-----Original Message-----
From: isaacson@lanl.gov [mailto:isaacson@lanl.gov]
Sent: Monday, December 19, 2005 12:12 PM
To: KIRK.W.OWENS@saic.com
Cc: Susan Radzinski
Subject: Fwd: Re: Fwd: LLW Facilities to be Constructed in Zone 4

Kirk, here is Bachmeier's response. I have nothing from Val.

JI

X-Sieve: CMU Sieve 2.2
Date: Sun, 18 Dec 2005 08:37:25 -0700
To: John Isaacson <isaacson@lanl.gov>, vrhodes@lanl.gov
From: "Craig L. Bachmeier" <craigb@lanl.gov>
Subject: Re: Fwd: LLW Facilities to be Constructed in Zone 4
X-PMX-Version: 4.7.1.128075

This looks okay to me.

Val - these are your words - right?

cb

At 01:04 PM 12/15/2005, John Isaacson wrote:

Craig and Val,

as per our conversation on the phone today, could one of you look over the descriptions of the LLW proccessing buildings for TA-54 below and send confirmation to Kirk Owens that the information is correct, or, make corrections if its not too onerous as per his request below.

Thanks for you help on this.

JI

X-Sieve: CMU Sieve 2.2
From: "Owens, Kirk W." <KIRK.W.OWENS@saic.com>
To: "'Isaacson, John'" <isaacson@lanl.gov>
Cc: "Gorden, Milton E." <MILTON.E.GORDEN@saic.com>
Subject: LLW Facilities to be Constructed in Zone 4
Date: Fri, 28 Oct 2005 17:23:49 -0400
Sender: KIRK.W.OWENS@saic.com

X-Proofpoint-Spam: 0
X-PMX-Version: 4.7.1.128075
John
Low-level radioactive waste facilities are planned to be constructed in Zone 4 of Area G. These three facilities are an access control and monitoring building, a characterization/verification building, and a compactor building. The information below describes our understanding of the scope of these proposed facilities, including processes, square footage, and general location. **Would you please have someone associated with the project verify the following information as accurate or provide corrections as needed.**

Thank you,
KO

The low-level radioactive waste processing buildings [in Area G] would be replaced with similar buildings in Zone 4 to support continued low-level radioactive waste disposal operations. It is assumed that the size and functions of these structures and processes would be duplicated in the new structures and processes in an expanded Zone 4 area. The currently proposed locations of these structures do not lie within the Zone 4 boundary, and therefore the Zone 4 boundary needs to be expanded.
Zone 4 is located between, and adjacent to, the current operational area in Area G and Area L. Zone 4 is approximately 30 acres (12 hectares). Access to Zone 4 (and the rest of Area G) is controlled by the gate at the western end of the waste management area. Mesita del Buey Road runs through Zone 4. The footprint of Zone 4 would need to expand westward into the current administrative area to accommodate the low-level radioactive waste processing activities. The area south of Mesita del Buey Road would be the likely location of the processing activities. LANL staff would relocate the access gate, add a new access control structure, and remove or relocate several office trailers and storage sheds.

Access Control and Monitoring Building

The access control and monitoring building would provide a physical control point for access to Zone 4 (and the rest of Area G) and a support area for radiological program needs. The building would consist of the following characteristics:

- A heating, ventilation and air conditioning system.
- An observation area with a large window to document entrance to and exit from Zone 4 and Area G.
- An administration area to support radiological control technicians and equipment.
- Separate entrances and exits for resident workers and non-resident workers (that is, workers that are delivering waste packages).
- Restrooms and locker areas for donning and removing personal protective equipment and personnel radiological monitoring.
- A break area.
- Remote gate and portal/turnstile control.

The proposed access control and monitoring building would be approximately 1,200 to 1,500 square feet (111 to 139 square meters) and would be located near the entrance to

Zone 4 and the rest of Area G. The building could be either a steel manufactured building or a portable or modular building. LANL would limit the radiological inventory for the building to check and calibration sources used for instrument maintenance and operational needs related to survey and smear sample analysis.

Characterization and Verification Building

The characterization and verification building would house the assay equipment associated with identifying and verifying radiological characteristics of waste materials. Survey methods would consist of non-intrusive methods such as gamma spectroscopy, neutron counting, and handheld instrument techniques. The building would consist of the following:

- A central heating, ventilation, and air conditioning system and dust control systems with a negative overpressure ventilation system.
- Processing areas for the characterization and verification equipment.
- A staging area for up to 15 55-gallon (208-liter) drums.
- Overhead rollup (coil) doors with ceiling clearance of at least 16 feet (4.9 meters) to provide for fork lift and lift truck access.
- A design floor load of 1,100 pounds per square foot (5,371 kilograms per square meter) to accommodate the concentrated floor loads of assay equipment that use lead shielding.
- Floors finished as smooth concrete with epoxy sealant for contamination control.
- Three-phase 480-volt power with a 200-Amp panel with single-phase requirements being addressed with a step-down transformer, as appropriate.
- Building partitioning to address personnel monitoring and badge control as well as a main restroom facility.

The proposed characterization and verification building would consist of a 2,500 to 3,000 square foot (232 to 279 square meter), single-story building. LANL staff would locate this facility in Zone 4 on the south side of Mesita del Buey Road. The building is anticipated to be designed to HC-3, PC-2 standards.

Compactor Building

The compactor building would serve as a low-level radioactive waste volume reduction facility that would house a new hydraulic compactor with associate glove box train and a drum crusher. The compactor building would have the following characteristics:

- Sufficient space to operate both pieces of equipment. The compactor footprint is assumed to be 8 feet by 12 feet (2.4 meters by 3.7 meters), with access from at least two sides. The glove box dimensions would be 17 feet (5.2 meters) in length, 7 feet (2.1 meters) wide and 12 feet (3.7 meters) high with conveyor dimensions of 24 feet (7.3 meters)long, 8 feet wide (2.4 meters) and 20 feet (6.1 meters) high. The existing drum crusher footprint is about 4 square feet (0.4 square meters) with access from at least one side.

- A waste package staging area of 300 to 500 square feet (28 to 46 square meters).
- A storage area of 300 square feet (28 square meters) for equipment, parts, and supplies.
- A ceiling clearance of 28 feet (8.5 meters) for compactor maintenance access (a ceiling clearance for the drum crusher would be less than 16 feet, or 4.9 meters).
- Rollup (coil) doors to accommodate fork lift and lift truck access.
- A design floor load of 1,100 pounds per square foot (5,371 kilograms per square meter) to accommodate volume reduction equipment.
- Floors finished as smooth concrete with epoxy sealant for contamination control.
- Three-phase 480-volt power with a 200-amp panel with single-phase requirements being addressed with a step-down transformer, as appropriate.
- HEPA-filtered exhaust system for local contamination control.
- Centralized uninterruptible power supply backup for continuous air monitors and personal computers.
- Centralized vacuum system for air samplers.
- Negative overpressure air confinement (pending further safety analyses).

The compactor building would consist of a 3,000 to 5,000 square foot (279 to 465 square meter), single-story building near the administration building and characterization and verification building within the nuclear facility fenceline. The building is anticipated to be designed to HC-3, PC-2 standards.

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