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

FEB 23 2001

01-FTD-014

Mr. Rick Bond, Transition Project Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. 4th Avenue
Kennewick, Washington 99336-6018

Dear Mr. Bond:

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (TRI-PARTY AGREEMENT) INTERIM MILESTONE M-89-02, COMPLETE REMOVAL OF 324 BUILDING RADIOCHEMICAL ENGINEERING CELLS (REC) B-CELL MIXED WASTE (MW) AND EQUIPMENT, NOVEMBER 30, 2000

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The U. S. Department of Energy, Richland Operations Office (RL) has received the Ecology letter from you, to Peter Knollmeyer, "324 Building Checklist and Confirmation of Missed Milestone M-89-02," dated February 1, 2001, which provides concurrence with the checklist of the actions and conditions to be met by Tri-Party Agreement Interim Milestone M-89-02, "Complete Removal of 324 Building REC B-Cell Mixed Waste (MW) and Equipment." Since that checklist has been developed, additional changes are proposed as discussed in the February 7, 2001, Unit Manager's meeting between RL, Ecology, and Fluor Hanford, Inc. (FHI). Several pieces of equipment have been developed, used, and found to be suitable for future deactivation activities, but were not specifically identified in the previous listing of remaining equipment. These items are as follows: 1) Rectangular Overpack Disposal Container (RODC) Lifting Fixture (Spreader Bar), 2) Band Saw, 3) Chop Saw, 4) Bigelow Scraper, 5) Wagon Wheel and 6) Crane Deployed Vacuum System. A brief description of these items and a justification for keeping them are enclosed. Also, the LaBounty Shear, an item previously identified to be kept, has in fact been discarded as waste and will not be kept for future use.

It is requested that RL receive concurrence from Ecology to maintain those pieces of equipment for future deactivation work. Since vacuuming of the B-Cell is ongoing, a timely response is requested, so if concurrence is not obtained, there will be sufficient time to dispose of that equipment prior to the projected completion date of March 30, 2001, to remove all excess equipment from B-Cell.

If there are any questions, please contact me on (509) 376-9333, or your staff may contact Dave Templeton, Facility Transition Division, on (509) 373-2966.

Sincerely,

Clifford E. Clark, Acting Program Manager
Office of Regulatory Liaison

FTD:DWT

Enclosure

cc w/encl:
M. L. Blazek, Oregon Energy
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Administrative Record
Ecology Library, Kennewick
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ENCLOSURE TO 01-FTD-014

ITEMS IN B-Cell NEEDED FOR FUTURE 324 BUILDING DEACTIVATION

Item 1. Rectangular Overpack Disposal Container (RODC) Lifting Fixture (Spreader Bar). The lifting fixture is needed to lift the RODC by a crane. It is currently in B-Cell.

a. **Future intended use.** The RODC lifting fixture will be used for all movements of the RODC inside the hot cells, and between the hot cells and the airlock.

b. **Impact of disposing of the RODC lifting fixture now.** Another lifting fixture would be required. The lifting fixture would take up about one-half of a 3-82B cylindrical grout container for disposal. Based on $65K in total costs to procure, fill, loadout, ship, and dispose of each 3-82B and 400 millirem expended in each 3-82B loadout, disposing of the lifting fixture now will add 200 millirem in personnel exposure and $33K in current procurement, waste handling and disposal costs. At $40K per person-rem, the added dose will cost $8K. Disposing of the lifting fixture now will cost at least $41K. A spare, uncontaminated lifting fixture is in Building 324.

c. **Reason this issue came up now.** The lifting fixture was not envisioned as an item to remain in B-Cell when the listing of tools to remain in B-Cell was issued to the U.S. Department of Energy (DOE) and the State of Washington Department of Ecology (Ecology) in May 2000. This item needs to remain for future 324 building deactivation.

Item 2. Band Saw. The band saw is designed to cut through long items four inches in diameter or smaller, either hollow piping or lead-filled. The lead-filled, four-inch pipe (lead leg) found in B-Cell was too long to fit inside a rectangular grout container (RGC) and needed to be cut in half. A band saw mount was designed and fabricated in November 2000 for this purpose. The band saw was initially deployed in December 2000 on an empty four-inch pipe that was thought to be lead-filled. In January 2001, the lead leg was found in B-Cell and the band saw successfully cut the leg in half; the pieces were placed in RGC-115.

a. **Future intended use.** The band saw is designed to fit on an RGC; it can be modified to fit onto a grout container (GC), as required. The band saw was very effective and has future applications involving size reduction of items that are four inches in diameter or less. It may be utilized in initial size reduction of the D-Cell skids in late fiscal year (FY) 2001; it will also be used to size reduce the two-inch piping removed from the pipe trench.

b. **Impact from disposing of the band saw now.** Another means to size reduce the D-Cell skid and the piping removed from the pipe trench will be required. The band saw would take up about one-fourth of a 3-82B cylindrical grout container for disposal. Based on $65K in total costs to procure, fill, loadout, ship, and dispose of each 3-82B and 400 millirem expended in each 3-82B loadout, disposing of the band saw now will add 100 millirem in personnel exposure and $16K in current procurement, waste handling and disposal costs. At $40K per person-rem, the added dose will cost $4K. Adding the estimated $5K for procurement and fabrication of a duplicate band saw, the disposing of the band saw now would cost $25K.

c. **Reason this issue came up now.** The band saw was not envisioned when the listing of tools to remain in B-Cell was issued to DOE and Ecology in mid–2000. Now that this item has

been fabricated and was found to be very useful, it needs to remain for future 324 Building deactivation.

Item 3. Chop Saw. The chop saw is designed to cut through long items, six inches in diameter or smaller, either piping or solid steel. In December 2000, after the band saw above was deployed, a six-inch-diameter steel-filled pipe (steel leg) was found in B-Cell. The band saw could not cut this item due to its large diameter and the band saw had been designed for cutting through lead, not thick steel. The steel leg was too long to fit inside a GC and needed to be cut in half. A mount for a chop saw, which uses a grinding wheel, was designed and fabricated in December 2000 and January 2001 for this purpose. The chop saw was successfully deployed in January 2001 to cut the steel leg in half, and the steel leg pieces were placed in GC-88.

a. **Future intended use.** The chop saw is designed to fit on either a GC or an RGC. It was very effective in cutting through the six-inches of steel and has future applications involving size reduction of items that are six inches in diameter or less. It may be utilized in final size reduction of the D-Cell skids when they are transferred to B-Cell in late FY 2001; it can also be used to size reduce the larger piping removed from the pipe trench.

b. **Impact from disposing of the chop saw now.** Another means to size reduce the D-Cell skid and the piping removed from the pipe trench will be required. The chop saw would take up another one-fourth of a 3-82B cylindrical grout container for disposal. Based on $65K in total costs to procure, fill, loadout, ship, and dispose of each 3-82B and 400 millirem expended in each 3-82B loadout, disposing of the chop saw now will add 100 millirem in personnel exposure and $16K in current procurement, waste handling and disposal costs. At $40K per person-rem, the added dose will cost $4K. Adding the estimated $5K for procurement and fabrication of a duplicate chop saw, the disposing of the chop saw now would cost $25K.

c. **Reason this issue came up now.** The chop saw was not envisioned when the listing of tools to remain in B-Cell was issued to DOE and Ecology in mid–2000. Now that this item has been fabricated and was found to be very useful, it needs to remain for future 324 building deactivation.

Item 4. Bigelow Scraper. The Bigelow scraper is designed to be pulled by a crane to drag particulate matter and other small items on the floor into a pile for retrieval by clam shelling.

a. **Future intended use.** The Bigelow scraper will be used to scrape particulate material into piles in all future Radiochemical Engineering Cell (REC) cell deactivation work. This includes the pipe trench in early FY 2002 as well as B-Cell after the liner is inspected.

b. **Impact from disposing of the Bigelow scraper now.** A duplicate Bigelow scraper or similar tool for scraping loose material into a pile for clam shelling will be required. Disposing of the Bigelow scraper now will also take up another one-tenth of a 3-82B cylindrical grout container for disposal. Based on $65K in total costs to procure, fill, loadout, ship, and dispose of each 3-82B and 400 millirem expended in each 3-82B loadout, disposing of the Bigelow scraper now will add 40 millirem in personnel exposure and $6.5K in current procurement, waste handling and disposal costs. At $40K per person-rem, the added dose will cost $1.6K. Adding the estimated $3K for procurement and fabrication of a duplicate Bigelow scraper, disposing of the Bigelow scraper now would cost over $11K.

c. **Reason this issue came up now.** The Bigelow scraper was not listed as an item to remain in B-Cell when the listing of tools to remain in B-Cell was issued to DOE and Ecology in May 2000. (It was not thought to be needed because scraping in B-Cell was planned to be performed using the 5,000-pound block.) The Bigelow scraper was found to be very useful; based on the results of the in-cell scraping and the vacuuming mockup, scraping and clam shelling is much more effective for retrieval of bulk materials than vacuuming. The vacuum is an effective tool for finish work. The Bigelow scraper will be deployed to clean out the pipe trench that begins in late FY 2001/early FY 2002. Also, a significant amount of grout appears to be adhered to the B-Cell liner. After the B-Cell floor is scabbled, it needs to be scraped with the Bigelow scraper and clam shelled before vacuuming. Therefore, the Bigelow scraper needs to remain for future 324 Building deactivation.

Item 5. Wagon Wheel. The wagon wheel is a device made of sheet steel that inserts into a cylindrical GC and holds Engineered Containers (ECs) upright. It is needed for filling ECs with dispersible and for staging ECs prior to loading into RGCs.

a. **Future intended use.** The wagon wheel will be used for vacuuming the pipe trench in early FY 2002; pipe trench particulate solids will need to be loaded directly into ECs to avoid contaminating the airlock.

b. **Impact from disposing of the wagon wheel now.** Another means to hold ECs in a vertical configuration for vacuuming will be required. Disposing of the wagon wheel now will take up about one-fourth of a 3-82B cylindrical grout container for disposal. Based on $65K in total costs to procure, fill, loadout, ship, and dispose of each 3-82B and 400 millirem expended in each 3-82B loadout, disposing of the wagon wheel now will add 100 millirem in personnel exposure and $16K in current procurement, waste handling and disposal costs. At $40K per person-rem, the added dose will cost $4K. Adding the estimated $5K for procurement and fabrication of a duplicate wagon wheel, disposing of the wagon wheel now would cost $25K.

c. **Reason this issue came up now.** The wagon wheel was listed as an excess item to be disposed of on the list of items to be removed from B-Cell, which was issued in early FY 2000. During recent preliminary planning for pipe trench remediation, it became apparent that a device will be needed in the airlock for holding ECs in a vertical position while the pipe trench is being vacuumed. The wagon wheel needs to remain for future 324 Building deactivation.

Item 6. Crane Deployed Vacuum System. Integral to the crane deployed vacuum system is a 5,000-pound block (2,265-kilogram steel block). Its mass (actually 4,050 pounds) is needed to provide control and stability to this system. With the large mass, balance of the vacuum system is almost unaffected by the pickup of dispersible in the large vacuum canister. At this time, Hot Cell Operations has vacuumed approximately one-half of the B-Cell floor with this device as the primary bulk vacuum.

a. **Future intended use.** The crane-deployed vacuum system will be used in the pipe trench in early FY 2002, cleanup of dispersible under the spent fuel rack in late FY 2002, and will be used in other future particulate material vacuuming efforts in D-Cell and B-Cell.

b. **Impact from disposing of the crane deployed vacuum now.** Development, fabrication, and installation of another crane deployable vacuum system would be required. The 5,000 lb

block would take up about three-fourths of a 3-82B cylindrical grout container for disposal. Based on $65K in total costs to procure, fill, loadout, ship, and dispose of each 3-82B and 400 millirem expended in each 3-82B loadout, disposing of the 5,000-pound block now will add 300 millirem in personnel exposure and $48K in current procurement, waste handling, and disposal costs. At $40K per person-rem, the added dose will cost $12K. Adding $2.5K for procurement of a comparable steel block (based on the cost of the block used for mockup), disposing of the 5,000-pound block now will cost over $62K.

c. **Reason this issue came up now.** The 5,000-pound block was listed as an excess item (2,265-kilogram steel block) to be disposed of on the list of items to be removed from B-Cell, which was issued in early FY 2000. A crane deployed vacuum system was determined to be favorable for in-cell bulk vacuuming. The crane-deployed vacuum system uses the 5,000-pound block for stability. The 5,000-pound block needed for proper operation of this vacuum is required to remain for future 324 Building deactivation.

Additional Items to Remain In-Cell

Item	Fraction Of GC Filled	Disposal Cost	Cost of Replacement Item	Personnel Waste Loadout Exposure	Equivalent Cost of Exposure**	Total Cost
RODC Lifting Fixture	.50	$33K	N/A – already have on-hand spare	200mR	$8K	$41K
Band Saw	.25	$16K	$5K	100mR	$4K	$25K
Chop Saw	.25	$16K	$5K	100mR	$4K	$25K
Bigelow Scraper	.1	$6.5K	$3K	40mR	$1.6K	$11K
Wagon Wheel	.25	$16K	$5K	100mR	$4K	$25K
5,000 lb block	.75	$48K	$2.5K	300mR	$12K	$63K
Totals	2.10	$135.5K	$20.5K	840mR	$33.6K	$190K

* Includes costs to procure, fill, loadout, ship, and dispose of each 3-82B container.
**Based on $40K per 1000 mR