



Department of Energy  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

0070782

06-AMRC-0346

SEP 1 2006

Ms. Jane A. Hedges, Program Manager  
Nuclear Waste Program  
State of Washington  
Department of Ecology  
3100 Port of Benton Blvd.  
Richland, Washington 99354

Dear Ms. Hedges:

**CERTIFICATION OF CLOSURE FOR THE 305-B STORAGE FACILITY**

Closure activities for the 305-B Storage Facility were completed on August 7, 2006. The Owner/Operator Closure Certification (Enclosure 1), the independent registered Professional Engineer's (PE) Certification of Closure statement (Enclosure 2) and the independent registered PE's Closure Certification Report (Enclosure 3) are provided in accordance with Washington Administrative Code (WAC) 173-303-610(6). The closure certifications were prepared in accordance with WAC 173-303-610 and the 305-B Closure Plan.

If you have questions, please contact me or your staff may contact Joe R. Franco, Assistant Manager for the River Corridor, on (509) 376-6628.

Sincerely,

Keith A. Klein  
Manager

AMRC:RFG

Enclosures (as stated)

cc w/encls:

J. Ayers, Ecology  
G. Bohnee, NPT  
F. W. Bond, Ecology  
A. L. Boyd, EPA  
N. Ceto, EPA  
G. P. Davis, Ecology  
R. D. Enge, PNNL

J. W. Golden, WCH  
S. Harris, CTUIR  
R. Jim, YN  
M. L. Proctor, WCH  
J. J. Wallace, Ecology  
Administrative Record, H6-08 (305-B Storage Facility)  
Environmental Portal, A3-01

**RECEIVED**  
SEP 25 2006

**EDMC**

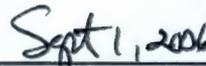
**ATTACHMENT 1**

**OWNER/OPERATOR  
CLOSURE CERTIFICATION  
FOR  
305-B STORAGE FACILITY**

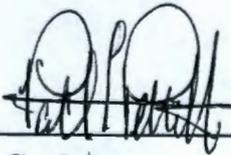
We, the undersigned, hereby certify that 305-B Storage Facility closure activities were performed in accordance with the specifications in the Closure Plan, approved by Ecology on April 19, 2006.



\_\_\_\_\_  
Owner/Operator  
Keith A. Klein, Manager  
U.S. Department of Energy  
Richland Operations Office



\_\_\_\_\_  
Date



\_\_\_\_\_  
Co-Operator  
Patrick L. Pettiette, President  
Washington Closure Hanford, LLC.



\_\_\_\_\_  
Date

**ATTACHMENT 2**



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## Professional Engineer's Certification of Closure for the 305B Storage Facility

Prepared For: Donna Yasek / Washington Closure Hanford

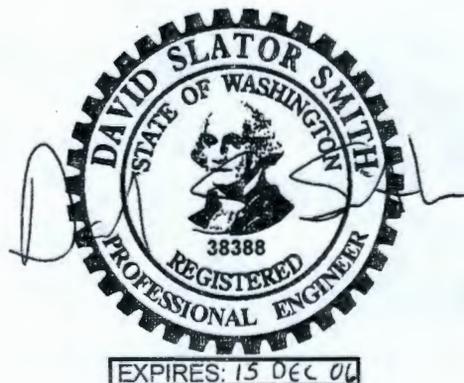
Prepared By: David S. Smith, P.E. / TRUTech, LLC

Date: August 7, 2006

I, the undersigned, a certified Professional Engineer, hereby certify that, to the best of my knowledge and belief, I have made a visual inspection of the 305-B Storage Facility at the 300 Area and that closure of the aforementioned unit has been performed in accordance with the approved closure plan. This certification is based on a review of pertinent documents, interviews with cognizant project personnel, and my personal observations of the condition of the building, which are described in the enclosed Attachment 2.

The above statements are true and complete to the best of my knowledge and within the limits of professional judgment under the prevailing standards of practice on this 7th day of August, 2006.

David S. Smith  
Washington P.E. # 38388  
TRUTech, LLC



**ATTACHMENT 3**



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# Specifications and Limitations of Professional Engineer's Certification of Closure for the 305B Storage Facility

Prepared For: Donna Yasek / Washington Closure Hanford

Prepared By: David S. Smith, P.E. / TRUTech, LLC

Date: August 7, 2006

## Scope of Closure

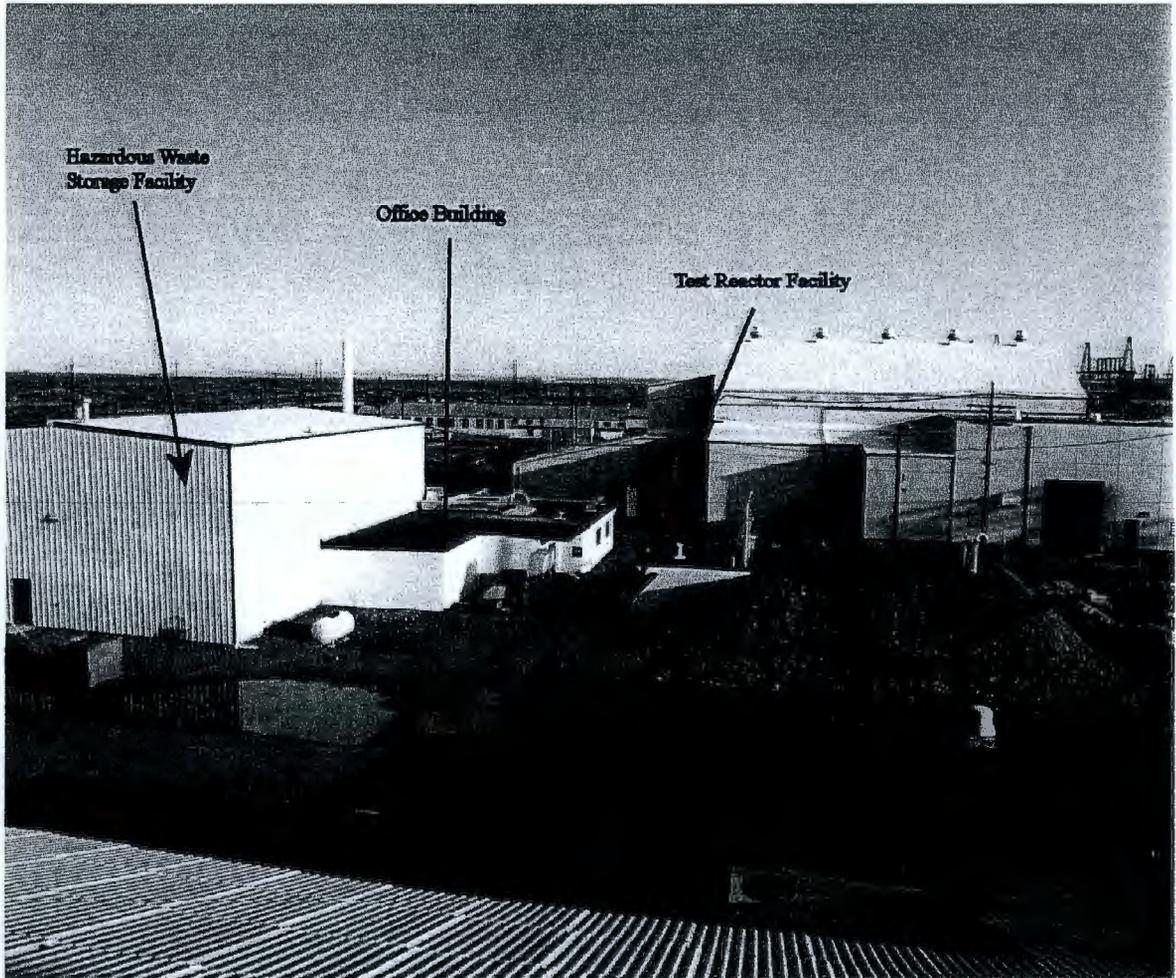
The 305B Facility is a Resource Conservation and Recovery Act (RCRA)-permitted waste treatment, storage, and disposal (TSD) unit, which operated from 1954 to 2006 under RCRA TSD permit WA7890008967 (Ecology 1994). This facility is located in the northern part of the 300 Area (Figure 1). The facility was used for reactor component testing, engineering development, and hazardous waste storage.

The purpose of this project is to conduct the certification of closure as required by WAC 173-303-610(6) for the closure of the 305B Facility. The certification shall verify that closure was completed in accordance with Attachment 18, Chapter 11 of the RCRA permit (Ecology 1994), hereafter referred to as the Closure Plan.



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Figure 1 – 305B Building, 300 Area, Hanford Site, looking northwest





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## Closure Strategy

The closure performance standards, as defined in the Closure Plan, are identified in Table 1, which also provides a summary of the closure activities pertinent to these standards.

Table 1 - Summary of Closure Performance Standards and Applications

Performance Standard	Discussion
Minimize the Need for Future Maintenance	The 305B TSD was clean closed and, as such, does not require future maintenance.
Protection of Human Health and the Environment	All dangerous/mixed waste and dangerous/mixed waste constituents have been removed from the facility, eliminating the danger of post-closure release of these materials.
Assist in Preparing the Facility for Demolition	<p>All equipment and structures in dangerous/mixed waste handling and storage areas were visually inspected. These areas included:</p> <ul style="list-style-type: none"><li>- Floors and walls of the four dangerous waste storage cells</li><li>- Floors, walls, and ceiling of high bay and flammable liquid bulking module areas</li><li>- Floors and walls of remainder of first floor except for offices, work area, and lavatories/change rooms</li><li>- Floors, walls, and ceiling of basement except equipment storage room</li><li>- Interior surfaces of all secondary containment trenches</li><li>- Fork lift and loading hoist</li><li>- Asphalt ramp outside north high bay door</li></ul> <p>Materials in these areas meet the "clean debris surface" standard of 40 CFR 268.45.</p>



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## Review of Physical and Chemical Data

Spill report logs from July 7, 1989 through August 18, 2005, historical characterization reports, and occurrence reports were used to evaluate the history of past spills or other contamination events in the building. Several small spills occurred in the facility according to the log book, but all were cleaned up immediately. Only two significant spills seemed to have occurred in the facility. One, in 1961, was noted in (Gerber 1992 and Jacques 2006). In that spill, a solution of plutonium nitrate overflowed a test container into a catch tank, which was then removed and buried. Another, documented in (PNNL 1997), occurred in July of 1997 and involved over-pressurization of two 55 gallon drums. In that spill, about 100 gallons of phosphoric acid waste was released from the drums and then collected in the facility's spill control system (the blind sumps). The spilled material was absorbed and cleaned up immediately, samples were collected of the spilled acid, and it was determined that no further action was required.

Two inspections of the building (on June 8 and June 12, 2006) verified that all waste had been removed from the building, and that the only visible contamination present in any of the dangerous/mixed waste handling and storage areas was in the First Floor Work Area hoist (Figure 2). This area was cleaned up under work package 300 06 03 01 002, Applicability Package "r" on July 20, 2006. One bag of rags was generated, and will be shipped to ERDF with the building demolition debris. Figure 3 shows the final condition of the area after cleanup was completed. Figures 4-9 provide documentation of the final status of the other areas in the building regulated under the permit.



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Figure 2 – First floor work area hoist area prior to clean up



Figure 3 – First floor work area hoist area after clean up





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Figure 4 – Typical dangerous waste storage cell



Figure 5 - High bay area, looking southwest (includes forklift and loading hoist area)



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Figure 6 - Flammable liquid bulking module



Figure 7 - Basement area, looking northwest



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Figure 8 – Typical secondary containment trench



Figure 9 - Asphalt ramp outside north high bay door



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## Analysis of Variances from Closure Plan Requirements

All requirements of the Closure Plan were met.

## Noted Exceptions

None

## References

DOE/RL, 2006, *Removal Action Work Plan #1 for 300 Area Facilities*, Rev. 1, DOE/RL-2004-77, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Ecology, 1994, *Hanford Facility RCRA Permit*, Permit No. WA7890008967, Washington State Department of Ecology, Olympia, Washington.

EPA, 2005, *Action Memorandum #1 for the 300 Area Facilities*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

Gerber, M.S., 1992, *Past Practices Technical Characterization Study – 300 Area – Hanford Site*, Westinghouse Hanford Company, Richland, Washington.

Jacques, I.D., 2006, *Historical Site Assessment for the 305-B Building*, Interoffice Memo # 127509

Pacific Northwest National Laboratory (PNNL), 1997, *Over Pressurization of two 55-Gallon drums of Phosphoric Acid Waste*, Occurrence Report # RL-PNNL-PNNLBOPER-1997-0022

WAC 173-303, *Dangerous Waste Regulations*, Washington Administrative Code, as amended.

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