **Docket 030-36974** on comments
- By mail at:
 - Chief, Rules and Directives Branch
 - Division of Administrative Services
 - Mailstop: T-6D59
 - U.S. Nuclear Regulatory Commission
 - Washington, DC 20555-0001
- E-mail at:
 - NRCREP@nrc.gov

Technical Information Availability

- Draft Environmental Assessment
- Draft Safety Topical Report

<http://www.nrc.gov/materials.html>

click on “Pa’ina Irradiator” in the Quick Links box on the right side of the page

Public Document Room

- All publicly available documents:
 - <http://www.nrc.gov/reading-rm/adams.html>
- Contact PDR for assistance:
 - 1-800-397-4209
 - Email: PDR@nrc.gov
 - Docket Number is 030-36974

NRC Points of Contact

- Roberto Torres
 - Licensing Project Manager
 - Email: RJT@nrc.gov
 - 1-800-860-8100, extension 189
- Matthew Blevins
 - Environmental Review Project Manager
 - Email: MXB6@nrc.gov
 - 1-800-368-5642, extension 7684

Next Steps in the NRC Licensing Process

- Consider comments on draft EA
- Issue final EA
- Finalize safety review
- If finding of no significant impact:
 - Region IV can issue license
- If significant impacts are found the NRC would prepare an Environmental Impact Statement