

Appendix A - SET Descriptions, Endpoints, and Hazard Matrix

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
1	<p>GLOVERBOX SET - Room 125 and Dimensional Metrology Lab GB</p> <p><i>Beryllium:</i> Be contaminated clothes may have been laundered in this area in the 1950s & 1960s, and Be components may have been located on carts that were moved through or staged in this area.</p> <p><i>Chemicals:</i> Ethyl alcohol, 1,1,1-trichloroethane and oil were used in this area up until operations were suspended.</p> <p><i>Lead and Other Heavy Metals:</i> The paint on the floor may contain lead and other heavy metals; GB gloves contain lead.</p> <p><i>PCBs:</i> PCBs may be contained in paint. A PCB determination of ballasts will be made when the ballasts are removed.</p> <p><i>SNM Holdup:</i> SNM holdup is not expected in this SET since the critical limits were "No Fissile Materials."</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surface. There is fixed contamination on the floor and walls from the 1969 fire and major leaks from the GBs.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Control/fix contamination Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping conduit Remove/dispose of utilities Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>Radiological Controls/ALARA Principles</p> <p>CBDPP</p>	<p>TRU, TRM, LLW, LLM</p>
2	<p>ROOM SET - Rooms 126, 132, 133, 137B</p> <p><i>Lead and Other Heavy Metals:</i> The paint on the floor may contain lead or other RCRA heavy metals. The solder and printed circuit boards contain regulated quantities of lead.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>		None	PPE	LLW, LLM
3	<p>EQUIPMENT SET - Hydraulic Oil System, 2nd Floor in Room 233A</p> <p><i>Chemicals:</i> The unit contains a significant quantity of hydraulic oil.</p>	<p><u>Deactivation:</u> Remove/dispose of loose combustibles Drain/isolate utility systems</p> <p><u>Decommissioning:</u> Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Chemicals:</i> Hydraulic oil</p>	None	PPE	LLW

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4	<p>GLOVEBOX SET - Portion of Room 131 East/West D-Line and GBs 601, 602, 604, 605, 606, 608 and 612 (including Mixed Residue Tanks DL-776 & V-605 [2])</p> <p><i>Beryllium:</i> Be was machined in GB-605.</p> <p><i>SNM Holdup:</i> Several of the GBs currently contain significant Pu holdup.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁴ cpm on the inner surfaces.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous material</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>Radiological Controls/ ALARA Principles</p> <p>CBDPP</p>	<p>TRU, TRM, LLW, LLM</p>
5	<p>GLOVEBOX SET - Portion of Room 131 East/West D-Line and GBs 601, 602, 605, 606, 608 (including Mixed Residue Tanks V-614, V-616, V-618, and V-620)</p> <p><i>Chemicals:</i> Carbon tetrachloride and Freon TF (1,1,2-trichloro-1,2,2-trifluoroethane) were used as solvents in these GBs. Texaco Regal #643 lubricating oil was used as coolant to cut Pu parts.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. The paint on the GBs may contain lead or other heavy metals. Leaded glass contains regulated quantities of barium and lead.</p> <p><i>SNM Holdup:</i> Several of the GBs contain significant Pu holdup.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>		<p>None</p>	<p>PPE</p>	<p>LLM, TRU</p>

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6	<p>GLOVEBOX SET - Portion of Room 131 North/South D-Line and GBs 626-628, 630, 632, 636, and 642 (including Mixed Residue Tanks V-626 and V-627)</p> <p><i>Beryllium:</i> Be contaminated oil is present in this area.</p> <p><i>Chemicals:</i> Carbon tetrachloride and Freon TF (1,1,2, trichloro-1,2,2-trifluoroethane) were used as solvents in these GBs. Texaco Regal #643 lubricating oil was used as a coolant to cut Pu parts.</p> <p><i>Lead and Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. The paint on the GBs may contain lead or other RCRA heavy metals. Leaded glass contains regulated quantities of barium and lead.</p> <p><i>SNM Holdup:</i> Several of the GBs contain significant Pu holdup.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. Several of the GBs have less fixed contamination on the exterior; they are individually marked. The optical comparator may be contaminated with U-235.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals: Oil</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	Beryllium	PPE CBDPP	TRU, TRM, LLW, LLM

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7	<p>TANK SET - Tanks 1103 (RCRA Unit 95.006), 1104 (RCRA Unit 95.007), 1106 (RCRA Unit 95.008) and associated ancillary equipment in Room 131</p> <p><i>Beryllium:</i> There is the possibility that liquids stored in the tank may be Be contaminated from Building 707 operations.</p> <p><i>Chemicals:</i> Carbon tetrachloride and Freon TF (1,1,2-trichloro-1,2,2-trifluoroethane) were used as solvents in some of the GBs. Lubricating oils was used as a coolant to cut Pu parts. In the 1970s perchloroethylene was used in place of carbon tetrachloride in certain operations.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the tanks might contain lead & other heavy metals. Based on historical analysis, there are detectable levels of barium, chromium and lead in the sludge.</p> <p><i>SNM Holdup:</i> The tanks have significant Pu holdup. High hold-up levels will be reduced to below safeguards termination limits during deactivation activities (ring and sludge removal).</p> <p><i>Radiological Contamination:</i> The tanks are assumed to be externally contaminated with Pu since they are in contamination control houses.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Liquids</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ALARA Principles</p>	TRM
8	<p>ROOM SET - Rooms 120, 130B, 131 (RCRA Unit 90.49), 131A, and Dock 1</p> <p><i>Chemicals:</i> Carbon Tetrachloride and Freon TF (1,1,2-trichloro-1,2,2-trifluoroethane) were used as solvents in the GBs located in Room 134E. Lubricating oil was used as a coolant to cut Pu parts.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead & other heavy metals. Printed circuit boards in the control equipment will be handled as RCRA waste due to lead in the solder. The incandescent and fluorescent lights may contain lead and mercury, respectively.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>		None	PPE	LLW, LLM

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9	<p>ROOM SET - Room 134E</p> <p><i>Chemicals:</i> Carbon tetrachloride and Freon TF were used as solvents in the GBs. Lubricating oil was used as a coolant to cut Pu parts.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead & other heavy metals. The gloveport covers and aprons in the cabinet contain lead. Printed circuit boards in control equipment will be handled as RCRA waste due to the lead in solder. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. Any paint analyzed for lead & other heavy metals will be analyzed for PCBs.</p> <p><i>Radiological Contamination:</i> There are several High Contamination Areas in GBs; the contamination is mainly in the form of Pu-contaminated oil. It is assumed that the fixed contamination under paint on the floors is the same as the contamination levels detected after the 1969 fire (i.e., $>10^6$ cpm/cm²).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<i>Radiological Surveys</i>	High radiological contamination areas	PPE Radiological Controls/ ALARA Principles	LLW, LLM
10	<p>GLOVEBOX SET - Room 134E, GBs 505, 509, 751, 752, 624 and Associated M-Line & North/South D-Line (including Mixed Residue Tank V-752)</p> <p><i>Chemicals:</i> Carbon tetrachloride, 1,1,1-trichloroethane and Freon TF were used as solvents in these GBs. Texaco Regal #643 lubricating oil was used as a coolant to cut Pu parts.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. The paint on the GBs may contain lead or other heavy metals.</p> <p><i>SNM Holdup:</i> GB 752 contains significant Pu holdup that will be removed prior to decommissioning.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated to $>10^6$ dpm Pu on the inner surfaces.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	PPE Radiological Controls/ ALARA Principles	TRU, TRM, LLW, LLM

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11	<p>GLOVEBOX SET - Room 134E, GBs 746, 747, 748, 749, and Associated M-Lines, (including Tank T-7 [RCRA Unit 95.014] and Mixed Residue Tanks V-746, V-747, V-748, & V-749)</p> <p><i>Chemicals:</i> Carbon Tetrachloride and Freon TF were used as solvents in these GBs. Texaco Regal #643 lubricating oil was used as a coolant to cut Pu parts.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. Leaded glass on the GB contains regulated quantities of barium and lead. The paint on the GBs may contain lead and other heavy metals.</p> <p><i>SNM Holdup:</i> GB746 contains significant Pu holdup; several of the remaining GBs contain measurable Pu holdup. GBs 746, 748, and 749 contain less than 15 grams uranium (U) holdup each.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surface. Several of the GBs have less fixed contamination on the exterior.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	<p>PPE</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>
12	<p>ROOM SET - Rooms 401, 402, 402A, 403, 404, 405, 406, 407, 409, 410, and 411</p> <p><i>Asbestos:</i> Rooms 495 and 410 have tile floors that may contain asbestos. There may be floor tile is under the carpet in Room 408 that may contain asbestos.</p> <p><i>Beryllium:</i> Based on the type of work performed in Room 408, Be is likely to be present. Be contamination has been detected in Room 401.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> PCBs may be in fluorescent light ballasts. Any paint sampled for lead or other heavy metals will be sampled for PCBs.</p> <p><i>Radiological Contamination:</i> There is fixed contamination in Rooms 402, 402A and 411 beneath the paint on the floor and original walls as a result of the 1969 fire. Floor contamination levels after the fire were up to 10⁶ cpm.</p>	<p><u>Deactivation:</u> Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>Radiological Controls/ ALARA Principles CBDPP</p>	<p>LLW, LLM, SAN, HAZ</p>

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13	<p>ROOM SET - Rooms 416, 416B, 417, 418, 419, 420, 429, 431, 431A, and 431B</p> <p><i>Asbestos:</i> There are floor tiles in Room 419 that may contain asbestos.</p> <p><i>Beryllium:</i> A grit blaster for Be parts was operated in Room 416 in the 1960s. R&D welding was performed in Room 416 in the same time period. Be contamination has been detected in Room 416.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p>	Beryllium	<p>PPE</p> <p>BCDDP</p>	LLW

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14	<p>ROOM/EQUIPMENT SET - Room 415 and associated GBs 201 through 205, 207 through 214, and 216 through 222</p> <p><i>Beryllium:</i> R&D welding was performed within Room 416 in the 1960s.</p> <p><i>Chemicals:</i> 1,1,1-Trichloroethane was used to clean specimens and wet the grit for polishing within the GBs. Ethanol was also used to clean specimens. A kerosene/diamond paste mixture was used in the polishers. Inorganic chemicals used in the GBs include electrolytic solution, oxalic acid and sodium hydride.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. The incandescent and fluorescent lights can contain lead and mercury, respectively.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. Any paint analyzed for lead & other heavy metals will be analyzed for PCBs.</p> <p><i>SNM Holdup:</i> To be determined.</p> <p><i>Radioisotope Sources:</i> The sources from the alphamet monitors in Room 415 will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated $>10^6$ dpm Pu on the inner surface. There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., $250 - 10^6$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>
15	<p>ROOM SET - Room 416A (Vault)</p> <p><i>Beryllium:</i> Be parts were stored on carts. R&D welding was performed in the 1960s. Be may have been welded or brazed in the equipment located in this room.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and wall may contain lead and other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., $10^5 - 10^6$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>

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16	<p>ROOM SET - Rooms 426, 427, 427A, and 428</p> <p><i>Beryllium:</i> Be has been detected in the hood above the washing machine. There are no records to indicate the source of Be contamination.</p> <p><i>Chemicals:</i> Soaps, detergent, and bleach were used within Rooms 426, 427 and 428.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., 10^5 - 10^6 cpm). The drains from the process sinks are assumed to be contaminated based on their usage.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	Beryllium	PPE CBDPP	LLW. LLM
17	<p>GLOVEBOX SET - Room 430, GB 481</p> <p><i>Chemicals:</i> A catalyst column is filled with palladium metal that is mounted to the Superdry facility wall.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. The paint on the GBs may contain lead or other RCRA heavy metals. Leaded glass on the GBs contains regulated quantities of barium and lead.</p> <p><i>Radiological:</i> Since the GB was never used, there is no contamination inside the GB. However, since the outside of the GB is painted, the GB may not be free released.</p>	<p><u>Deactivation:</u> Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<i>Radiological Surveys</i>	None	PPE Radiological Controls/ ALARA Principles	LLW, LLM

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18	<p>GLOVEBOX SET - Room 430, GBs 360, 361, 362, 363, 364, 367, 368, 369, 370, 371, 372, 373, 465, and associated G2-Line</p> <p><i>Chemicals:</i> Carbon tetrachloride and Freon TF were used as solvents in these GBs.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. The paint on the GBs may contain lead or other RCRA heavy metals. Leaded glass on the GBs contains regulated quantities of barium and lead.</p> <p><i>PCBs:</i> PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> GB 362 contains Pu holdup. No measurable U holdup has been detected to date. There are other GBs in this SET where holdup is not yet determined.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated $>10^4$ dpm Pu on the inner surfaces. Several of the GBs have less fixed contamination on the exterior; they are individually marked.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	PPE Radiological Controls/ ALARA Principles	TRU, TRM, LLW, LLM
19	<p>ROOM SET - Room 154A</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire ($10^5 - 10^6$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<i>Radiological Surveys</i>	High levels of radiological contamination	PPE Radiological Controls/ ALARA Principles	LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
20	<p>GLOVEBOX SET - Room 430, GBs 401, 402, Hood Area, and Room 424</p> <p><i>Beryllium:</i> Be was machined in GBs 401 and 402. Be salts were handled in the hoods in Room 424. Surveys confirmed the presence of Be in these areas.</p> <p><i>Chemicals:</i> 1,1,1-trichloroethane was used on wipes within the GBs. Oil from the vacuum pumps will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> Not determined. The two lathe B-boxes will be scanned for holdup.</p> <p><i>Radiological Sources:</i> There are two registered sources in Room 424. These sources will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., >10⁵ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
21	<p>GLOVEBOX SET - Room 430, GBs 403, 404, 405, 408, 409, 413, 426, 427, 450, and associated A-Line</p> <p><i>Beryllium:</i> Be was handled in GB427.</p> <p><i>Chemicals:</i> 1,1,1-trichloroethane was used on wipes and inside the ultrasonic cleaner/vapor degreaser within the GBs. Oil from the vacuum pumps will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> It has not been determined if there is holdup in the GBs.</p> <p><i>Radiological Sources:</i> The sources in the alphanet monitors will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. Some of the GBs may be internally contaminated with enriched U.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/repackage classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility system Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>
22	<p>GLOVEBOX SET - Room 430, GBs 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 451, 452, 454, 456, 457, 458, 459, 462, 464 and associated A-Line</p> <p><i>Beryllium:</i> Be was handled in GBs 448, 451, 451 and 454.</p> <p><i>Chemicals:</i> 1,1,1-trichloroethane was used on wipes and inside the ultrasonic cleaner/vapor degreaser within the GBs. Oil from the vacuum pumps will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> It has not yet been determined if these GBs contain holdup.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. Some of the GBs may be internally contaminated with enriched and depleted U.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
23	<p>GLOVEBOX SET - Room 430, GB 515, associated R-Line, and GBs 318, 320, 321, 323, 324, 327, 328, 329, 330, and 331</p> <p><i>Chemicals:</i> Carbon tetrachloride, 1,1,1-trichloroethane and Freon TF were used on wipes in the GBs.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. There are lead counterweights on the equipment in GB 318. The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> It has not yet been determined if these GBs contain holdup.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated $>10^6$ dpm Pu on the inner surfaces.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	PPE Radiological Controls/ ALARA Principles	TRU, TRM, LLW, LLW
24	<p>GLOVEBOX SET - Room 430, GBs 756, 758, 759, 760, 761, 762, 763, 764, and associated M-Line</p> <p><i>Chemicals:</i> Carbon tetrachloride and Freon TF were used on wipes within the GBs.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. There are lead counterweights on the equipment in GB 758. The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> It has not yet been determined if these GBs contain holdup.</p> <p><i>Radiological Sources:</i> The sources in the alphanet monitors will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> The GBs (except GB 764) are expected to be contaminated $>10^6$ dpm Pu on the inner surface. The outer surfaces of the GBs are contaminated up to 250,000 dpm. GB 764 was never used and has little or no radioactive contamination.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	PPE Radiological Controls/ ALARA Principles	TRU, TRM, LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
25	<p>ROOM SET - Room 430, including RCRA Unit 777.1 (i.e., Areas 2 & 3)</p> <p><i>Asbestos:</i> There is insulation on small tank(s) and tritium dryers in this SET. This insulation will be managed as asbestos waste.</p> <p><i>Beryllium:</i> Be was machined in GBs 401 and 402 in Room 430. Be salts were handled in the hoods in Room 424, which is on the southern border of this SET. Previous surveys have confirmed the presence of Be contamination.</p> <p><i>Chemicals:</i> Water in Tank RT-1 and oil in the vacuum pumps will be drained during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead metal on the drum shields and leaded gloves stored in this room. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radioactive Sources:</i> Sources on combo monitors will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> Gettering system tank RT-1 is marked as Pu and tritium contaminated.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>Tritium</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LW, LLM</p>
26	<p>TANK SET - Room 430, Tanks T-1 (RCRA Unit 95.015), T-2 (RCRA Unit 95.016), and FL-1</p> <p><i>Beryllium:</i> Be metal was not routinely cleaned in ultrasonic cleaners after the late 1960s -early 1970s. Prior to this period, an ultrasonic cleaner for grit blasted Be parts operated in Room 418. It is not clear if the SET 26 tanks were installed before or after the ultrasonic cleaner was removed from Room 418.</p> <p><i>Chemicals:</i> 1,1,1-trichloroethane was stored in the tanks. Prior to 1974, trichloroethylene was used in place of 1,1,1-trichloroethane.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the tanks and filter GB may contain lead or other RCRA heavy metals.</p> <p><i>PCBs:</i> PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> The tanks were scanned in 1990 and 1994 for holdup. The holdup is less than 50 grams per tank. Holdup levels will be reduced during deactivation.</p> <p><i>Radiological Contamination:</i> The tanks are assumed to be externally contaminated with Pu since they are in contamination control houses.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p>	<p>PPE</p> <p>CBDPP</p>	<p>TRU, TRM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
27	<p>ROOM/EQUIPMENT SET - Rooms 432, 432A, 432B, 432C (RCRA Unit 777.1), 432D, 440, and GB 461</p> <p><i>Asbestos:</i> A small oven in this SET is insulated with Transite.</p> <p><i>Beryllium:</i> Be parts were stored, cleaned and assembled in the Superdry facility.</p> <p><i>Chemicals:</i> 1,1,1-trichloroethane was used in the ultrasonic cleaners in Room 440. Prior to 1974, trichloroethylene was used in place of 1,1,1-trichloroethane. The oil in the machinery will be removed during deactivation. A palladium metal filled catalyst column for SET 17 is attached to the north exterior wall of the SET.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead metal stored in the room. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> It is not yet determined if the lathes in Room 432D and the downdraft table in Room 432B contain SNM holdup.</p> <p><i>Radiological Contamination:</i> There are used tritium dryers with unknown levels of contamination. Depleted and enriched U contamination is possible in this SET. Room 432B and the lathe in Room 432D are posted as high contamination areas. The posted contamination within Room 432B is 500,000 cpm.</p>	<p>Deactivation: Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p>Decommissioning: Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>Tritium</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, LLW, LLM</p>
28	<p>ROOM SET - Room 433</p> <p><i>Beryllium:</i> Be parts were handled in this area in the 1960s and may have been transported through the room after the 1960s. Be contamination has been found near SET 28 in SET 20.</p> <p><i>Chemicals:</i> The flammable cabinets contain two drums of epoxy and catalyst. These drums will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is a leaded glove and a box of leaded glass stored in the room. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> A transformer in the SET is marked as having 50,000 dpm fixed contamination.</p>	<p>Deactivation: Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p>Decommissioning: Drain/isolate/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p>	<p>PPE</p> <p>CBDPP</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
29	<p>GLOVEBOX SET - Room 437, GB A1, A2 and A3, and associated conveyor lines</p> <p><i>Beryllium:</i> Leak detector parts stored in the room have manufacturer warnings regarding Be in the ceramic rings.</p> <p><i>Chemicals:</i> 1,1,1-trichloroethane and Freon TF were use as solvents in these GBs. Containerized chemicals will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. Leaded GB covers, gloves, and an apron are stored in the cabinets. Leaded glass in the GB windows contains regulated quantities of barium and lead. The paint on the floors, walls and GBs may contain lead or other RCRA heavy metals.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> GBs A-1 and A-2 have been scanned for Pu holdup. While these GBs contain gram quantities of Pu, the holdup does not require remediation prior to decommissioning.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. The maximum fixed contamination on the exterior of the GBs is 100,000 dpm. An electrical cabinet in the room is marked as containing fixed contamination. There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., 10⁵ to 10⁶ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Radiological Surveys</i></p>	<p>High levels of radiological contamination</p>	<p>PPE Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>
30	<p>ROOM SET - Room 442</p> <p><i>Beryllium:</i> Be parts were x-rayed and stored in this area.</p> <p><i>Chemicals:</i> Freon gas will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead metal located in the room. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is no indication of radiological contamination in this room.(surveys).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i> <i>Radiological Surveys</i></p>	<p>Beryllium</p>	<p>PPE CBDDPP</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
31	<p>ROOM/EQUIPMENT SET - Room 443 (including RCRA Unit 777.1) and NDT Line</p> <p><i>Beryllium:</i> Be parts may have been stored on carts in Room 443.</p> <p><i>Chemicals:</i> A small cylinder of sulfur hexafluoride will be removed during deactivation. Any liquids (i.e., oil or water) in the x-ray unit or GBs will be drained. Carbon tetrachloride has been used in the GBs in the past.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead metal stored in the room and lead shielding within the x-ray unit. There is a thermometer on the X-ray unit that contains mercury. There is lead metal located in the room. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> Not yet determined. The GBs need to be scanned prior to packaging in waste containers, as required by the current criticality controls.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated $>10^6$ dpm Pu on the inner surfaces. There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., $>10^3$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
32	<p>ROOM SET - Room 436, 444, 446, 447, 448 (RCRA Unit 777.1), 449, and 450</p> <p><i>Asbestos:</i> Rooms 444 and 450 have suspended ceiling with that may be made of asbestos tile.</p> <p><i>Beryllium:</i> Be parts may have been radiographed or stored on carts in Rooms 448 or 449.</p> <p><i>Chemicals:</i> Any liquids (i.e., oil or water) in the x-ray unit, including hydraulics, will be drained. The water in the water walled storage positions and the batteries in Room 448 will be drained after the SNM is removed from the vault during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead metal stored in Rooms 447, 448, and 449. There is lead shielding within the cobalt sources in Room 449 and the can storage positions in Room 448. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radioactive Sources:</i> The Cobalt-60 and alpha met sources will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., $10^5 > 10^6$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
33	<p>ROOM/EQUIPMENT SET - Room 445 and GBs 494, 495, 499, 500, 501, and 502</p> <p><i>Asbestos:</i> A heating mantle will be managed as asbestos waste unless sampling or manufacturer information indicates the material is non-asbestos.</p> <p><i>Beryllium:</i> Be was welded in the PIGMA welder. Be metal is stored in the cabinet north of the PIGMA welder and in a desk near Room 458. Be parts may have been handled within the environmental test chamber and GBs.</p> <p><i>Chemicals:</i> Oil from the vacuum pumps and hydraulic units will be removed during deactivation. The refrigerant from an environmental test chamber will be removed prior to decommissioning. The can of magnesium oxide below GBs 494 and 494 will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding, leaded glass, leaded aprons, and leaded gloves stored in cabinets. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>SNM Holdup:</i> GBs 494 and 495 have been scanned for holdup. The holdup in these two GBs does not require remediation prior to GB removal. The other four GBs in the SET need to be scanned.</p> <p><i>Radiological Contamination:</i> The inside surfaces of the GBs are contaminated with $>10^6$ dpm. There is up to 10,000 dpm of fixed contamination on the exterior of the GBs. There is fixed contamination on a section of bagged ductwork, a downdraft vacuum, and room exhaust ducts. There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., $10^3 > 10^6$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
34	<p>ROOM/EQUIPMENT SET - Room 452 (including Mixed Residue Tank V-022) and Room 475, GBs 022, 027, 029, 034, 035, 522, 548 and associated H-Line</p> <p><i>Beryllium:</i> Pits with Be were disassembled within the inert system. Machining necessary to disassemble the pits would contaminate the inside of the GB with Be.</p> <p><i>Chemicals:</i> Oil from the vacuum pumps and hydraulic units will be removed during deactivation. The can of magnesium oxide in GB 034 will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding, leaded glass, and leaded gloves on the GBs. A mercoird switch contains mercury. The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> Not yet determined.</p> <p><i>Radiological Contamination:</i> The inside surfaces of the GBs are contaminated with >10⁶ dpm. There is up to 40,000 dpm of fixed contamination on the vacuum pumps and associated motors below the GBs. The contamination beneath the paint on the GBs cannot be measured due to the paint shielding the alpha particles.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM. LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
35	<p>GLOVEBOX SET - Room 452, GBs 026, 526, 524, 525, 526, 527, 528, 530, 532, 537, 538, 541, and associated H-Line</p> <p><i>Asbestos:</i> The insulation associated with the muffle furnace in GB 523 and the heating chamber in GB 528 may contain asbestos. Manufacturer information or sampling may be used to characterize the insulation.</p> <p><i>Beryllium:</i> Mixed Be/Pu chips were oxidized within the furnace in GB 523. Be parts may have been handled within the environmental test chamber and GBs.</p> <p><i>Chemicals:</i> Oil from the vacuum pumps and hydraulic units will be removed during deactivation. The refrigerant from the environmental test chamber will be removed prior to decommissioning. Containerized chemicals will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding, leaded glass, and leaded gloves on the GBs. There is a lead hammer in GB 537. The geometry tank in GB 524 is lined with cadmium. The parts processed in the GBs were made of or coated with a variety of unspecified metals. Any metal fragments or chips discovered in the GBs will be characterized. The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> Not yet determined.</p> <p><i>Radiological Contamination:</i> The inside surfaces of the GBs are contaminated with $>10^6$ dpm. The downdraft rooms have been surveyed as 1,000,000 dpm fixed + removable inside. There is up to 20,000 dpm fixed contamination on the exterior of the GBs. The contamination beneath the GB paint cannot be measured due to the paint shielding the alpha particles. The cylinders extending into the raschig ring filled pit beneath GB 528 are Pu contaminated. Depleted and enriched U contamination is possible in these GBs. Tritium releases occurred in GB 532 in the 1960s and 1970s. Parts exposed to radiation blasts at NTS were disassembled in the GBs. Residual activation or fission product contamination will need to be addressed.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p> <p>Tritium</p> <p>Activation products</p> <p>Fission products</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
36	<p>ROOM/EQUIPMENT SET - Room 452 (including Mixed Residue Tank V-543) and Room 475 with GBs 536, 544, and 543 and machining equipment</p> <p><i>Asbestos:</i> The high temperature gloves and heating mantles will be managed as asbestos waste unless sampling or manufacturer information indicates these are non-asbestos.</p> <p><i>Beryllium:</i> Be was machined in GB 543. Historical Be surveys confirm the presence of Be contamination near this GB. The argon system in the mezzanine is potentially contaminated internally with Be.</p> <p><i>Chemicals:</i> Oil from the vacuum pumps and hydraulic units will be removed during deactivation. The can of magnesium oxide will be removed during deactivation. The oxygen getter is identified as Dow Q1. This material needs to be characterized. The desiccant is a zeolite.</p> <p><i>Lead & Other Heavy Metals:</i> There are lead vise covers, lead bricks and lead hammers in the rooms. There is lead tape and leaded glove covers stored in the cabinets. Paint on walls and floors may contain lead and other heavy metals.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> The columns for the gettering material and desiccant will be scanned for holdup.</p> <p><i>Radiological Contamination:</i> There is up to 10,000 dpm of fixed contamination on the hoods, table, and room exhaust duct. In the early 1960s, a contamination incident from a coating machine dispersed Pu and gold contamination throughout Room 452. The contamination from this incident is in the range of the fire contamination.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
37	<p>ROOM SET - Rooms 453, 454, 460, and part of Room 445 (south end)</p> <p><i>Beryllium:</i> Be metal samples were found in Room 453. Be parts may have been handled within the testing equipment. Surface surveys will be performed prior to initiating decommissioning activities.</p> <p><i>Chemicals:</i> Oil from the compressors and hydraulic units will be removed during deactivation. The refrigerant from the environmental test chamber will be removed prior to decommissioning.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor, walls and accelerators may contain lead or other RCRA heavy metals. Fluorescent lights contain mercury; these lights will be managed as hazardous waste. The room thermostats may contain mercury. Some of the internal parts of the horizontal accelerator are cadmium plated.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination on the exterior of the horizontal accelerator including the sandbags. The contamination beneath the paint on the accelerator can not be measured due to the paint shielding the alpha particles. There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., 10^5 - $>10^6$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurements</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
38	<p>ROOM SET - Rooms 301, 302, 455, 456, 457, 458, and 481</p> <p><i>Asbestos:</i> The floor tile in Rooms 302 and 302 may contain asbestos.</p> <p><i>Beryllium:</i> The tool cutter in Room 461 is marked as Be contaminated. Be metal parts were handled in Rooms 455 and 457.</p> <p><i>Chemicals:</i> Oil in the equipment will be drained during deactivation. The containerized chemicals (salt, calcium sulfate) in Room 458 will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead glass in Room 457. There are printed circuit boards and a lead apron in Room 458. Lead scrap, lead security seals, and a lead-shielded cart are contained in this SET. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint. The switchgear will be inspected for PCB capacitors when it is removed. An obsolete power supply in Room 302 will be inspected for PCB fluid when it is removed.</p> <p><i>Radiological Contamination:</i> There is fixed contamination in and on the equipment in Rooms 302 (power supply, surface plate) and 455 (pumpdown table, hood). There is fixed contamination on bagged tools within cabinets in several of the rooms. There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., 10^3 - 10^6 cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Chemicals</i></p> <p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
39	<p>ROOM SET - Rooms 459 and 459A</p> <p><i>Beryllium:</i> Be metal parts may have been pressure tested in Room 459A.</p> <p><i>Chemicals:</i> Oil or other liquids in the equipment will be removed during deactivation. The container of water in Room 459 will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead metal and circuit boards in Room 459. There is a mercury switch in this SET. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent lights contain mercury; these lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint. The InductoTherm furnace contains capacitors filled with Pydraul dielectric fluid.</p> <p><i>Radiological Contamination:</i> There is 2,400 dpm fixed contamination on a room exhaust duct. Depleted U contamination is possible in the pressure test units. There is fixed contamination beneath the paint on the floor and the building walls from the 1969 fire. It is assumed that floor contamination levels are the same as those after the 1969 fire (i.e., 10^5 - 10^6 cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>
40	<p>ROOM SET - Room 462, "A" Vault</p> <p><i>Beryllium:</i> Be metal parts have been stored on carts or in shipping containers in Room 462.</p> <p><i>Chemicals:</i> Tubes of vacuum grease, sealant and containers of cleaning supplies will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead metal, leaded glass and leaded aprons stored in Room 462. There is lead shielding on the benelex wall. The paint on the floor and walls may contain lead or other RCRA heavy metals. The room thermostat may contain mercury. Fluorescent light fixtures contain mercury and will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> The SNM in the vault is stored with containment (i.e. metal can, plastic bags, within a pit) at all times. Therefore, holdup is not an issue.</p> <p><i>Radiological Contamination:</i> The map of floor contamination levels after the 1969 fire indicates contamination from the fire did not spread to the vault.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p>	<p>PPE</p> <p>CBDPP</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
41	<p>ROOM/EQUIPMENT SET - Room 463 and GBs A4, A5, A6, A7, A8, A9, and A11</p> <p><i>Beryllium:</i> Leak detector parts stored in the room have manufacturer warning regarding Be in the ceramic rings. There are Be metal discs stored in one of the cabinets. The north end of the room was once part of Room 464, which contained furnaces to "bake out" Be parts.</p> <p><i>Chemicals:</i> Ethanol and Freon TF were used as solvents in these GBs. All liquids will be drained prior to decommissioning activities. Containerized chemicals will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on GBs. Leaded GB covers gloves, printed circuit boards with lead solder, and leaded aprons are stored in cabinets. Leaded glass on the GBs contains regulated quantities of barium and lead. The vacuum pump connected to GB A-7 is assumed to contain mercury until the pump liquid can be verified to be mercury or oil.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> GBs A-4, -5 and -11 have been scanned for Pu holdup. The Pu in these GBs does not require remediation prior to decommissioning. While enriched U was handled in these Gabs, measurable U holdup has not been detected to date.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. The maximum fixed contamination on the exterior of the GBs is 600,000 dpm. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., 10³ - 10⁴ cpm). An electrical cabinet in the room is marked as containing fixed contamination.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ALARA</p>	<p>TRU, TRM, LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
42	<p>ROOM SET - Rooms 464, 477, 477A, 463A, and 463B</p> <p><i>Asbestos:</i> The insulation on the water pipes in Room 463B is visually identified as fiberglass insulation (confirm as non-asbestos). The floor tile in Rooms 477 and 477A may contain asbestos.</p> <p><i>Beryllium:</i> Be parts were baked to remove moisture in Room 464 during the 1960s.</p> <p><i>Chemicals:</i> Water from process tank in Room 463B will be drained during deactivation. The refrigerant and oil from the air conditioner in Room 464 will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Sources:</i> The alphanet sources in Room 463A will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $10^3 - 10^4$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Drain/isolate/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Liquids</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>
43	<p>ROOM SET - Rooms 465, 465A, and the north end of Room 445</p> <p><i>Beryllium:</i> Be parts were stored in packages in Room 465. At least one pressure cooker in Room 465 is marked as internally contaminated with Be. There is Be contaminated equipment in Room 445 in SET 33, which is south of SET 43.</p> <p><i>Chemicals:</i> Containerized chemicals (Bonami, 1,1,1-trichloroethane, oil, Oakite, water) in and near the two hoods in Room 445 will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There are printed circuit boards with lead solder, lead-taped vials, lead bricks, and leaded aprons in this SET. The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent light fixtures contain mercury and will be managed as RCRA hazardous waste. Thermostats in the room may contain mercury.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radioactive Sources:</i> The combo source will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> Fixed contamination exists within the used pressure cookers in Room 465A. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $10^3 - >10^6$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
44	<p>ROOM SET - Rooms 466, 467, 468, 469, 470, 471, 472, 474, and 474D</p> <p><i>Beryllium:</i> Be parts were moved on carts through the hallway and radiographed in Room 471. Be windows were used to filter out low energy X-rays on the low keV in Room 471.</p> <p><i>Chemicals:</i> Any liquids (i.e. oil or water) will be drained from equipment during deactivation. Containers of oil and Freon will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> Pieces of lead metal are stored in Room 471. There is lead shielding on the sources and in the door to Room 471. There are leaded gloves and lead shielding on the GB in Room 472. The radiography film in Room 474D may contain regulated quantities of heavy metals such as cadmium based on information from Kodak. Equipment that contacted the fixer solution will be contaminated with silver. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights may contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> It has not yet been determined if the GB and tank in Room 472 contain holdup.</p> <p><i>Radioactive Sources:</i> The sources in Room 471 will be removed during deactivation, including the depleted U pig used for shielding.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., 10³ - 10⁵ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
45	<p>ROOM SET - Rooms 473 and 476</p> <p><i>Beryllium:</i> Be parts may have been radiographed and stored on carts in Room 473.</p> <p><i>Chemicals:</i> Sulfur hexafluoride is an insulating gas within the x-ray device. Any liquids (i.e., oil or water) in the x-ray unit will be drained.</p> <p><i>Lead & Other Heavy Metals:</i> There are leaded gloves and pieces of lead metal stored in the room. The door to Room 473 and the storage rack doors in Room 476 contain lead metal. There is lead shielding within the x-ray unit and on the floor. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radioactive Sources:</i> The gamma alarm and radiography sources will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> Fixed contamination exists within the x-ray unit. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $10^3 - 10^4$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	Beryllium	PPE CBDPP	LLW, LLM
46	<p>ROOM SET - Room 478, "B" Vault</p> <p><i>Beryllium:</i> Be metal parts have been stored on carts or shelves in Room 478.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $10^3 - 10^4$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	Beryllium	PPE CBDPP	LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
47	<p>ROOM SET - Rooms 479, 481, 482, 483, 483A, and 483B (including RCRA Unit 777.1 [i.e., Rm. 483, Area 8])</p> <p><i>Beryllium:</i> Be parts are stored in Room 483A. Be parts may have been stored or moved through other rooms in this SET.</p> <p><i>Chemicals:</i> Containerized chemicals near the forklift charging station (water, sodium bicarbonate, and magnesium oxide) will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding from shipping containers and lead bricks stored in Room 482. Leaded aprons are stored in Room 481. Room thermostats may contain mercury. The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radioactive Sources:</i> The source on the combo monitor in Room 481 will be removed during deactivation.</p> <p><i>Radiological Contamination:</i> The depleted U parts stored in Room 483A will be removed during deactivation. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $10^3 - 10^5$ cpm).</p>	<p>Deactivation: Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p>Decommissioning: Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p>	<p>PPE</p> <p>CBDPP</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
48	<p>EQUIPMENT SET - Kathabar System (except inside plenums)</p> <p><i>Asbestos:</i> The insulation on the Kathabar K-1 is listed in the asbestos inventory. Insulation on the remaining units will be managed as asbestos.</p> <p><i>Chemicals:</i> The brine in the units will not be drained until decommissioning because cooling of the air is needed to keep the building temperatures comfortable.</p> <p><i>Lead & Other Heavy Metals:</i> Kathabar sludge has been analyzed and shown to contain regulated amounts of cadmium, chromium and lead.</p> <p><i>Radiological Contamination:</i> There is no known radiological contamination of the Kathabar units except for the GBDA Kathabar (SET 72). Since the equipment is not completely surveyable, the equipment will be disposed of as radiologically contaminated.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p>	<p>Cadmium</p> <p>Chromium</p>	<p>PPE</p>	<p>LL.W, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
49	<p>ROOM SET - Modulab</p> <p><i>Asbestos:</i> The gloves used for handling thermally hot samples will be managed as asbestos waste.</p> <p><i>Beryllium:</i> The lapping machine in the Modulab is marked as Be contaminated. There is a portion of a Be ingot and other pieces of Be stored in a cabinet. Be has been detected on smears taken from the Modulab.</p> <p><i>Chemicals:</i> The column of dierite (calcium sulfate) will be removed during deactivation. Ethanol and varsol were used as solvents in the lapping process. Oil from the hydraulic systems and vacuum pumps will be drained during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> Lead metal is located in cabinet drawers.</p> <p><i>PCBs:</i> The InductoTherm furnace contains capacitors filled with Pydraul dielectric fluid. A PCB determination of ballasts will be made when the ballasts are removed.</p> <p><i>Radiological Contamination:</i> There are depleted U metal samples in the Modulab. Some of the equipment may be contaminated with depleted U. According to OSAs for the processes, Pu was no processed in the Modulab. Based on the contamination map form the 1969 fire, the Modulab was not internally contaminated.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p>	<p>PPE CBDPP</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
50	<p>ROOM SET - Rooms 101, 102, 103, 103A, 104, 104A, 104B, 104C, 104E, 106A, 106D, 107, 107D, 107E, 108, 108A, 108B, 108C, 109, 109A, 109C, 109D, 110, 112, 112A, 112B, 113, 113B, 113C, 114, 116B, 117, 119, 120, 121, 129, 140, and 149</p> <p><i>Asbestos:</i> May be present in floor tiles.</p> <p><i>Chemicals:</i> Cleaning supplies in this SET will be removed prior to decommissioning.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radioactive Sources:</i> Sources will be removed prior to decommissioning.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint and floor tile. It is assumed that contamination levels are the same as those after the 1969 fire (i.e., 250 – 10⁶ cpm). The offices were extensively decontaminated after the fire; however, contamination has been discovered when floor tile has been removed. Small amounts of contamination have been discovered in a light fixture in Room 129.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Radiological Surveys</i></p>	<p>High levels of radiological contamination</p>	<p>PPE</p> <p>Radiological Controls/ALARA Principles</p>	<p>LI.W, SAN</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
51.	<p>GLOVEBOX SET - GBs in Room 154A: 046, 494 (cold box adjacent to GB 495), 495, 496, 499, 501, 502, 503, 505, 506, and 507</p> <p><i>Chemicals:</i> Freon refrigerant was used to cool the furnaces. Water from the water wall shielding and oil from the vacuum pumps will be drained during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding and leaded gloves on the GBs. Leaded glass contains regulated quantities of lead and barium. The paint on the floor and walls may contain lead or other RCRA heavy metals.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> GBs 495, 496, 501 and 502 contain significant Pu holdup, which will be remediated to safeguards termination limits prior to decommissioning. No measurable U holdup has been detected.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. The fixed contamination on the exterior of the GBs ranges from 10,000 dpm to 1,000,000 dpm. Americium contamination in GBs 046, 499, 501, 502 and 503 contain greater than 1000 ppm Am in the Pu.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/dispose of fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Chemicals</i></p> <p><i>SNM Holdup easement</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	<p>PPE</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>
52	<p>EQUIPMENT SET - Tanks T-360 (RCRA Unit 94.007) and T-370 (RCRA Unit 94.008), plus GBs 361 and 371 and Bermed Area</p> <p><i>Beryllium:</i> There is no record of Be processing in this area. Surface surveys will be performed to verify there is no contamination.</p> <p><i>Chemicals:</i> Any liquids in the tanks will be drained during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There are leaded gloves on the filter GBs.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed.</p> <p><i>SNM Holdup:</i> Not yet determined for the tanks and GBs. The tanks and the GBs will need to be "gram estimated" prior to removal to comply with the current criticality control requirements for waste boxes.</p> <p><i>Radiological Contamination:</i> The tanks and GBs may or may not be contaminated inside. Radiological surveys are needed.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	None	PPE	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
53	<p>ROOM SET - Room 152 Vault (RCRA Unit 90.85) <i>Beryllium:</i> The criticality limits did not allow the storage of Be. Surface surveys will be performed prior to initiating decommissioning to confirm there is no Be contamination.</p> <p><i>Chemicals:</i> The water in the water walled storage will be drained during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding on the can storage positions in Room 448. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $>10^6$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	PPE Radiological Controls/ ALARA Principles	LLW, LLM
54	<p>ROOM SET - Rooms 153, 154 (RCRA Unit 776.1), 154B, 155, and 161B <i>Asbestos:</i> The insulation on the condensate tank will be managed as asbestos waste unless sample results indicate the insulation is non-asbestos.</p> <p><i>Beryllium:</i> Pits with Be parts were processed in the autoclaves in Room 153 during the 1960s.</p> <p><i>Chemicals:</i> There are lead acid batteries and tubes of adhesive that will be removed during deactivation. The tanks and vacuum pumps will be drained during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> Printed circuit boards contain lead. The room thermostat may contain mercury. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> The SNM processed in the autoclaves was self-contained; therefore, holdup is not possible in the autoclave pit.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $10^3 - >10^4$ cpm) in Room 153 and $>10^6$ cpm in other rooms in this SET.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/dispose of fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	Beryllium High levels of radiological contamination	PPE CBDPP Radiological Controls/ ALARA Principles	LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
55	<p>EQUIPMENT SET - Tanks SRV3 (RCRA Unit 94.001), SRV4 (RCRA Unit 94.002), SRV5 (RCRA Unit 94.003), and GB0001</p> <p><i>Beryllium:</i> Be contaminated metal may have been cleaned in the SRV. This possible Be contamination is not a safety concern due to the suspension in water and the controls necessary for radiological contamination.</p> <p><i>Chemicals:</i> Any liquids in the tanks will be drained during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There are leaded gloves on the filter GB. Lead from the leaded glove washing (ball mill) is assumed to be present in the water within the tanks. The paint on the tanks and filter GBs may contain lead or other RCRA heavy metals.</p> <p><i>PCBs:</i> PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> The tanks were scanned for Pu holdup in the early 1990s. The maximum holdup in any of the tanks is about 200 grams. The tanks will be rescanned for holdup prior to and after the raschig rings are removed.</p> <p><i>Radiological Contamination:</i> The highest fixed contamination marked on the equipment exterior is 100,000 dpm. It is assumed that the inside surface of the tanks is contaminated with $>10^6$ dpm. The tanks were brought to the building for the 1969 fire cleanup; therefore, the tanks were not contaminated by the fire.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	<p>PPE</p> <p>Radiological Controls/ALARA Principles</p>	TRU, TRM
56	<p>ROOM SET - Rooms 161 and 161A</p> <p><i>Beryllium:</i> Surface surveys will be performed prior to decommissioning activities.</p> <p><i>Chemicals:</i> There is a container of Molykote and vacuum grease in Room 161. These chemicals and any liquid in the press will be drained during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> Paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> The press will be scanned for holdup prior to dismantlement to comply with the criticality control requirements for the waste boxes.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $>10^6$ cpm). There is contamination above the paint in Room 161A. There is 10,000 dpm contamination on the console in Room 161A. The electrical boxes are marked with internal contamination warnings.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria Close subsurface volumes</p>	<p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	<p>PPE</p> <p>Radiological Controls/ALARA Principles</p>	LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
57	<p>ROOM SET - Rooms 156, 159 (RCRA Unit 776.1), 159A, 159B, 159C, and 160 (the enclosed portion of Dock 5)</p> <p><i>Asbestos:</i> The insulation in the furnaces will be managed as asbestos unless sample results or manufacturer information indicate the insulation is non-asbestos.</p> <p><i>Chemicals:</i> Acids, metals, and organics were used in the processes that were in this area. The hood exhaust and furnaces may be contaminated with residual metals from the coating material.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead brick in Room 156. The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste. Thermostats may contain mercury.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $10^3 - 10^5$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	<p>PPE</p> <p>Radiological Controls/ALARA Principles</p>	LLW, LLM
58	<p>ROOM SET - Rooms 157 and 158</p> <p><i>Asbestos:</i> The tile floor in Room 157 may contain asbestos.</p> <p><i>Beryllium:</i> There is no record of Be storage or processing in this area. Surface surveys will be performed prior to initiating decommissioning to confirm that there is no Be contamination in this area.</p> <p><i>Chemicals:</i> The paint in the flammable cabinet, refrigerant in the air conditioner, Varsol, and oil will be removed prior to decommissioning.</p> <p><i>Lead & Other Heavy Metals:</i> There are lead sheets, bricks, and tape in this set. Thermostats may contain mercury. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> A nitrogen cylinder is marked as having fixed contamination. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., $10^3 - 10^5$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	<p>PPE</p> <p>Radiological Controls/ALARA Principles</p>	LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
59	<p>ROOM SET - Rooms 002, 138, 139, 144, and 147; room south of Room 144; and tunnel to Building 771</p> <p><i>Asbestos:</i> The insulation in Room 144 will be managed as asbestos waste unless sample results indicate that the insulation is non-asbestos.</p> <p><i>Chemicals:</i> The oil in the vacuum pump will be drained during deactivation. The hydraulic oil for the elevator will not be drained until the elevator is removed from service. If the portable tank contains any liquid, the liquid will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There are lead aprons in the SET. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> The portable tank is marked as having 15,000 dpm fixed contamination. The baler and elevator shaft are internally contaminated with Pu. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor levels are the same as those after the 1969 fire (i.e., $10^5 - 10^6$ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	<p>High levels of radiological contamination</p>	<p>High levels of radiological contamination</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
60	<p>ROOM/EQUIPMENT SET - Room 146, including Ball Mill Washer (RCRA Unit 94.009), Collection Pan (RCRA Unit 94.010), and Annular Tank (RCRA Unit 94.011), plus Rooms 146A, 146B, and 146C, including SRV Treatment and Storage Units (RCRA Unit 61)</p> <p><i>Asbestos:</i> There is no insulation, floor tile or fire blankets visible on the 1989 photographs of the vault interior. An updated visual characterization is needed to see if any insulation waste has been placed in the vault since the photographs were taken.</p> <p><i>Beryllium:</i> Be contaminated metal may have been sized reduced in the SRV.</p> <p><i>Chemicals:</i> The oil in the equipment and any residual liquid in the ball mill collection ring or piping will be drained prior to decommissioning. A supplied air entry of the SRV is needed to determine if any containerized chemicals exist.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding on the east side of the vault. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> No PCB items are visible on the 1989 photographs of the area. A visual inspection is needed to determine if PCB ballasts are stored in the vault. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> Not yet determined. The wash table and ball mill need to be scanned for SNM holdup. The scans will be performed in FY99 and FY00.</p> <p><i>Radiological Contamination:</i> The SRV is expected to be contaminated >10⁶ dpm Pu on the inner surfaces. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., >10⁶ cpm).</p>	<p>Deactivation: Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p>Decommissioning: Drain/isolate fluid systems Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>
61	<p>ROOM/EQUIPMENT SET - Room 135, FBI Pilot Unit, including Tanks T-1 & T-2 (RCRA Unit 49.02)</p> <p><i>Asbestos:</i> Insulation on the equipment will be managed as asbestos waste unless sample results indicate that the insulation is nonasbestos.</p> <p><i>Chemicals:</i> The ALARA paint and other containerized chemicals will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There are leaded gloves on the canyon wall. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint. Though PCBs were incinerated in the FBI, the ash is not Toxic Substance Control Act (TSCA) Regulated.</p> <p><i>Radiological Contamination:</i> The FBI is internally contaminated with Pu. The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., 10⁵ - >10⁶ cpm).</p>	<p>Deactivation: Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p>Decommissioning: Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria Remove/dispose of specified constituents</p>	<p><i>Radiological Surveys</i></p>	<p>High levels of radiological contamination</p>	<p>High levels of radiological contamination</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
60	<p>ROOM/EQUIPMENT SET - Room 146, including Ball Mill Washer (RCRA Unit 94.009), Collection Pan (RCRA Unit 94.010), and Annular Tank (RCRA Unit 94.011), plus Rooms 146A, 146B, and 146C, including SRV Treatment and Storage Units (RCRA Unit 61)</p> <p><i>Asbestos:</i> There is no insulation, floor tile or fire blankets visible on the 1989 photographs of the vault interior. An updated visual characterization is needed to see if any insulation waste has been placed in the vault since the photographs were taken.</p> <p><i>Beryllium:</i> Be contaminated metal may have been sized reduced in the SRV.</p> <p><i>Chemicals:</i> The oil in the equipment and any residual liquid in the ball mill collection ring or piping will be drained prior to decommissioning. A supplied air entry of the SRV is needed to determine if any containerized chemicals exist.</p> <p><i>Lead & Other Heavy Metals:</i> There is lead shielding on the east side of the vault. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> No PCB items are visible on the 1989 photographs of the area. A visual inspection is needed to determine if PCB ballasts are stored in the vault. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> Not yet determined. The wash table and ball mill need to be scanned for SNM holdup. The scans will be performed in FY99 and FY00.</p> <p><i>Radiological Contamination:</i> The SRV is expected to be contaminated >10⁶ dpm Pu on the inner surfaces. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., >10⁶ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>
61	<p>ROOM/EQUIPMENT SET - Room 135, FBI Pilot Unit, including Tanks T-1 & T-2 (RCRA Unit 49.02)</p> <p><i>Asbestos:</i> Insulation on the equipment will be managed as asbestos waste unless sample results indicate that the insulation is nonasbestos.</p> <p><i>Chemicals:</i> The ALARA paint and other containerized chemicals will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There are leaded gloves on the canyon wall. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint. Though PCBs were incinerated in the FBI, the ash is not Toxic Substance Control Act (TSCA) Regulated.</p> <p><i>Radiological Contamination:</i> The FBI is internally contaminated with Pu. The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., 10⁵ - >10⁶ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria Remove/dispose of specified constituents</p>	<p><i>Radiological Surveys</i></p>	<p>High levels of radiological contamination</p>	<p>High levels of radiological contamination</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
62	<p>ROOM/EQUIPMENT SET - Tanks FBI-1 & FBI-2, and Oil Storage Tanks T-1 & T-2 (RCRA Units 44.01 & 44.02), and Associated Room</p> <p><i>Beryllium:</i> No process data for Be is available. In process surveys/sampling are needed.</p> <p><i>Chemicals:</i> Organic liquids were stored in these tanks. The liquids were drained in 1998.</p> <p><i>Lead & Other Heavy Metals:</i> Based on the 1992 analysis of liquid from the tank that leaked on the floor, cadmium and chromium are present in the oil.</p> <p><i>Radiological Contamination:</i> The rings in one of the tanks were found to be contaminated (about 10,000 cpm) when they were removed in 1998.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Lead & Other Heavy Metals</i> Oil</p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	PPE Radiological Controls/ ALARA Principles	LLM
63	<p>ROOM/EQUIPMENT SET - Rooms 118, 118A, 118B, 118C, 118D, 118E, 118F, 118G, 118H, and FBI Production Unit (RCRA Unit 49.01)</p> <p><i>Asbestos:</i> Insulation on equipment will be managed as asbestos unless sample results indicate the insulation is non-asbestos.</p> <p><i>Beryllium:</i> There is no record of Be storage or processing in this area. Surface surveys will be performed prior to initiating decommissioning activities to confirm there is no Be contamination in the area.</p> <p><i>Chemicals:</i> hydraulic oil will be drained from tanks during deactivation. Hydraulic oil for the elevator will not be drained until the elevator is removed from service. If portable tank contains liquid, it will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There are leaded gloves on the canyon wall. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> The FBI is internally contaminated with low levels of Pu contamination. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor levels are the same as those after the 1969 fire (i.e., >106 cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria Remove/dispose of specified constituents</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	PPE Radiological Controls/ ALARA Principles	LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
64	<p>GLOVEBOX SET - SARF (GBs 512, 513, 515, 517, 518, 521-1, 521-2), including RCRA Unit 74</p> <p><i>Chemicals:</i> The hydraulic oil will be drained during deactivation. If the collection ring contains any liquid, the liquid will be drained during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There are leaded gloves on the SARF GBs. The fluorescent lights contain mercury, and will be managed as RCRA hazardous waste. Representative samples of the paint throughout the building will be analyzed prior to removal of the paint or painted item.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> The potential for holdup in these GBs is extremely low since the GBs were used for a short period of time on material that was well contained. However, these GBs will need to be scanned for SNM holdup prior to removal based on the current criticality limit requirements.</p> <p><i>Radioisotope sources:</i> The Pu sources for alpha mets need to be removed.</p> <p><i>Radiological Contamination:</i> The internal surfaces of the SARF are Pu contaminated. The level of contamination is not known at this time and will need to be determined by in-process surveys. Since the SARF was used for only a short time on TRU waste, the contamination may be lower than in other GBs within the building. Based on discussions with two of the operators, the heaviest contamination should be on the pre-compactor ram and supercompactor piston.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	<p>PPE</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>
65	<p>ROOM SET - Rooms 127J, 136, 141, 150, and 150A</p> <p><i>Asbestos:</i> The insulation on the equipment will be managed as asbestos waste unless sample results indicate that the insulation is non-asbestos.</p> <p><i>Chemicals:</i> There are a number of chemicals in this SET, including antifreeze, oil, and freon refrigerant. These chemicals will be in use until the utility equipment is no longer needed. Any containers of chemicals will be removed prior to decommissioning. In addition, the liquid reservoirs on the utility equipment will be drained.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., 10^1 - $> 10^6$ cpm).</p>	<p><u>Deactivation:</u> Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	<p>PPE</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM, SAN</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
66	<p>ROOM/EQUIPMENT SET - ASRF (RCRA Units 776.1 and 776.3), including RDA, MDA, TA, J177, J176, J340, J341, J357, J270, Rooms 130, 130A, 209, 228 and Filter Units, Tank T-344 (RCRA Unit 94.005) and Tank T-345 (RCRA Unit 94.006)</p> <p><i>Asbestos:</i> There is insulation on the steam piping within Room 228. There are high-temperature mittens within GB J-341.</p> <p><i>Beryllium:</i> Be contaminated metal may have been size reduced in the ASRF.</p> <p><i>Chemicals:</i> The oil in the equipment and any residual condensate in the steam condensate tanks or piping will be drained during deactivation. The containers of liquid in the GBs and the DOP in Room 228 will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> There are leaded gloves on the GBs. The paint on the floor and walls may contain lead or other RCRA heavy metals. Incandescent lights contain lead and fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> The GBs in this SET will be scanned for SNM Holdup in FY99 and FY00.</p> <p><i>Radioactive Sources:</i> There are several Pu sources in the ASRF. The sources will be removed when this SET is deactivated.</p> <p><i>Radiological Contamination:</i> The internal surfaces of the ASRF are contaminated. The GBs and the canyons are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., 10⁵ - 10⁶ cpm for Rooms 130, 130A, 209 and 228).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
67	<p>ROOM SET - Rooms 123, 134 (RCRA Unit 776.1), and 137</p> <p><i>Beryllium:</i> Be parts were moved through this SET on carts. There is no indication that the rooms became contaminated from these parts. Surface surveys will be performed prior to initiating decommissioning activities to confirm there is no Be contamination in this area.</p> <p><i>Chemicals:</i> Any liquids in equipment will be drained during deactivation. The gas cylinders associated with the PCMs will not be removed until the PCMs are no longer needed.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., >10⁶ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>
68	<p>ROOM SET - Rooms 001 (RCRA Unit 90.99), 127 (RCRA Unit 776.1), 127A, and 127B</p> <p><i>Lead and Other Heavy Metals:</i> The fence around the process waste tanks has 1/8 inch lead shielding. Representative samples of paint from the rooms will be taken if necessary. Fluorescent lights may contain mercury.</p> <p><i>PCBs:</i> Ballasts within fluorescent light fixtures may contain PCBs. Paint may be sampled for PCBs.</p> <p><i>Radiological:</i> The map of floor contamination levels after the fire indicates contamination >10⁶ cpm. The paint on the floor has bubbled several times; surveys completed for radiological contamination verify the contamination levels after the fire.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Radiological Surveys</i></p>	<p>High levels of radiological contamination</p>	<p>PPE</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM, TRU</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
69	<p>TANK SET - Tanks T-1A, T1B, T-2A, & T-2B (RCRA Unit 776.2), Tank T3, and Bermed Area</p> <p><i>Beryllium:</i> Be contaminated metal may have been cleaned in the SRV. Wash water from the SRV was shipped to Tanks T1A and T1B. The process waste from Building 779 may have contained small amounts of Be. This possible Be contamination is not a safety concern due to the suspension in water and the controls necessary for the radiological contamination.</p> <p><i>Chemicals:</i> Any liquids in the tanks or piping will be drained prior to the removal of the piping. The process waste tanks are RCRA regulated.</p> <p><i>Lead & Other Heavy Metals:</i> The tanks were permitted for RCRA heavy metals.</p> <p><i>PCBs:</i> PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> The process waste tanks are limited to fissile exempt liquid by the Nuclear Materials Safety limits. Tank T-3 may be more contaminated inside since the water from the plenums is not necessarily fissile exempt liquid.</p> <p><i>Radiological Contamination:</i> The process waste tanks are limited to fissile exempt liquid by the Nuclear Material Safety Limits. Tank T-3 may be more contaminated inside since the water from the plenums is not necessarily fissile exempt liquid. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor levels are the same as those after the 1969 fire (i.e., >10⁶ cpm).</p>	<p><u>Deactivation:</u> Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/ conduit Package to waste acceptance criteria</p>	<p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	High levels of radiological contamination	LLW, TRU
70	<p>ROOM SET - Rooms 205, 206, 208 (RCRA Units 776.1 & 777.1), 219, 237 (RCRA Unit 776.1), and 232 to 256 (not all inclusive)</p> <p><i>Asbestos:</i> Floor tiles and pipe insulation in several rooms may contain asbestos.</p> <p><i>Beryllium:</i> Be was not stored or processed on the second floor of Building 776 or 777B. Be was handled on the first floor of the Building 777B. In process surveys for Be contamination will be needed when building components are removed. The only potential site of Be contamination on the second floor of Building 776 is the exhaust ducting and plenums. Surface surveys will be performed prior to initiating decommissioning activities.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. Fluorescent light fixtures contain mercury. These lights will be managed as RCRA hazardous waste.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> The GBs are expected to be contaminated >10⁶ dpm Pu on the inner surfaces. The maximum fixed contamination on the exterior of the GBs is 600,000 dpm. There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., 10¹ - 10⁶ cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	Beryllium	PPE CBDPP	LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
71	<p>EQUIPMENT SET - Superdry Air Drying System, 2nd Floor</p> <p><i>Asbestos:</i> The insulation on the ducting contains asbestos.</p> <p><i>Beryllium:</i> Be was stored, cleaned, and assembled in the Superdry facility. None of these operations would cause significant airborne contamination. Surface surveys will be performed prior to initiating decommissioning activities.</p> <p><i>Chemicals:</i> The dryers are filled with silica gel.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals.</p> <p><i>PCBs:</i> PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> The dryers may be slightly contaminated from room exhaust.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	Beryllium	PPE CBDPP	LLW
72	<p>EQUIPMENT SET - GB Dry Air Drying System, 2nd Floor</p> <p><i>Asbestos:</i> The insulation on the Kathabar K-1 is listed in the asbestos inventory. Insulation on the remaining units will be managed as asbestos.</p> <p><i>Beryllium:</i> The only potential site of Be contamination on the second floor is the exhaust plenums. Surface surveys will be performed prior to initiating decommissioning activities.</p> <p><i>Chemicals:</i> Any freon refrigerant remaining in the compressors will be removed during deactivation.</p> <p><i>Lead & Other Heavy Metals:</i> Kathene sludge has been analyzed and shown to contain regulated amounts of cadmium, chromium and lead.</p> <p><i>PCBs:</i> The lubricating oil in the Kathabars will be tested for PCBs since the unit is pre 1970s and the oil has not been changed since the 1960s. PCBs may be present in paint.</p> <p><i>SNM Holdup:</i> GB exhaust was not routed through this unit during its operation. The contamination in the unit is from the makeup air drawn from the 2nd floor during the 1969 fire.</p> <p><i>Radiological Contamination:</i> The GBDA Cathedra is known to be internally contaminated from the 1969 fire.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Lead & Other Heavy Metals: Sludge</i></p> <p><i>SNM Holdup Measurement</i></p>	Beryllium	PPE CBDPP	LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
73	<p>EQUIPMENT SET - Remainder of the 2nd Floor Equipment Not in Other SETS</p> <p><i>Asbestos:</i> Asbestos has been detected in multiple insulation samples on the 2nd floor. The insulation on the piping and equipment in this SET will be managed as asbestos contaminated waste.</p> <p><i>Beryllium:</i> The only potential site of Be contamination on the second floor is in the exhaust plenums. Surveys will be performed prior to initiating decommissioning activities.</p> <p><i>Chemicals:</i> Any liquids or compressed gases will be drained from the equipment prior to removing the equipment. This includes brine, freon, oil and water.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals</p> <p><i>PCBs:</i> PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> The reheat system is known to be internally contaminated. The remaining equipment may be contaminated since the SET is contained within a Radiation Buffer Area (RBA). Unless the equipment is unpainted and 100% surveyable, the equipment will be disposed of as LLW.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/package classified material Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	Beryllium	PPE CBDPP	LLW
74	<p>BUILDING STRUCTURE SET - Building 702, 712 and 712A</p> <p><i>Asbestos:</i> The insulation on the steam lines in Building 702 will be managed as asbestos waste unless sampling indicates otherwise. The baffles on the cooling tower will be sampled for asbestos.</p> <p><i>Chemicals:</i> There are several drums of oil that will be removed from Building 702 during deactivation. Liquids from the motors, pumps, and piping will be drained also.</p> <p><i>Lead & Other Heavy Metals:</i> Incandescent lights contain lead. Fluorescent light fixtures and mercooid switches contain mercury. These items will be managed as RCRA hazardous waste.</p> <p><i>Radiological Contamination:</i> There is no indication of radiological contamination in these buildings. Surveys will be performed to verify contamination is not present.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria Remove/dispose of specified constituents Remove/dispose of structures Close subsurface volumes</p>	<p><i>Asbestos</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	None	PPE	HAZ, SAN

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
75	<p>BUILDING STRUCTURE SET - Building 781</p> <p><i>Beryllium:</i> Not yet known; there is no process history for the items tested in the chamber in Building 781.</p> <p><i>Chemicals:</i> A cylinder of helium in the building will be removed prior to decommissioning.</p> <p><i>Lead & Other Heavy Metals:</i> Incandescent lights contain. These lights will be managed as RCRA hazardous waste.</p> <p><i>Radiological Contamination:</i> There is no indication of radiological contamination in this building. However, the compressor lines from Building 781 pass into a Contamination Area in Room 459A, Building 777. Surveys will be performed to verify contamination is not present.</p>	<p><u>Deactivation:</u> Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria Remove/dispose specified constituents Close subsurface volumes</p>	<p><i>Beryllium</i></p> <p><i>Radiological Surveys</i></p>	None	PPE	LLW, LLM
76	<p>BUILDING STRUCTURE SET - Building 701, 710 and 730</p> <p><i>Asbestos:</i> The insulation in these buildings will be managed as asbestos waste unless sampling indicates otherwise.</p> <p><i>Beryllium:</i> There may be historical Be contamination from the laundry water in Building 730. There is no indication of Be handling or storage in Building 701 or 710.</p> <p><i>Chemicals:</i> There are several gas cylinders that will be removed from Building 701 during deactivation. Liquids from the motors, pumps and piping will be drained also.</p> <p><i>Lead & Other Heavy Metals:</i> Incandescent lights contain lead, fluorescent light fixtures contain mercury, and sodium vapor lights can contain lead and mercury. These lights will be managed as RCRA hazardous waste. There are leaded gloves stored in this SET.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed</p> <p><i>Radiological Contamination:</i> The liquids handled in Building 730 were radioactively contaminated. Building 701 has been contaminated twice by incidents related to process waste backing up into a toilet in 1972 and personnel spreading contamination from Building 730 in 1975. The building was decontaminated after both incidents. There is no indication of radiological contamination in Building 710.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria Remove/dispose of specified constituents Remove/dispose of structures Close subsurface volumes</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	Beryllium	PPE CBDPP	LLW, HAZ, SAN

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
77	<p>EQUIPMENT SET - Chillers #2 and #3 (not in use) in Room 150</p> <p><i>Asbestos:</i> Asbestos has been detected in samples of the Chiller #5 insulation. Based on this information and the age of Chillers #2 and #3, it is assumed that the insulation on these chillers contains asbestos.</p> <p><i>Chemicals:</i> Any brine or oil remaining in the chillers will be drained prior to removal of the chillers.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals.</p> <p><i>PCBs:</i> A PCB determination of ballasts will be made when the ballasts are removed. PCBs may be present in paint.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., 10^4 - 10^6 cpm).</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	High levels of radiological contamination	PPE Radiological Controls/ ALARA Principles	LLW
78	<p>EQUIPMENT SET - Miscellaneous Unused Piping (e.g. machine coolant, CCl₄, trichloroethane, process waste, and argon)</p> <p><i>Beryllium:</i> The possibility of Be contamination exists in the waste lines (process, machine coolant and trichloroethane). This possible Be contamination is not a safety concern due to the suspension in oil and the controls necessary for the radiological contamination. Be contamination is expected in the argon system as well.</p> <p><i>Chemicals:</i> Sections of piping will be drained prior to removal of the pipe. The liquids will be characterized according to the individual system (i.e., process waste, trichloroethane, and machine coolant).</p> <p><i>SNM Holdup:</i> The piping will be scanned prior to disposal to comply with current criticality limit requirements. It is anticipated the holdup amounts will be modest if any for the waste lines. The amounts in the argon system may be higher than the other systems in this SET if the argon was not filtered prior to leaving the GB.</p> <p><i>Radiological Contamination:</i> Based on the removal of waste trichloroethane and machine coolant lines in 1995 and 1998, the interior of this piping is contaminated $>10^6$ dpm. The painted supply piping may be contaminated on the exterior. The process waste piping will be contaminated to varying degrees depending on the source of the liquid (i.e., the line for size reduction will be more contaminated than the lines from the ASRF or the 2nd floor). The argon line in Room 475 is assumed to be contaminated with $>10^6$ dpm Pu since these units contained GB atmosphere.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	Beryllium High levels of radiological contamination	PPE CBDPP Radiological Controls/ ALARA Principles	LLW, LLM

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
79	<p>EQUIPMENT SET - Criticality Accident Alarm System (CAAS) and Plenum Deluge System</p> <p><i>Beryllium:</i> There is no indication of Be contamination on the components of this SET that will be removed during decommissioning. Be surveys will be required to "free release" the system component.</p> <p><i>Chemicals:</i> The water from the deluge valve to the supply will need to be drained. The system is "dry" within the plenum.</p> <p><i>Radiological Contamination:</i> Radiological contamination is not encountered when the neutron detectors are replaced or serviced.</p>	<p><u>Deactivation:</u> Control/fix contamination Drain/dispose of solutions Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Radiological Surveys</i></p>	None	PPE	LLW, SAN
80	<p>EQUIPMENT SET - Plenums and associated ductwork for Zone 1 ventilation</p> <p><i>Beryllium:</i> The ducting from the GBs and hoods that processed Be will be considered Be contaminated.</p> <p><i>Chemicals:</i> DOP on the filters from testing.</p> <p><i>SNM Holdup:</i> The plenums are scanned on an annual basis to determine the amount of holdup present. The ducting was scanned in 1990 to determine the amount of SNM within the ducting. SNM has been removed from the molten salts duct. SNM holdup will be reduced to the safeguards termination limits during deactivation.</p> <p><i>Radiological Contamination:</i> The plenums are High Contamination Areas. The plenums and ducting contain gram amounts of Pu and are therefore contaminated in excess of 10⁶ dpm.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Control radioactive/chemical contamination Drain/isolate/remove/dispose utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Beryllium</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	LLW, TRU

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
81	<p>EQUIPMENT SET - Miscellaneous external items (including UST, AST, cargo containers, exterior piping, and electrical transformers)</p> <p><i>Asbestos:</i> Much of the steam condensate line insulation has been replaced with non-asbestos insulation. Any insulation that has not been replaced or installed recently will be managed as asbestos unless sample results indicate the insulation is non-asbestos.</p> <p><i>Beryllium:</i> The process waste lines may have low levels of Be contamination (see tank SETs 7, 26 and 69). This possible Be contamination is not a safety concern due to the suspension in liquid and the controls that are necessary for radiological contamination.</p> <p><i>Chemicals:</i> There are chemical containers that will be removed from cargo containers during deactivation. Any residual liquids in the piping will be removed prior to decommissioning. The dielectric fluid in the transformers will be sampled and removed prior to removal of the transformer carcasses.</p> <p><i>Lead & Other Heavy Metals:</i> Sodium vapor lights contain lead and mercury. There are treatability wastes in cargo containers that must be disposed of prior to decommissioning.</p> <p><i>SNM Holdup:</i> Not determined. The contaminated piping was used to ship process waste. Based on the removal of the trichloroethane piping in Rooms 141 and 430, there is no detectable holdup in the piping. The piping will require scanning prior to packaging to comply with the current criticality controls for waste drums and boxes.</p> <p><i>Radiological Contamination:</i> The process waste lines are internally contaminated. The other piping should not be contaminated. The cargo carriers, their contents, and the transformer carcasses will be surveyed for "free release" also.</p>	<p><u>Deactivation:</u> Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Control radioactive/chemical contamination Drain/isolate utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria</p>	<p><i>Asbestos</i></p> <p><i>Beryllium</i></p> <p><i>Chemicals</i></p> <p><i>Lead & Other Heavy Metals: Sludge</i></p> <p><i>SNM Holdup Measurement</i></p> <p><i>Radiological Surveys</i></p>	Beryllium	PPE CBDPP	LLW. LLM. HAZ, SAN

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
82	<p>BUILDING STRUCTURE SET - Building Shell (1st and 2nd Floors) includes Docks 2 through 6</p> <p><i>Asbestos:</i> The walls contain several asbestos features. Much of the original exterior walls are covered with transite panels. Where asbestos insulated pipes pass through the 2nd floor, asbestos insulation may be present in the pipe section remaining in the floor. The mortar filling contained in some cement blocks might contain asbestos.</p> <p><i>Beryllium:</i> Be surveys will be needed for the building structure once the equipment is removed. The areas that have known or suspected contamination can be found on the Be map in the Reconnaissance Level Characterization Report or in the individual SET descriptions in this appendix.</p> <p><i>Chemicals:</i> The wall along column line L between Columns 7 and 9 is potentially contaminated with carbon tetrachloride and oil. In the 1960s prior to the 1969 fire, waste machine coolant mixed with carbon tetrachloride was sprayed onto the wall when drums of the liquid were overfilled. There are numerous other incidents where the same waste leaked onto the 1st floor in other areas of the building. Since the 1st floor will not be removed during decommissioning, these sites do not affect characterization of the waste generated during decommissioning.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals. The concrete near the Kathabar units on the second floor is contaminated with Kathene. Kathene sludge contains chromium, cadmium and lead. The levels of these metals in the concrete have not been determined. Based on comments from a former NDT employee, the north, west, and east walls of Room 473 may contain lead "wool" within the concrete. The lead was added to increase the shielding provided by the walls.</p> <p><i>Radiological Contamination:</i> There is fixed contamination beneath the paint on the floor and building walls from the 1969 fire. It is assumed that the floor contamination levels are the same as those after the 1969 fire (i.e., a range of not detectable to >10⁶ cpm).</p>	<p>Ensure that the following deactivation and decommissioning have been completed:</p> <p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment Remove/dispose of loose hazardous materials</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/ chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria Remove/dispose of specified constituents Control air emissions</p> <p><u>Then:</u> Remove/dispose of building structure</p>	<p><i>Beryllium</i></p> <p><i>Lead & Other Heavy Metals:</i> Sludge</p> <p><i>Radiological Surveys</i></p>	<p>Beryllium</p> <p>High levels of radiological contamination</p> <p>Kathene</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, TRU, LLM, HAZ, SAN</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
83	<p>EQUIPMENT SET - SET 83 is broken into three parts: (1) Buildings 703, 713 (cooling tower) and 713A, (2) Zone 2 Plenums and Ductwork, (3) Remaining equipment in Building 776/777 (Supply Fans S1 -S9, HP heads, air, N₂, sanitary drains, domestic water, electrical, UPS batteries (Room 230), LS/DW batteries, Rooms 230A, 231, 231A and 232A, fire systems). The overall SET has the same endpoints; the individual parts have different hazards and contaminants, as shown below.</p> <p><i>Asbestos:</i> (1) The insulation on the piping and structure will be managed as asbestos waste unless sampling indicates otherwise. The baffles on the cooling tower may contain asbestos. (2) None. (3) The pipe insulation, ceiling tile and floor tile will be managed as asbestos waste unless sampling indicates otherwise.</p> <p><i>Beryllium:</i> (1) None. (2) The ducting from the rooms with Be was handled will be considered Be contaminated. (3) None.</p> <p><i>Chemicals:</i> (1) There are containers of oil and Nalco 2826 that will be removed from Building 702 during deactivation. Liquids from the motors, pumps and piping will be drained also. (2) There is DOP on the filters from testing. (3) The electrolyte in the batteries is acidic.</p> <p><i>Lead & Other Heavy Metals:</i> (1) The fluorescent bulbs contain mercury (Building 703) and will be managed as hazardous waste. (2) None (3) The fluorescent bulbs contain mercury. There is lead within the LS/DW and UPS batteries. Incandescent bulbs can contain lead.</p> <p><i>PCBs:</i> (1) A PCB determination of ballasts will be made when the ballasts are removed. (2) None (3) A PCB determination of ballasts will be made when the ballasts are removed. The switchgear will be inspected for PCB capacitors when it is deactivated.</p> <p><i>Radioactive Sources:</i> (1) None (2) None (3) The sources in the air monitors will be removed with the air monitors.</p> <p><i>Radiological Contamination:</i> (1) There is no indication of radiological contamination in these buildings. (2) The plenums are High Contamination Areas. Several room exhaust ducts on the 1st floor are marked "contains fixed contamination". (3) The remaining equipment may be contaminated since the SET is contained within a Radiation Buffer Area and Contamination Area. Unless the equipment is unpainted and 100% surveyable, the equipment will be disposed of as LLW.</p>	<p><u>Deactivation:</u> Control/fix contamination Remove/dispose of loose combustibles Drain/dispose of solutions Remove/dispose of loose equipment</p> <p><u>Decommissioning:</u> Drain/isolate fluid systems Control radioactive/chemical contamination Drain/isolate/remove/dispose of utility systems Remove/dispose of equipment & associated piping/conduit Package to waste acceptance criteria Remove/dispose specified constituents Control air emissions Remove/dispose of structures Close subsurface volumes</p>	<p><i>Beryllium</i> (2)</p> <p><i>Chemicals</i> (1), (3)</p> <p><i>PCBs</i> (3)</p> <p><i>Radiological Surveys</i> (1), (2), (3)</p>	<p>Beryllium</p> <p>High levels of radiological contamination</p>	<p>PPE</p> <p>CBDPP</p> <p>Radiological Controls/ ALARA Principles</p>	<p>LLW, LLM</p>

SET NO.	SET DESCRIPTION	MAJOR ENDPOINTS	ADDITIONAL CHARACTERIZATION NEEDED	UNIQUE HAZARD ANALYSIS	HAZARD CONTROL	WASTE STREAM
84	<p>EQUIPMENT SET - Floors and below-grade features filled with concrete, including equipment from the 1969 fire cleanup</p> <p><i>Asbestos:</i> It is assumed that the insulation on the buried autoclave contains asbestos.</p> <p><i>Chemicals:</i> There were numerous incidents in Rooms 127, 131, and 134E where oil/carbon tetrachloride mixture leaked to the floor. This mixture was cleaned in accordance with decontamination practices or procedures in place at the time of the spill. The stairwells, mill/press pits and the Hydroform equipment room floor were most likely contaminated with this mixture at various times. There is no information on the presence or absence of leakage from the paint trap. Trichloroethylene was used for cleaning items processed in the autoclaves.</p> <p><i>Lead & Other Heavy Metals:</i> The paint on the floor and walls may contain lead or other RCRA heavy metals.</p> <p><i>SNM Holdup:</i> Not yet determined. Buried equipment used to process SNM (GBs, rolling mill rolls) may contain SNM.</p> <p><i>Radiological:</i> The depth of the contamination into the floor has not been established. The contaminated fire water from the 1969 fire may have penetrated the floors at the expansion joints.</p>	<p><u>Decommissioning:</u></p> <p><u>Area A, Stairwells (5) Under Main Floor Slab</u> Control radioactive contamination Remove/ dispose of cement Package to waste acceptance criteria Control air emissions</p> <p><u>Area B, Room 127, Maintenance Area</u> Control radioactive contamination Remove/ dispose of cement and metal panels Package to waste acceptance criteria Control air emissions</p> <p><u>Area C, Four-High Rolling Mill Pit</u> Control radioactive contamination Remove/ dispose of cement and equipment Package to waste acceptance criteria Control air emissions</p> <p><u>Area D, Marform Press Pit</u> Control radioactive contamination Remove/dispose of cement Package to waste acceptance criteria Control air emissions</p> <p><u>Area E, Hydroform Press Room</u> Control radioactive contamination Remove/dispose of cement and equipment Package to waste acceptance criteria Control air emissions</p> <p><u>Area F, Autoclave Equipment Pit</u> Control radioactive contamination Remove/ dispose of cement Package to waste acceptance criteria Control air emissions</p> <p><u>Area G, Washing Machine Drain Pit</u> Control radioactive contamination Remove/dispose of cement and equipment Package to waste acceptance criteria Control air emissions</p> <p><u>Area H, Paint Trap</u> Control radioactive contamination Remove/dispose of cement and equipment Package to waste acceptance criteria Control air emissions</p>	<p><i>Chemicals:</i> To be determined.</p> <p><i>SNM Holdup:</i> To be determined on a case by case basis.</p> <p><i>Radiological Surveys</i></p>	<p>High levels of radiological contamination</p>	<p>PPE</p> <p>Radiological Controls/ ALARA Principles</p>	<p>TRU, TRM, LLW</p>

Appendix B
Ground Water Action Levels
(source: RFCA, Attachment 5)

Analyte	CAS No.	Tier 1- 100 x MCLs (mg/L)	Tier 2- MCLs (mg/L)
Acenaphthene (V)	83-32-9	2.19E+02	2.19E+00
Acetone (V)	67-64-1	3.65E+02	3.65E+00
Aldrin	309-00-2	5.00E-04	5.00E-06
Aluminum	7429-90-5	1.06E+04	1.06E+02
Anthracene (V)	120-12-7	1.10E+03	1.10E+01
Antimony	7440-36-0	6.00E-01	6.00E-03
Aroclor-1016	12674-11-2	5.00E-02	5.00E-04
Aroclor-1221	11104-28-2	5.00E-02	5.00E-04
Aroclor-1232	11141-16-5	5.00E-02	5.00E-04
Aroclor-1242	53469-21-9	5.00E-02	5.00E-04
Aroclor-1248	12672-29-6	5.00E-02	5.00E-04
Aroclor-1254	11097-69-1	5.00E-02	5.00E-04
Aroclor-1260	11096-82-5	5.00E-02	5.00E-04
Arsenic	7440-38-2	5.00E+00	5.00E-02
Barium	7440-39-3	2.00E+02	2.00E+00
Benzene (V)	71-43-2	5.00E-01	5.00E-03
alpha-BHC	319-84-6	1.35E-03	1.35E-05
beta-BHC	319-85-7	4.72E-03	4.72E-05
gamma-BHC (Lindane)	58-89-9	2.00E-02	2.00E-04
Benzo(a)anthracene	56-55-3	1.16E-02	1.16E-04
Benzo(a)pyrene	50-32-8	2.00E-02	2.00E-04
Benzo(b)fluoranthene	205-99-2	1.16E-02	1.16E-04
Benzo(k)fluoranthene	207-08-9	1.16E-01	1.16E-03
Benzoic Acid	65-85-0	1.46E+04	1.46E+02
Benzyl Alcohol	100-51-6	1.10E+03	1.10E+01
Beryllium	7440-41-7	4.00E-01	4.00E-03
bis(2-Chloroethyl)ether (V)	111-44-4	1.63E-03	1.63E-05
bis(2-Chloroisopropyl)ether (V)	108-60-1	4.22E-02	4.22E-04
bis(2-Ethylhexyl)phthalate	117-81-7	6.00E-01	6.00E-03
Bromodichloromethane (V)	75-27-4	1.00E+01	1.00E-01
Bromoform (V)	75-25-2	1.00E+01	1.00E-01
Bromomethane (V)	74-83-9	1.09E+00	1.09E-02
2-Butanone (V)	78-93-3	2.47E+02	2.47E+00
Butylbenzylphthalate	85-68-7	7.30E+02	7.30E+00
Cadmium	7440-43-9	5.00E-01	5.00E-03
Carbon disulfide (V)	75-15-0	2.76E+00	2.76E-02
Carbon tetrachloride (V)	56-23-5	5.00E-01	5.00E-03
alpha-Chlordane	5103-71-9	2.00E-01	2.00E-03
beta-Chlordane	5103-74-2	2.00E-01	2.00E-03
gamma-Chlordane	5103-74-2	2.00E-01	2.00E-03
4-Chloroaniline	106-47-8	1.46E+01	1.46E-01
Chlorobenzene (V)	108-90-7	1.00E+01	1.00E-01
Chloroethane (V)	75-00-3	2.78E+03	2.78E+01
Chloroform (V)	67-66-3	1.00E+01	1.00E-01
Chloromethane (V)	74-87-3	2.32E-01	2.32E-03
2-Chloronaphthalene (V)	91-58-7	2.92E+02	2.92E+00
2-Chlorophenol (V)	95-57-8	1.83E+01	1.83E-01
Chromium	7440-47-3	1.00E+01	1.00E-01
Chrysene	218-01-9	1.16E+00	1.16E-02
Cobalt	7440-48-4	2.19E+02	2.19E+00

Appendix B
Ground Water Action Levels
(source: RFCA, Attachment 5)

Analyte	CAS No.	Tier 1- 100 x MCLs (mg/L)	Tier 2- MCLs (mg/L)
Copper	7440-50-8	1.30E+02	1.30E+00
Cyanide	57-12-5	2.00E+01	2.00E-01
4,4-DDD	72-54-8	3.54E-02	3.54E-04
4,4-DDE	72-55-9	2.50E-02	2.50E-04
4,4-DDT	50-29-3	2.50E-02	2.50E-04
Dalapon	75-99-0	2.00E+01	2.00E-01
Dibenz(a,h)anthracene	53-70-3	1.16E-03	1.16E-05
Dibromochloromethane	124-48-1	1.01E-01	1.01E-03
1,2-Dibromo-3-chloropropane	96-12-8	2.00E-02	2.00E-04
Di-n-butylphthalate	84-74-0	3.65E+02	3.65E+00
2,4-D	94-75-7	7.00E+00	7.00E-02
1,2-Dichlorobenzene (V)	95-50-1	6.00E+01	6.00E-01
1,3-Dichlorobenzene (V)	541-73-1	6.00E+01	6.00E-01
1,4-Dichlorobenzene (V)	106-46-7	7.50E+00	7.50E-02
3,3-Dichlorobenzidine	91-94-1	1.89E-02	1.89E-04
1,1-Dichloroethane (V)	107-06-2	1.01E+02	1.01E+00
1,2-Dichloroethane (V)	107-06-2	5.00E-01	5.00E-03
1,1-Dichloroethene (V)	540-59-0	7.00E-01	7.00E-03
1,2-Dichloroethene (total)(V)	540-59-0	7.00E+00	7.00E-02
2,4-Dichlorophenol	120-83-2	1.10E+01	1.10E-01
1,2-Dichloropropane (V)	78-87-5	5.00E-01	5.00E-03
cis-1,3-Dichloropropene (V)	1006-01-5	1.27E-02	1.27E-04
trans-1,3-Dichloropropene (V)	10061-02-6	1.27E-02	1.27E-04
Dieldrin	60-57-1	5.31E-04	5.31E-06
Diethylphthalate	84-66-2	2.92E+03	2.92E+01
2,4-Dimethylphenol (V)	105-67-9	7.30E+01	7.30E-01
Dimethylphthalate	131-11-3	3.65E+04	3.65E+02
2,4-Dinitrophenol	51-28-5	7.30E+00	7.30E-02
2,4-Dinitrotoluene	121-14-2	7.30E+00	7.30E-02
2,6-Dinitrotoluene	606-20-2	1.25E-02	1.25E-04
Di-n-octylphthalate	117-84-0	7.30E+01	7.30E-01
Endosulfan I	959-98-8	2.19E+01	2.19E-01
Endosulfan II	33213-65-9	2.19E+01	2.19E-01
Endosulfan sulfate	1031-07-8	2.19E+01	2.19E-01
Endosulfan (technical)	115-29-7	2.19E+01	2.19E-01
Endrin (technical)	72-26-8	2.00E-01	2.00E-03
Ethylbenzene (V)	100-41-4	7.00E+01	7.00E-01
Fluoranthene	206-44-0	1.46E+02	1.46E+00
Fluorene (V)	85-73-7	1.46E+02	1.46E+00
Fluoride	16984-48-8	4.00E+02	4.00E+00
Glyphosate	1071-83-6	7.00E+01	7.00E-01
Heptachlor	76-44-8	4.00E-02	4.00E-04
Heptachlor epoxide	1024-57-3	2.00E-02	2.00E-04
Hexachlorobenzene	118-74-1	1.00E-01	1.00E-03
Hexachlorobutadiene	87-68-3	1.09E-01	1.09E-03
Hexachlorocyclopentadiene	77-47-4	5.00E+00	5.00E-02
Hexachloroethane	67-72-1	6.07E-01	6.07E-03
Indeno(1,2,3-cd)pyrene	193-39-5	1.16E-02	1.16E-04
Isophorone	78-59-1	8.95E+00	8.95E-02
Lithium	7439-93-2	7.30E+01	7.30E-01

Appendix B
Ground Water Action Levels
(source: RFCA, Attachment 5)

Analyte	CAS No.	Tier 1- 100 x MCLs (mg/L)	Tier 2- MCLs (mg/L)
Manganese	7439-96-5	1.83E+01	1.83E-01
Mercury	7439-97-6	2.00E-01	2.00E-03
Methoxychlor	72-43-5	4.00E+00	4.00E-02
Methylene chloride (V)	75-09-2	5.00E-01	5.00E-03
4-Methyl-2-pentanone (V)	108-10-1	2.03E+01	2.03E-01
2-Methylphenol	95-48-7	1.83E+02	1.83E+00
Molybdenum	7439-98-7	1.83E+01	1.83E-01
Naphthalene (V)	91-20-3	1.46E+02	1.46E+00
Nickel	7440-02-0	1.00E+01	1.00E-01
Nitrate (MCL as N)	1-005	1.00E+03	1.00E+01
Nitrite (MCL as N)	1-005	1.00E+02	1.00E+00
Nitrobenzene (V)	98-95-3	4.20E-01	4.20E-03
n-Nitrosodiphenylamine (V)	86-30-6	1.73E+00	1.73E-02
n-Nitrosodipropylamine	621-64-7	1.21E-03	1.21E-05
Pentachlorophenol	87-86-5	1.00E-01	1.00E-03
Phenol	108-95-2	2.19E+03	2.19E+01
Pyrene	129-00-0	1.10E+02	1.10E+00
Selenium	7782-49-2	5.00E+00	5.00E-02
Silver	7440-22-4	1.83E+01	1.83E-01
Strontium	7440-24-6	2.19E+03	2.19E+01
Styrene (V)	100-42-5	1.00E+01	1.00E-01
Sulfate	14808-79-8	5.00E+04*	5.00E+02*
1,1,2,2-Tetrachloroethane (V)	79-34-5	8.95E-03	8.95E-05
Tetrachloroethene (V)	127-18-4	5.00E-01	5.00E-03
Thallium	7440-28-0	2.00E-01	2.00E-03
Tin	7440-31-5	2.19E+03	2.19E+01
Toluene (V)	108-88-3	1.00E+02	1.00E+00
Toxaphene	8001-35-2	3.00E-01	3.00E-03
1,2,4-Trichlorobenzene (V)	120-82-1	7.00E+00	7.00E-02
1,1,1-Trichloroethane (V)	71-55-6	2.00E+01	2.00E-01
1,1,2-Trichloroethane (V)	79-00-5	5.00E-01	5.00E-03
Trichloroethene (V)	79-01-6	5.00E-01	5.00E-03
2,4,5-Trichlorophenol	95-95-4	5.00E+00	5.00E-02
2,4,6-Trichlorophenol	88-06-2	7.73E-01	7.73E-03
Vanadium	7440-62-2	2.56E+01	2.56E-01
Vinyl acetate	108-05-4	3.65E+03	3.65E+01
Vinyl chloride (V)	75-01-4	2.00E-01	2.00E-03
Xylene (total)(V)	1330-20-7	1.00E+03	1.00E+01
Zinc	7440-66-6	1.10E+03	1.10E+01

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Appendix C
Building 776/777 Closure Project
Administrative Record

DOCUMENT	DRIVER
Administrative Record Listing	RFCA, ¶s 283-285; CERCLA, 40 CFR 300.800 <i>et seq.</i>
Joint Scoping Meeting Minutes/Disposition	FDPM, Section 3.3.7.2
Reconnaissance Level Characterization Report (RLCR)	RFCA, ¶120(g)
DRAFT Decommissioning Operations Plan (DOP)	RFCA, ¶107
DOP Responsiveness Summary	RFCA, ¶107
FINAL DOP	RFCA, ¶107
Pre-Demolition Survey	DPP, Sections 3.3.10 and 3.3.13; CERCLA, , 40 CFR 300.800 <i>et seq.</i>
Demolition Permit	FDPM, Section 6.3.4
Notification to CDPHE prior to demolition (required for asbestos abatement activities)	DOE Order 440.1, OSHA, 29 CFR 1910 <i>et seq.</i>
Air Pollutant Emission Notification (APEN), (required if 2000 lbs. dust/VOC emissions will be exceeded in a single event)	Colorado Air Quality Control Regulation No. 3
Post-Demolition Survey	CERCLA, 40 CFR 300.800 <i>et seq.</i> ; DDCP,
Decommissioning Final Closeout Report	RFCA, ¶118

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Appendix D

**Building 776/777 Closure Project Schedule
(pages 193-228)**

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Jm Float						
						FY99	FY00	FY01	FY02	FY03	FY04
035 WAO 035 - 776/777 Cluster Project											
1.1.06.12.01 776/777 CLUSTER LANDLORD FUNCTIONS											
D5BEGWPD35	Start WPD 35		01OCT98		0						
1.1.06.12.01.01 776/777 CLUSTER COMPLIANCE SURVEILLANCE											
D5F0199A00	B776/777 Compliance Surveillance - Authorization	254	01OCT98	30SEP99	1						
D5F0199E00	B776/777 Compliance Surveillance - Environmental	254	01OCT98	30SEP99	1						
D5F0199M00	B776/777 Compliance Surveillance - Other	254	01OCT98	30SEP99	1						
D5F0199M02	Glove Inspection/Changes B776/777 FY-99 20% of TTL	94	16NOV98	31MAR99	129						
D5F0100A00	B776/777 Compliance Surveillance - Authorization	254	01OCT99	29SEP00	1						
D5F0100E00	B776/777 Compliance Surveillance - Environmental	254	01OCT99	29SEP00	1						
D5F0100M00	B776/777 Compliance Surveillance - Other	254	01OCT99	29SEP00	1						
D5F0101A00	B776/777 Compliance Surveillance - Authorization	253	02OCT00	28SEP01	1						
D5F0101E00	B776/777 Compliance Surveillance - Environmental	253	02OCT00	28SEP01	1						
D5F0101M00	B776/777 Compliance Surveillance - Other	253	02OCT00	28SEP01	1						
D5F0102A00	B776/777 Landlord Compliance Surveillance FY-02	254	01OCT01	30SEP02	1						
D5F0102E00	B776/777 Landlord - Environmental Surveill FY-02	254	01OCT01	30SEP02	1						
D5F0102M00	B776/777 Landlord - Other Surveillance FY-02	254	01OCT01	30SEP02	1						
D5F0103A00	B776/777 Landlord - Compliance Surveillance FY03	254	01OCT02	30SEP03	1						
D5F0103E00	B776/777 Landlord - Environm'l Surveill FY-03	254	01OCT02	30SEP03	1						
D5F0103M00	B776/777 Landlord - Other Surveillances FY-03	254	01OCT02	30SEP03	1						
1.1.06.12.01.02 776/777 CLUSTER MAINTENANCE											
D5F0299M05	Pressure Safety JCO (Major IWCP)	63	01OCT98	31DEC98	1						
D5F0299C00	Maintenance - Corrective	254	01OCT98	30SEP99	1						
D5F0299M00	B776/777 Landlord - Major IWCP Maint FY-99	254	01OCT98	30SEP99	1						
D5F0299P00	B776/777 Landlord - Preventative Maint FY-99	254	01OCT98	30SEP99	1						
D5F0299R00	B776/777 Landlord - Routine Maintenance FY-99	254	01OCT98	30SEP99	1						
D5F0200C00	B776/777 Landlord - Corrective Maintenance FY-00	254	01OCT99	29SEP00	1						
D5F0200M00	B776/777 Landlord - Major IWCP Maint FY-00	254	01OCT99	29SEP00	1						

Project Start	01OCT97	 Early Bar
Project Finish	23SEP05	 Progress Bar
Data Date	01OCT98	 Critical Activity
Run Date	11OCT99	

BL05:W035

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

Sheet 1 of 33

CLOSURE KAISER-HILL



195
ROCKY FLATS CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Schedule						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5F0200P00	B776777 Landlord - Preventative Maint FY-00	254	01OCT99	29SEP00	1							
D5F0200R00	B776777 Landlord - Routine Maintenance FY-00	254	01OCT99	29SEP00	1							
D5F0201C00	B776777 Landlord - Corrective Maintenance FY-01	253	02OCT00	28SEP01	1							
D5F0201M00	B776777 Landlord - Major IWCP Maintenance FY-01	253	02OCT00	28SEP01	1							
D5F0201P00	B776777 Landlord - Preventative Maint FY-01	253	02OCT00	28SEP01	1							
D5F0201R00	B776777 Landlord - Routine Maintenance FY-01	253	02OCT00	28SEP01	1							
D5F0202C00	B776777 Landlord - Corrective Maintenance FY-02	254	01OCT01	30SEP02	1							
D5F0202P00	B776777 Landlord - Preventative Maint FY-02	254	01OCT01	30SEP02	1							
D5F0202R00	B776777 Landlord - Routine Maintenance FY-02	254	01OCT01	30SEP02	1							
D5F0203C00	B776777 Landlord - Corrective Maintenance FY-03	254	01OCT02	30SEP03	1							
D5F0203P00	B776777 Landlord - Preventative Maint FY-03	254	01OCT02	30SEP03	1							
D5F0203R00	B776777 Landlord - Routine Maintenance FY-03	254	01OCT02	30SEP03	1							
1.1.06.12.01.03 776/777 CLUSTER OPERATIONS TECH SUPPORT												
D5F0399T00	B776777 Landlord - Operations Tech Spl FY-99	254	01OCT98	30SEP99	1							
D5F0300T00	B776777 Landlord - Operations Tech Spl FY-00	254	01OCT99	29SEP00	1							
D5F0301T00	B776777 Landlord - Operations Tech Spl FY-01	253	02OCT00	28SEP01	1							
D5F0302T00	B776777 Landlord - Operations Tech Spl FY-02	228	01OCT01	30SEP02	1							
D5F0303T00	B776777 Landlord - Operations Tech Spl FY-03	228	01OCT02	30SEP03	1							
1.1.06.12.01.04 776/777 CLUSTER OPERATIONS MANAGEMENT												
D5F0499M00	B776777 Landlord - Operations Management FY-99	254	01OCT98	30SEP99	1							
D5F0400M00	B776777 Landlord - Operations Management FY-00	254	01OCT99	29SEP00	1							
D5F0400M10	FY-00 Personnel Relo & Property Disposition	254	01OCT99	29SEP00	1							
D5FDELE283	Complete B776/777 Nuclear Operatons	0		30MAR00	1							
D5F0401M00	B776777 Landlord - Operations Management FY-01	253	02OCT00	28SEP01	1							
D5F0401M10	FY-01 Personnel Relo & Property Disposition	253	02OCT00	28SEP01	1							
D5F0402M10	FY-02 Personnel Relo & Property Disposition	254	01OCT01	30SEP02	1							
D5F0402MG0	B776777 Landlord - Operations Management FY-02	254	01OCT01	30SEP02	1							
D5F0403M10	FY-03 Personnel Relo & Property Disposition	254	01OCT02	30SEP03	1							

Project Start	01OCT97	Early Bar
Project Finish	23SEP05	Progress Bar
Data Date	01OCT98	Critical Activity
Run Date	11OCT99	

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

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ROCKY FLAT CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float							
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5F0403MG0	B776/777 Landlord - Operations Management FY-03	254	01OCT02	30SEP03	1							
D5FPROPRT	B776/777 Comp Personnel Relo & Property Disp'n	0		30SEP03	63							
1.1.06, 12.01.05 AUTH BASIS DEV AND IMPL B776/777												
D5F0599N91	A/B Imp Freeze Protection Program (DF)	10	01OCT98	15OCT98	156							
D5F0599N30	A/B Imp Training Program (GC)	24	01OCT98	06NOV98	55							
D5F0599N40	A/B Imp Organization and Management (DN)	24	01OCT98	06NOV98	103							
D5F0599N35	A/B Imp - Emergency Preparedness Program (WT)	24	01OCT98	06NOV98	107							
D5F0599N90	A/B Imp Hazardous Mil Protection Program (JJW)	24	01OCT98	06NOV98	112							
D5F0599N10	A/B Imp General Applications (JS)	24	01OCT98	06NOV98	126							
D5F0599N20	A/B Imp Criticality Safety Program (RS)	24	01OCT98	06NOV98	127							
D5F0599N15	A/B Imp Radiation Protection Program (EB)	24	01OCT98	06NOV98	181							
D5F0599N80	A/B Imp BIO Maintenance (AD)	24	01OCT98	06NOV98	181							
D5F0599N00	B776/777 BIO Approval Activities (REV 1)	28	01OCT98	12NOV98	177							
D5F0599N25	A/B Imp Inventory Control Program (TT)	38	01OCT98	02DEC98	103							
D5F0599N45	A/B Imp Fire Protection Program (BM)	50	01OCT98	21DEC98	110							
D5F0599N92	A/B Imp Design Features (TBD1)	110	01OCT98	26MAR99	0							
D5F0599NA5	A/B Imp Seal Cable Hole	113	01OCT98	31MAR99	92							
D5F0599NA6	A/B Imp Fire Retardant Coating	113	01OCT98	31MAR99	92							
D5F0599NA7	A/B Imp - Proof File Development and Maint (MJS)	150	01OCT98	27MAY99	55							
D5F0599N05	A/B Imp - Project Management/Administrative Spt	228	01OCT98	30SEP99	0							
D5F0599N94	A/B Imp Quality Assurance (DF)	24	19OCT98	23NOV98	156							
D5F0599N96	A/B Imp BOA (CC)	50	02NOV98	21JAN99	0							
D5F0599N80	A/B Imp Forklift Operational Controls (WT)	10	09NOV98	23NOV98	107							
D5F0599N65	A/B Imp - WM, EP and Transport'n Programs (DN)	24	09NOV98	17DEC98	103							
D5F0599N50	A/B Imp Tank Controls (JJW)	24	09NOV98	17DEC98	112							
D5F0599N55	A/B Imp Compressed Gas Controls (RS)	24	09NOV98	17DEC98	127							
D5F0599NA1	A/B Imp - Criticality Safety System LCO/SER (JS)	40	09NOV98	14JAN99	126							

Project Start 01OCT97
Project Finish 23SEP05
Data Date 01OCT98
Run Date 11OCT99

Early Bar
Progress Bar
Critical Activity

BL05:W035

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year							
						FY99	FY00	FY01	FY02	FY03	FY04	FY05	
D5F0599NA4	A/B Imp Training Activities (GC)	126	09NOV98	27MAY99	55								
D5F0599N02	B776/777 New A/B REV 1 Submitted to RFFO	0		12NOV98	177	◆							
D5F0599NB4	A/B Imp Work Control Document SMP (DF)	15	24NOV98	18DEC98	156	■							
D5F0599NA3	A/B Imp Compressed Air & NII Gas LCO/SER (WT)	40	24NOV98	29JAN99	107	■							
D5F0599N67	A/B Imp - Conduct of Operations Program (TT)	24	03DEC98	12JAN99	103	■							
D5F0599NB3	A/B Imp Industrial Safety SMP (RS)	15	18DEC98	13JAN99	127	■							
D5F0599N75	A/B Imp Configuration Management Program (DN)	24	18DEC98	27JAN99	103	■							
D5F0599N99	A/B Imp Fire Suppression System LCO/SER (JJW)	45	18DEC98	01MAR99	112	■							
D5F0599N98	A/B Imp HVAC System Act LCO/SER (BM)	45	22DEC98	03MAR99	110	■							
D5F0599NA2	A/B Imp Electrical Power System LCO/SER (TT)	40	13JAN99	15MAR99	103	■							
D5F0599NB5	A/B Imp Integrated Safety Management SMP (RS)	15	14JAN99	04FEB99	127	■							
D5F0599NB2	A/B Imp Nuclear Safety SMP (JS)	15	15JAN99	08FEB99	126	■							
D5F0599NB1	A/B Imp Occurrence Reporting SMP (DN)	15	28JAN99	18FEB99	103	■							
D5F0599N85	A/B Imp Maintenance Program (WT)	24	01FEB99	09MAR99	107	■							
D5F0599N70	A/B Imp Work Control Program (DN)	15	22FEB99	15MAR99	103	■							
D5F0599NA8	A/B Imp Final Corrective Actions	9	29MAR99	09APR99	0	■							
D5F0599NA9	A/B Imp Management Assessment	9	12APR99	23APR99	0	■							
D5F0599ED1	Incorporate RFFO Technical Direction into BIO	10	26APR99	07MAY99	0	■							
D5F0599NC1	A/B Imp Management Assessment Corrective Actions	4	10MAY99	13MAY99	0	■							
D5F0599NC2	A/B Imp Independent Validation Review	9	17MAY99	27MAY99	0	■							
D5F0599NC3	A/B Imp IVR Corrective Actions	62	28MAY99	25AUG99	0	■							
D5FCPM1901	B776/777 A/B Implementation Complete	0		25AUG99*	0	◆							
D5F0599NC4	A/B Imp Revise BIO to Include D&D, Submit to DOE	25	26AUG99	30SEP99	1	■							
D5F0500AB0	B776/777 Landlord - AB Maintenance FY-00	254	01OCT99	29SEP00	1		■						
D5F0501A00	B776/777 Landlord - AB Maintenance FY-01	253	02OCT00	28SEP01	1			■					
D5F0502RM0	B776/777 Landlord - AB Maintenance FY-02	254	01OCT01	30SEP02	1				■				
D5F0503RM0	B776/777 Landlord - AB Maintenance FY-03	254	01OCT02	30SEP03	1					■			

Project Start: 01OCT97
 Project Finish: 23SEP05
 Data Date: 01OCT98
 Run Date: 11OCT99

Legend:
 ■ Early Bar
 ■ Progress Bar
 ■ Critical Activity

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT



Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Est Float							
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
1.1.06.12.02 776/777 CLUSTER SNM REMOVAL OPERATIONS												
D5P9902020	FY-99 B776/777 Remove Holdup Area 1	62	01OCT98	30DEC98	192							
D5P9902005	FY-99 B776/777 SNM Holdup Removal Project Mgmt	254	01OCT98	30SEP99	1							
D5P9902030	FY-99 B776/777 Remove Holdup Area 2	60	26OCT98*	21JAN99	177							
D5P9902040	FY-99 B776/777 Remove Holdup Area 3	60	18NOV98*	15FEB99	160							
D5P9902050	FY-99 B776/777 Remove Holdup Area 4	60	15DEC98*	10MAR99	143							
D5P9902150	FY-99 B776/777 Holdup Mil Xfer to B707	191	04JAN99*	30SEP99	1							
D5P9902060	FY-99 B776/777 Remove Holdup Area 5	59	11JAN99*	01APR99	127							
D5P9902160	FY-99 B707 Thermal Stabilization of B776 Holdup	171	01FEB99	30SEP99	1							
D5P9902070	FY-99 B776/777 Remove Holdup Area 6	60	02FEB99*	26APR99	110							
D5P9902080	FY-99 B776/777 Remove Holdup Area 7	60	25FEB99*	19MAY99	93							
D5P9902090	FY-99 B776/777 Remove Holdup Area 8	60	22MAR99*	14JUN99	76							
D5P9902190	FY-99 Holdup Removal Planning for FY-00 5 Areas	129	31MAR99*	30SEP99	0							
D5P99SCAN0	B776/777 Holdup Scans/Drum Movement	110	09APR99*	30SEP99	58							
D5P9902100	FY-99 B776/777 Remove Holdup Area 9	60	13APR99*	07JUL99	60							
D5P9902110	FY-99 B776/777 Remove Holdup Area 10	60	06MAY99*	30JUL99	43							
D5P9902120	FY-99 B776/777 Remove Holdup Area 11	61	27MAY99*	23AUG99	27							
D5P9902130	FY-99 B776/777 Remove Holdup Area 12	60	21JUN99*	14SEP99	12							
D5P9902010	FY-99 B776/777 SNM Verification Walkdowns	64	01JUL99*	30SEP99	0							
D5P9902140	FY-99 B776/777 Remove Holdup Area 13	61	07JUL99*	30SEP99	0							
D5P9902M02	Complete Removal of Holdup from 13 Areas	0		30SEP99	0							
D5P0002010	FY-00 SNM Holdup Scans	62	01OCT99	30DEC99	65							
D5P0102005	B776/777 MAA Closure Planning Activities	127	01OCT99	31MAR00	0							
D5P0002005	B776/777 SNM Holdup Removal Project Mgmt	190	01OCT99	29JUN00	1							
D5HMILE306	FY01-T1 Holdup Removal Of Area ABV Safeguards	0		31MAR00	0							
D5P0102010	B776/777 MAA Closure Execution Activities	42	03APR00	31MAY00	0							
D5HMILE311	FY01-T2 Close MAA in B776/777 by 9/30/01	0		30JUN00	0							

Project Start	01OCT97	Early Bar
Project Finish	23SEP06	Progress Bar
Data Date	01OCT98	Critical Activity
Run Date	11OCT99	

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

CLOSURE KAISER-HILL

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 ROCKY FLATS CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float								
						FY99	FY00	FY01	FY02	FY03	FY04	FY05	
D5PMILE323	Compl Rem'l of all B766/777 Holdup Requiring Stab	0		22MAY03	3								
1.1.06.12.03.02 776/777 CLUSTER DEACT PLAN AND PROJ MGMT													
D5HD299MD1	Review and Incorp RFFO Comments on DOP	83	01OCT98	29JAN99	1								
D5HD299P00	FY99 B776 Deact Planning and Project Management	254	01OCT98	30SEP99	0								
D5HD299MD2	Submit DOP for Public Review and Comment	0	01FEB99		1								
D5HD299MD3	Public Review Period and Inc Comments on DOP	171	01FEB99	30SEP99	1								
D5HMILE175	B776 DOP CDPHE Approved	0		30SEP99	1								
D5HD200P00	FY00 B776 Deact Planning and Project Management	254	01OCT99	29SEP00	1								
D5HD201P00	FY01 B776 Deact Planning and Project Management	253	02OCT00	28SEP01	1								
1.1.06.12.03.05 776/777 CLUSTER DEACT INITIAL PHY DEACT													
D5HD599G05	FY-99 Remove Oils/Solutions from GBs	126	01OCT98	31MAR99	0								
D5HD599R30	FY-99 Remove Used Oils	190	01OCT98	30JUN99	64								
D5HD599G01	FY-99 Remove Classified from Gloveboxes	254	01OCT98	30SEP99	0								
D5HD599G15	FY-99 Remove Misc Items from Gloveboxes	254	01OCT98	30SEP99	0								
D5HD599R35	FY-99 Rem 90% of Legacy Waste Drums	254	01OCT98	30SEP99	0								
D5HD599A01	FY-99 Disposition B776/777 Actuators	82	03DEC98	12APR99	0								
D5HD599R10	FY-99 Remove Classified from Rooms	191	04JAN99	30SEP99	0								
D5HD599R15	FY-99 Rem Microwave Samples from B701	191	04JAN99	30SEP99	0								
D5HD599T05	FY-99 Drain Tks T1&T2 Rem Raschlg Rings	191	04JAN99	30SEP99	0								
D5HD599T15	FY-99 Drain Vacuum Accumulators	191	04JAN99	30SEP99	0								
D5HD599T20	FY-99 Drain Low Level Oils Tks B776/777	191	04JAN99	30SEP99	0								
D5HD599RM1	Comp Rem'l of Combust liquid-bearing drums Rm134	0		15JAN99	0								
D5HD599GM1	Remove bulk oils from 7 gloveboxes Rms 131&134E	0		26FEB99	0								
D5HD599GM2	Comp Deactivation of 7 gloveboxes Rms 131 & 134E	0		31MAR99	0								
D5HCPM1902	FY-99 Complete B776/777 Actuator Disposition	0		30SEP99	0								
D5HD5991C3	FY-99 Comp Rem Misc Items from 8 GB Sets	0		30SEP99	0								
D5HD5992B1	Comp Rem Used Oils Cont'rs from Rm131 & Rm477	0		30SEP99	0								
D5HD599M22	B776/77 Cmpl Removal 90% Backlog Legacy Waste	0		30SEP99	0								

Project Start	01OCT97	Early Bar
Project Finish	23SEP05	Progress Bar
Date Date	01OCT98	Critical Activity
Run Date	11OCT99	
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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

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ROCKY FLJ SURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Sl Float							
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5HD599MS1	FY-99 Comp Draining LL Oil Tanks B776/7	0		30SEP99	0		◆					
D5HD599MS4	FY-99 Comp Rem B701 MicroTreatm't Splcs	0		30SEP99	0		◆					
D5HD599MS7	FY-99 Comp Rem of oils/solutions 6 GBs	0		30SEP99	0		◆					
D5HD599MS9	FY-99 Comp Draining/Raschig Rem Tks T1,T2	0		30SEP99	0		◆					
D5HD599MSA	FY-99 Comp Vac'm Accumul drain to RCRA Sta	0		30SEP99	0		◆					
D5HD599MSB	FY-99 Comp Rem/Disp'n Classif'd Items	0		30SEP99	0		◆					
D5HD599PM1	FY-99 Comp Metric 1 PM 99/00-7.5R B776/7	0		30SEP99	0		◆					
D5HD599PM2	FY-99 Comp Metric 2 PM 99/00-7.5R B776/7	0		30SEP99	0		◆					
D5HD500G00	FY-00 B776/777 Glovebox Deactivation	127	01OCT99	31MAR00	0		■					
D5HD500R85	Remove Remaining Legacy Waste Drums	254	01OCT99	29SEP00	1		■					
D5HD599G16	FY-00 Remove Sources from Gloveboxes	254	01OCT99	29SEP00	1		■					
D5HD599R20	FY-00 Remove Sources from Rooms	254	01OCT99	29SEP00	1		■					
D5HD599R25	FY-00 Rem Loose Haz Materials from Rooms	254	01OCT99	29SEP00	1		■					
D5HD599T25	FY-00 Drain/Remove Trichlorethane Line	254	01OCT99	29SEP00	1		■					
D5HD500T05	FY-00 Drain SRV Tanks (SR3, 4 & 5)	87	29DEC99	28APR00	0		■					
D5HD500D10	FY-00 Drain Ancillary Piping Systems	192	03JAN00	29SEP00	1		■					
D5HD500R10	FY-00 B776/777 Room Deact and Equipment Removal	192	03JAN00	29SEP00	1		■					
D5HD500T10	Dm Tks T360,T370,T344 & T345 to RCRA Stable	192	03JAN00*	29SEP00	1		■					
D5HD500T15	FY-00 Drain FBI Pilot Tanks to RCRA Stable	192	03JAN00	29SEP00	1		■					
D5HD500MS2	FY-00 Clean out GBs in Sets 1,14,20,29,41 and 69	0		31MAR00	0		◆					
D5HD500R15	FY-00 Rem Classified Telecom Sys/Docs from Rooms	127	03APR00*	29SEP00	1		■					
D5HD500M01	FY-00 Complete SR3,4&5 Tank Draining	0		28APR00	108		◆					
D5HMILE320	FY00-T5 Drain Mixed Residue Tanks Complete	0		28SEP00	1			◆				
D5HD500MS1	Comp Draining of Rem Tanks/Ancillary Eq to RCRA	0		29SEP00	1			◆				
D5HD500MS8	FY00 Comp Rem Radioact Sources from GB&Rms	0		29SEP00	1			◆				
D5HD599MS5	FY-00 Comp Rem of Loose Haz Mtls from Rms	0		29SEP00	1			◆				
D5HMILE499	B776/777 Complete Legacy Waste Removal	0		29SEP00	1			◆				

Project Start	01OCT97		Early Bar	BL05:W035
Project Finish	23SEP05		Progress Bar	
Data Date	01OCT99		Critical Activity	
Run Date	11OCT99			

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

 201
 ROCKY FLATS CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Gantt Chart									
						FY99	FY00	FY01	FY02	FY03	FY04	FY06			
D5HD500T20	FY-01 Drain to RCRA stable Equip in Rm 146	253	02OCT00	28SEP01	1										
D5HD501R05	FY-01 B776/777 Room Deact and Equipment Removal	253	02OCT00*	28SEP01	1										
D5HD599R40	Clean out Advanced Size Reduction Area	97	13NOV00	02APR01	127										
D5FMILE392	B776/777 Deactivation Complete	0		28SEP01	1										
D5HD500MS3	FY-01 Comp Rem of Loose Haz Mils, Rms	0		28SEP01	1										
D5HMILE465	Complete B776/777 Excess Property Removal	0		30SEP03	1										
1.1.06.12.04.01 B776/777 DECOM RM 125 DIMENSIONAL MET GB															
D5J0100MS1	B776/777 Start Set 01 Decommissioning	0	03APR00*		320										
D5J0100010	B776/777 Set 01 Planning and Engineering	78	03APR00	02AUG00	320										
D5J0100020	B776/777 Set 01 Proj Specif Long Lead Procurem't	58	02OCT00*	03JAN01	284										
D5J0100030	B776/777 Set 01 Isolation and Containment	26	04JAN01	13FEB01	284										
D5J0100040	B776/777 Set 01 Dismantlement Tasks	64	14FEB01	23MAY01	284										
D5J0100MF1	B776/777 Complete Set 01 Decommissioning	0		23MAY01	284										
1.1.06.12.04.02 B776/777 DECOM SET 2-ROOM 126,132,133,137B															
D5J0200MS1	B776/777 Start Set 02 Decommissioning	0	19NOV01*		120										
D5J0200010	B776/777 Set 02 Planning and Engineering	58	19NOV01	21FEB02	120										
D5J0200020	B776/777 Set 02 Proj Specif Long Lead Procurem't	57	22FEB02	21MAY02	120										
D5J0200030	B776/777 Set 02 Isolation and Containment	26	22MAY02	02JUL02	120										
D5J0200040	B776/777 Set 02 Dismantlement Tasks	32	03JUL02	22AUG02	120										
D5J0200MF1	B776/777 Complete Set 02 Decommissioning	0		22AUG02	120										
1.1.06.12.04.03 B776/777 DECOM SET 3-HYDRAULIC OIL SYS,2ND															
D5J0300MS1	B776/777 Start Set 03 Decommissioning	0	04OCT01*		107										
D5J0300010	B776/777 Set 03 Planning and Engineering	58	04OCT01	08JAN02	107										
D5J0300020	B776/777 Set 03 Proj Specif Long Lead Procurem't	57	09JAN02	05APR02	107										
D5J0300030	B776/777 Set 03 Isolation and Containment	20	08APR02	07MAY02	107										
D5J0300040	B776/777 Set 03 Dismantlement Tasks	80	08MAY02	12SEP02	107										
D5J0300MF1	B776/777 Complete Set 03 Decommissioning	0		12SEP02	107										

Project Start	01OCT97	Early Bar
Project Finish	23SEP05	Progress Bar
Date Date	01OCT98	Critical Activity
Run Date	11OCT99	

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT



Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
1.1.06.12.04.04 B776/777 DECOM SET 4-PART R131 DLINE & GBX												
D5.J0400MS1	B776/777 Start Set 04 Decommissioning	0	02OCT00*		0							
D5.J0400010	B776/777 Set 04 Planning and Engineering	58	02OCT00	03JAN01	0							
D5.J0400020	B776/777 Set 04 Proj Specif Long Lead Procurem't	65	04JAN01	16APR01	0							
D5.J0400030	B776/777 Set 04 Isolation and Containment	70	17MAY01	06SEP01	0							
D5.J0400040	B776/777 Set 04 Dismantlement Tasks	149	09OCT01*	04JUN02	0							
D5.J0400MF1	B776/777 Complete Set 04 Decommissioning	0		04JUN02	0							
1.1.06.12.04.05 B776/777 DECOM SET 5-PART R131 DLINE & GBX												
D5.J0500MS1	B776/777 Start Set 05 Decommissioning	0	03APR00*		36							
D5.J0500010	B776/777 Set 05 Planning and Engineering	78	03APR00	02AUG00	36							
D5.J0500020	B776/777 Set 05 Proj Specif Long Lead Procurem't	58	02OCT00*	03JAN01	0							
D5.J0500030	B776/777 Set 05 Isolation and Containment	62	01NOV00	09FEB01	0							
D5.J0500040	B776/777 Set 05 Dismantlement Tasks	145	12FEB01	27SEP01	0							
D5.J0500MF1	B776/777 Complete Set 05 Decommissioning	0		27SEP01	0							
1.1.06.12.04.06 B776/777 DECOM SET 6-PART R131 DLINE & GBX												
D5.J0600MS1	B776/777 Start Set 06 Decommissioning	0	02FEB00*		74							
D5.J0600010	B776/777 Set 06 Planning and Engineering	78	02FEB00	02JUN00	74							
D5.J0600020	B776/777 Set 06 Proj Specif Long Lead Procurem't	58	02OCT00*	03JAN01	0							
D5.J0600030	B776/777 Set 06 Isolation and Containment	84	01NOV00	15MAR01	0							
D5.J0600040	B776/777 Set 06 Dismantlement Tasks	167	09JAN01	27SEP01	0							
D5.J0600MF1	B776/777 Complete Set 06 Decommissioning	0		27SEP01	0							
1.1.06.12.04.07 B776/777 DECOM SET 7-TANKS 1103,1104,1106.												
D5.J0700MS1	B776/777 Start Set 07 Decommissioning	0	04OCT99		0							
D5.J0700020	B776/777 Set 07 Proj Specif Long Lead Procurem't	11	04OCT99	19OCT99	26							
D5.J0700022	B776/777 Set 07 Mgmt Review Prep (1st Tank)	19	04OCT99	01NOV99	0							
D5.J0700025	B776/777 Set 07 Conduct Management Review	18	02NOV99	01DEC99	0							
D5.J0700040	B776/777 Set 07 Dismantlement Tasks	38	02DEC99	01FEB00	0							
D5.J0700MF1	B776/777 Complete Set 07 Decommissioning	0		01FEB00	96							

Project Start 01OCT97
Project Finish 23SEP06
Data Date 01OCT99
Run Date 11OCT99

Early Bar
Progress Bar
Critical Activity

BL05:W035

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT



Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
1.1.06.12.04.08 B776/777 DECOM SET 8-R120,131, AREA 90,49,1												
D5J0800MS1	B776/777 Start Set 08 Decommissioning	0	03APR01*		205			◆				
D5J0800010	B776/777 Set 08 Planning and Engineering	60	03APR01	05JUL01	205			■				
D5J0800020	B776/777 Set 08 Proj Specif Long Lead Procurem't	53	09JUL01	27SEP01	205			■				
D5J0800030	B776/777 Set 08 Isolation and Containment	15	07NOV01	03DEC01	180				■			
D5J0800040	B776/777 Set 08 Dismantlement Tasks	23	04DEC01	10JAN02	180				■			
D5J0800MF1	B776/777 Complete Set 08 Decommissioning	0		10JAN02	180				◆			
1.1.06.12.04.09 B776/777-SET 09-RM 134E EXCLUDING GBS												
D5J0900MS1	B776/777 Start Set 09 Decommissioning	0	03APR01*		156			◆				
D5J0900010	B776/777 Set 09 Planning and Engineering	58	03APR01	02JUL01	156			■				
D5J0900020	B776/777 Set 09 Proj Specif Long Lead Procurem't	56	03JUL01	01OCT01	156			■				
D5J0900030	B776/777 Set 09 Isolation and Containment	25	05JUN02	15JUL02	2					■		
D5J0900040	B776/777 Set 09 Dismantlement Tasks	48	18JUL02	30SEP02	15					■		
D5J0900MF1	B776/777 Complete Set 09 Decommissioning	0		30SEP02	15					◆		
1.1.06.12.04.10 B776/777-SET 10-RM 134E GB505,509,751,752,												
D5J1000MS1	B776/777 Start Set 10 Decommissioning	0	13NOV00*		0			◆				
D5J1000010	B776/777 Set 10 Planning and Engineering	58	13NOV00	14FEB01	0			■				
D5J1000020	B776/777 Set 10 Proj Specif Long Lead Procurem't	56	15FEB01	14MAY01	0			■				
D5J1000030	B776/777 Set 10 Isolation and Containment	86	15MAY01	27SEP01	0				■			
D5J1000040	B776/777 Set 10 Dismantlement Tasks	155	01OCT01	04JUN02	0					■		
D5J1000MF1	B776/777 Complete Set 10 Decommissioning	0		04JUN02	0					◆		
1.1.06.12.04.11 B776/777-SET 11-RM 134E GB746,747,748 AND												
D5J1100MS1	B776/777 Start Set 11 Decommissioning	0	02FEB00*		118			◆				
D5J1100010	B776/777 Set 11 Planning and Engineering	85	02FEB00	14JUN00	118			■				
D5J1100020	B776/777 Set 11 Proj Specif Long Lead Procurem't	57	02OCT00*	02JAN01	51			■				
D5J1100030	B776/777 Set 11 Isolation and Containment	55	17OCT00	15JAN01	51			■				
D5J1100040	B776/777 Set 11 Dismantlement Tasks	162	16JAN01	27SEP01	51					■		
D5J1100MF1	B776/777 Complete Set 11 Decommissioning	0		27SEP01	155					◆		

Project Start	01OCT97	Early Bar	BL05:W036
Project Finish	23SEP05	Progress Bar	
Data Date	01OCT99	Critical Activity	
Run Date	11OCT99		

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

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ROCKY FLAT CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Float	Year								
						FY99	FY00	FY01	FY02	FY03	FY04	FY05		
1.1.06.12.04.12 B776/7-SET 12-RM 401, 403, 404, 405, 406														
D5J1200MS1	B776/777 Start Set 12 Decommissioning	0	01OCT01*		154				◆					
D5J1200010	B776/777 Set 12 Planning and Engineering	58	01OCT01	02JAN02	154				■					
D5J1200020	B776/777 Set 12 Proj Specif Long Lead Procurem't	56	03JAN02	01APR02	154				■					
D5J1200030	B776/777 Set 12 Isolation and Containment	27	01OCT02*	11NOV02	40						■			
D5J1200040	B776/777 Set 12 Dismantlement Tasks	30	12NOV02	31DEC02	40						■			
D5J1200MF1	B776/777 Complete Set 12 Decommissioning	0		31DEC02	40							◆		
1.1.06.12.04.13 B776/7-SET 13-RM 402, 402A, 416, 416B, 4														
D5J1300MS1	B776/777 Start Set 13 Decommissioning	0	02OCT00*		284			◆						
D5J1300010	B776/777 Set 13 Planning and Engineering	58	02OCT00	03JAN01	284			■						
D5J1300020	B776/777 Set 13 Proj Specif Long Lead Procurem't	56	04JAN01	02APR01	284			■						
D5J1300030	B776/777 Set 13 Isolation and Containment	27	01OCT01*	08NOV01	171						■			
D5J1300040	B776/777 Set 13 Dismantlement Tasks	30	12NOV01	31DEC01	171						■			
D5J1300MF1	B776/777 Complete Set 13 Decommissioning	0		31DEC01	171							◆		
1.1.06.12.04.14 B776/7-SET 14-RM 415, 417 AND ASSOCIATED														
D5J1400MS1	B776/777 Start Set 14 Decommissioning	0	04OCT99		40			◆						
D5J1400010	B776/777 Set 14 Planning and Engineering	36	04OCT99	30NOV99	40			■						
D5J1400030	B776/777 Set 14 Isolation and Containment	38	01DEC99	31JAN00	40			■						
D5J1400020	B776/777 Set 14 Proj Specif Long Lead Procurem't	53	01DEC99	23FEB00	62			■						
D5J1400040	B776/777 Set 14 Dismantlement Tasks	57	01FEB00	27APR00	40			■						
D5J1400MF1	B776/777 Complete Set 14 Decommissioning	0		27APR00	40						◆			
1.1.06.12.04.15 B776/7-ROOM 418A (VAULT)														
D5J1500MS1	B776/777 Start Set 15 Decommissioning	0	03APR00*		413			◆						
D5J1500010	B776/777 Set 15 Planning and Engineering	58	03APR00	30JUN00	413			■						
D5J1500020	B776/777 Set 15 Proj Specif Long Lead Procurem't	56	02OCT00*	29DEC00	357			■						
D5J1500030	B776/777 Set 15 Isolation and Containment	27	02JAN01	12FEB01	357						■			
D5J1500040	B776/777 Set 15 Dismantlement Tasks	30	13FEB01	29MAR01	357						■			
D5J1500MF1	B776/777 Complete Set 15 Decommissioning	0		29MAR01	357							◆		

Project Start	01OCT97	Early Bar
Project Finish	23SEP06	Progress Bar
Data Date	01OCT98	Critical Activity
Run Date	11OCT99	

BL05:W035

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**KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT**



Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
1.1.06.12.04.16 B776/777-RM 426, 427, 427A AND 426												
D5J1600MS1	B776/777 Start Set 16 Decommissioning	0	04OCT01*		54				◆			
D5J1600010	B776/777 Set 16 Planning and Engineering	56	04OCT01	03JAN02	54				■			
D5J1600020	B776/777 Set 16 Proj Specif Long Lead Procurem't	58	07JAN02	04APR02	54				■			
D5J1600030	B776/777 Set 16 Isolation and Containment	27	05APR02	16MAY02	54				■			
D5J1600040	B776/777 Set 16 Dismantlement Tasks	30	17MAY02	03JUL02	54				■			
D5J1600MF1	B776/777 Complete Set 16 Decommissioning	0		03JUL02	54				◆			
1.1.06.12.04.17 B776/777-RM 430 GB481												
D5J1700MS1	B776/777 Start Set 17 Decommissioning	0	04OCT99		6	◆						
D5J1700030	B776/777 Set 17 Isolation and Containment	20	04OCT99	02NOV99	6	■						
D5J1700020	B776/777 Set 17 Proj Specif Long Lead Procurem't	20	04OCT99	02NOV99	55	■						
D5J1700040	B776/777 Set 17 Dismantlement Tasks	38	02DEC99*	01FEB00	38	■						
D5J1700MF1	B776/777 Complete Set 17 Decommissioning	0		01FEB00	38	◆						
1.1.06.12.04.18 B776/777-RM 430 GB 360-362, 370-373, 368												
D5J1800MS1	B776/777 Start Set 18 Decommissioning	0	02OCT00*		27				◆			
D5J1800010	B776/777 Set 18 Planning and Engineering	56	02OCT00	29DEC00	27				■			
D5J1800020	B776/777 Set 18 Proj Specif Long Lead Procurem't	75	02JAN01	26APR01	27				■			
D5J1800030	B776/777 Set 18 Isolation and Containment	75	30APR01	24AUG01	27				■			
D5J1800040	B776/777 Set 18 Dismantlement Tasks	120	01OCT01*	09APR02	6				■			
D5J1800MF1	B776/777 Complete Set 18 Decommissioning	0		09APR02	6				◆			
1.1.06.12.04.19 B776/777-RM 154A												
D5J1900MS1	B776/777 Start Set 19 Decommissioning	0	13MAR00*		419				◆			
D5J1900010	B776/777 Set 19 Planning and Engineering	58	13MAR00	12JUN00	419				■			
D5J1900020	B776/777 Set 19 Proj Specif Long Lead Procurem't	45	02OCT00*	12DEC00	350				■			
D5J1900030	B776/777 Set 19 Isolation and Containment	26	13DEC00	24JAN01	350				■			
D5J1900040	B776/777 Set 19 Dismantlement Tasks	49	01OCT01	17DEC01	194				■			
D5J1900MF1	B776/777 Complete Set 19 Decommissioning	0		17DEC01	194				◆			
1.1.06.12.04.20 B776/777-RM 430 GB 401,402 HOOD AREA AND R												
D5J2000MS1	B776/777 Start Set 20 Decommissioning	0	04OCT99		0	◆						

Project Start	01OCT97	Early Bar
Project Finish	23SEP05	Progress Bar
Data Date	01OCT99	Critical Activity
Run Date	11OCT99	

BL05:W035

**KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT**

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CLOSURE KAISER-HILL
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ROCKY FLAT CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5J2000010	B776777 Set 20 Planning and Engineering	38	04OCT99	30NOV99	0							
D5J2000020	B776777 Set 20 Proj Specif Long Lead Procurem't	38	01DEC99	31JAN00	1							
D5J2000030	B776777 Set 20 Isolation and Containment	39	01DEC99	01FEB00	0							
D5J2000040	B776777 Set 20 Dismantlement Tasks	28	02FEB00	15MAR00	0							
D5J2000MF1	B776777 Complete Set 20 Decommissioning	0		15MAR00	0							
1.1.06.12.04.21 B77677-RM 430 GB 404, 406, 409, 426, 427												
D5J2100MS1	B776777 Start Set 21 Decommissioning	0	02FEB00'		118							
D5J2100010	B776777 Set 21 Planning and Engineering	78	02FEB00	02JUN00	118							
D5J2100020	B776777 Set 21 Proj Specif Long Lead Procurem't	58	02OCT00'	03JAN01	64							
D5J2100030	B776777 Set 21 Isolation and Containment	55	04JAN01	29MAR01	64							
D5J2100040	B776777 Set 21 Dismantlement Tasks	114	02APR01	27SEP01	64							
D5J2100MF1	B776777 Complete Set 21 Decommissioning	0		27SEP01	64							
1.1.06.12.04.22 B77677-RM 430 GB 442-448,451,452,454,456												
D5J2200MS1	B776777 Start Set 22 Decommissioning	0	23MAR01'		98							
D5J2200010	B776777 Set 22 Planning and Engineering	78	23MAR01	25JUL01	138							
D5J2200020	B776777 Set 22 Proj Specif Long Lead Procurem't	58	27JUN01	26SEP01	98							
D5J2200030	B776777 Set 22 Isolation and Containment	97	01OCT01'	05MAR02	97							
D5J2200040	B776777 Set 22 Dismantlement Tasks	208	31OCT01	30SEP02	97							
D5J2200MF1	B776777 Complete Set 22 Decommissioning	0		30SEP02	97							
1.1.06.12.04.23 B77677-RM 430 GB 515, ASSOC R-LINE AND G												
D5J2300MS1	B776777 Start Set 23 Decommissioning	0	04OCT99		0							
D5J2300020	B776777 Set 23 Proj Specif Long Lead Procurem't	46	04OCT99	15DEC99	0							
D5J2300050	B776777 Set 23 Modify Rm 127 Wall for Access	37	18OCT99	15DEC99	0							
D5J2300022	B776777 Set 23 Mgmt Review Prep (1st hot box)	36	19OCT99	15DEC99	0							
D5J2300030	B776777 Set 23 Isolation and Containment	26	03NOV99	15DEC99	0							
D5J2300025	B776777 Set 23 Conduct Mgmt Review/CAs	27	16DEC99	28JAN00	0							
D5J2300040	B776777 Set 23 Dismantlement Tasks	125	16DEC99	30JUN00	0							
D5J2300MF1	B776777 Complete Set 23 Decommissioning	0		30JUN00	0							

Project Start 01OCT97
Project Finish 23SEP05
Data Date 01OCT98
Run Date 11OCT98

Early Bar
Progress Bar
Critical Activity

BL05:W035

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

207
ROCKY FLATS CLOSURE PROJECT

Activity Id	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year								
						FY99	FY00	FY01	FY02	FY03	FY04	FY05		
1.1.06.12.04.24 B776/777- RM 430 GB756, 759-764 AND ASSOC M														
D5J2400MS1	B776/777 Start Set 24 Decommissioning	0	04OCT00'		175									
D5J2400010	B776/777 Set 24 Planning and Engineering	58	04OCT00	08JAN01	175									
D5J2400020	B776/777 Set 24 Proj Specif Long Lead Procurem't	56	09JAN01	04APR01	175									
D5J2400030	B776/777 Set 24 Isolation and Containment	30	15NOV01'	07JAN02	34									
D5J2400040	B776/777 Set 24 Dismantlement Tasks	61	08JAN02	10APR02	34									
D5J2400MF1	B776/777 Complete Set 24 Decommissioning	0		10APR02	34									
1.1.06.12.04.25 B776/7-ROOM 430, RCRA AREAS 90.67, 95.01														
D5J2500MS1	B776/777 Start Set 25 Decommissioning	0	03DEC01'		119									
D5J2500010	B776/777 Set 25 Planning and Engineering	58	03DEC01	05MAR02	119									
D5J2500020	B776/777 Set 25 Proj Specif Long Lead Procurem't	52	06MAR02	23MAY02	119									
D5J2500030	B776/777 Set 25 Isolation and Containment	27	28MAY02	09JUL02	119									
D5J2500040	B776/777 Set 25 Dismantlement Tasks	30	10JUL02	23AUG02	119									
D5J2500MF1	B776/777 Complete Set 25 Decommissioning	0		23AUG02	119									
1.1.06.12.04.26 B776/7-TANKS T1, T2, FL1-ROOM 430, RCRA														
D5J2600MS1	B776/777 Start Set 26 Decommissioning	0	03NOV99		6									
D5J2600020	B776/777 Set 26 Proj Specif Long Lead Procurem't	49	03NOV99	24JAN00	6									
D5J2600040	B776/777 Set 26 Dismantlement Tasks	38	02FEB00	30MAR00	0									
D5J2600MF1	B776/777 Complete Set 26 Decommissioning	0		30MAR00	0									
1.1.06.12.04.27 B776/7-ROOMS 432, 432A,B,C,D, 440 AND GB														
D5J2700MS1	B776/777 Start Set 27 Decommissioning	0	01NOV01'		110									
D5J2700010	B776/777 Set 27 Planning and Engineering	58	01NOV01	05FEB02	110									
D5J2700020	B776/777 Set 27 Proj Specif Long Lead Procurem't	56	06FEB02	02MAY02	110									
D5J2700030	B776/777 Set 27 Isolation and Containment	30	03MAY02	19JUN02	110									
D5J2700040	B776/777 Set 27 Dismantlement Tasks	50	12JUL02	30SEP02	97									
D5J2700MF1	B776/777 Complete Set 27 Decommissioning	0		30SEP02	97									
1.1.06.12.04.28 B776/7-ROOM 433														
D5J2800MS1	B776/777 Start Set 28 Decommissioning	0	01FEB01'		295									
D5J2800010	B776/777 Set 28 Planning and Engineering	58	01FEB01	02MAY01	295									

Project Start	01OCT97	Early Bar	BL05:W03E
Project Finish	23SEP08	Progress Bar	
Date Date	01OCT98	Critical Activity	
Run Date	11OCT99		

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Year							
						FY99	FY00	FY01	FY02	FY03	FY04	FY05	
D5J2800020	B776/777 Set 28 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	295								
D5J2800030	B776/777 Set 28 Isolation and Containment	37	01AUG01	27SEP01	295								
D5J2800040	B776/777 Set 28 Dismantlement Tasks	30	01OCT01	14NOV01	295								
D5J2800MF1	B776/777 Complete Set 28 Decommissioning	0		14NOV01	295								
1.1.06.12.04.29 B776/7-Room 437 GB A1, A2, A3 AND ASSO													
D5J2900MS1	B776/777 Start Set 29 Decommissioning	0	02FEB00*		249								
D5J2900010	B776/777 Set 29 Planning and Engineering	58	02FEB00	02MAY00	249								
D5J2900020	B776/777 Set 29 Proj Specif Long Lead Procurem't	56	02OCT00*	29DEC00	155								
D5J2900030	B776/777 Set 29 Isolation and Containment	56	02JAN01	28MAR01	155								
D5J2900040	B776/777 Set 29 Dismantlement Tasks	115	29MAR01	27SEP01	155								
D5J2900MF1	B776/777 Complete Set 29 Decommissioning	0		27SEP01	155								
1.1.06.12.04.30 B776/7-Room 442 (VAULT)													
D5J3000MS1	B776/777 Start Set 30 Decommissioning	0	05MAR01*		205								
D5J3000010	B776/777 Set 30 Planning and Engineering	58	05MAR01	01JUN01	205								
D5J3000020	B776/777 Set 30 Proj Specif Long Lead Procurem't	56	04JUN01	29AUG01	205								
D5J3000030	B776/777 Set 30 Isolation and Containment	26	01OCT01*	07NOV01	187								
D5J3000040	B776/777 Set 30 Dismantlement Tasks	30	08NOV01	28DEC01	187								
D5J3000MF1	B776/777 Complete Set 30 Decommissioning	0		28DEC01	187								
1.1.06.12.04.31 B776/7-Room 433 AND NDT LINE													
D5J3100MS1	B776/777 Start Set 31 Decommissioning	0	04OCT99		143								
D5J3100010	B776/777 Set 31 Planning and Engineering	36	04OCT99	30NOV99	143								
D5J3100020	B776/777 Set 31 Proj Specif Long Lead Procurem't	75	01DEC99	28MAR00	143								
D5J3100030	B776/777 Set 31 Isolation and Containment	75	01DEC99	28MAR00	143								
D5J3100040	B776/777 Set 31 Dismantlement Tasks	95	29MAR00	25AUG00	143								
D5J3100MF1	B776/777 Complete Set 31 Decommissioning	0		25AUG00	143								
1.1.06.12.04.32 B776/7-RM 444, 448-450, 436 AND RCRA ARE													
D5J3200MS1	B776/777 Start Set 32 Decommissioning	0	03JAN01*		243								
D5J3200010	B776/777 Set 32 Planning and Engineering	58	03JAN01	03APR01	243								

Project Start 01OCT97
Project Finish 23SEP05
Data Date 01OCT98
Run Date 11OCT99

Early Bar
Progress Bar
Critical Activity

BL05:W035

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5J3200020	B776/777 Set 32 Proj Specif Long Lead Procurem't	56	04APR01	29JUN01	243							
D5J3200030	B776/777 Set 32 Isolation and Containment	26	02JUL01	10AUG01	243							
D5J3200040	B776/777 Set 32 Dismantlement Tasks	30	01OCT01*	14NOV01	213							
D5J3200MF1	B776/777 Complete Set 32 Decommissioning	0		14NOV01	213							
1.1.06.12.04.33 B776/7-Room 445 AND GB494, 495, 499-502												
D5J3300MS1	B776/777 Start Set 33 Decommissioning	0	04OCT99		0							
D5J3300010	B776/777 Set 33 Planning and Engineering	36	04OCT99	30NOV99	0							
D5J3300020	B776/777 Set 33 Proj Specif Long Lead Procurem't	35	01DEC99	26JAN00	3							
D5J3300030	B776/777 Set 33 Isolation and Containment	38	01DEC99	31JAN00	0							
D5J3300040	B776/777 Set 33 Dismantlement Tasks	153	01FEB00	28SEP00	0							
D5J3300MF1	B776/777 Complete Set 33 Decommissioning	0		28SEP00	0							
1.1.06.12.04.34 B776/7-Room 452 GB 522, 548, 022, 027, 0												
D5J3400MS1	B776/777 Start Set 34 Decommissioning	0	02FEB00*		169							
D5J3400010	B776/777 Set 34 Planning and Engineering	58	02FEB00	02MAY00	169							
D5J3400020	B776/777 Set 34 Proj Specif Long Lead Procurem't	45	02OCT00*	12DEC00	75							
D5J3400030	B776/777 Set 34 Isolation and Containment	50	13DEC00	01MAR01	75							
D5J3400040	B776/777 Set 34 Dismantlement Tasks	132	05MAR01	27SEP01	75							
D5J3400MF1	B776/777 Complete Set 34 Decommissioning	0		27SEP01	75							
1.1.06.12.04.35 B776/7-Room 452 GB 623-628, 630, 632, 53												
D5J3500MS1	B776/777 Start Set 35 Decommissioning	0	17NOV00*		157							
D5J3500010	B776/777 Set 35 Planning and Engineering	58	17NOV00	21FEB01	157							
D5J3500020	B776/777 Set 35 Proj Specif Long Lead Procurem't	56	22FEB01	18MAY01	157							
D5J3500030	B776/777 Set 35 Isolation and Containment	122	01OCT01	11APR02	75							
D5J3500040	B776/777 Set 35 Dismantlement Tasks	198	15NOV01	30SEP02	75							
D5J3500MF1	B776/777 Complete Set 35 Decommissioning	0		30SEP02	75							
1.1.06.12.04.36 B776/7-Room 452 AND 475 GB 544 AND 543 A												
D5J3600MS1	B776/777 Start Set 36 Decommissioning	0	03APR00*		240							
D5J3600010	B776/777 Set 36 Planning and Engineering	58	03APR00	30JUN00	240							

Project Start 01OCT97
Project Finish 23SEP06
Data Date 01OCT98
Run Date 11OCT99

Early Bar
 Progress Bar
 Critical Activity

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

CLOSURE KAISER-HILL

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ROCKY FLAT CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5J3600020	B776/777 Set 36 Proj Specif Long Lead Procurem't	56	02OCT00*	29DEC00	184							
D5J3600030	B776/777 Set 36 Isolation and Containment	57	02JAN01	29MAR01	184							
D5J3600040	B776/777 Set 36 Dismantlement Tasks	85	02APR01	13AUG01	184							
D5J3600MF1	B776/777 Complete Set 36 Decommissioning	0		13AUG01	184							
1.1.06.12.04.37 B776/7-ROOM 453, 454, AND 460												
D5J3700MS1	B776/777 Start Set 37 Decommissioning	0	15OCT01*		101							
D5J3700010	B776/777 Set 37 Planning and Engineering	58	15OCT01	16JAN02	101							
D5J3700020	B776/777 Set 37 Proj Specif Long Lead Procurem't	56	17JAN02	15APR02	101							
D5J3700030	B776/777 Set 37 Isolation and Containment	34	16APR02	06JUN02	101							
D5J3700040	B776/777 Set 37 Dismantlement Tasks	67	10JUN02	23SEP02	101							
D5J3700MF1	B776/777 Complete Set 37 Decommissioning	0		23SEP02	101							
1.1.06.12.04.38 B776/7-ROOMS 455-457, 481 AND 458												
D5J3800MS1	B776/777 Start Set 38 Decommissioning	0	01FEB01*		223							
D5J3800010	B776/777 Set 38 Planning and Engineering	58	01FEB01	02MAY01	223							
D5J3800020	B776/777 Set 38 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	223							
D5J3800030	B776/777 Set 38 Isolation and Containment	27	01AUG01	12SEP01	223							
D5J3800040	B776/777 Set 38 Dismantlement Tasks	30	01OCT01*	14NOV01	213							
D5J3800MF1	B776/777 Complete Set 38 Decommissioning	0		14NOV01	213							
1.1.06.12.04.39 B776/7-ROOMS 459 AND 459A												
D5J3900MS1	B776/777 Start Set 39 Decommissioning	0	01FEB01*		223							
D5J3900010	B776/777 Set 39 Planning and Engineering	58	01FEB01	02MAY01	223							
D5J3900020	B776/777 Set 39 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	223							
D5J3900030	B776/777 Set 39 Isolation and Containment	27	01AUG01	12SEP01	223							
D5J3900040	B776/777 Set 39 Dismantlement Tasks	30	01OCT01*	14NOV01	213							
D5J3900MF1	B776/777 Complete Set 39 Decommissioning	0		14NOV01	213							
1.1.06.12.04.40 B776/7-ROOM 462 -A VAULT												
D5J4000MS1	B776/777 Start Set 40 Decommissioning	0	01FEB01*		224							
D5J4000010	B776/777 Set 40 Planning and Engineering	58	01FEB01	02MAY01	224							

Project Start 01OCT97
Project Finish 23SEP05
Data Date 01OCT98
Run Date 11OCT99

BL05:W035

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT



Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5J4000020	B778/777 Set 40 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	224							
D5J4000030	B778/777 Set 40 Isolation and Containment	26	01AUG01	11SEP01	224							
D5J4000040	B778/777 Set 40 Dismantlement Tasks	30	01OCT01*	14NOV01	213							
D5J4000MF1	B778/777 Complete Set 40 Decommissioning	0		14NOV01	213							
1.1.06.12.04.41 B778/7-Room 463 AND GB A4-A9 AND A11												
D5J4100MS1	B778/777 Start Set 41 Decommissioning	0	02FEB00*		249							
D5J4100010	B778/777 Set 41 Planning and Engineering	58	02FEB00	02MAY00	249							
D5J4100020	B778/777 Set 41 Proj Specif Long Lead Procurem't	56	02OCT00*	29DEC00	155							
D5J4100030	B778/777 Set 41 Isolation and Containment	54	02JAN01	26MAR01	155							
D5J4100040	B778/777 Set 41 Dismantlement Tasks	117	27MAR01	27SEP01	155							
D5J4100MF1	B778/777 Complete Set 41 Decommissioning	0		27SEP01	155							
1.1.06.12.04.42 B778/7-Room 464, 477, 477A, 463A AND 463												
D5J4200MS1	B778/777 Start Set 42 Decommissioning	0	01FEB01*		224							
D5J4200010	B778/777 Set 42 Planning and Engineering	58	01FEB01	02MAY01	224							
D5J4200020	B778/777 Set 42 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	224							
D5J4200030	B778/777 Set 42 Isolation and Containment	26	01AUG01	11SEP01	224							
D5J4200040	B778/777 Set 42 Dismantlement Tasks	30	01OCT01*	14NOV01	213							
D5J4200MF1	B778/777 Complete Set 42 Decommissioning	0		14NOV01	213							
1.1.06.12.04.43 B778/7-ROOMS 465 AND 465A												
D5J4300MS1	B778/777 Start Set 43 Decommissioning	0	02JAN02*		98							
D5J4300010	B778/777 Set 43 Planning and Engineering	58	02JAN02	02APR02	98							
D5J4300020	B778/777 Set 43 Proj Specif Long Lead Procurem't	56	03APR02	28JUN02	98							
D5J4300030	B778/777 Set 43 Isolation and Containment	26	01JUL02	09AUG02	98							
D5J4300040	B778/777 Set 43 Dismantlement Tasks	30	12AUG02	26SEP02	98							
D5J4300MF1	B778/777 Complete Set 43 Decommissioning	0		26SEP02	98							
1.1.06.12.04.44 B778/7-ROOMS 466-472, 474 AND 474D												
D5J4400MS1	B778/777 Start Set 44 Decommissioning	0	03APR00*		356							
D5J4400010	B778/777 Set 44 Planning and Engineering	58	03APR00	30JUN00	356							

Project Start 01OCT97
Project Finish 23SEP05
Data Date 01OCT98
Run Date 11OCT99

Early Bar
Progress Bar
Critical Activity

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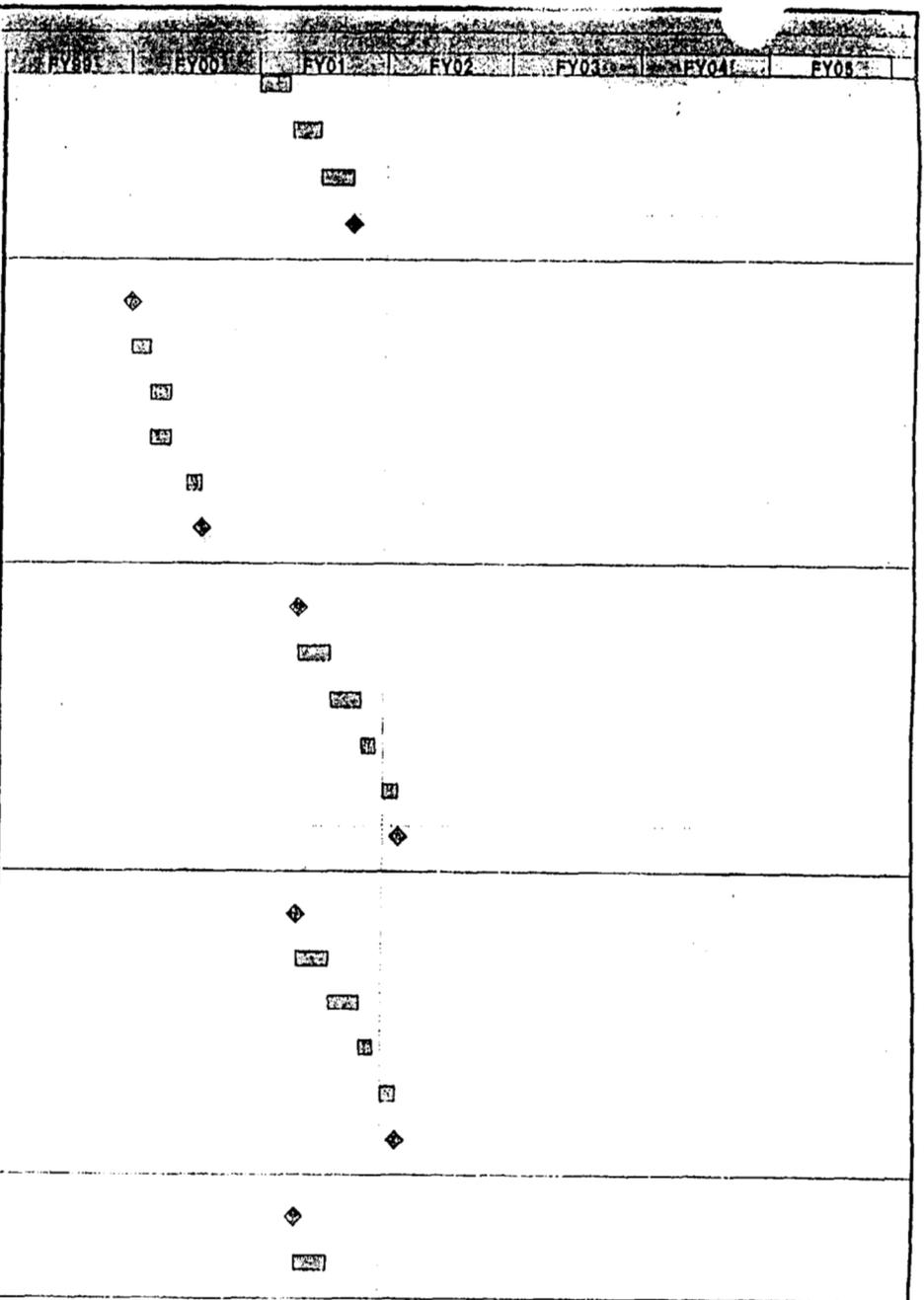
KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

CLOSURE KAISER-HILL

212

ROCKY FLAT CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Est. Float
D5J4400020	B776/777 Set 44 Proj Specif Long Lead Procurem't	58	02OCT00*	29DEC00	300
D5J4400030	B776/777 Set 44 Isolation and Containment	58	02JAN01	28MAR01	300
D5J4400040	B776/777 Set 44 Dismantlement Tasks	58	28MAR01	28JUN01	300
D5J4400MF1	B776/777 Complete Set 44 Decommissioning	0		28JUN01	300
1.1.06.12.04.45 B776/777-ROOMS 473 AND 478					
D5J4500MS1	B776/777 Start Set 45 Decommissioning	0	04OCT99		29
D5J4500010	B776/777 Set 45 Planning and Engineering	36	04OCT99	30NOV99	28
D5J4500030	B776/777 Set 45 Isolation and Containment	38	01DEC99	31JAN00	29
D5J4500020	B776/777 Set 45 Proj Specif Long Lead Procurem't	38	01DEC99	31JAN00	47
D5J4500040	B776/777 Set 45 Dismantlement Tasks	28	16MAR00	27APR00	0
D5J4500MF1	B776/777 Complete Set 45 Decommissioning	0		27APR00	40
1.1.06.12.04.46 B776/777-ROOM 478 - B VAULT					
D5J4600MS1	B776/777 Start Set 46 Decommissioning	0	01FEB01*		224
D5J4600010	B776/777 Set 46 Planning and Engineering	58	01FEB01	02MAY01	224
D5J4600020	B776/777 Set 46 Proj Specif Long Lead Procurem't	58	03MAY01	31JUL01	224
D5J4600030	B776/777 Set 46 Isolation and Containment	26	01AUG01	11SEP01	224
D5J4600040	B776/777 Set 46 Dismantlement Tasks	30	01OCT01*	14NOV01	213
D5J4600MF1	B776/777 Complete Set 46 Decommissioning	0		14NOV01	213
1.1.06.12.04.47 B776/777-ROOMS 479, 481-483, 483A, 483B AND					
D5J4700MS1	B776/777 Start Set 47 Decommissioning	0	01FEB01*		224
D5J4700010	B776/777 Set 47 Planning and Engineering	58	01FEB01	02MAY01	224
D5J4700020	B776/777 Set 47 Proj Specif Long Lead Procurem't	58	03MAY01	31JUL01	224
D5J4700030	B776/777 Set 47 Isolation and Containment	28	01AUG01	11SEP01	224
D5J4700040	B776/777 Set 47 Dismantlement Tasks	30	01OCT01*	14NOV01	213
D5J4700MF1	B776/777 Complete Set 47 Decommissioning	0		14NOV01	213
1.1.06.12.04.48 B776/777-KATHABAR SYSTEM (EXCLUDING INSIDE					
D5J4800MS1	B776/777 Start Set 48 Decommissioning	0	01FEB01*		205
D5J4800010	B776/777 Set 48 Planning and Engineering	58	01FEB01	02MAY01	205



Project Start 01OCT97
 Project Finish 23SEP08
 Data Date 01OCT98
 Run Date 11OCT99

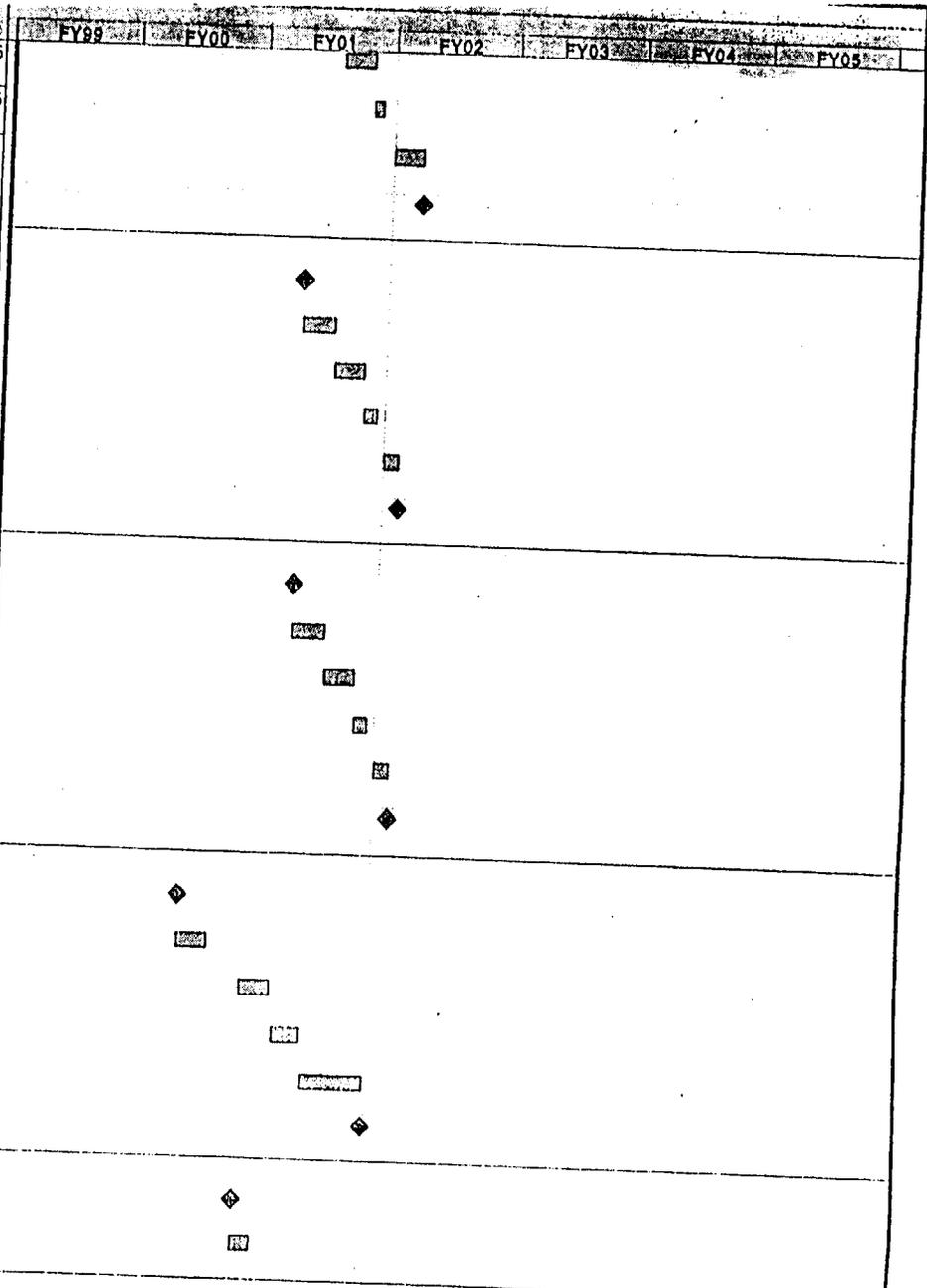
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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT



Description	Dur	Start	Finish	Float
D5J4800020 B776/777 Set 48 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	205
D5J4800030 B776/777 Set 48 Isolation and Containment	20	01AUG01	30AUG01	205
D5J4800040 B776/777 Set 48 Dismantlement Tasks	55	01OCT01*	27DEC01	188
D5J4800MF1 B776/777 Complete Set 48 Decommissioning	0		27DEC01	188
1.1.08.12.04.49 B776/7-MODULAB				
D5J4900MS1 B776/777 Start Set 49 Decommissioning	0	01FEB01*		224
D5J4900010 B776/777 Set 49 Planning and Engineering	58	01FEB01	02MAY01	224
D5J4900020 B776/777 Set 49 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	224
D5J4900030 B776/777 Set 49 Isolation and Containment	26	01AUG01	11SEP01	224
D5J4900040 B776/777 Set 49 Dismantlement Tasks	30	01OCT01*	14NOV01	213
D5J4900MF1 B776/777 Complete Set 49 Decommissioning	0		14NOV01	213
1.1.08.12.04.50 B776/7-PM 101, 103, 103A, 104, 104A-C, E				
D5J5000MS1 B776/777 Start Set 50 Decommissioning	0	01FEB01*		224
D5J5000010 B776/777 Set 50 Planning and Engineering	58	01FEB01	02MAY01	224
D5J5000020 B776/777 Set 50 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	224
D5J5000030 B776/777 Set 50 Isolation and Containment	26	01AUG01	11SEP01	224
D5J5000040 B776/777 Set 50 Dismantlement Tasks	30	01OCT01*	14NOV01	213
D5J5000MF1 B776/777 Complete Set 50 Decommissioning	0		14NOV01	213
1.1.08.12.04.51 B776/7-GB IN ROOMS 154A, 046, 495, 496, 4				
D5J5100MS1 B776/777 Start Set 51 Decommissioning	0	03APR00*		211
D5J5100010 B776/777 Set 51 Planning and Engineering	58	03APR00	30JUN00	211
D5J5100020 B776/777 Set 51 Proj Specif Long Lead Procurem't	56	02OCT00*	29DEC00	155
D5J5100030 B776/777 Set 51 Isolation and Containment	57	02JAN01	29MAR01	155
D5J5100040 B776/777 Set 51 Dismantlement Tasks	114	02APR01	27SEP01	155
D5J5100MF1 B776/777 Complete Set 51 Decommissioning	0		27SEP01	155
1.1.08.12.04.52 B776/7-TANKS T360 AND T370, GB361 AND 37				
D5J5200MS1 B776/777 Start Set 52 Decommissioning	0	02OCT00*		215
D5J5200010 B776/777 Set 52 Planning and Engineering	35	02OCT00	27NOV00	215



Project Start	01OCT97	Early Bar	BLOS:W035
Project Finish	23SEP05	Progress Bar	
Date Date	01OCT98	Critical Activity	
Run Date	11OCT99		

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Earliest Start	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5J5200020	B776/777 Set 52 Proj Specif Long Lead Procurem't	18	28NOV00	26DEC00	215							
D5J5200030	B776/777 Set 52 Isolation and Containment	58	27DEC00	27MAR01	215							
D5J5200040	B776/777 Set 52 Dismantlement Tasks	56	28MAR01	25JUN01	215							
D5J5200MF1	B776/777 Complete Set 52 Decommissioning	0		25JUN01	215							
1.1.06.12.04.53 B776/7-Room 152 VAULT, RCRA AREA 90.85												
D5J5300MS1	B776/777 Start Set 53 Decommissioning	0	01FEB01*		175							
D5J5300010	B776/777 Set 53 Planning and Engineering	58	01FEB01	02MAY01	175							
D5J5300020	B776/777 Set 53 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	175							
D5J5300030	B776/777 Set 53 Isolation and Containment	37	01AUG01	27SEP01	175							
D5J5300040	B776/777 Set 53 Dismantlement Tasks	68	01OCT01*	17JAN02	175							
D5J5300MF1	B776/777 Complete Set 53 Decommissioning	0		17JAN02	175							
1.1.06.12.04.54 B776/7-Room 154, 154B, 155, 161B, 153 DO												
D5J5400MS1	B776/777 Start Set 54 Decommissioning	0	01FEB01*		222							
D5J5400010	B776/777 Set 54 Planning and Engineering	58	01FEB01	02MAY01	222							
D5J5400020	B776/777 Set 54 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	222							
D5J5400030	B776/777 Set 54 Isolation and Containment	26	01AUG01	11SEP01	222							
D5J5400040	B776/777 Set 54 Dismantlement Tasks	32	01OCT01*	16NOV01	211							
D5J5400MF1	B776/777 Complete Set 54 Decommissioning	0		16NOV01	211							
1.1.06.12.04.55 B776/7-TANKS SRV3-5, GB0001, RCRA AREA 9												
D5J5500MS1	B776/777 Start Set 55 Decommissioning	0	04OCT99		63							
D5J5500010	B776/777 Set 55 Planning and Engineering	52	04OCT99	27DEC99	63							
D5J5500020	B776/777 Set 55 Proj Specif Long Lead Procurem't	56	28DEC99	23MAR00	63							
D5J5500040	B776/777 Set 55 Dismantlement Tasks	40	01MAY00	30JUN00	0							
D5J5500MF1	B776/777 Complete Set 55 Decommissioning	0		30JUN00	0							
1.1.06.12.04.56 B776/7-Room 161												
D5J5600MS1	B776/777 Start Set 56 Decommissioning	0	01FEB01*		222							
D5J5600010	B776/777 Set 56 Planning and Engineering	58	01FEB01	02MAY01	222							
D5J5600020	B776/777 Set 56 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	222							

Project Start	01OCT97	Early Bar	BLOS:W035
Project Finish	23SEP06	Progress Bar	
Date Date	01OCT99	Critical Activity	
Run Date	11OCT99		

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5J5600030	B776/777 Set 58 Isolation and Containment	28	01AUG01	11SEP01	222							
D5J5600040	B776/777 Set 58 Dismantlement Tasks	32	01OCT01*	16NOV01	211							
D5J5600MF1	B776/777 Complete Set 58 Decommissioning	0		16NOV01	211							
1.1.06.12.04.57 B776/7-Room 156, 160, 159A, 159, 159B, 1												
D5J5700MS1	B776/777 Start Set 57 Decommissioning	0	06DEC01*		111							
D5J5700010	B776/777 Set 57 Planning and Engineering	58	06DEC01	08MAR02	111							
D5J5700020	B776/777 Set 57 Proj Specif Long Lead Procurem't	56	11MAR02	05JUN02	111							
D5J5700030	B776/777 Set 57 Isolation and Containment	26	06JUN02	17JUL02	111							
D5J5700040	B776/777 Set 57 Dismantlement Tasks	32	18JUL02	08SEP02	111							
D5J5700MF1	B776/777 Complete Set 57 Decommissioning	0		06SEP02	111							
1.1.06.12.04.58 B776/7-ROOMS 157, 156 AND DOCK 4												
D5J5800MS1	B776/777 Start Set 58 Decommissioning	0	06DEC01*		111							
D5J5800010	B776/777 Set 58 Planning and Engineering	58	06DEC01	08MAR02	111							
D5J5800020	B776/777 Set 58 Proj Specif Long Lead Procurem't	56	11MAR02	05JUN02	111							
D5J5800030	B776/777 Set 58 Isolation and Containment	26	06JUN02	17JUL02	111							
D5J5800040	B776/777 Set 58 Dismantlement Tasks	32	18JUL02	06SEP02	111							
D5J5800MF1	B776/777 Complete Set 58 Decommissioning	0		06SEP02	111							
1.1.06.12.04.59 B776/7-ROOMS 138, 139, 144, 147												
D5J5900MS1	B776/777 Start Set 59 Decommissioning	0	01FEB01*		222							
D5J5900010	B776/777 Set 59 Planning and Engineering	58	01FEB01	02MAY01	222							
D5J5900020	B776/777 Set 59 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	222							
D5J5900030	B776/777 Set 59 Isolation and Containment	26	01AUG01	11SEP01	222							
D5J5900040	B776/777 Set 59 Dismantlement Tasks	32	01OCT01*	16NOV01	211							
D5J5900MF1	B776/777 Complete Set 59 Decommissioning	0		16NOV01	211							
1.1.06.12.04.60 B776/7-ROOMS 146, 146A,B,C												
D5J6000MS1	B776/777 Start Set 60 Decommissioning	0	01FEB01*		220							
D5J6000010	B776/777 Set 60 Planning and Engineering	58	01FEB01	02MAY01	220							
D5J6000020	B776/777 Set 60 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	220							

Project Start 01OCT97
Project Finish 23SEP06
Data Date 01OCT99
Run Date 11OCT99

Early Bar
Progress Bar
Critical Activity

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BLOS:W035

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

CLOSURE KAISER-HILL

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ROCKY FLAT CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5J600030	B776/777 Set 60 Isolation and Containment	20	01AUG01	30AUG01	220							
D5J600040	B776/777 Set 60 Dismantlement Tasks	40	01OCT01*	03DEC01	203							
D5J6000MF1	B776/777 Complete Set 60 Decommissioning	0		03DEC01	203							
1.1.06.12.04.61 B776/7-ROOM 135 (PILOT FBI) RCRA AREA 49												
D5J6100MS1	B776/777 Start Set 61 Decommissioning	0	14DEC01*		104							
D5J6100010	B776/777 Set 61 Planning and Engineering	58	14DEC01	18MAR02	104							
D5J6100020	B776/777 Set 61 Proj Specif Long Lead Procurem't	56	19MAR02	13JUN02	104							
D5J6100030	B776/777 Set 61 Isolation and Containment	20	14JUN02	16JUL02	104							
D5J6100040	B776/777 Set 61 Dismantlement Tasks	40	17JUL02	18SEP02	104							
D5J6100MF1	B776/777 Complete Set 61 Decommissioning	0		18SEP02	104							
1.1.06.12.04.62 B776/7-TANKS FBI 1 ABD FBI 2 AND ASSOC R												
D5J6200MS1	B776/777 Start Set 62 Decommissioning	0	03APR00		0							
D5J6200020	B776/777 Set 62 Proj Specif Long Lead Procurem't	32	03APR00	19MAY00	1							
D5J6200040	B776/777 Set 62 Dismantlement Tasks	58	03APR00	30JUN00	0							
D5J6200MF1	B776/777 Complete Set 62 Decommissioning	0		30JUN00	0							
1.1.06.12.04.63 B776/7-ROOMS 118, 118A,B,C,D,E,F,G,H AND												
D5J6300MS1	B776/777 Start Set 63 Decommissioning	0	01FEB01*		116							
D5J6300010	B776/777 Set 63 Planning and Engineering	58	01FEB01	02MAY01	116							
D5J6300020	B776/777 Set 63 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	116							
D5J6300030	B776/777 Set 63 Isolation and Containment	37	01AUG01	27SEP01	116							
D5J6300040	B776/777 Set 63 Dismantlement Tasks	127	01OCT01*	19APR02	116							
D5J6300MF1	B776/777 Complete Set 63 Decommissioning	0		19APR02	116							
1.1.06.12.04.64 B776/7-SARF (AREA 512, 513, 515, 517, 51)												
D5J6400MS1	B776/777 Start Set 64 Decommissioning	0	02FEB00*		249							
D5J6400010	B776/777 Set 64 Planning and Engineering	58	02FEB00	02MAY00	249							
D5J6400020	B776/777 Set 64 Proj Specif Long Lead Procurem't	45	02OCT00*	12DEC00	155							
D5J6400030	B776/777 Set 64 Isolation and Containment	80	13DEC00	18APR01	155							
D5J6400040	B776/777 Set 64 Dismantlement Tasks	162	16JAN01	27SEP01	155							

Project Start	01OCT97	■	Early Bar
Project Finish	23SEP05	■	Progress Bar
Data Date	01OCT98	■	Critical Activity
Run Date	11OCT99		

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT



Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year								
						FY99	FY00	FY01	FY02	FY03	FY04	FY06		
D5J6400MF1	B776/777 Complete Set 64 Decommissioning	0		27SEP01	155				◆					
1.1.06.12.04.65 B776/7-Room 150, 150A, 136, 127J AND 141									◆					
D5J6500MS1	B776/777 Start Set 65 Decommissioning	0	01OCT01*		97				◆					
D5J6500010	B776/777 Set 65 Planning and Engineering	58	01OCT01	02JAN02	97				■					
D5J6500020	B776/777 Set 65 Proj Specif Long Lead Procurem't	56	03JAN02	01APR02	97				■					
D5J6500030	B776/777 Set 65 Isolation and Containment	37	02APR02	29MAY02	97				■					
D5J6500040	B776/777 Set 65 Dismantlement Tasks	77	30MAY02	30SEP02	97				■					
D5J6500MF1	B776/777 Complete Set 65 Decommissioning	0		30SEP02	97				◆					
1.1.06.12.04.66 B776/7-ASRF INCLUDING RDA,MDA,TA, J177,J									◆					
D5J6600MS1	B776/777 Start Set 66 Decommissioning	0	05DEC01*		0				◆					
D5J6600010	B776/777 Set 66 Planning and Engineering	58	05DEC01	07MAR02	0				■					
D5J6600020	B776/777 Set 66 Proj Specif Long Lead Procurem't	56	08MAR02	04JUN02	0				■					
D5J6600030	B776/777 Set 66 Isolation and Containment	73	05JUN02	30SEP02	0				■					
D5J6600040	B776/777 Set 66 Dismantlement Tasks	228	01OCT02	30SEP03	0				■					
D5J6600MF1	B776/777 Complete Set 66 Decommissioning	0		30SEP03	0								◆	
1.1.06.12.04.67 B776/7-ROOMS 134, 123, 137, RCRA AREA 49									◆					
D5J6700MS1	B776/777 Start Set 67 Decommissioning	0	01NOV01*		176				◆					
D5J6700010	B776/777 Set 67 Planning and Engineering	58	01NOV01	05FEB02	176				■					
D5J6700020	B776/777 Set 67 Proj Specif Long Lead Procurem't	57	06FEB02	03MAY02	176				■					
D5J6700030	B776/777 Set 67 Isolation and Containment	26	06MAY02	14JUN02	176				■					
D5J6700040	B776/777 Set 67 Dismantlement Tasks	40	17JUN02	19AUG02	176				■					
D5J6700MF1	B776/777 Complete Set 67 Decommissioning	0		19AUG02	176				◆					
1.1.06.12.04.68 B776/7-Room 1, 127, 127A, 127B, RCRA ARE									◆					
D5J6800MS1	B776/777 Start Set 68 Decommissioning	0	03APR02*		38				◆					
D5J6800010	B776/777 Set 68 Planning and Engineering	58	03APR02	02JUL02	38				■					
D5J6800020	B776/777 Set 68 Proj Specif Long Lead Procurem't	55	03JUL02	30SEP02	38				■					
D5J6800030	B776/777 Set 68 Isolation and Containment	26	01OCT02	07NOV02	38				■					
D5J6800040	B776/777 Set 68 Dismantlement Tasks	33	11NOV02	06JAN03	38				■					

Project Start	01OCT97	Early Bar
Project Finish	23SEP05	Progress Bar
Date Date	01OCT98	Critical Activity
Run Date	11OCT99	

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

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ROCKY FLAT CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Lai Float							
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5J6800MF1	B776/777 Complete Set 68 Decommissioning	0		06JAN03	38							
1.1.06.12.04.69 B776/7-TANK T1A, T1B, T2A, T2B, T3 AND A												
D5J6900MS1	B776/777 Start Set 69 Decommissioning	0	01MAY02*		179							
D5J6900010	B776/777 Set 69 Planning and Engineering	58	01MAY02	31JUL02	179							
D5J6900020	B776/777 Set 69 Proj Specif Long Lead Procurem't	38	01AUG02	01OCT02	179							
D5J6900030	B776/777 Set 69 Isolation and Containment	10	02OCT02	16OCT02	179							
D5J6900040	B776/777 Set 69 Dismantlement Tasks	38	17OCT02	17DEC02	179							
D5J6900MF1	B776/777 Complete Set 69 Decommissioning	0		02MAY03	93							
1.1.06.12.04.70 B776/7-ROOM 230, 230A, 231, 231A, 232, 2												
D5J7000MS1	B776/777 Start Set 70 Decommissioning	0	01FEB01*		224							
D5J7000010	B776/777 Set 70 Planning and Engineering	58	01FEB01	02MAY01	224							
D5J7000020	B776/777 Set 70 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	224							
D5J7000030	B776/777 Set 70 Isolation and Containment	26	01AUG01	11SEP01	224							
D5J7000040	B776/777 Set 70 Dismantlement Tasks	30	01OCT01*	14NOV01	213							
D5J7000MF1	B776/777 Complete Set 70 Decommissioning	0		14NOV01	213							
1.1.06.12.04.71 B776/7-SUPERDRI AIR DRYING SYSTEM 2D FLO												
D5J7100MS1	B776/777 Start Set 71 Decommissioning	0	01FEB01*		196							
D5J7100010	B776/777 Set 71 Planning and Engineering	58	01FEB01	02MAY01	196							
D5J7100020	B776/777 Set 71 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	196							
D5J7100030	B776/777 Set 71 Isolation and Containment	26	01AUG01	11SEP01	196							
D5J7100040	B776/777 Set 71 Dismantlement Tasks	58	01OCT01*	02JAN02	185							
D5J7100MF1	B776/777 Complete Set 71 Decommissioning	0		02JAN02	185							
1.1.06.12.04.72 B776/7-GLOVEBOX DRY AIR DRYING SYSTEM 2D												
D5J7200MS1	B776/777 Start Set 72 Decommissioning	0	01FEB01*		196							
D5J7200010	B776/777 Set 72 Planning and Engineering	58	01FEB01	02MAY01	196							
D5J7200020	B776/777 Set 72 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	196							
D5J7200030	B776/777 Set 72 Isolation and Containment	26	01AUG01	11SEP01	196							
D5J7200040	B776/777 Set 72 Dismantlement Tasks	58	01OCT01*	02JAN02	185							

Project Start	01OCT07	 Early Bar	BL05:W035
Project Finish	23SEP05	 Progress Bar	
Data Date	01OCT08	 Critical Activity	
Run Date	11OCT09		

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

 219
 ROCKY FLATS CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year							
						FY99	FY00	FY01	FY02	FY03	FY04	FY05	
D5J7200MF1	B776/777 Complete Set 72 Decommissioning	0		02JAN02	185				◆				
1.1.06.12.04.73 B776/7-REMAINDER OF 2D FLOOR EQUIPMENT N													
D5J7300MS1	B776/777 Start Set 73 Decommissioning	0	01FEB01*		196			◆					
D5J7300010	B776/777 Set 73 Planning and Engineering	58	01FEB01	02MAY01	196			■					
D5J7300020	B776/777 Set 73 Proj Specif Long Lead Procurem't	56	03MAY01	31JUL01	196			■					
D5J7300030	B776/777 Set 73 Isolation and Containment	26	01AUG01	11SEP01	196			■					
D5J7300040	B776/777 Set 73 Dismantlement Tasks	58	01OCT01*	02JAN02	185			■					
D5J7300MF1	B776/777 Complete Set 73 Decommissioning	0		02JAN02	185				◆				
1.1.06.12.04.74 B776/7-BUILDING 702, 712, AND 712A													
D5J7400MS1	B776/777 Start Set 74 Decommissioning	0	24DEC01*		397				◆				
D5J7400010	B776/777 Set 74 Planning and Engineering	35	24DEC01	18FEB02	397			■					
D5J7400030	B776/777 Set 74 Isolation and Containment	15	19FEB02	12MAR02	397			■					
D5J7400040	B776/777 Set 74 Dismantlement Tasks	71	13MAR02	02JUL02	397			■					
D5J7400MF1	B776/777 Complete Set 74 Decommissioning	0		02JUL02	397					◆			
1.1.06.12.04.75 B776/7-BUILDING 781													
D5J7500MS1	B776/777 Start Set 75 Decommissioning	0	01OCT02*		122					◆			
D5J7500010	B776/777 Set 75 Planning and Engineering	58	01OCT02	02JAN03	122			■					
D5J7500020	B776/777 Set 75 Proj Specif Long Lead Procurem't	56	06JAN03	01APR03	122			■					
D5J7500030	B776/777 Set 75 Isolation and Containment	20	02APR03	01MAY03	122			■					
D5J7500040	B776/777 Set 75 Dismantlement Tasks	30	02MAY03	18JUN03	122			■					
D5J7500MF1	B776/777 Complete Set 75 Decommissioning	0		18JUN03	122						◆		
1.1.06.12.04.76 B776/7-BUILDING 701													
D5J7600MS1	B776/777 Start Set 76 Decommissioning	0	01OCT02*		208					◆			
D5J7600010	B776/777 Set 76 Planning and Engineering	58	01OCT02	02JAN03	208			■					
D5J7600020	B776/777 Set 76 Proj Specif Long Lead Procurem't	20	06JAN03	04FEB03	208			■					
D5J7600030	B776/777 Set 76 Isolation and Containment	26	19JUN03	30JUL03	122			■					
D5J7600040	B776/777 Set 76 Dismantlement Tasks	30	31JUL03	17SEP03	122			■					
D5J7600MF1	B776/777 Complete Set 76 Decommissioning	0		17SEP03	122							◆	

Project Start	01OCT97	■	Early Bar	BL05:W035
Project Finish	23SEP05	■	Progress Bar	
Data Date	01OCT98	■	Critical Activity	
Run Date	11OCT99			

**KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT**

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CLOSURE KAISER-HILL

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
1.1.06.12.04.77 B776/7-CHILLERS #2 AND #3												
D5J7700MS1	B776/777 Start Set 77 Decommissioning	0	01FEB01*		196			◆				
D5J7700010	B776/777 Set 77 Planning and Engineering	58	01FEB01	02MAY01	196			■				
D5J7700020	B776/777 Set 77 Proj Specil Long Lead Procurem't	56	03MAY01	31JUL01	196			■				
D5J7700030	B776/777 Set 77 Isolation and Containment	26	01AUG01	11SEP01	196			■				
D5J7700040	B776/777 Set 77 Dismantlement Tasks	58	01OCT01*	02JAN02	185				■			
D5J7700MF1	B776/777 Complete Set 77 Decommissioning	0		02JAN02	185				◆			
1.1.06.12.04.78 B776/7-MISC. UNUSED PIPE												
D5J7800MS1	B776/777 Start Set 78 Decommissioning	0	01OCT01*		191			◆				
D5J7800010	B776/777 Set 78 Planning and Engineering	57	01OCT01	31DEC01	191			■				
D5J7800020	B776/777 Set 78 Proj Specil Long Lead Procurem't	56	02JAN02	28MAR02	285				■			
D5J7800030	B776/777 Set 78 Isolation and Containment	60	02JAN02	04APR02	191				■			
D5J7800040	B776/777 Set 78 Dismantlement Tasks	110	05APR02	26SEP02	191				■			
D5J7800MF1	B776/777 Complete Set 78 Decommissioning	0		26SEP02	191					◆		
1.1.06.12.04.79 B776/7-CRITICALITY SYSTEMS												
D5J7900MS1	B776/777 Start Set 79 Decommissioning	0	05MAR02*		183			◆				
D5J7900010	B776/777 Set 79 Planning and Engineering	58	05MAR02	03JUN02	183			■				
D5J7900020	B776/777 Set 79 Proj Specil Long Lead Procurem't	56	04JUN02	29AUG02	183				■			
D5J7900030	B776/777 Set 79 Isolation and Containment	26	17FEB03	26MAR03	80					■		
D5J7900040	B776/777 Set 79 Dismantlement Tasks	37	27MAR03	22MAY03	80					■		
D5J7900MF1	B776/777 Complete Set 79 Decommissioning	0		22MAY03	80						◆	
1.1.06.12.04.80 B776/7-ZONE 1												
D5J8000MS1	B776/777 Start Set 80 Decommissioning	0	15OCT01*		34			◆				
D5J8000010	B776/777 Set 80 Planning and Engineering	58	15OCT01	16JAN02	34			■				
D5J8000020	B776/777 Set 80 Proj Specil Long Lead Procurem't	56	17JAN02	15APR02	34				■			
D5J8000030	B776/777 Set 80 Isolation and Containment	73	05JUN02	30SEP02	2					■		
D5J8000040	B776/777 Set 80 Dismantlement Tasks	148	01OCT02	22MAY03	2					■		
D5J8000MF1	B776/777 Complete Set 80 Decommissioning	0		22MAY03	2						◆	

Project Start	01OCT97	 Early Bar	BL05:W035
Project Finish	23SEP05	 Progress Bar	
Date Date	01OCT98	 Critical Activity	
Run Date	11OCT99		

KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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CLOSURE KAISER-HILL

 ROCKY FLATS CLOSURE PROJECT

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year							
						FY99	FY00	FY01	FY02	FY03	FY04	FY05	
D5JMILE405	B776/777 Zone 1 Ventilation Shutdown	0		22MAY03	3								
1.1.06.12.04.81 B776/777-CARGOS													
D5J8100MS1	B776/777 Start Set 81 Decommissioning	0	15APR02*		172								
D5J8100010	B776/777 Set 81 Planning and Engineering	58	15APR02	15JUL02	172								
D5J8100020	B776/777 Set 81 Proj Specif Long Lead Procurem't	48	16JUL02	30SEP02	172								
D5J8100030	B776/777 Set 81 Isolation and Containment	26	18FEB03*	27MAR03	86								
D5J8100040	B776/777 Set 81 Dismantlement Tasks	30	31MAR03	14MAY03	86								
D5J8100MF1	B776/777 Complete Set 81 Decommissioning	0		14MAY03	86								
1.1.06.12.04.82 B776/777-BUILDING SHELL													
D5J8200MS1	B776/777 Start Set 82 Decommissioning	0	25OCT01*		0								
D5JA100002	Perform Final Building Surveys for B776/777	115	25OCT01	29APR02	0								
D5JA100005	Prep Procurem't Pkg for Demo Plan Preparation	21	17JAN02	19FEB02	6								
D5JA100MS1	Issue Procurem't Pkg RFP for B776/777 Demo Plan	0		19FEB02	6								
D5JA100010	Vendors Respond to RFP for Demolition Plan Prep	38	20FEB02	18APR02	6								
D5JA100MS2	Award Subcontract for Demolition Plan Preparat'n	0		18APR02	6								
D5JA100003	Prep/Review/Approve B776/777 Demolition Survey Plan	113	30APR02	24OCT02	0								
D5JA100015	Develop B776/777 Demolition Plan	171	30APR02	29JAN03	0								
D5JA100MS3	Submit B776/777 Demolition Plan to DOE	0		29JAN03	0								
D5JA100020	DOE Review and Incorp Comments into Demo Plan	19	30JAN03	27FEB03	0								
D5JA100MS4	Submit B776/777 Demo Plan to Regulators (DOE)	0		27FEB03	0								
D5JA100025	Regulators Review/Comment on B776/777 Demo Plan	39	03MAR03	30APR03	0								
D5JA100035	Purchase and Install B776/777 Containment System	95	03MAR03	29JUL03	0								
D5JA100MS5	Receive Regulators Comments- B776/777 Demo Plan	0		30APR03	0								
D5JA100022	Decontaminate Second Floor B776/777	57	30APR03	29JUL03	39								
D5JA100030	Incorporate Regulators Comments into Demo Plan	56	01MAY03	29JUL03	0								
D5JA100032	Prep/Issue Demo RFP, Receive/Review Submittals	56	01MAY03	29JUL03	0								
D5X71357	Cmpl B776/777 PWTSN Flow/Transfer Utility Water	0		02MAY03	93								
D5JA100MS6	B776/777 Demolition Plan Approved	0		29JUL03	0								

Project Start	01OCT97	Early Bar
Project Finish	23SEP05	Progress Bar
Data Date	01OCT98	Critical Activity
Run Date	11OCT99	

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

CLOSURE KAISER-HILL

 ROCKY PLATE CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Earl Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5JA100MS7	Award B776/777 Demolition Contract	0		29JUL03	0							
D5JA100038	Mobilize and Prepare for B776/777 Demolition	39	30JUL03	30SEP03	0							
D5JA100040	Demolish B776/777 and Out Buildings	114	01OCT03	31MAR04	0							
D5JMILE414	Complete B776/777 Demolition	0		31MAR04	0							
D5J4006000	WAD 35 B776/777 - Finish Decommissioning (MR8)	0		31MAR04	511							
D5J4006M50	D&D Complete B776/7	0		31MAR04	511							
D5J8306DD3	B776/777 Prep/Rev/Issue Final Completion Report	55	01APR04	25JUN04	570							
1.1.06.12.04.83 B776/777-ZONE AND BUILDING UTILITIES												
D5J8300MS1	B776/777 Start Set 83 Decommissioning	0	01OCT01*		129							
D5J8300010	B776/777 Set 83 Planning and Engineering	58	01OCT01	02JAN02	129							
D5J8300020	B776/777 Set 83 Proj Specif Long Lead Procurem't	56	03JAN02	01APR02	129							
D5J8300030	B776/777 Set 83 Isolation and Containment	82	01OCT02*	10FEB03	15							
D5J8300040	B776/777 Set 83 Dismantlement Tasks	95	04DEC02	02MAY03	15							
D5J8300MF1	B776/777 Complete Set 83 Decommissioning	0		02MAY03	15							
1.1.06.12.04.84 B776/777 SET 84-BURIED EQMT & TAM FLOORS												
D5J8400MS1	B776/777 Start Set 84 Decommissioning	0	01OCT01*		0							
D5J8400010	B776/777 Set 84 Planning and Engineering	58	01OCT01	02JAN02	0							
D5J8400020	B776/777 Set 84 Proj Specif Long Lead Procurem't	68	03JAN02	18APR02	0							
D5J8400040	B776/777 Set 84 Dismantlement Tasks (1st 1/2)	102	19APR02	30SEP02	0							
D5J8400045	B776/777 Set 84 Dismantlement Tasks (2d 1/2)	189	01OCT02	29JUL03	0							
D5J8400MF1	B776/777 Complete Set 84 Decommissioning	0		29JUL03	0							
1.1.06.12.04.AA B776/777-DECOM PLNG & PROJECT MGMT												
D5J0001000	Initiate B776/777 Decommissioning	0	04OCT99		0							
D5JDELE172	B776/777 Start D&D	0	04OCT99*		0							
D5J00AA010	FY-00 B776/777 Decommissioning Project Mgmt	227	04OCT99	28SEP00	1							
D5SBIRDMS4	B776/777 Hard Side SRU BIO Changes Complete	0		30NOV99	0							
D5SBIRDMS2	B776/777 Hard Side SRU Operational Room 430	0		15DEC99	0							
D5STECHMS1	B776/777 Technology Demo BIO Changes Complete	0		09MAR00	1							

Project Start 01OCT97
Project Finish 23SEP06
Data Date 01OCT98
Run Date 11OCT99

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Schedule						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5STECHMS2	B776/777 Technology Demonstration Complete	0		10APR00	1		◆					
D5JOSUPERB	99/00-SS07.5b Complete	0		30JUN00	0		◆					
D5J00AA110	FY-01 B776/777 Decommissioning Project Mgmt	227	02OCT00	27SEP01	1			■				
D5J00AA210	FY-02 B776/777 Decommissioning Project Mgmt	228	01OCT01	30SEP02	1				■			
D5J00AA310	FY-03 B776/777 Decommissioning Project Mgmt	228	01OCT02	30SEP03	1					■		
D5J00AA410	FY-04 B776/777 Decommissioning Project Mgmt	228	01OCT03	29SEP04	1						■	
1.1.06.12.04.CA B776/777 CLUSTER CLOSURE ACTIVITIES												
D5K5007CC0	WAD 35 B776/777 - Cluster Closure Activities	114	01APR04	29SEP04	511							■
1.1.06.12.04.SR.01 B776/777 ROBOTIC SIZE REDUCTION SYSTEM												
D5RRSRU110	Remote Robotic Size Reduction Facility Modificat	97	04OCT99*	07MAR00	10		■					
D5RRSRU120	Remote Robotic Size Reduction Phase I - Design	99	04OCT99*	09MAR00	0		■					
D5RRSRU100	Remote Robotic Size Reduction Project Management	227	04OCT99*	28SEP00	1		■					
D5RRSRU130	R-Robotic SRU Phase II - Demonstration	87	21OCT99*	09MAR00	0		■					
D5RRSRUMS1	Remote Robotic SRU - Vendor Submit 90% Design Pk	0		05NOV99	0		◆					
D5RRSRUMS2	Remote Robotic SRU - Final Design Approved	0		29NOV99	0		◆					
D5RRSRU180	Remote Robotic SRU Phase IV Startup in B776/777	141	30NOV99	11JUL00	0		■					
D5RRSRU160	Remote Robotic SRU - RFETS Procedure Development	105	14DEC99	25MAY00	0		■					
D5RRSRU150	Remote Robotic SRU - BIO Update	43	24FEB00	01MAY00	0		■					
D5RRSRU170	Remote Robotic SRU - RFETS Training	60	24FEB00	25MAY00	0		■					
D5RRSRUMS3	Remote Robotic SRU - Complete Offsite Demonstrat	0		09MAR00	0		◆					
D5RRSRU140	Remote Robotic SRU Phase III RFETS Installation	28	10MAR00	21APR00	0		■					
D5RRSRUMS4	Remote Robotic SRU - Unit Received at RFETS	0		24MAR00	0		◆					
D5RRSRUMS5	Remote Robotic SRU - Comp System Installation	0		21APR00	0		◆					
D5RRSRUMS9	Remote Robotic SRU - BIO Update Complete	0		01MAY00	0		◆					
D5RRSRUMS6	Remote Robotic SRU - Complete Cold Startup	0		05MAY00	0		◆					
D5RRSRUMS7	Remote Robotic SRU - Complete Hot Startup	0		19JUN00	0		◆					
D5RRSRUMS8	Remote Robotic SRU - Begin Full Scale Operations	0		11JUL00	0		◆					
D5RRSRU190	Remote Robotic SRU - Final Pymt	51	12JUL00	28SEP00	0						■	

Project Start	01OCT97	Early Bar
Project Finish	23SEP05	Progress Bar
Data Date	01OCT99	Critical Activity
Run Date	11OCT99	

BL05-W035

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

CLOSURE KAISER-HILL

 224
 ROCKY FLAT CLOSURE PROJECT

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Tot Float									
						FY99	FY00	FY01	FY02	FY03	FY04	FY05		
D5RRSRU200	FY01 Remote Robotic Size Reduction Maintenance	227	02OCT00	27SEP01	1									
D5RRSRU300	FY02 Remote Robotic Size Reduction Maintenance	228	01OCT01	30SEP02	1									
D5RRSRU400	FY03 Remote Robotic Size Reduction Maintenance	228	01OCT02	30SEP03	1									
1.1.06.12.04.SR.02 B776/777 HARD SIDED SIZE REDUCTION SYSTE														
D5SBIRD050	B776/777 Hard Side SRU - Preliminary Engineering	19	01SEP99	30SEP99	0									
D5SBIRD140	B776/777 Hard Side SRU Procure/Install	36	04OCT99	30NOV99	0									
D5SBIRD145	B776/777 Hard Side SRU BIO Update	36	04OCT99	30NOV99	0									
D5SBIRD150	B776/777 Hard Side SRU Procedure Development	36	04OCT99	30NOV99	0									
D5SBIRD100	B776/777 Hard Side SRU Project Mgmt	45	04OCT99	14DEC99	0									
D5SBIRDMS1	B776/777 Hard Side SRU - Unit Received at RFETS	0		18OCT99	0									
D5SBIRD130	B776/777 Hard Side SRU Facility Modifications	26	19OCT99	30NOV99	0									
D5SBIRD160	B776/777 Hard Side SRU Training	26	19OCT99	30NOV99	0									
D5SBIRDMS3	B776/777 Hard Side SRU Unit Install'n Complete	0		30NOV99	0									
D5SBIRD170	B776/777 Hard Side SRU Readiness Demonstration	10	01DEC99	15DEC99	0									
1.1.06.12.04.SR.03 B776/777 D&D TECHNOLOGY DEMONSTRATIONS														
D5STECH140	B776/777 Technology Demo Procedure Development	50	14DEC99	01MAR00	1									
D5STECH100	B776/777 Technology Demo SRU Project Mgmt	52	14DEC99	06MAR00	1									
D5STECH130	B776/777 Technology Demonstration BIO Update	55	14DEC99	09MAR00	1									
D5STECH120	B776/777 Technology Demonstration Procurement	40	21DEC99	23FEB00	1									
D5STECH110	B776/777 Facility Mods for Technology Demo	58	21DEC99	22MAR00	1									
D5STECH150	B776/777 Technology Demonstration Training	13	02MAR00	22MAR00	1									
D5STECH160	B776/777 Technology Demonstration Readiness Demo	12	23MAR00	10APR00	1									
1.1.06.12.05 776/777 CLUSTER CLOSURE														
D5FDELE560	Complete B776/777 Closure	0		29SEP04	511									
1.1.06.12.06 REMEDIATE/CONTAIN 776/777 CLUSTER HIGH R														
D5RFS04776	VUL RFSW77604 Fire protection program weakness	0		28FEB00	405									
D5F2042801	VUL RFP776A BREACHED PITS IN VAULT	0		28SEP01	1									
D5RF776001	VUL RF776/77701 plastic contact w/ Pu cont HEU M	0		28SEP01	1									

Project Start 01OCT97
Project Finish 23SEP05
Data Date 01OCT98
Run Date 11OCT99

BL05:W035

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT



Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5RF778002	VUL RF776/77702 AB Doc not include 776 Hazard/Op	0		28SEP01	1							
D5RFP77803	VUL RFP776/77703 Storage Pu solution in plastic	0		28SEP01	1							
D5RFP77613	VUL RFPSW776S13 Inventory delta due to holdup	0		28SEP01	1							
D5RFS02776	VUL RFSW77602 Crit safety Inst weakness/vul	0		28SEP01	1							
D5RFS03776	VUL RFSW77603 Layoffs/loss of exp personnel	0		28SEP01	1							
D5RFS05776	VUL RFSW77605 Lack cont fire water runoff cont	0		28SEP01	1							
D5RFS07776	VUL RFSW77607 Crit safe controls for mtrl	0		28SEP01	1							
D5RFS08776	VUL RFSW77608 Emp aware fissile mtrl presence	0		28SEP01	1							
D5MFP0776H	VUL RFPSW776H RES WASTE DRUMS BLOCKING EGRES	0		30SEP02	1,551							
D5MFP0776N	VUL RFPSW776N RES WASTE DRUMS IN HALL/WORK A	0		30SEP02	1,551							
D5MFP77606	VUL RFP77606 BREACH OF MATL. STORAGE CONTAINERS	0		30SEP02	1,551							
D5MFP77607	VUL RFP77607 MATL. FIRE IN RES. STOR. CONTAINERS	0		30SEP02	1,551							
D5ER673100	SAP Preparation - IHSS Group 700-3	60	03OCT02	30DEC02	0							
D5ER673110	SAP Approval by Agencies - IHSS Group 700-3	0		30DEC02	0							
D5ER673120	Procurement and Field Prep - IHSS Group 700-3	15	31DEC02	21JAN03	0							
D5ER673130	Contract Award - IHSS Group 700-3	0		21JAN03	0							
D5ER673140	Readiness Assessment - IHSS Group 700-3	15	22JAN03	11FEB03	0							
D5ER673150	Field Sampling, Lab Analysis - IHSS Group 700-3	75	12FEB03	28MAY03	0							
D5ER673160	Data Collection Completed - IHSS Group 700-3	0		28MAY03	0							
D5ER673170	Prepare Summary/NFA - IHSS Group 700-3	90	29MAY03	03OCT03	0							
D5ER673180	Prepare Decision Document - IHSS 700-3	135	11JUL03	22JAN04	0							
D5ER673200	Decision Document Approval - IHSS Group 700-3	0		22JAN04	0							
D5ER673210	Procurement and Field Prep - IHSS Grouping 700-3	214	23JAN04	22NOV04	0							
D5RFPS776A	VUL RFPSW776A Emp exposure alarm sys/high noise	0		31MAR04	1,003							
D5RFPS776D	VUL RFPSW776D Rubber Gloves/plastic bags on GBs	0		31MAR04	1,003							
D5RFPS776E	VUL RFPSW776E Contamination from out use equip	0		31MAR04	1,003							
D5RFPS776F	VUL RFPSW776F Age/limited MC&A counting equip	0		31MAR04	1,003							

Project Start 01OCT97
 Project Finish 23SEP05
 Date Date 01OCT98
 Run Date 11OCT99

Early Bar
 Progress Bar
 Critical Activity

BLOS:W035
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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT

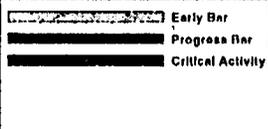
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CLOSURE KAISER-HILL

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Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Float	Fiscal Year						
						FY99	FY00	FY01	FY02	FY03	FY04	FY05
D5RFPS776Q	VUL RFPSW776Q Emp exposure due Cri/un-ID source	0		31MAR04	1,003							
D5ER673220	Contract Award Action - IHSS Group 700-3	0		22NOV04	0							◆
D5ER673240	Readiness Assessment - IHSS Group 700-3	22	23NOV04	27DEC04	0							■
D5ER673250	Remedial Action - IHSS Grouping 700-3	160	28DEC04	11AUG05	0							■
D5LMILE435	B776/777 Cluster Complete IHSS/UBC Remediation	0		11AUG05	0							◆
D5ENDPBD19	Complete PBD 019 - B776/777 Cluster Closure Proj	0		11AUG05	350							◆
D5ENDWAD35	Complete WAD35 - B776/777 Cluster Closure Proj	0		11AUG05	350							◆
D5ER673270	Prepare Closeout Report - IHSS Group 700-3	30	12AUG05	23SEP05	280							■
D5ER673280	Closeout Rpt Submitted - IHSS Group 700-3	0		23SEP05	280							◆

Project Start 01OCT97
 Project Finish 23SEP05
 Date Date 01OCT98
 Run Date 11OCT99



BLOS:W036

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KAISER-HILL COMPANY
CLOSURE PROJECT BASELINE SCHEDULE
BUILDING 776/777 CLOSURE PROJECT



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Appendix E

**Weekly Inspection Log for
Waste Chemical Exclusion Areas
(pages 229-234)**

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**WASTE CHEMICAL EXCLUSION AREAS
WEEKLY INSPECTION LOG
776/ 777 BUILDINGS WITHIN THE 777 CLUSTER**

BLDG	LOCATION	DESCRIPTION	DATE	INSPECTOR	FINDINGS/ CORRECTIVE ACTIONS	SIGNATURE
776	R134 TA & RDA (West)	High Contamination Areas [Chemicals present]				
776	R135 FBI Gloveboxes	Inoperable Gloveboxes [Unknown if chemicals are present]				
776	R146	High Contamination Area [Unknown if chemicals are present]				
776	R146 A	High Contamination Area [Unknown if chemicals are present]				
776	R146 C	High Contamination Area [Unknown if chemicals are present]				
777	R125 GB550*160	Inoperable Glovebox [Chemicals present]				
777	R430 GB207*758	Inoperable Glovebox [Chemicals present]				
777	R430 GB399	Inoperable Glovebox [Chemicals present]				
777	R430 GB451	Inoperable Glovebox [Chemicals present]				
777	R432 B	High Contamination Area [Unknown if chemicals are present]				
777	R452 GB034	Inoperable Glovebox [Chemicals present]				

APPROVED: _____

J.S. VanMeighem
November 3, 1999

Definition:

Inoperable Glovebox = Glovebox or B-box where removal of chemicals will be deferred to decommissioning in cases where, to access the chemical(s), upgrades to the box are required (e.g., glove changes, magnetic calibration, authorization basis changes, or airflow adjust) to bring the box into operational

WASTE CHEMICAL EXCLUSION AREAS WEEKLY INSPECTION LOG

776/ 777 BUILDINGS WITHIN THE 777 CLUSTER

BLDG	LOCATION	DESCRIPTION	DATE	INSPECTOR	FINDINGS/ CORRECTIVE ACTIONS	SIGNATURE
777	R452 GB541	Inoperable Glovebox [Chemicals present]				
777	R452 Downdraft 14/24 (GB206*532)	Out of Service (Red Tag) [Unknown If chemicals are present]				
777	R445 Hood #28	High Contamination Area Out of Service (Red Tag) [Chemicals present]				
777	R445 Hood #29	High Contamination Area Out of Service (Red Tag) [Chemicals present]				
776	R161 ISO Press	High Contamination Area [UNKNOWN If chemicals are present]			DELETED 12/04/98	
777	R134E GB207*140	Inoperable Glovebox [Chemicals present]			DELETED 01/07/99	
777	R134E GB624	Inoperable Glovebox [Chemicals present]			DELETED 05/17/99	
777	R131 GB207-110	Inoperable Glovebox [Chemicals present]			DELETED 07/01/99	

ACTIVE EXCLUSION AREA TOTAL: 15

Definition:

Inoperable Glovebox = Glovebox or B-box where removal of chemicals will be deferred to a date when the box is to be decommissioned. In order to access the chemical(s), upgrades to the box are required (e.g., glove change mechanism calibration, authorization basis changes, or airflow adjustments) to bring the box into operational status.

**WASTE CHEMICAL STORAGE AREA
WEEKLY/ MONTHLY INSPECTION LOG
776/ 777 BUILDINGS WITHIN THE 777 CLUSTER**

BLDG	LOCATION	DESCRIPTION	DATE	INSPECTION TYPE	INSPECTOR	FINDINGS/ CORRECTIVE	SIGNATURE
Outside	991 Laydown yard	Cargo # 00024195-00 [Chemicals present] Pickup deferred until residual cluster.		<input checked="" type="checkbox"/> Weekly <input type="checkbox"/> Monthly			

STORAGE AREA TOTAL: 1

REMINDER: Every third week of the month, notify Mike Jennings.

Monthly

INSPECTION CRITERIA

- Identify spills, leaks, swelling, tipped over containers, or other obvious health & safety concerns.
- Observe Exclusion Area for potential signs of entry.
- Verify signs/postings are in place & in good condition.
- Observe chemical(s) through Glovebox windows where possible.
- Once per month open storage cargo as part of the required monthly inspection.

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
AIR QUALITY		
Emission Controls for Particulates, Smokes, Carbon Monoxide, and Sulfur Emissions of Volatile Organic Compounds	5 CCR 1001-3 Reg. 1 5 CCR 1001-9 Reg.7	Control of emissions for smoke, particulate, and volatiles of concern. Implemented for construction activities, haul roads, haul trucks, demolition activities
Air Pollution Emission Notice (compliance with National Ambient Air Quality Standards [NAAQS])	5 CCR 1001-3 Reg. 3	Air Pollution Emission Notices are used by the State to help determine State compliance with the NAAQS.
Control of Hazardous Air Pollutants National Emission Standards for Emissions of Radionuclides Other than Radon from DOE Facilities (compliance with NESHAP)	5 CCR 1001-10 Reg. 10 40 CFR 61 Subpart H	Regulated radionuclide emissions from DOE facilities with a limit of ten millirem (mrem) per year. Site Standard.
Ambient Air Quality Standards (compliance with NAAQS)	5 CCR 1001-14	Maintain quality of ambient air for criteria pollutants
Control of Hazardous Air Pollutants (asbestos)	5 CCR 1001-10 Reg. 8	Standards for demolition, storage, and handling of asbestos containing material; emission standards and work place practice requirements; implemented through specific operational directions in IWCPs.
Control of Hazardous Air Pollutants	5 CCR 1001-10 Reg. 8	Implemented if the remedial action involves a specific regulated pollutant (e.g., lead).
Control of Emission Ozone Depleting Compounds	5 CCR 1001-19 Reg. 15	Ensure refrigerants are disposed of properly. Approved vessel recovery method must be used.

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
WATER QUALITY		
EPA Administered Permit Programs: The National Pollutant Discharge Elimination System (NPDES)	40 CFR Part 122 40 CFR Part 125 5 CCR 1002-8	Requirements for discharge of storm water or treated wastewater into surface water bodies. Criteria and standards for the NPDES. Identify and protect all connections to the sanitary collection system.
SOLID (SANITARY) WASTE		
Solid Waste Disposal Sites and Facilities Definitions Exemptions	6 CCR 1007-2 Section 1.2 Section 1.4.3	"Recyclable materials" means any type of discarded or waste material that is not regulated under Section 25-8-205(1)(e), C.R.S., and can be reused, remanufactured, reclaimed, or recycled. This is the exemption for recyclable material.

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)		
<p>Generator Standards</p> <p>Hazardous waste determinations</p> <p>Hazardous waste accumulation areas</p>	<p>6 CCR 1007-3 Part 262 (40 CFR Part 262)</p> <p>.11</p> <p>34 (a)(1)(i),(ii),(iv, excluding A & B); (a)(3); (a)(4); (c)(1)</p>	<p>Persons who generate solid wastes are required to determine if the wastes are hazardous according to 6 CCR 1007-3 Parts 261, 267, 279 [40 CFR Parts 261, 266, and 279]</p> <p>Persons who accumulate hazardous waste in containers or tanks must manage the waste in a manner that protects human health and the environment.</p>
<p>General Facility Standards</p> <p>Waste Analysis</p> <p>Security</p> <p>General Inspection Requirements</p> <p>Personnel Training Requirements</p> <p>General Requirements for Ignitable, Reactive or Incompatible Wastes</p>	<p>6 CCR 1007-3 Part 264, Subpart B [40 CFR Part 264, Subpart B]</p> <p>.13 (a)</p> <p>.14</p> <p>.15 (a), (c)</p> <p>.16 (a), (b), (c)</p> <p>.17 (a), (b)</p>	<p>The owner/operator of a facility that stores, treats, or disposes of waste must verify the waste has been characterized adequately.</p> <p>The owner/operator of a facility must prevent unauthorized access.</p> <p>The owner/operator of a facility must inspect for malfunctions, deteriorations, and releases, and must remedy any deficiencies noted.</p> <p>Personnel must be trained to maintain the facility in compliance with the regulations.</p> <p>Wastes will be managed to prevent accidental ignition or reaction of ignitable or reactive waste, or the mixing of incompatible waste.</p>

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
<p>Preparedness and Prevention</p> <p>Design and Operation of a Facility</p> <p>Required Equipment</p> <p>Testing and Maintenance of Equipment</p> <p>Access to Communications or Alarm System</p> <p>Required Aisle Space</p> <p>Arrangement with Local Authorities</p>	<p>6 CCR 1007-3 Part 264, Subpart C [40 CFR 264, Subpart C]</p> <p>.31</p> <p>.32</p> <p>.33</p> <p>.34</p> <p>.35</p> <p>.37</p>	<p>Design facilities to minimize the potential for fire, explosion or release of hazardous waste.</p> <p>Facilities must be equipped with specified equipment to mitigate incidents, should they occur.</p> <p>Equipment must be maintained.</p> <p>Employees must have access to emergency communications when managing hazardous waste.</p> <p>Aisle space must be maintained to allow unobstructed access to emergency personnel and emergency equipment.</p> <p>The owner/operator must make arrangements with specified local emergency personnel.</p>
<p>Contingency Plan and Emergency Procedures</p> <p>Purpose and Implementation</p> <p>Emergency Coordinator</p> <p>Emergency Procedures</p>	<p>6 CCR 1007-3 Part 264, Subpart D [40 CFR Part 264, Subpart D]</p> <p>.51 (b)</p> <p>.55</p> <p>.56 (a-i)</p>	<p>Emergencies such as fire, explosion, or release of hazardous waste must be mitigated immediately.</p> <p>A designated employee is responsible for coordinating emergency response actions.</p> <p>The Emergency Coordinator must take action in emergency situations</p>
<p>Ground-Water Monitoring</p>	<p>6 CCR 1007-3 Part 264, Subpart F [40 CFR Part 264, Subpart F]</p>	<p>The substantive portions of the groundwater monitoring ARARs for each CERCLA action will be incorporated into the Integrated Monitoring Plan (IMP)</p>
<p>Closure and Post-Closure</p> <p>Closure Performance Standards</p> <p>Disposal or Decontamination of Equipment, Structures, or Soils</p>	<p>6 CCR 1007-3 Part 264, Subpart G [40 CFR Part 264, Subpart G]</p> <p>.111</p> <p>.114</p>	<p>The owner/operator must close the facility in a manner that protects human health and the environment.</p> <p>All hazardous wastes and residues of hazardous waste must be disposed or decontaminated.</p>

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
Use and Management of Containers	6 CCR 1007-3 Part 264, Subpart I [40 CFR Part 264, Subpart I]	
Condition of Containers	.171	Containers must be maintained in good condition.
Compatibility of Waste in Containers	.172	Wastes must be compatible with containers.
Management of Containers	.173	Containers must be closed except when adding or removing waste.
Inspections	.174	Containers must be inspected weekly.
Containment System Design and Operation Ignitable and Reactive Wastes Incompatible Wastes	.175 .176 .177	Containment must be designed and operated as specified in these sections.
Closure	.178	Hazardous wastes and residues of hazardous waste must be removed or decontaminated from the unit and soils.
Air Emission Standards	.179	Hazardous wastes must be managed in accordance with AA, BB, CC, as appropriate.

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
<p>Tank Systems</p> <p>Design and Installation of New Tank Systems or Components</p> <p>Containment and Detection of Releases</p> <p>General Operating Requirements</p> <p>Inspections</p> <p>Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems</p> <p>Closure and Post-Closure Care</p> <p>Special Requirements for Ignitable and Reactive Wastes</p> <p>Special Requirements for Incompatible Waste</p> <p>Air Emission Standards</p>	<p>6 CCR 1007-3 Part 264, Subpart J [40 CFR Part 264, Subpart J]</p> <p>.192 (a-f)</p> <p>.193 (a)(i)(1,2,3,5)</p> <p>.194 (a-c)</p> <p>.195 (b,c)</p> <p>.196 (a-c),(e)</p> <p>.197 (a,b)</p> <p>.198</p> <p>.199</p> <p>.200</p>	<p>Tank systems must be designed to maintain their integrity when storing or treating hazardous waste.</p> <p>Secondary containment must be designed to contain and detect any releases from the tank system.</p> <p>Tank systems must be maintained in good condition to prevent releases to the environment.</p> <p>Inspections are conducted to identify any tank system integrity concern.</p> <p>Actions must be taken as specified in this section.</p> <p>During closure all hazardous waste and hazardous waste residues must be removed from the tank system.</p> <p>Ignitable or reactive waste must be managed as specified in this section.</p> <p>Incompatible waste must not be introduced into a tank system unless 264.17(b) is complied with.</p> <p>All hazardous waste shall be managed in accordance with AA, BB, CC</p>
<p>Corrective Action for Solid Waste Management Units</p> <p>Temporary Units</p>	<p>6 CCR 1007-3 Part 264, Subpart S [40 CFR Part 264, Subpart S]</p> <p>.553 (a-c)</p>	<p>Temporary units allow flexibility. Alternative compliance options are included in the waste management section of this CERCLA/RFCRA decision document</p>
<p>Miscellaneous Units</p> <p>Environmental Performance Standards</p> <p>Monitoring, Analysis, Inspection, Response, Reporting, and Corrective Action</p>	<p>6 CCR 1007-3 Part 264, Subpart X [40 CFR Part 264, Subpart X]</p> <p>.601</p> <p>.602</p>	<p>Miscellaneous units must be designed, constructed, operated and maintained in a manner that protects groundwater, surface water, wetlands, soils, and air.</p> <p>Miscellaneous units must be managed to ensure compliance with 264.15 (inspections), 264.33 (testing and monitoring), 264.101 (corrective action for releases).</p>

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
<p>Land Disposal Restrictions</p> <p>Dilution Prohibited as a Substitute for Treatment</p> <p>LDR Determination (Determination if Hazardous Waste Meets the LDR Treatment Standards)</p> <p>Special Rules for Wastes that Exhibit a Characteristic</p>	<p>6 CCR 1007-3 Part 268 [40 CFR Part 268]</p> <p>.3</p> <p>.7</p> <p>.9 (a-c)</p>	<p>LDR determinations must be completed for all hazardous wastes generated.</p> <p>Land disposal restrictions apply primarily to the off-site disposal actions proposed as part of the remedial activity. All of the applicable substantive and administrative regulatory requirements apply to off-site actions.</p>
<p>Management of Universal Waste</p> <p>Disposal, Dilution, and Treatment Prohibitions</p> <p>Waste Management</p> <p>Labeling and Marking</p> <p>Employee Training</p> <p>Response to Releases</p>	<p>6 CCR 1007-3 Part 273 [40 CFR Part 273]</p> <p>.31</p> <p>.33</p> <p>.34</p> <p>.36</p> <p>.37</p>	<p>Addresses the management of specifically identified batteries, pesticides, and thermostats.</p> <p>A large quantity handler of universal waste is prohibited from disposing, diluting, or treating universal waste, except during responses to releases.</p> <p>Management of universal waste must be conducted in accordance with this section.</p> <p>Universal waste and the associated accumulation areas must be labeled and marked as defined in this section.</p> <p>Employees who must be trained on waste management requirements and on emergency procedures according to their responsibilities.</p> <p>Universal waste handlers must contain releases of universal wastes, and must manage the resulting waste, as appropriate, in accordance with the hazardous waste regulations.</p>

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
Standards for the Management of Used Oil Used Oil Specifications Prohibitions Hazardous Waste Mixing Used Oil Storage On-Site Burning in Space Heaters	6 CCR 1007-3 Part 279 [40 CFR Part 279] .11 .12 .21 .22 .23	Used oil burned for energy recovery must meet the specifications of this section Used oil must not be stored in surface impoundments, be used as a dust suppressant, or be burned in unapproved units according to this section. Used oil must be characterized and managed in accordance with 269.10 and this section. Used oil must be managed in containers or tanks in a manner that protects human health and the environment. Releases must be cleaned up and steps must be taken to prevent re-occurrence. Used oil may be used as fuel for space heaters if the gases are vented to ambient air, and the maximum capacity of the space heater is not more than 0.5 million Btu per hour.
Performance Standards for Above-Ground Tanks (AST) Normal Venting for Aboveground Tanks Emergency Relief Venting for Fire Exposure for Aboveground Tanks Vent Piping for Aboveground Tanks Tank Openings other than Vents for Aboveground Tanks Standards for Piping, Valves, and Fittings	7 CCR 1101-14 Part 3 AST.31.5 AST.31.6 AST.31.7 AST.31.8 AST.32	ASTs must be designed, maintained, and operated to prevent releases to the environment.
Operating Requirements for Above-Ground Tanks Collision Protection Spill and Overfill Control (excluding reporting requirements), Remote Impounding, Secondary Containment	7 CCR 1101-14 Part 4 AST.40 AST.41 (excluding reporting part of AST.41.1(e))	

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
<p>Operation and Maintenance of Corrosion Protection</p> <p>Compatibility Requirements for all Tanks</p> <p>Static Protection for all Tanks</p> <p>Repairs Allowed (excluding requirement for approvals and inspections by State Oil Inspector)</p> <p>Out-of-Service, Closure or Change-in-Service</p>	<p>AST.42</p> <p>AST.43</p> <p>AST.44</p> <p>AST.45 (excluding AST.45(b)(4))</p> <p>AST.46(c)(1-5)</p>	
<p>Release Detection</p>	<p>7 CCR 1101-14 Part 5 AST.5</p>	
<p>Release Response and Corrective Action</p> <p>Initial Response</p> <p>Initial Abatement Measures</p> <p>Repair or Closure Required</p>	<p>7 CCR 1101-14 Part 7</p> <p>AST.72(b), (c)</p> <p>AST.73</p> <p>AST.74</p>	<p>Under Site operating procedures, responses to leaks or spills is immediate, resulting in cessation of the release and an evaluation of the remediation that will be conducted immediately. Surface spills will be cleaned up and actions will be taken to prevent a release to surface water. Releases that impact soils or groundwater will be identified as a PAC, will be added to the ER Ranking List, and will be incorporated into the integrated Site remediation program.</p>
<p>Oil Pollution Prevention</p> <p>Oil Pollution Prevention: Oil Pollution Prevention SPCC Plan Requirements</p>	<p>7 CCR 1101-14 Part 11</p> <p>AST.112.7(c), (d), (e, 1-2, 4-5)</p>	<p>A SPCC plan is not required as an ARAR; however, the substantive requirements that are incorporated into and implemented as part of the SPCC plan are an ARAR. (e.g., Prediction of the direction, rate and flow of a release from an AST system will be known by the facility and will be available to emergency responders at the facility.)</p>
<p>TOXIC SUBSTANCES CONTROL ACT (TSCA) FOR PCBS</p>		
<p>PCB Use Authorizations</p>	<p>40 CFR 761.30</p>	<p>Lists authorized uses and use restrictions for PCBs</p>
<p>Marking Requirements</p>	<p>40 CFR 761.40 and .45</p>	<p>Labeling of PCBs and PCB storage Areas</p>

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
Disposal Requirements Applicability Disposal Requirements PCB Remediation Waste PCB Bulk Product Waste Disposal of R&D and Chemical Analyses wastes	40 CFR 761.50 40 CFR 761.60 40 CFR 761.61 40 CFR 761.62 40 CFR 761.64	
Storage Requirements Time limits Facility Criteria Temporary Storage Inspections Container Specifications PCB radioactive waste Marking Laboratory Sample Exemption from Manifesting	40 CFR 761.65	
TSCA Coordinated Approval	40 CFR 761.77	Institutionalizes EPA approval of PCB activities under TSCA when activities are being conducted under another waste management permit, or other decision document issued by EPA or pursuant to a State PCB waste management program
Decontamination Standards and Procedures Self-Implementing Decontamination Measurement-Based Decontamination	40 CFR 761.79	
PCB Spill Cleanup Requirements for PCB Spill Cleanup	40 CFR Subpart G	40 CFR 761 Subpart G is entitled PCB Spill Cleanup Policy and thus many of the sections, specifically for spills after May 4, 1987 are "To Be Considered"
Cleanup Site Characterization Sampling for PCB Remediation Waste	40 CFR Subpart N	Characterization requirements for cleanup of PCB remediation waste
Sampling Non-Porous Surfaces for Measurement-Based Use, Reuse, and On-Site Or Off-Site Disposal Under 761.361(a)(6) and Determination Under 761.79(b)(3)	40 CFR Subpart P	
Self-Implementing Alternative Extraction and Chemical Analysis Procedures for Non-Liquid PCB Remediation Waste Samples	40 CFR Subpart Q	Applicable procedures when using alternatives to required analytical methodology
Sampling Non-Liquid, Non-Metal PCB Bulk Product Waste for Purposes of Characterization for PCB Disposal in Accordance with 761.62, and Sampling PCB Remediation Waste Destined for Off-Site Disposal, in Accordance with 761.61	40 CFR Subpart R	Characterization requirements for PCB bulk product waste and PCB remediation waste when characterization for disposal is required
Double Wash/Rinse Method for Decontaminating Non-Porous Surfaces	40 CFR Subpart S	Referenced procedure from 761.79

Appendix F - Building 776/777 Closure Project ARARs

REQUIREMENT	CITATION	COMMENT
MIGRATORY BIRDS		
Protection of migratory birds through compliance with the Migratory Bird Treaty Act and Wildlife & Fisheries Act	50 CFR 10	Principally focuses on the taking and possession of birds and bird nests protected under this regulation. Enforcement is predicated on location of the project and time of year. Current list of protected birds is maintained by the Ecology Group.

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Reviewer	Comment No.	Sec./Page/Para.	Comment Description	Comment Resolution
CDPHE	1	p. 12	As written, the DOP does not provide for any form of demolition and that includes interior walls, which may be appropriate for removal during room SET D&D activities. We would have no objection to addition of provisions describing this selective removal of interior walls as determined by the collaborative IWCP process.	No change. Section 4.1 explains that room and room/equipment SETs include all equipment and instrumentation, tools, miscellaneous items, utilities below 8 feet, and interior walls. In addition, Section 4.11.2 states that room decommissioning activities may include removal of interior walls.
CDPHE	1	p. 12, para. 2	Delete "which may (emphasis added) include a modification to this DOP." Replace with "which will constitute a major modification to this DOP. In addition to the routine requirements for major modifications, this information on Building 776/777 demolition will be submitted for a public comment period equivalent to that for the initial Building 776/777 DOP." Demolition details are part of the total scope of the originally reviewed and approved DOP and, therefore, subject to the routine public comment process. It is essential to CDPHE that the understandable delay in planning the demolition phase of this regulated project not allow the required public comment on demolition to be omitted. Since even a major modification, per RFCA, does not require public comment, it is essential that the commitment to this be included in this original DOP.	The last sentence of this paragraph has been re-worded as follows: "This information will be provided in a subsequent decision document(s), which will constitute a major modification to this DOP. In addition to the routine requirements for major modifications, this information on Building 776/777 demolition will be submitted for a public comment period equivalent to that for the initial Building 776/777 DOP."

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Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CDPHE	7a-b	p. 26	In previous discussions, DOE has stated that future and additional sampling and analysis of the buried equipment in and under Building 776/777 does not fall under the CERCLA requirement for regulatory approval of sampling and analysis plans. The state disagrees. To allow for timely progress on this decommissioning project the addition of the following language to the DOP will be acceptable: "Additional sampling and analysis plans for characterization of buried equipment within the Building 776/777 structure will be provided to the LRA for review and approval prior to such sampling. Work packages, currently undeveloped, for removal of equipment buried or cemented within the building structure will be shared with the regulators per the collaborative process."	The following language has been added to the first paragraph of Section 4.3.2.1: "Due to the sensitivity of this work, in-process characterization of buried equipment within the Building 776/777 structure will be provided to the LRA for review. Work packages, currently undeveloped, for removal of equipment buried or cemented within the building structure will be shared with the regulators per the consultative process."
CDPHE	8	p. 33	The term "and" is necessary between the two criteria for categorization of a material as sanitary waste in Section 4.4.1. If either criteria (a. surface contamination or b. volumetric contamination) is exceeded, the material cannot be disposed of in a sanitary landfill or free-released. As written, the section results in two statements, neither of which by itself is correct. The LRA would be amenable to other possible language changes which would clarify the invalid logic of the current wording.	The last two sentences of Section 4.4.1 have been combined to clarify that both the surface contamination and volumetric contamination limits must be met for the material to be free-released.

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Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CDPHE	15 a	p. 51	The LRA , in prior comments, objected to the statement that information and commitments in this chapter originally on "Health, Safety, and the Environment" is non-enforceable. RFETS has responded by eliminating the term "environment" from this section, while maintaining the assertion that the information is non-enforceable. This is not the solution we envisioned when making the original comment. We do not believe that the DOP is the appropriate vehicle to discuss or make legal pronouncements on enforceability issues. If issues in this regard arise later (and hopefully they will not) they can be discussed, negotiated and resolved by legal staff separately. As a solution to this issue, we recommend that the phrase "Although not enforceable . . ." be deleted and replaced with a separate sentence acknowledging that "DOE is the lead agency responsible for enforcement of health and safety provisions."	The phrase "Although not enforceable . . ." has been deleted from the second sentence of the first paragraph of Sec. 5.0 and the following sentence has been added to the end of the paragraph: "DOE is the lead agency responsible for enforcement of H&S provisions." This responsibility is also included in Section 11.1.1.
CDPHE	16	p. 61	Add to Section 5.1.4.1: "Prior to various phases of decommissioning, readiness reviews of infrastructure, procedures, and personnel will be completed by integrating contractor management. Upon satisfactory completion of these reviews, closure project personnel will be given permission to proceed with phases of the project. The LRA will be advised of the dates and times of these reviews and be provided full opportunity to oversee and collaborate with reviewers." Language of this nature was present in Draft E and needs to be reinserted.	The following language has been added to the end of Section 5.1.4.1: "The LRA will be advised of the dates and times of readiness determination activities and may participate in the readiness determination process per Section 11.1.3 of this DOP." The first part of the requested language is not necessary because the DOP already describes the readiness determination process. The second part of the requested language has been modified to be consistent with language agreed to by the parties prior to the public comment period (Section 5.1.3.1).

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CDPHE	20	Sec. 7	I am told that legal staff of both parties agree that the ARARs section is incomplete and needs further legal review. 776 DOP approval will be conditional, based on further ARARs evaluations. As the only regulation applying to decommissioning of nuclear facilities, the NRC regulation on decommissioning appears to be relevant and appropriate. Add this to the ARARs chart. Additionally, CDPHE has included equivalent provisions within its own Rules and Regulations Pertaining to Radiation Control, 6 CCR 1007-1.1 et seq. reference to this should also be included as relevant and appropriate.	DOE Legal staff does not believe that the ARARs section is incomplete. In addition, DOE maintains its position that the NRC regulation quoted in the comment is not applicable or relevant and appropriate.
CDPHE	23, 24	pp. 113, 115	Why does RFETS resist the LRA request to notify us in the event of schedule and management changes. Isn't this notification consistent with the collaborative process?	The language in these sections is contained in the DPP; therefore, it has not been changed. However, new language has been added to state that schedule and organization changes will be shared with the LRA according to the "Timely Sharing of Information" section of the DPP (Section 1.1.1, paragraph [1]).

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Reviewer	Comment No.	Sec./Page/Para.	Comment Description	Comment Resolution
CDPHE	25 a	p. 116	Language on regulatory authority emphasizes RCRA authority and is light on decommissioning authority. We suggest the two be separated. Discuss RCRA authority in one paragraph and in a separate paragraph note that "CDPHE regulates decontamination and decommissioning."	This section has been re-worded to include the language from the Memorandum of Understanding that was entered into by DOE, EPA, CDPHE, and the DNFSB on February 15, 1996: CDPHE is the LRA for (1) regulation, oversight, and enforcement of RCRA/CHWA legal requirements for mixed waste; (2) regulation or oversight of D&D of fixed structures and equipment, dismantlement, demolition, and closure of RCRA TSD units; (3) oversight of LLW and regulation of LLM waste disposal on site or elsewhere in the State of Colorado; (4) regulation of RCRA corrective actions and lead oversight of CERCLA response actions. Each point is included in a separate paragraph.
CDPHE	28	pp. 135-187	Endpoints are often generically described in the "major endpoints" charts and this may lead to misunderstandings regarding acceptable completion of work SETs. For example, work sets generically include "control contamination" as an end point. CDPHE finds this end point unclear and, actually, not an end point but rather an activity that occurs throughout the D&D process. The DOP end point chart needs to better define the end point for this activity. CDPHE suggests that the end point be redefined as "remove all contamination and contaminated materials." This change in endpoint language will be needed selectively within most workset descriptions.	No change. The major endpoint for the initial version of the DOP is to have all equipment stripped out and all contamination either removed, fixed in place, or otherwise controlled in preparation for building demolition. Specific methods for achieving this major endpoint will be identified in individual IWCP work packages. The demolition phase of decommissioning will be addressed in a major modification to the DOP, which will be submitted for a public review period equivalent to that for the initial version of the DOP.

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Reviewer	Comment No.	Sec./Page/Para.	Comment Description	Comment Resolution
CDPHE	29	Sec. 4	"The overall goal of the Building 776/777 Closure Project is to have all buildings within the Cluster emptied and demolished to slab on grade, with subsurface penetrations capped." Is this truly the end-state for Building 776/777 and the Cluster facilities? Per recent discussions with Site representatives, isn't the Site's proposed plan to remove the slab and foundations to at least three feet below grade? Slab removal should be considered part of D&D vs environmental restoration (ER), especially in light of the buried equipment identified in Section 4.3.2.1 of this DOP. Note that CDPHE will soon transmit a proposed slab policy which will better define our expectations.	Management of the building slab(s) will be part of demolition; therefore, the first two sentences of Sec. 4.0 have been deleted and language has been added to clarify that the major modification to the DOP, which will cover demolition, will also cover management of the building slab(s).
CDPHE	30	Table 6	Several rooms (e.g., 134, 127, 430 et. al) have their proposed closure deferred until IHSS remediation. As written, IHSS remediation is to be performed following demolition. If this is true, how can closure of these rooms be deferred to IHSS remediation? Define when and how closure of these rooms will occur.	All RCRA units will be closed during decommissioning. Table 6 has been revised to show that these units will be closed by removal.
CDPHE	31	Sec. 4.5.1.2	The "debris rule" is applicable provided the equipment meets the definition of debris.	No change. As explained in the second sentence of this section, the "debris rule" applies to "unit equipment or structures that have no intended use or reuse and are slated for removal and discard." This is the definition of "debris."

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CDPHE	32	4.5.2	<p>The revised DOP no longer requires submittal of a waste management plan. DOE's response to our previous comment stated that "elements of the waste management plan are now contained in Section 6 (of the DOP)." Section 6 fails to identify how waste will be managed (process v. remediation waste). Simply stating that process waste will be managed in accordance with CHWA/RCRA and remediation waste will be managed in accordance with CERCLA is unacceptable. To date, the Site has been unable to clearly define CERCLA remediation waste management requirements an operations level. The Site must develop an implementing procedure(s) clearly defining appropriate CERCLA management requirements (e.g., generation, storage, treatment, packaging, etc.). The issue of CERCLA vs RCRA waste management has been an issue the Site has failed to resolve over the past 6 months (specifically B771).</p> <p>I strongly recommend discussing this issue with B771 representatives in hopes of cooperatively generating specific operating procedures for building personnel to utilize (ideally site-wide). Once developed, this operating procedure should act as the major portion of a waste management plan for each building.</p>	<p>The Site is currently working on a site-wide strategy for managing process vs. remediation waste during decommissioning activities. Once that strategy is finalized, we will submit a minor modification to the DOP to include additional information on this issue, consistent with DPP requirements. Until that time, hazardous and mixed waste generated during decommissioning activities under this DOP will be managed as process waste in compliance with RCRA/CHWA, the CHWR, and the RCRA Part B Permit. The DOP has been revised to reflect this. The minor modification regarding the process vs. remediation waste strategy will be submitted by February 2000.</p>
CDPHE	33	Sec. 6.1.1	<p>The DOP has deferred closure of the basement to remediation of the surrounding IHSSs. Elaborate on how the Site intends to deal with the slab/foundation as basement D&D vs the activities that will be deferred to environmental restoration (ER).</p>	<p>All RCRA units will be closed during decommissioning. The Building 776/777 slab(s) will be addressed during demolition. The final approach address the slab(s) is still to be determined. This information will be provided in a major modification to the DOP, which will be submitted for a public comment period equivalent to that for the initial version of the DOP.</p>

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CDPHE	34	Sec. 6.5	The DOP proposes the use of temporary units (TUs) for staging, storage, and treatment. Specifically, this section includes the following processes: size reduction, filtration of aqueous wastes, amalgamation of radioactive mercury, crushing of fluorescent bulbs, and waste solidification. What is the mechanism to authorize these activities? The Site's plan to utilize TUs must include the substantive requirements of Section 254.553(c) of the CHWR. The information currently included in this DOP is insufficient to authorize treatment in TUs. To utilize a TU, this information must either be included in the DOP or submitted to the Division separately. In addition, what advantage does the Site gain by utilizing a TU?	Section 6.5 has been revised to indicate that the Site will submit a minor modification to the DOP with additional information to authorize the use of TUs once the information is known and the Site has a need for the units. The minor modification will be submitted by February 2000.
CDPHE	e-mail message from CDPHE (E. Kray) to DOE, RFFO (S. MacLeod), 11/3/99	Sec. 6.2.4, p. 78	The language relating to termination of the Mixed Residue Compliance Order needs clarification, per discussions with Dan Miller of our Attorney General's Office. Please revise.	The last sentence of Section 6.2.4 has been modified to read as follows: "The Mixed Residue Compliance Order on Consent (Ref. 42) will terminate as to each of the mixed residue tanks located in Building 776/777 in accordance with paragraph 66(i) of that Order when the LRA approves a minor modification for each tank as provided for in Section 4.5.2 of this DOP."

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CDPHE	e-mail message from CDPHE (E. Kray) to DOE, RFFO (S. MacLeod), 11/3/99	Sec. 6.2.9, p. 79	The language in the last two lines, relating to termination of the Waste Chemical Compliance Order needs to be similarly clarified. Please revise.	The second bullet has been changed to read as follows: "No inspections that require entry into a High Contamination Area, Airborne Radioactivity Area, or inoperable glovebox or hood will be performed due to worker radiation exposure concerns and implementation of ALARA radiation exposure principles. These are the same reasons that these chemicals are considered to be "excluded chemicals" under the Consent Order. Weekly visual observations will be made of each area used to store "excluded chemicals" by looking through windows into the room, glovebox, or hood. For areas where no windows are available, the inspection will be limited to the exterior of the area. (This response is continued on the next page.)

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CDPHE	e-mail message from CDPHE (E. Kray) to DOE, RFFO (S. MacLeod), 11/3/99	Sec. 6.2.9, p. 79	The language in the last two lines, relating to termination of the Waste Chemical Compliance Order needs to be similarly clarified. Please revise. (continued from previous page)	<p>"Observations will be performed by facility personnel during normal routine facility operations. These visual observations are to be non-intrusive in nature. Observations are intended to identify issues such as spills, leaks, swelling, tipped over containers, or other obvious safety or health problems without actual handling of the containers or opening waste chemical storage cabinets. Additionally, the documented weekly visual observations for all "excluded chemicals" will include a review of the Consent Order posting, including verification that the point of contact listed on the posting is current, and a review of whether entry has been or is planned to be made to the area(s). These observations will be documented on a weekly inspection log, a copy of which is contained in Appendix E of this DOP. Any issues identified will be addressed and corrected in accordance with applicable Site procedures (Ref. 44)."</p> <p>In addition, a new bullet has been inserted between the second and third bullets: "Potentially shock sensitive/explosive waste chemicals will be managed in accordance with the Potentially Shock Sensitive/Explosive Chemical Characterization, Management, and Disposal Plan."</p>

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Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
EPA	GEN'L 1		Assuming the 2006 Plan becomes a reality, how will we modify the DOP? Major or minor modification?	All references to the "2010 Plan" have been changed to the "Closure Project Baseline" so that the DOP will remain current and will not require modifications when the plan changes. Schedules may change without modifying the DOP.
EPA	GEN'L 2		There is a concern that all the buildings within the Cluster are not being addressed in the DOP. However, another concern is that building 712a and B713a are not listed in the Facility Disposition Program Manual. This needs to be addressed.	The Executive Summary explains that the DOP is intended to address Type 2 and Type 3 buildings, only. The other buildings in the Cluster are anticipated to be Type 1 buildings, which do not require a decision document. If the other buildings are determined to be other than Type 1 buildings, the DOP will be modified to include them. In addition, Buildings 712, 712A, 713, and 713A are listed in Section 2 of the DOP.
EPA	GEN'L 3		The DOP has made reference to buried waste and waste that has been cemented over. All these areas must be removed before demolition. This is not referenced to under building contamination.	Sections describing buried equipment/waste have been revised to clarify that all equipment/waste will be removed during decommissioning (i.e., Section 4.3.2.1 and Section 4.11.6).
EPA	GEN'L 4		The table for surface contamination guidelines is missing a unit in footnote 3 and 6.	We could not find the table or error referenced in this comment. Upon further discussion with EPA, it was determined that the comment should have read as follows: "The table showing release criteria for materials contaminated with radionuclides does not include footnotes from the source document (i.e., DOE Order 5400.5)." The referenced footnotes have been added to Table 5.

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Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
EPA	SPECIFIC 1	Sec. 2.3, p. 19	There are large quantities of waste containers in the building, yet there is no indication of where these containers will go. Could you provide the current plan for removal of these containers. Decisions?	No change. Section 6 describes how the existing waste inventory will be dispositioned. Pending off-site shipment, this waste will be stored in permitted storage areas (e.g., RCRA Units 371. and 707.1).
EPA	SPECIFIC 2	Sec. 4.1, p. 23	It sounds like one team could be mobilized and demobilized in one room 3 or 4 times before it is completely dispositioned. What happened to the "touch things once" that is being used in B771? This method sounds slow and costly.	No change. It is true that D&D teams may be mobilized and demobilized in one room 3 or 4 times. As discussed in Section 4.11.2, the decommissioning sequence begins with the removal of gloveboxes and B-boxes so that the Zone I ventilation can be removed. Process tanks will be removed during the same time frame as the gloveboxes and used as "fill in" work. After the gloveboxes, B-boxes, process tanks, and Zone I ventilation systems have been removed, the remaining room decommissioning activities will take place, to include the removal of interior walls, piping, ventilation, and electrical systems. This sequence is necessary to minimize worker exposures to radiological hazards.

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Reviewer	Comment No.	Sec./Page/Para.	Comment Description	Comment Resolution
EPA	SPECIFIC 3	Sec. 4.3.2.1, p. 26	Regarding the buried waste in and under Building 776/777: First, any contaminant that poses a threat to human health and the environment falls under the CERCLA statute and requires a sampling and analysis plan. Second, all buried waste must be addressed during decommissioning. Finally, the DOP should describe how and when these investigations will take place. These investigations should be outlined in the schedule as well as the actual D&D work and removal of these wastes. How will these investigations be done? When in the process will this waste be addressed.	Section 4.3.2.1 has been re-worded to clarify that buried equipment (i.e., SET 84) will be removed before the building is demolished. Due to the sensitivity of this work, in-process characterization of buried equipment within the Building 776/777 structure will be provided to the LRA for review. IWCP work packages, currently undeveloped, for removal of equipment buried or cemented within the building structure will be shared with the regulators per the consultative process. The project schedule (Appendix D) shows when these activities are scheduled to take place.
EPA	SPECIFIC 4	Sec. 4.3.3.1, p. 29	It states that in-process characterization is based on process knowledge. This is an incorrect statement. In-process characterization is based on field samples and radiation survey measurements that are taken during the decommissioning process. Please rewrite.	This section has been re-worded to clarify that in-process characterization is based on process knowledge and field samples and/or radiation survey measurements.
EPA	SPECIFIC 5	Sec. 4.3.3.5, p. 32	Sampling should be done to confirm that radiation is not mixed with any asbestos-containing material. What about the insulation in the walls?	No change. The entire Section 4.3.3 is intended to explain the in-process characterization activities. Each subsection addresses characterization for only the specific contaminant listed. All subsections must be used together for a complete characterization. The subsections are not meant to be mutually exclusive. Therefore, radiological contamination is addressed in its own subsection, not in the asbestos subsection. It is the Site's intent, however, to characterize for both, as necessary.

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EPA	SPECIFIC 6	Sec. 4.11.6, p. 47	How are you addressing the H&S concerns for airborne Pu?	Neutron detectors (i.e., criticality detectors) and alpha monitors (i.e., Selective Alpha Air Monitoring System [SAAMS] and Continuous Alpha Monitoring System [CAMS]) provide continuous monitoring in Pu areas. In addition, D&D workers wear thermoluminescent dosimeters (TLD), which detect personnel exposure to neutrons, beta particles, and gamma rays. Additional requirements (e.g., the need for additional dosimetry) will be addressed by Radiological Engineering in individual IWCP work packages.
EPA	SPECIFIC 7	Sec. 4.12, p. 47	In this section it discussed 4 Zone II plenum deluge tanks. Why aren't we removing all four of them? What are the contaminants and what are the concentration?	Section 4.1.2 has been clarified to indicate that all four tanks will be removed. Appendix A of the DOP and the Building 776/777 Reconnaissance Level Characterization Report (RLCR) contain information concerning associated contaminants.
EPA	SPECIFIC 8	Sec. 5.2, p. 65	Will there be neutron detectors used during D&D (i.e., neutron badges)?	As explained in the response to EPA Specific Comment #6 (above), the use of additional personnel dosimetry will be addressed by Radiological Engineering during the development of individual IWCP work packages.
EPA	SPECIFIC 9	Sec. 5.3, p. 65	How are you addressing the H&S concerns for airborne Pu?	DUPLICATE COMMENT - Please refer to the response to EPA Specific Comment #6 (above).

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Reviewer	Comment No.	Sec./Page/Para.	Comment Description	Comment Resolution
EPA	SPECIFIC 10	Sec. 6.2.5, p. 75	Leaking ballasts are considered PCB remediation waste. Interesting concept beryllium (Be) not considered hazardous waste. I did know that a known carcinogen is not considered hazardous. This state should be rewritten. In addition, all Be housekeeping standards need to be explained and used.	Section 6.2.5 has been clarified to distinguish between leaking ballasts (managed as PCB remediation waste) and non-leaking ballasts (managed as PCB bulk product waste). Be that is not in a powder form is not hazardous waste. As indicated in Section 4.3.3.7, areas where Be operations were performed have been documented in the RLCR. In-process characterization will be conducted in accordance with the RFETS Chronic Beryllium Disease Prevention Program, which includes Be housekeeping requirements.
EPA	SPECIFIC 11	Sec. 6.2.7, p. 76	Again, Be not considered hazardous waste. To my knowledge, we have not agreed to allow Be to be disposed of in a sanitary landfill. This needs further discussion.	Be that is not in a powder form is not hazardous waste. The last sentence of this section has been revised to state that "This waste category may include Be waste that is not considered hazardous waste."
EPA	SPECIFIC 12	Table 14, p. 77	How are you addressing pyrophoric concerns surrounding Pu and Uranium?	Pyrophoric materials are managed in accordance with Section 31.11 of the RFETS Health and Safety Practices (HSP) Manual. When appropriate, the applicable requirements will be included in individual IWCP work packages.
EPA	SPECIFIC 13	Sec. 7, p. 85	The ARARs section needs further discussion regarding authority.	DOE believes the ARARs section is complete.

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Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CITY OF BRMFLD	N/A	Sec. 4.3.3	IN-PROCESS KNOWLEDGE - Sec. 4.3.3 implies that in-process knowledge may be the only means of classifying some materials as non-contaminated. In-process knowledge is helpful, but should not be the only means of verifying that radiological contamination does not exist on materials and equipment removed from Building 776/777. Verification monitoring which includes some means of quantifying radiation levels must be employed.	This section has been re-worded to clarify that in-process characterization is based on process knowledge AND field samples and/or radiation survey measurements. As shown in Table 4 of the DOP, and described in Sections 4.3.3.1 through 4.3.3.7, in-process radiological surveys will be performed to verify contamination levels and to identify appropriate disposal paths; in-process Be surveys will be performed to verify Be contamination levels in Be storage, handling and production areas; and, where appropriate, in-process sampling will be performed to identify asbestos containing material, PCBs, and lead and other heavy metals.

Appendix G
Comment Response Summary for the Final Draft (7/7/99) of the
Building 776/777 Decommissioning Operations Plan

Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CITY OF BRMFLD	N/A	4.4.1	FREE-RELEASE CRITERIA - Please provide the excerpt from DOE Order 5400.5 that specifically provides the volume contamination threshold.	DOE Order 5400.5 defines the Allowable Total Residual Surface Contamination (ATRSC) release limits for material surfaces but it does not provide specific release limits for material volumes. However, during the course of the Building 779 Closure Project, the ATRSC limits are being applied to contaminated bulk or volume material, as follows: (1) for a given surface type, a sample is taken from a defined area, to the depth of the radioactive material present; (2) the sample is then analyzed for radioactive material indicative of RFETS (e.g., plutonium, americium, uranium); (3) the amount of radioactive material in the sample is distributed uniformly over the sample area so the amount of radioactive material present in the sample is in the units of dpm/100 cm ² ; and (4) the quantity of radioactive material is then compared with the ATRSC limits to determine whether it may be free-released. This method is conservative in that actual (This response is continued on the next page.)

Appendix G
Comment Response Summary for the Final Draft (7/7/99) of the
Building 776/777 Decommissioning Operations Plan

Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CITY OF BRMFLD	N/A	4.4.1	FREE-RELEASE CRITERIA - (continued from previous page)	surface contamination values will be no greater than, and in almost all cases, much less than the calculated number. The method or methods to be applied to contaminated bulk or volume materials generated during the Building 776/777 Closure Project will be described in an upcoming revision to the Decontamination & Decommissioning Characterization Protocol (DDCP) and associated Pre-Demolition Survey Plan. The DDCP is being revised in consultation with EPA and CDPHE, per Section 2.3 of the Decommissioning Program Plan (DPP). When completed, the associated Pre-Demolition Survey Plan will be submitted to the LRA for review and approval, per Section 4.6 of the DOP.
CITY OF BRMFLD	N/A	4.3.2.1	Prior to removal of air filtration equipment, building walls, ceilings, and other safeguards, the materials that have been buried under the floor should be removed. We are concerned that the removal of contaminated materials from under the floor may be problematic.	Section 4.3.2.1 has been re-worded to clarify that buried equipment (i.e., SET 84) will be removed before the building is demolished. Due to the sensitivity of this work, in-process characterization of buried equipment within the Building 776/777 structure will be provided to the LRA for review. IWCP work packages, currently undeveloped, for removal of equipment buried or cemented within the building structure will be shared with the regulators per the consultative process.

Appendix G
Comment Response Summary for the Final Draft (7/7/99) of the
Building 776/777 Decommissioning Operations Plan

Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CITY OF BRMFLD	N/A	Table 5	FREE-RELEASE CRITERIA - The PCB free-release value of 50 ppm in Table 5 is not specifically provided in 40 CFR 761.62 as written in the table. Please provide justification for the statement "95% Upper Confidence Limit (UCL) of the mean value of a representative sample does not exceed 50 ppm."	As noted by the City of Broomfield, the PCB free-release value of 50 ppm is not specifically provided in 40 CFR 761.62, nor is there a reference to an "95% Upper Confidence Limit (UCL)." Upon further review of the PCB regulations, it has been determined that the release threshold of <1 ppm PCBs is the appropriate (i.e., most conservative) threshold and should be listed in Table 5. As indicated in 40 CFR 761.61(a)(4)(1), <1 ppm PCBs is the threshold for bulk PCB remediation waste in high occupancy areas. This is also consistent with the free-release concentration provided in Section 4.4.4 of the DOP.

**Appendix G
 Comment Response Summary for the Final Draft (7/7/99) of the
 Building 776/777 Decommissioning Operations Plan**

Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CITY OF BRMFLD	N/A	Sec. 8.4	AIR EMISSIONS CONTROLS AND MONITORING - The DOP states that "air emissions will be controlled and monitored in accordance with the Site H&S Program and applicable environmental regulatory requirements." We are particularly concerned with how emissions which are generated during demolition activities will be controlled and monitored. The City of Broomfield requests a copy of the documents that describe how air emissions will be controlled and monitored.	Air emissions controls and monitoring to be employed during demolition activities will be described in the demolition modification to this DOP, which will be submitted for a public comment period equivalent to that for the initial Building 776/777 DOP. Prior to building demolition (i.e., during building component removal and decontamination activities), the heating, ventilation, and air conditioning (HVAC) systems in Building 776/777 will be configured and controlled to ensure that air flows from areas of least contamination (e.g., corridors, rooms) to areas of higher potential for contamination (e.g., gloveboxes). Air streams will be filtered through various stages of high efficiency particulate air (HEPA) filters, which remove particulate contamination. System interlocks will be used to shut down air supply systems to prevent air reversals in the event of a loss of exhaust air flow. The Building 776/777 Basis for Interim Operations (BIO) describes the HVAC controls in further detail. A copy of the BIO will be provided to the City of Broomfield.

**Comment Response Summary for the Final Draft (7/7/99) of the
Building 776/777 Decommissioning Operations Plan**

Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CITY OF BRMFLD	N/A	Sec. 8.4	AIR EMISSIONS CONTROLS AND MONITORING - (continued from previous page)	The Air Quality Management (AQM) group within Kaiser-Hill Environmental Systems and Stewardship (ESS) operates effluent, ambient, and meteorological monitoring systems to characterize and quantify the air pathway impacts of Site activities on public receptors. The RFETS air monitoring programs are described in Section 4 of the "RFETS Integrated Monitoring Plan," (May 1998), and in the "Proposal to Use Environmental Sampling for Demonstrating Compliance with 40 CFR Part 61, Subpart H" (July 1997) and associated addendum (December 1998). As requested, copies of these documents will be provided to the City of Broomfield.
CITY OF BRMFLD	N/A	Sec. 4.7	INDEPENDENT VERIFICATION - Independent sampling and testing is an important element in verifying that all areas have been completely decontaminated. Sec. 4.7 of the DOP states that independent sampling and testing may be included as part of the independent verification. We request that the word "may" be replaced by the word "will."	Independent verification will be performed by an independent reviewer(s) selected by DOE, RFFO. Additional sampling and/or testing may be ordered on a case-by-case basis, at the discretion of the independent reviewer(s).
CITY OF BRMFLD	N/A	Sec. 8.5	POTENTIAL IMPACTS TO AIR AND WATER DRAINAGES - The DOP states that following the removal of buildings and other containers within the Cluster, bare ground will pose the potential for erosion of those soils by wind and water processes. The DOP states that "silt fencing or a similar protective device will be installed to prevent or minimize the possibility of water-borne soil leaving the immediate area and entering the drainage ways." This concept may not be protective of human health and environment.	The analysis of potential impacts to air and water drainages will be revised, as necessary, in the demolition modification to this DOP, which will be submitted for a public comment period equivalent to that for the initial Building 776/777 DOP.

Appendix G
Comment Response Summary for the Final Draft (7/7/99) of the
Building 776/777 Decommissioning Operations Plan

Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CITY OF BRMFLD	N/A	Sec. 8.5	POTENTIAL IMPACTS TO AIR AND WATER DRAINAGES - In traffic areas, rock aggregate should be placed over bare ground in addition to silt fencing to control wind and water erosion. Alternatively, revegetation and/or application of soil stabilizers should be used for non-traffic areas as these techniques are likely to be more effective at controlling soil erosion from wind and water.	The analysis of potential impacts to air and water drainages will be revised, as necessary, in the demolition modification to this DOP, which will be submitted for a public comment period equivalent to that for the initial Building 776/777 DOP.
CITY OF BRMFLD	N/A	Sec. 6.2.8	POTENTIAL IMPACTS TO AIR AND WATER DRAINAGES - Section 6.2.8 states that waste water generated from decommissioning activities may be treated or directly discharged in compliance with the requirements of the NPDES permit. What are all the types of water that could be directly discharged? Where would these discharges be routed?	No wastewater that is generated during decommissioning will be discharged directly to the environment. The only water that is directly discharged is effluent from the Site's sewage treatment plant in accordance with the terms and conditions of the NPDES permit. The sewage treatment plant accepts (1) domestic wastewater; (2) non-domestic, non-hazardous, non-radioactive wastewater (i.e., cooling tower water, boiler blowdown); and (3) wastewater that meets the definition of an "internal waste stream" (i.e., non-hazardous, non-radioactive wastewater generated during building operations and/or decommissioning activities). Wastewater entering the sewage treatment plant must meet the applicable acceptance criteria. Effluent from the sewage treatment plant is monitored at three outfalls (the sewage treatment plant, Pond B-3, and Pond B-5 [under the NPDES permit]) and two points of compliance (Pond B-5 and Walnut Creek at Indiana Avenue [under RFCA]). Section 6.2.8 has been revised accordingly.

Appendix G
Comment Response Summary for the Final Draft (7/7/99) of the
Building 776/777 Decommissioning Operations Plan

Reviewer	Comment No.	Sec./Page/ Para.	Comment Description	Comment Resolution
CITY OF BRMFLD	N/A	Sec. 8.10	<p>POTENTIAL IMPACTS TO AIR AND WATER DRAINAGES - Section 8.10 states that dust and sediment generation from the project may reach Walnut Creek; therefore, potential impacts to the Preble's meadow jumping mouse habitat are a concern. The DOP fails to state that water quality standards for Walnut Creek are very stringent and that if actinide-laden dust or sediment generated from this area reaches Walnut creek, that a violation of the water quality standard could easily occur.</p>	<p>The analysis of potential impacts to air and water drainages will be revised, as necessary, in the demolition modification to this DOP, which will be submitted for a public comment period equivalent to that for the initial Building 776/777 DOP.</p>
CITY OF BRMFLD	N/A	Sec. 10	<p>IMPLEMENTATION SCHEDULE - Although some schedule information is provided in Appendix E, it is not clear when major activities related to the Building 776/777 Cluster deactivation and decommissioning will be occurring. From the text provided in Sec. 10, the first major schedule date is FY04; however, the schedule in Appendix E shows that activities are already occurring. The DOP also states that the information is based on the 2010 closure schedule. Please provide a schedule that includes just the major activities covered by the Building 776/777 DOP according to the 2006 Plan.</p>	<p>The new version of Figure 4, Set Prioritization, shows the year in which each SET is scheduled to be decommissioned. The new project schedule (included in Appendix D of the DOP) provides additional detail. Finally, all references to the "2010 Plan" have been changed to the "Closure Project Baseline" so that the DOP will remain current and will not require modifications when the plan changes.</p>

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March 15, 2001 K&K

Appendix H RCRA Unit-Specific Closure Information Sheets

Sheet #	RCRA Unit(s)	Description	PDF Sheet #	Effective Date	Page #s
62	44.01, 44.02	FBI Oil Storage Tanks T-2 (FBI2) T-1 (FBI1)	1	12/15/99	273-276
7	95.006, 95.007, 95.008	Mixed Residue Tanks 1103, 1104, 1106	3	03/03/00	277-278
11	95.014	Mixed Residue Pencil Tank T-7	3	03/03/00	279-280
26	95.015, 95.016	Mixed Residue Holding Tanks T-1 and T-2	3	03/03/00	281-284
61	49.02	Pencil Tanks T-1 and T-2	3	03/03/00	285-287
55	94.001, 94.002, 94.003	Mixed Residue Tanks SRV-3, SRV-4, and SRV-5	5	09/13/00	288-290
4	95.019, NA	Tanks V-605, DL-776, Glovebox 612	6	02/22/01	291-295
5	NA	Tanks V-614, V-616, V-618, V-620	6	02/22/01	296-301
6	NA	Tanks V-626, V-627, Glovebox 642	6	02/22/01	302-306
10	NA	Tank V-752, ancillary piping	6	02/22/01	307-310
11	NA	Tanks V-746, V-747, V-747A, V-748, V-749	6	02/22/01	311-318
18	95.015	Gloveboxes 368, 465 ancillary	6	02/22/01	319-320
21	95.015	Glovebox 426 ancillary	6	02/22/01	321-322
22	95.015	Glovebox 446 ancillary	6	02/22/01	323-324
27	777.1	Room 432C Container Storage	6	02/22/01	325
28-29 K&K	95.015	Ancillary equipment	6	02/22/01	326-327
34	NA	Tank V-022	6	02/22/01	328-329
35	95.015	Glovebox 524 ancillary	6	02/22/01	330-331
36	NA	Tank V-543	6	02/22/01	332-334
52	94.007, 94.008	Tanks T-360, T-370	6	02/22/01	335-337

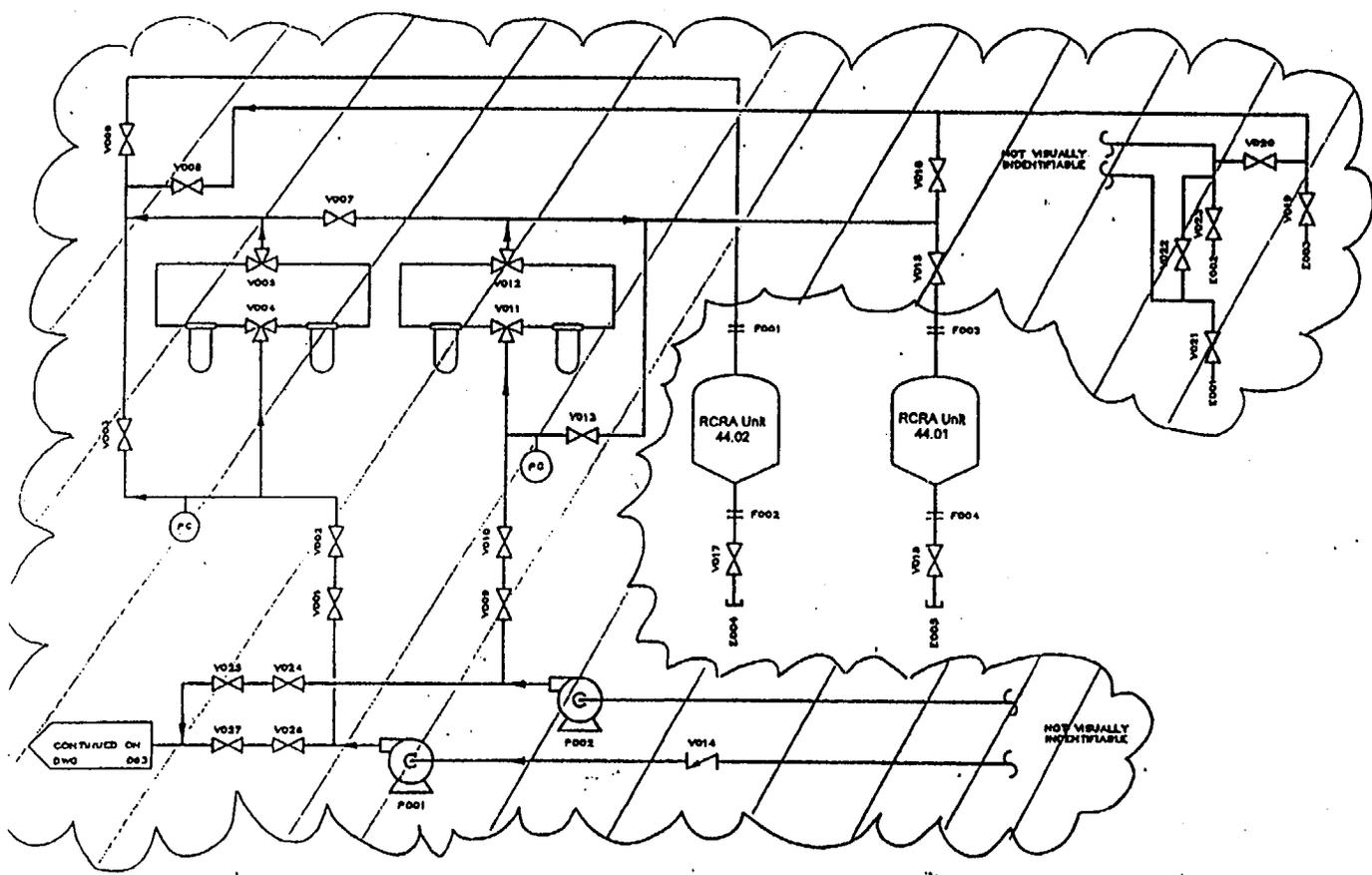
Modification #16

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**B776/777 Closure Project
RCRA Unit-Specific Closure Information Sheet**

SET #	RCRA Unit #(s)	Description	Regulatory Status	Closure Status
62	44.01	FBI Oil Storage Tank T-2 (FBI-2)	Interim Status	RCRA Stable
	44.02	FBI Oil Storage Tank T-1 (FBI-1)	Interim Status	RCRA Stable

Unit Description:	<p>RCRA Units 44.01/44.02 are located in Room 134 of Building 776. The tanks were used for storage of liquid wastes intended for processing in the Fluidized Bed Incinerator (FBI) Production Unit in Room 118. Tank T-1 has a capacity of 400 gallons, and T-2 has a capacity of 350 gallons. The tanks were filled with raschig rings when in use and had working volumes of 260 gallons and 230 gallons, respectively. Constituents within the liquid were identified as water, methanol, pyridine, methylene chloride, diesel fuel, paint thinners, iodine, sulfur dioxide, and 1,1,1-trichloroethane.</p> <p>The initial draining of the two tanks occurred in 1992. Residual liquids and raschig rings were removed in March and April of 1998. As part of this effort the pumping system, metering system, and associated piping in Room 134 were also removed.</p>
Unit Boundaries and Interfaces:	<p>RCRA Units 44.01/44.02 were connected to Unit 49.01, the FBI Production Unit. For the purposes of this RCRA closure activity, the ancillary equipment and piping that runs from the tanks to the east wall of Room 134 is considered to be part of Units 44.01/44.02. As described above, ancillary equipment and piping in Room 134 was removed in 1998.</p> <p>The ancillary equipment and piping that runs from the east wall of Room 134, through the Room 118 Series rooms, to the FBI Production Unit, is considered to be part of Unit 49.01. This equipment and piping will be removed with Unit 49.01 during the decommissioning of SET 63.</p> <p>The attached engineering drawings (D-062 and D-063) and FBI system flow diagram show these boundaries and interfaces.</p>
EPA Waste Codes:	D001, D006, D007, D008, D018, D019, D028, D029, D035, D038, D040, D043, F001-F003, F005
Selected Closure Option	Unit removal without onsite treatment
Closure Requirements:	Since all the ancillary equipment and piping located in Room 134 has already been removed, the scope of this work package is limited to physical removal of the tanks, either by cutting or unbolting the legs of the tanks from floor.
Waste Disposal:	If residual liquids are present, they will be drained or absorbed. Upon final radiological characterization, the tanks will be packaged to meet the waste acceptance criteria (WAC) of the approved disposal facility. Hoisting and rigging equipment will be used to facilitate transport to a size reduction facility, if necessary. In the event this waste cannot be shipped directly to the approved disposal facility, it will be stored in an approved on-site storage area until shipment can be scheduled.



PART/NAME	DESCRIPTION	DATE
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NOTES:

- 1) Shaded area shows ancillary equipment and piping that was removed in 1998 under IWCP Work Package #T0084282.

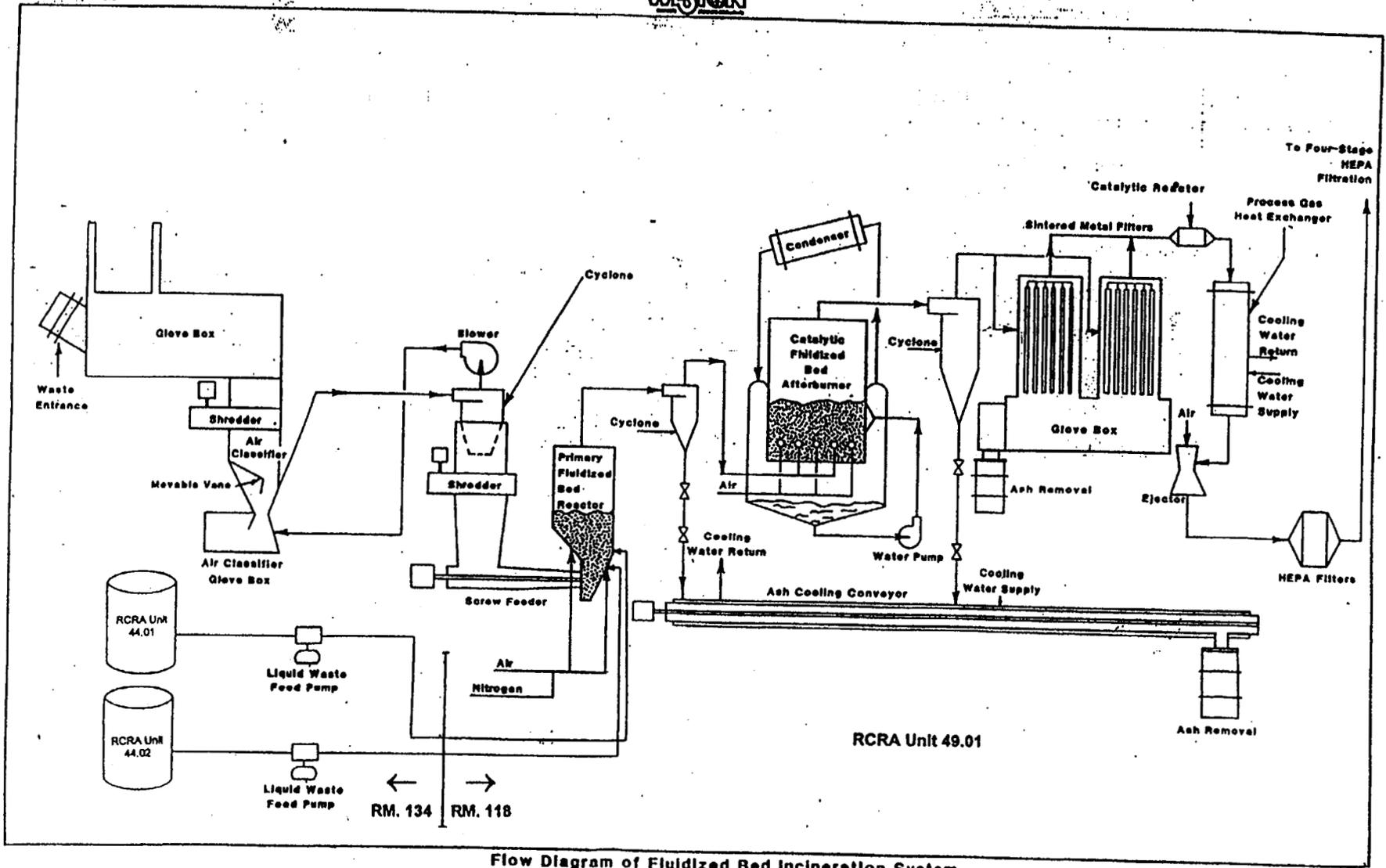
RCRA UNIT #44
BLDG 776, ROOM 134

08/30/91

274

Building 776/777 DOP
Modification Request #1

REVISION	DATE	BY	CHKD	APP'D	DESCRIPTION
1					RCRA ORGANIC AIR FILTERS
2					FBI FILTER AND FEED TANKS (1 OF 2)
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Flow Diagram of Fluidized Bed Incineration System

**B776/777 Closure Project
RCRA Unit-Specific Closure Information Sheet**

SET #	RCRA Unit #(s)	Description	Regulatory Status	Closure Status
7	95.006	Mixed Residue Tank 1103	Mixed Residue	RCRA Stable/Physically Empty
	95.007	Mixed Residue Tank 1104	Mixed Residue	RCRA Stable/Physically Empty
	95.008	Mixed Residue Tank 1106	Mixed Residue	RCRA Stable/Physically Empty

Unit Description:	<p>Tanks 1103, 1104, and 1106 were installed in Room 131 of Building 777 in 1972. These raschig-ring tanks were used to store contaminated organic waste, which was transferred via pipeline to Building 774 for treatment. The waste was primarily used machining coolant (predominately 643 light hydraulic oil) with spent carbon tetrachloride solvent, along with smaller amounts of Freon TF (1,1,2-trichloro-1,2,2-trifluoroethane), vacuum pump oil, and sight gauge oil. Other liquids included 645 heavy grade hydraulic oil, 10W-30 & 10W-40 motor oil, perchloroethylene, spray mist oil, vacuum pump exhaust condensate, and 689 criticality drain fluid.</p> <p>In addition, liquids originating from a series of five pencil tanks (T-5, T-6, T-10, T-11, and T-12) in Room 134 were filtered in Glovebox 642, then transferred to Tank 1104. After sampling and additional filtering (as necessary), the waste liquid was pumped into Tank 1103 for confirmatory sampling in preparation for pipeline transfer to Building 774. Tank 1106 was an overflow tank that connected to Tanks 1103 and 1104.</p> <p>All three tanks were drained, raschig rings removed, process waste lines disconnected, and blank flanges installed in August and September of 1998.</p>
Unit Boundaries and Interfaces:	RCRA Units 95.006, 95.007, and 95.008 are connected to ancillary equipment that will be removed during the decommissioning of SET 8 (piping in Room 131), SET 6 (Glovebox 642), and SET 78 (miscellaneous piping over eight feet). This closure activity is limited to removal of the tanks themselves. The ancillary piping and glovebox will be removed at a later date. The attached drawing shows a schematic of the tanks and ancillary equipment, with the approximate termination points (TPs).
EPA Waste Codes:	D006, D007, D008, D019, F001, F002
Selected Closure Option:	Unit removal without onsite treatment.
Closure Requirements:	This closure activity will include disconnecting the tanks from the Zone I exhaust system, disconnecting the legs of the tanks, size-reducing the tanks in place or in a central size reduction facility (as necessary), and packaging the tanks for offsite disposal.
Waste Disposal:	If residual liquids are present, they will be absorbed. The tanks will be disposed of as mixed waste. Upon final radiological characterization, the tanks will be packaged to meet the waste acceptance criteria (WAC) of the approved disposal facility. Hoisting and rigging equipment will be used to facilitate transport to a size reduction facility, if necessary. In the event this waste cannot be shipped directly to the approved disposal facility, it will be stored in an approved onsite storage unit until shipment can be scheduled.

**B776/777 Closure Project
RCRA Unit-Specific Closure Information Sheet**

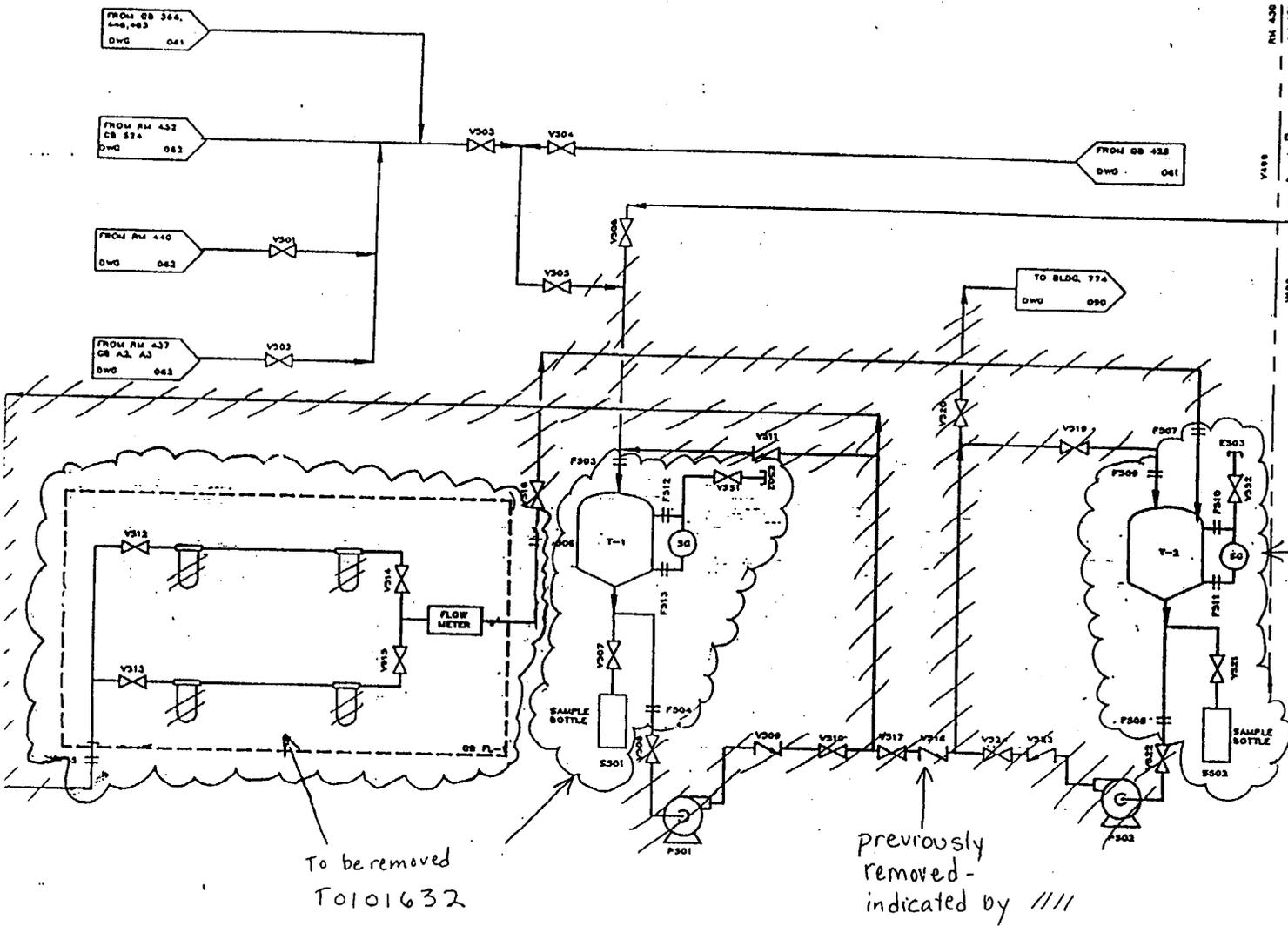
SET #	RCRA Unit #(s)	Description	Regulatory Status	Closure Status
11	95.014	Pencil Tank T-7	Mixed Residue	RCRA Stable/Physically Empty

Unit Description:	<p>Pencil Tank T-7 is located in Room 134E in Building 777. T-7 was used as a surge tank, which collected waste oils, coolants, and carbon tetrachloride from machining processes located in the gloveboxes in Room 134E, and freon from the density balance located in Glovebox 763 in Room 430. From T-7, the waste was transferred to a series of five pencil tanks (T-5, T-6, T-10, T-11, and T-12) in Room 134. The waste from the five pencil tanks was then transferred to Tank 1104 in Room 131 (SET 7). Tank T-7 is vented to Tank 1106 in Room 131.</p> <p>T-7 was drained and isolated in 1997, when the five pencil tanks were closed as part of Mixed Residue Pencil Tank Closure Project #2.</p>
Unit Boundaries and Interfaces:	<p>RCRA Unit 95.014 includes Tank T-7 and associated ancillary equipment in Room 134E. The attached drawing shows a schematic of the tank and ancillary equipment. This closure activity is limited to the removal of T-7, only. The associated ancillary piping will be removed with Gloveboxes 746, 747, 748, 749 and associated M-lines, and mixed residue vacuum accumulators V-746, V-747, V-748, and V-749, at a later time.</p>
EPA Waste Codes:	D006, D007, D008, D019, F001, F002
Selected Closure Option:	Unit removal without onsite treatment.
Closure Requirements:	The work effort will include disconnecting the tank from the vent line and the inlet and outlet piping, installing blank flanges on the lines remaining, size-reducing the tank (if necessary), and packaging the tank for offsite disposal.
Waste Disposal:	If residual liquids are present, they will be absorbed. The tank will be disposed of as mixed waste. Upon final radiological characterization, the tank will be packaged to meet the waste acceptance criteria (WAC) of the approved disposal facility. In the event this waste cannot be shipped directly to the approved disposal facility, it will be stored in an approved onsite storage area until shipment can be scheduled.

B776/777 Closure Project
RCRA Unit-Specific Closure Information Sheet

SET #	RCRA Unit #(s)	Description	Regulatory Status	Closure Status
26	95.015	Holding Tank T-1	Mixed Residue	Physically Empty
	95.016	Holding Tank T-2	Mixed Residue	Physically Empty

Unit Description:	<p>Holding Tanks T-1 and T-2 are located in Room 430 in Building 777. These stainless steel, raschig-ring tanks were built in 1969, and had approximate working capacities of 150 gallons and 170 gallons respectively (subtracting the raschig ring volume). The tanks were used to collect waste 1,1,1-trichloroethane (TCA) from vapor degreasers and gloveboxes in Building 777 (Rooms 430, 437, 440, and 452), and from Tank V-100 in Building 707. The waste TCA from both buildings was collected in Tank T-1, filtered in Glovebox FL-1, and transferred to Tank T-2. From Tank T-2, the waste TCA was pumped to an overhead line, where it joined a double-contained line, which was used to transfer oil and carbon tetrachloride wastes to Building 774 for treatment.</p> <p>The raschig rings were removed from both tanks in January 2000. No residual liquid or sludge was present. The ancillary pumps, filters in Glovebox FL-1, and the inlet piping back to the first valves above the tanks were also drained and removed at that time. The outlet piping from Tank T-2 to the tie-in with the waste oil/coolant piping was drained and removed in July 1998. The remaining ancillary inlet piping that connected Tanks T-1 and T-2 to waste sources in Building 777 (Rooms 430, 437, 440, and 452), and to Tank V-100 in Building 707, has not been drained.</p>
Unit Boundaries and Interfaces:	RCRA Units 95.015 and 95.016 consist of Holding Tanks T-1 and T-2 and associated ancillary equipment, including Glovebox FL-1, piping located inside Glovebox FL-1, and the remaining inlet piping that connected Tanks T-1 and T-2 to waste sources in Buildings 777 and 707. The attached drawings show Tanks T-1 and T-2, and a schematic of the tanks and ancillary equipment.
EPA Waste Codes:	F001, F002
Selected Closure Option:	<p><u>Tanks and ancillary piping:</u> Unit removal without onsite treatment.</p> <p><u>Glovebox FL-1:</u> Unit removal in conjunction with "debris rule" treatment (i.e., either water washing/spraying or liquid phase solvent).</p>
Closure Requirements:	<p>This closure activity includes (1) removal, size reduction (if necessary), and packaging of Tanks T-1 and T-2, the vent line connecting each tank to Glovebox FL-1, and the ancillary piping inside Glovebox FL-1; and (2) "debris rule" treatment, removal, size reduction (if necessary), and packaging of Glovebox FL-1.</p> <p>The remainder of the ancillary inlet piping that connected Tanks T-1 and T-2 to waste sources in Building 777 and 707 will be removed during the decommissioning of SET 29 (piping in Room 437), SET 27 (piping in Room 440), SET 35 (piping in Room 452), and SET 78 (miscellaneous piping over eight feet).</p>
Waste Disposal:	<p>The tanks will be disposed of as mixed waste. If, after "debris rule" treatment, Glovebox FL-1 meets the standard for a "clean debris surface," and it does not exhibit a hazardous waste characteristic, it will be disposed of as solid waste. If not, it will be disposed of as mixed waste.</p> <p>Upon final radiological characterization, the tanks will be packaged to meet the waste acceptance criteria (WAC) of the approved disposal facility. In the event this waste cannot be shipped directly to the approved disposal facility, it will be stored in an approved onsite storage area until shipment can be scheduled.</p>



- NOTES:**
- 1) THE TOTAL ORGANIC CONCENTRATION IN THE HAZARDOUS WASTE STREAM AT ALL PIECES OF REGULATED EQUIPMENT ON THIS DRAWING IS 100%, UNLESS OTHERWISE NOTED.
 - 2) THESE DRAWINGS ARE CONSIDERED DRAFT UNTIL OFFICIAL DRAWING REVISIONS HAVE BEEN APPROVED BY THE ENGINEERING DEPARTMENT AT THE ROCKY FLATS PLANT.

To be removed
T0101632

BLDG 777, ROOM 430

08/30/91

To be removed
T0101632

previously removed -
indicated by ////

from Supplement to Part B Permit Applications
for Subpart BB information, January 1992

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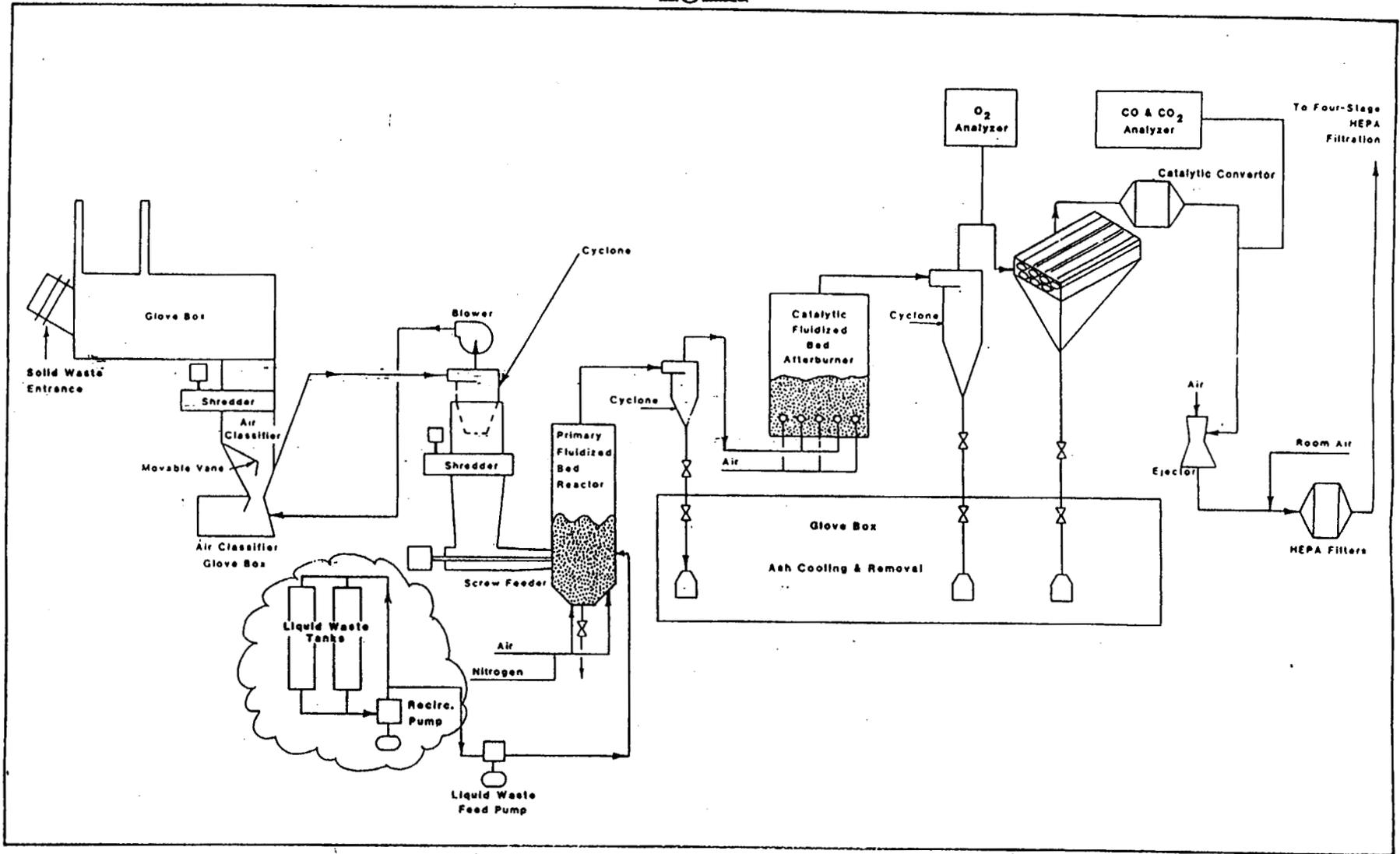
COMPUTER-GENERATED; NO MANUAL CHANGES ALLOWED

**Building 776/777, SET 26
Holding Tanks T-1 and T-2
RCRA Units 95.015 and 95.016**

**B776/777 Closure Project
RCRA Unit-Specific Closure Information Sheet**

SET #	RCRA Unit #(s)	Description	Regulatory Status	Closure Status
61	49.02	Pencil Tank T-1	Interim Status	RCRA Stable
		Pencil Tank T-2	Interim Status	RCRA Stable

Unit Description:	<p>Pencil Tanks T-1 and T-2 in Room 134 were used as feed tanks for the Pilot Fluidized Bed Incinerator (FBI). They are six-inch diameter stainless steel tanks, with capacities of approximately eight gallons each. Liquid wastes were received in 55-gallon drums and pumped through a filter into the pencil tanks. The liquid was mixed by pumping it through a recirculation loop with a Sandpiper double diaphragm pump. A variable displacement metering pump was used to deliver the liquid waste to the primary reactor in the incinerator chamber.</p> <p>Pencil Tanks T-1 and T-2 have contained various organic solvents, degreasing fluids, lubricating oils, cutting oils, and other oil/solvent wastes from laboratories and production areas at Rocky Flats. Methanol was used during start-up to bring the incinerator up to operating temperature. An EPA-approved trial burn for PCBs was conducted in the pilot FBI in May 1981 using a feed comprised of 25 weight percent pyranol A13B3B3 (PCB transformer fluid) and 75 weight percent kerosene (Conoco LPA solvent). The test burn achieved a 99.9999 percent destruction efficiency.</p> <p>The tanks were drained in May 1996 and the tank piping was locked/tagged out.</p>
Unit Boundaries and Interfaces:	<p>RCRA Unit 49.02 includes the FBI Pilot Unit, Pencil Tanks T-1 and T-2, and associated ancillary equipment. The pencil tanks, Sandpiper pump, two filters, and some ancillary piping are located in Room 134. Additional filters and the metering pump are located in Room 135 outside the incinerator canyon, and the pilot FBI unit and feed lines are located inside the incinerator canyon. The attached drawings show a schematic of the entire system and a schematic of the tanks and ancillary equipment.</p> <p>This closure activity includes removal of the pencil tanks, Sandpiper pump, filters, and ancillary piping in Room 134 only. The piping will be capped at the wall between rooms 134 and 135. The FBI Pilot Unit will be removed at a later date.</p>
EPA Waste Codes:	D001, F001, F003, F005, and U044.
Selected Closure Option:	Unit removal without onsite treatment.
Closure Requirements:	The work effort will include disconnecting electrical, air, and nitrogen lines; tapping low points in the system and draining residual liquids (if necessary); draining and removing the filters; and removing the ancillary piping and pump. The tanks will then be removed, size-reduced in place or moved to a central size reduction facility, and packaged for offsite shipment.
Waste Disposal:	If residual liquids are present, they will be drained or absorbed. The tanks will be disposed as mixed waste. Upon final radiological characterization, the tanks will be packaged to meet the waste acceptance criteria (WAC) of the approved disposal facility. Hoisting and rigging equipment will be used to facilitate transport to a size reduction facility, if necessary. In the event this waste cannot be shipped directly to the approved disposal facility, it will be stored in an approved onsite storage area until shipment can be scheduled.



**Building 776/777, SET 61
 Pilot Fluidized Bed Incineration System
 Pencil Tanks T-1 and T-2
 RCRA Unit 49.02**

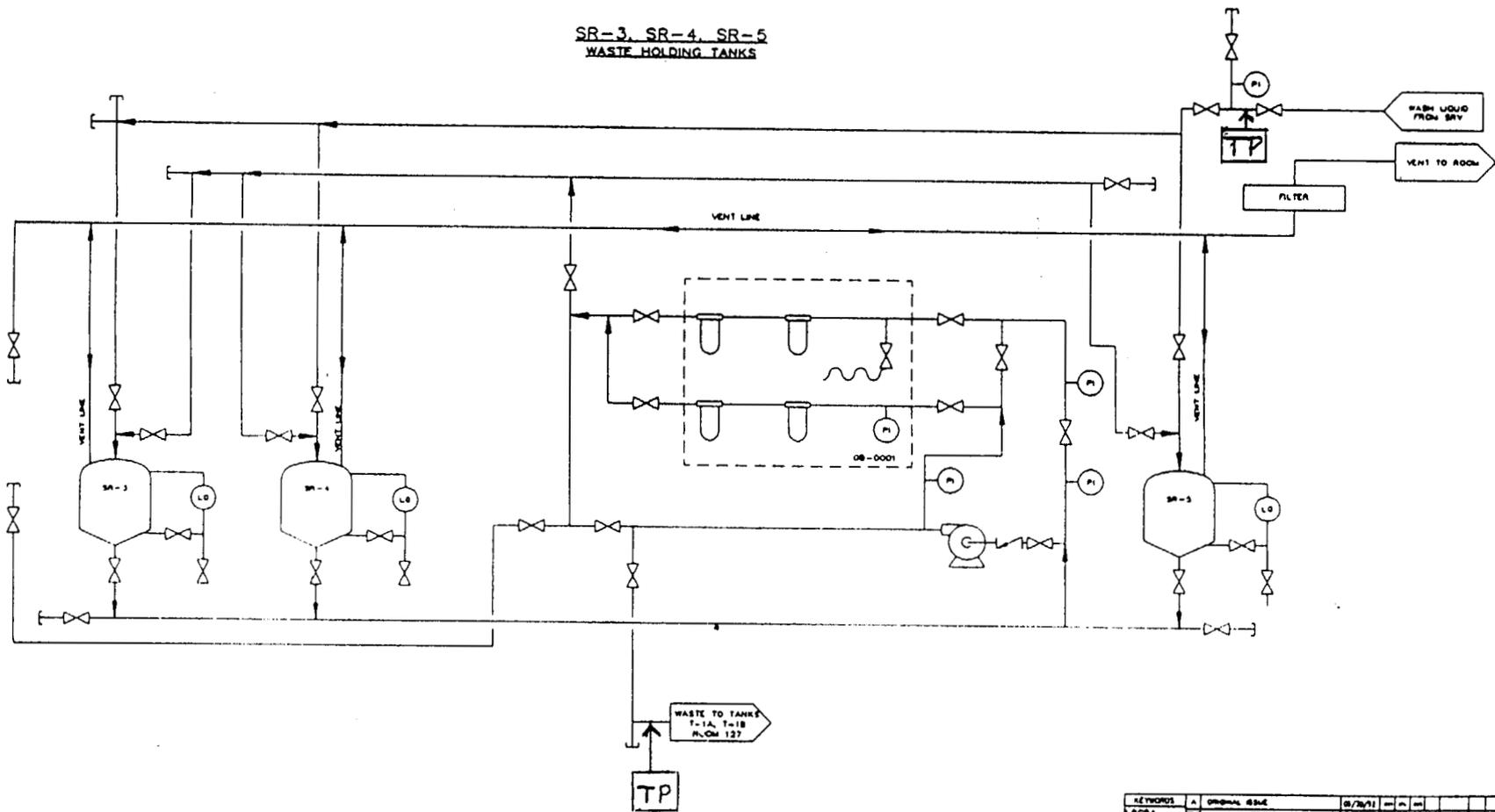
**Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet**

SET #	RCRA Unit #s	Description	Regulatory Status	Current Status
55	94.001	Tank SRV-3	Mixed Residue	Operationally Empty
	94.002	Tank SRV-4	Mixed Residue	Operationally Empty
	94.003	Tank SRV-5	Mixed Residue	Operationally Empty

Unit Description:	<p>Tanks SRV-3, SRV-4, and SRV-5 (RCRA Units 94.001, 94.002, and 94.003) are raschig ring filled tanks located in Room 134 in Building 776. SRV-3 is 53.5" in diameter by 39.5" high, SRV-4 is 41" in diameter and 40.5" high, and SRV-5 is 42" in diameter by 40.5" high.</p> <p>The three tanks were used to collect wash water generated in the Size Reduction Vault (SRV). The wash water was generated from washing leaded acid-contaminated gloves, filters, and metal tooling in the ball mill washer (RCRA Unit 94.009). Wash water from the SRV was pumped through Ful-flo filters in the vault and transferred to Tanks SRV-3, 4, and 5. From these three tanks the waste was filtered in glovebox GB0001 prior to transfer to Tanks T-1A and T-1B in Room 127 (RCRA Unit 776.2). The SRV tanks have been out of service since 1989. The attached drawing shows a schematic of the tank and ancillary equipment with termination points shown for SET 55.</p> <p>The Building 776/777 Reconnaissance Level Characterization Report says the SRV tanks were brought into the building after the 1969 fire for use in the cleanup operations. The tanks were used to collect water from paint removal and other decontamination efforts. Based on the property inventory numbers, these tanks originally came from Building 881, but there is no indication what they were used for there.</p>
Unit Boundaries and Interfaces:	<p>SET 55 includes Tanks SRV-3, 4, and 5 and ancillary equipment in Rooms 134 and 154. Associated ancillary equipment includes inlet piping coming from the SRV (SET 60, Room 146), filters and piping in glovebox GB-0001, recirculation piping and a pump between the tanks and glovebox, and outlet piping leading to Tanks T-1A and T-1B in Room 127 (SET 69, RCRA Unit 776.2). Secondary containment is provided by GB-0001 and the concrete floor.</p>
EPA Waste Codes/ Waste Characterization:	<p>The tank system collected wash water from the ball mill washer in the SRV, which has been characterized based on process knowledge with EPA waste code D008. (Ref. Backlog Waste Recharacterization, Subpopulation 46B, for SRV ball mill sludge, IDC 340.) Any remaining liquid will be drained from the tanks and piping during deactivation, and sample results from the liquid may be used to determine additional waste codes that may be applicable.</p> <p>The piping and tanks will be characterized in accordance with 6 CCR 1007-3 Part 262.11, and managed accordingly.</p>
Selected Closure Option:	<p>Unit removal without onsite treatment.</p>

Closure Activities:	The tank inlet and outlet piping will be removed to approximately the eight-foot level under a work package for SET 55 deactivation and decommissioning. Raschig rings will be removed from the tanks during deactivation. The tanks and glovebox will be removed under a later work package for SET 55 decommissioning. The remainder of the piping will be removed as part of SET 78 (miscellaneous piping over eight feet), and the concrete secondary containment area will be addressed with SET 82 (building structure).
Waste Disposal:	<p>The tanks, piping, raschig rings, glovebox, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges.</p> <p>Upon final radiological characterization, the waste will be packaged to meet the waste acceptance criteria (WAC) of the approved disposal facility. In the event this waste cannot be shipped directly to the approved disposal facility, it will be stored in an approved on-site storage area until shipment can be scheduled.</p>

SR-3, SR-4, SR-5
WASTE HOLDING TANKS



NOTES

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TP = Termination Point, Set 55

REVISED	DESCRIPTION	DATE	BY	CHKD	APP'D
1	ORIGINAL ISSUE	8/29/71			
2	REVISION				
3	REVISION				
4	REVISION				
5	REVISION				
6	REVISION				
7	REVISION				
8	REVISION				
9	REVISION				
10	REVISION				
11	REVISION				
12	REVISION				
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16	REVISION				
17	REVISION				
18	REVISION				
19	REVISION				
20	REVISION				

U.S. DEPARTMENT OF ENERGY
 HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION
 Rocky Flats Plant
 INSTRUMENTATION SECTION
 SR-3, SR-4, SR-5
 D39650-080

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**Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet**

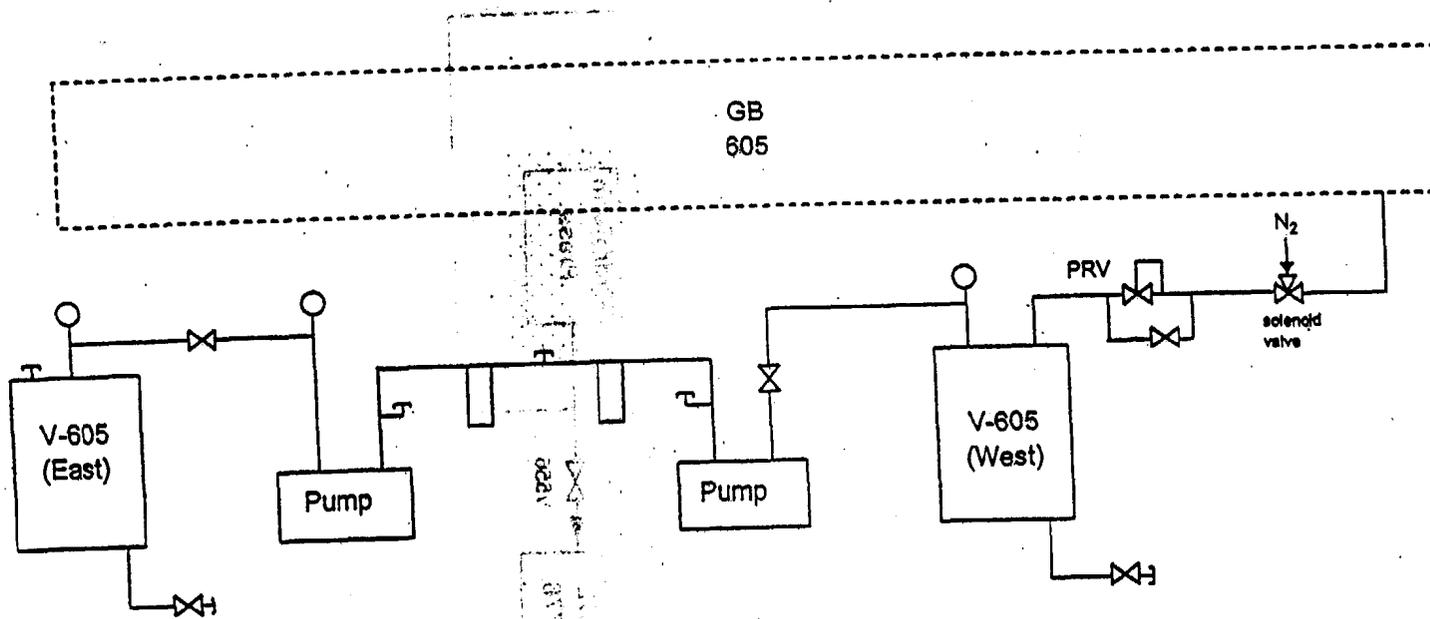
UNIT	RCRA ID	Description	RCRA Unit Contents	Current Status
4	NA	Tank V-605 (2)	Mixed Residue	Physically Empty/RCRA Stable
	95.019	Tank DL-776	Mixed Residue	Physically Empty/RCRA Stable
	NA	GB 612 ancillary piping	Mixed Residue	Physically Empty

Unit Description:	<p><u>Tank V-605</u> Tank V-605 includes two vacuum accumulator tanks. They are constructed of carbon steel and have approximate dimensions of 12 inches in diameter by 23 inches high. The tanks are located in Building 777 Room 131 below Glovebox 605.</p> <p>Vacuum was used to hold parts to lathes in the gloveboxes as they were being machined. The vacuum accumulators were used in the process line between the lathe and the vacuum pump so that constant vacuum pressure could be maintained on the parts being machined. In the event of an upset condition where the part came loose from the chuck, the cutting oils and solvents used in the machining process would be pulled into the accumulators. Maintenance personnel periodically drained the accumulators of any oil and solvent that accumulated.</p> <p>Both Tank V-605s were drained to a physically empty condition in May 1999 under work package T0100104. The vacuum pumps were drained in January 2000.</p> <p><u>Tank DL-776</u> Tank DL-776 measures approximately two feet by two feet by four feet, and is filled with raschig rings. The tank is located in Building 777 Room 131 beneath Glovebox 606.</p> <p>Tank DL-776 was used to collect waste oil from the hydroform press located in Glovebox 606. Glovebox 606 served as secondary containment for the ancillary equipment within it. The RLCR states that the hydroform press and tank were replaced in the late 1980s and were never used to press plutonium parts. They may have been used to test press aluminum parts. Tank DL-776 was drained to a physically empty condition in May 1999 under work package T0100104.</p> <p><u>Glovebox 612 Ancillary Piping</u> Waste oil collected in slab tank oil carts by maintenance personnel was pumped out of the carts into an enclosed pump-out station on the west side of Glovebox 612, where it was filtered through Ful-Flo cartridge filters in the glovebox and transferred to Tanks T-A1 and T-A2 in Room 131. These tanks were closed by removal in 1996 along with the piping from GB 612 to the tanks. The filters inside the glovebox have also been removed. Remaining equipment includes a small amount of equipment associated with the cart pump-out station attached to the glovebox.</p>
Unit Boundaries and Interfaces:	The vacuum accumulator systems include the vacuum accumulator tanks, vacuum pumps, and associated piping and valves. These were small stand-alone tank systems and the ancillary equipment is minimal. These tank systems will be entirely removed as part of Set

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	<p>4 D&D. The attached drawing shows a schematic of the V-605 tank systems. Schematics are also attached showing the extent of the regulated systems associated with Tank DL-776 and GB 612. These systems will be entirely removed as part of Set 4 D&D.</p>
EPA Waste Codes/ Waste Characterization:	<p>The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002. When the vacuum accumulators and Tank DL-776 were drained, the collected liquids from several tanks were commingled prior to analysis, so it is not known whether Tank DL-776 contained hazardous waste. This tank system will be conservatively managed as mixed waste at closure, including the raschig rings. Glovebox 606 will be cleaned using debris rule technology and will then be closed by removal and managed as non-hazardous LLW.</p>
Selected Closure Option:	<p><u>Tanks and ancillary piping:</u> Unit removal without onsite treatment. <u>Glovebox 606:</u> Unit removal in conjunction with debris rule treatment.</p>
Closure Activities:	<p>Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated tanks and ancillary equipment. The raschig rings in Tank DL-776 will either be removed during deactivation activities or during closure activities. Glovebox 606 will be wiped down using trisodium phosphate solution, and will be visually inspected to determine if it meets the standard for a clean debris surface. If it meets the standard, the glovebox will be closed by removal and managed as non-hazardous waste. Otherwise, it will be closed by removal and managed as mixed waste.</p>
Waste Disposal:	<p>The tanks, piping, pumps, raschig rings, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges. Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.</p>

B776/777, SET 4
Building 777 Room 131
Vacuum Accumulators V-605

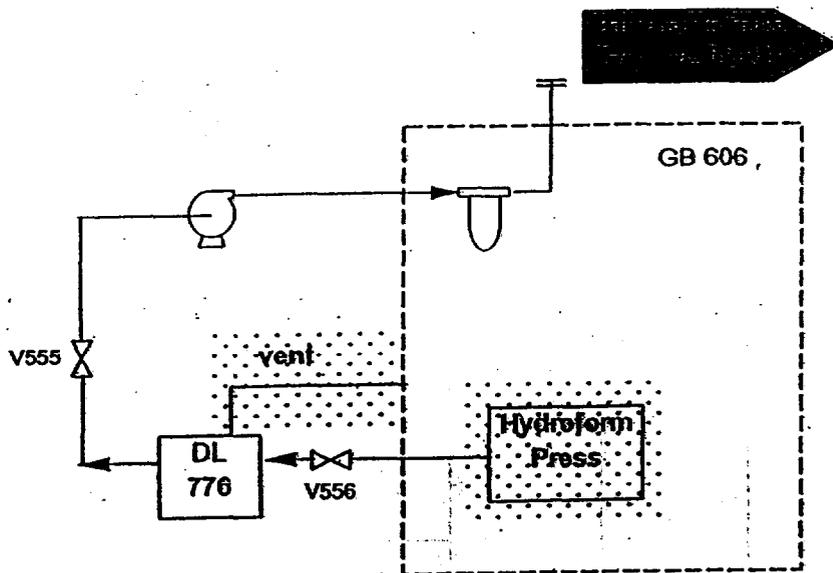


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March 5, 2001 KLC

Modification #6
March 15, 2001 KHC

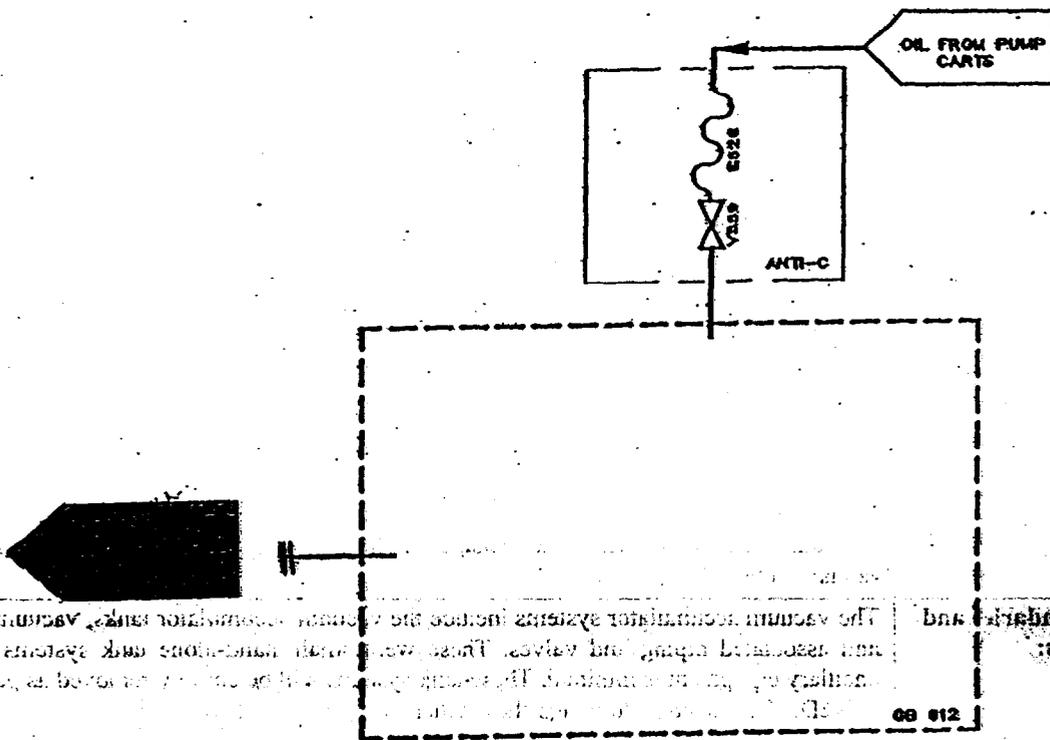
B776/777, SET 4
Building 777 Room 131
Tank DL-776
RCRA Unit 95.019



Shading indicates non-regulated equipment

Modification #6
March 15, 2001 KRC

B776/777, SET 4
Building 777 Room 131
Glovebox 612 Ancillary Piping



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Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet

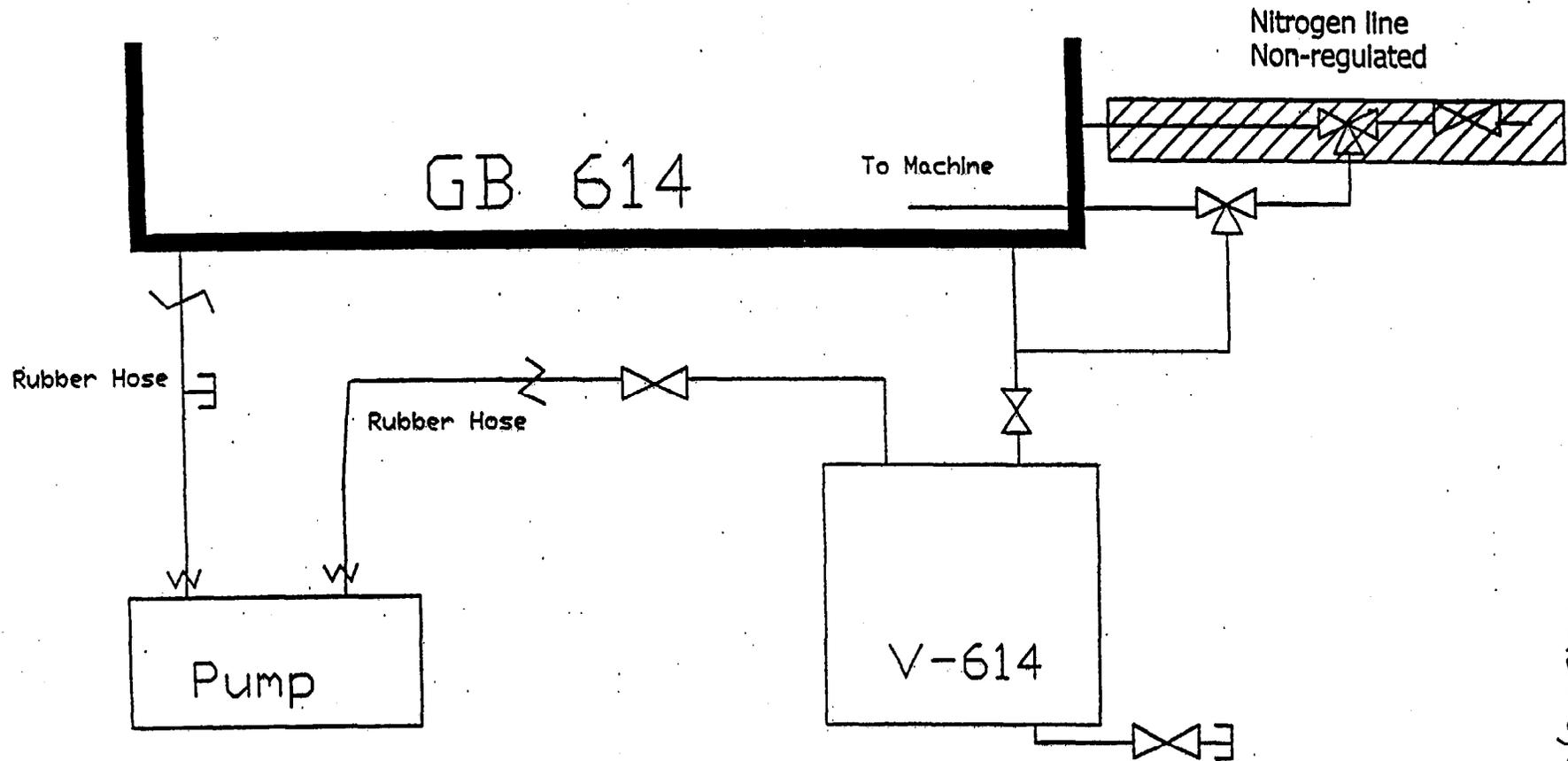
Set	RCRA Code	Description	Regulatory Status	Closure Status
5	NA	Tank V-614	Mixed Residue	Physically Empty/RCRA Stable
	NA	Tank V-616	Mixed Residue	Physically Empty/RCRA Stable
	NA	Tank V-618	Mixed Residue	Physically Empty/RCRA Stable
	NA	Tank V-620	Mixed Residue	Physically Empty/RCRA Stable

Unit Description:	<p>Tanks V-614, V-616, V-618, and V-620 are vacuum accumulator tanks. They are constructed of carbon steel and have approximate dimensions of 12 inches in diameter by 23 inches high. The tanks are located in Building 777 Room 131 below gloveboxes 614, 616, 617, and 620, respectively.</p> <p>Vacuum was used to hold parts to lathes in the gloveboxes as they were being machined. The vacuum accumulators were used in the process line between the lathe and the vacuum pump so that constant vacuum pressure could be maintained on the parts being machined. In the event of an upset condition where the part came loose from the chuck, the cutting oils and solvents used in the machining process would be pulled into the accumulators. Maintenance personnel periodically drained the accumulators of any oil and solvent that accumulated. The lathe in glovebox 617 was never put into operation, and the glovebox windows are open to the room. It is not known whether cold testing was performed or whether solvents were collected in Tank V-618.</p> <p>Tanks V-614, V-616, V-618, and V-620 were drained to a physically empty condition in May and June 1999 under work package T0100104. The vacuum pumps were drained in January 2000.</p>
Unit Boundaries and Interfaces:	<p>The vacuum accumulator systems include the vacuum accumulator tanks, vacuum pumps, and associated piping and valves. These were small stand-alone tank systems and the ancillary equipment is minimal. These tank systems will be entirely removed as part of Set 5 D&D. The attached drawings show schematics of the tank systems.</p>
EPA Waste Codes/ Waste Characterization:	<p>The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.</p> <p>When the vacuum accumulators were drained, the collected liquids from several tanks were commingled prior to analysis, so it is not known whether Tank V-618 contained hazardous waste. This tank system will be conservatively managed as mixed waste at closure.</p>
Selected Closure Option:	Unit removal without onsite treatment.
Closure Activities:	Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated tanks and ancillary equipment.
Waste Disposal:	The tanks, piping, pumps, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges.

March 15, 2001 *KAC*

	Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.
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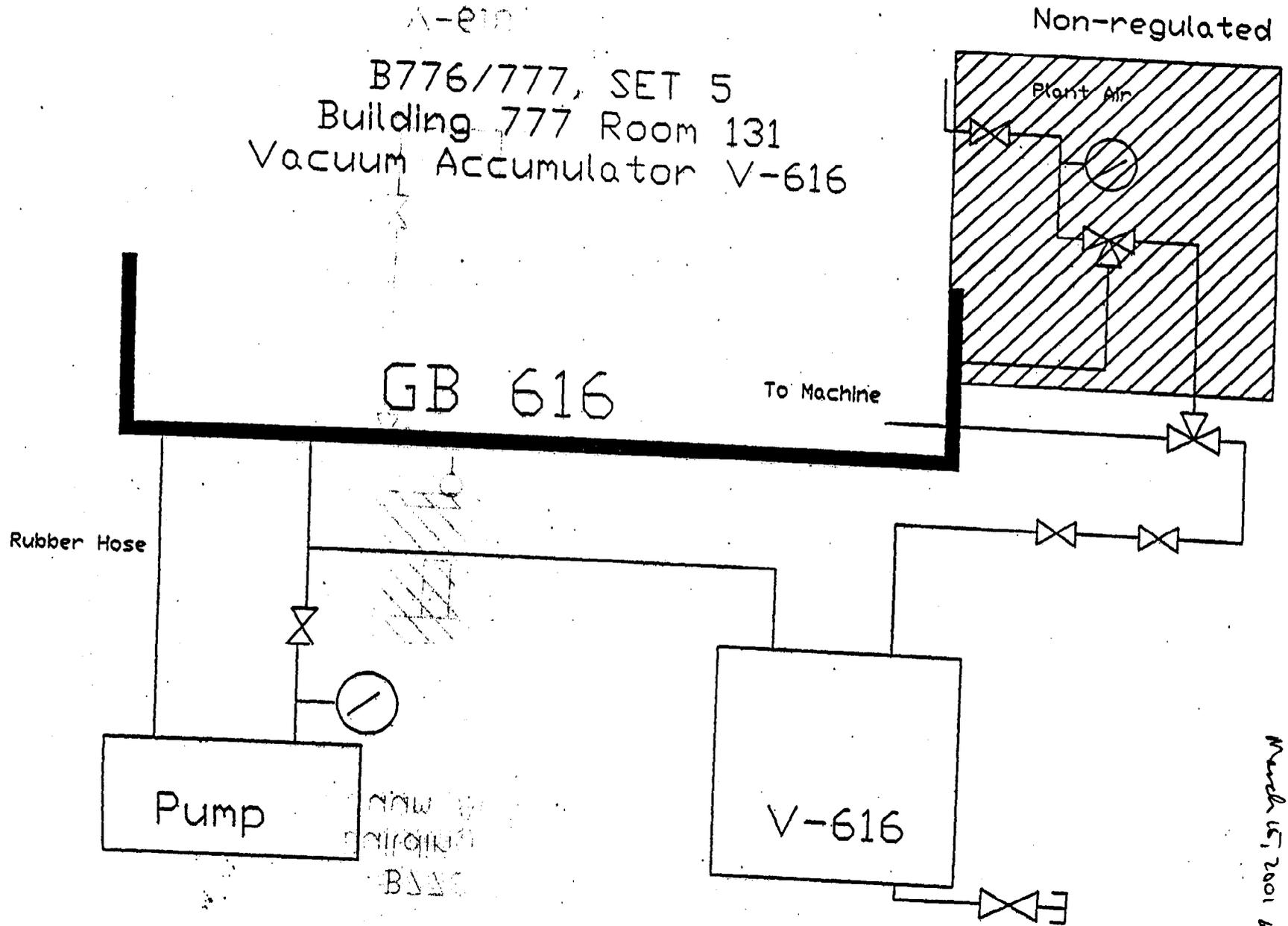
B776/777, SET 5
Building 777 Room 131
Vacuum Accumulator V-614



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March 15, 2001
KAC

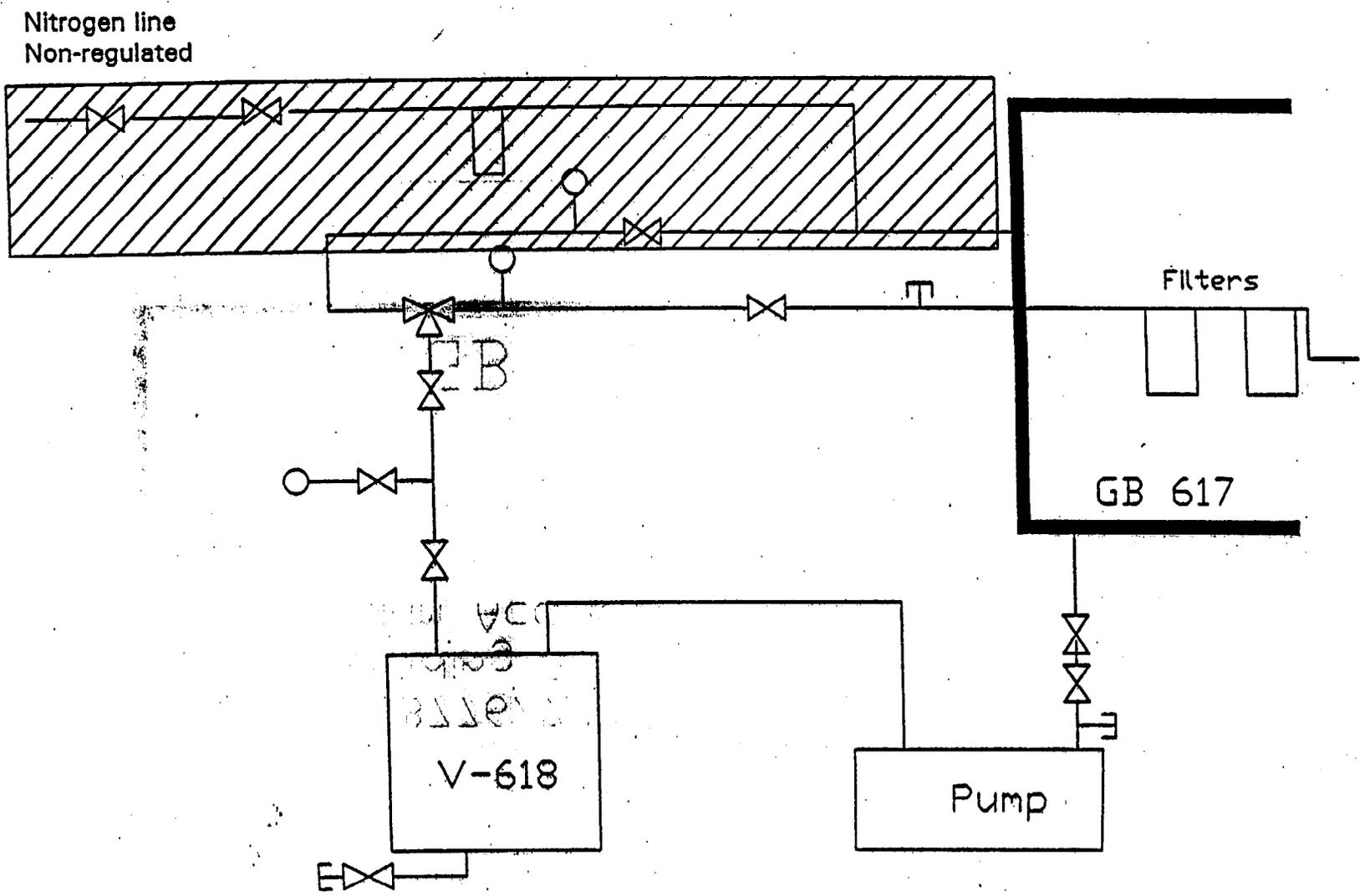
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B776/777, SET 5
Building 777 Room 131
Vacuum Accumulator V-616



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March 15, 2001 KPC

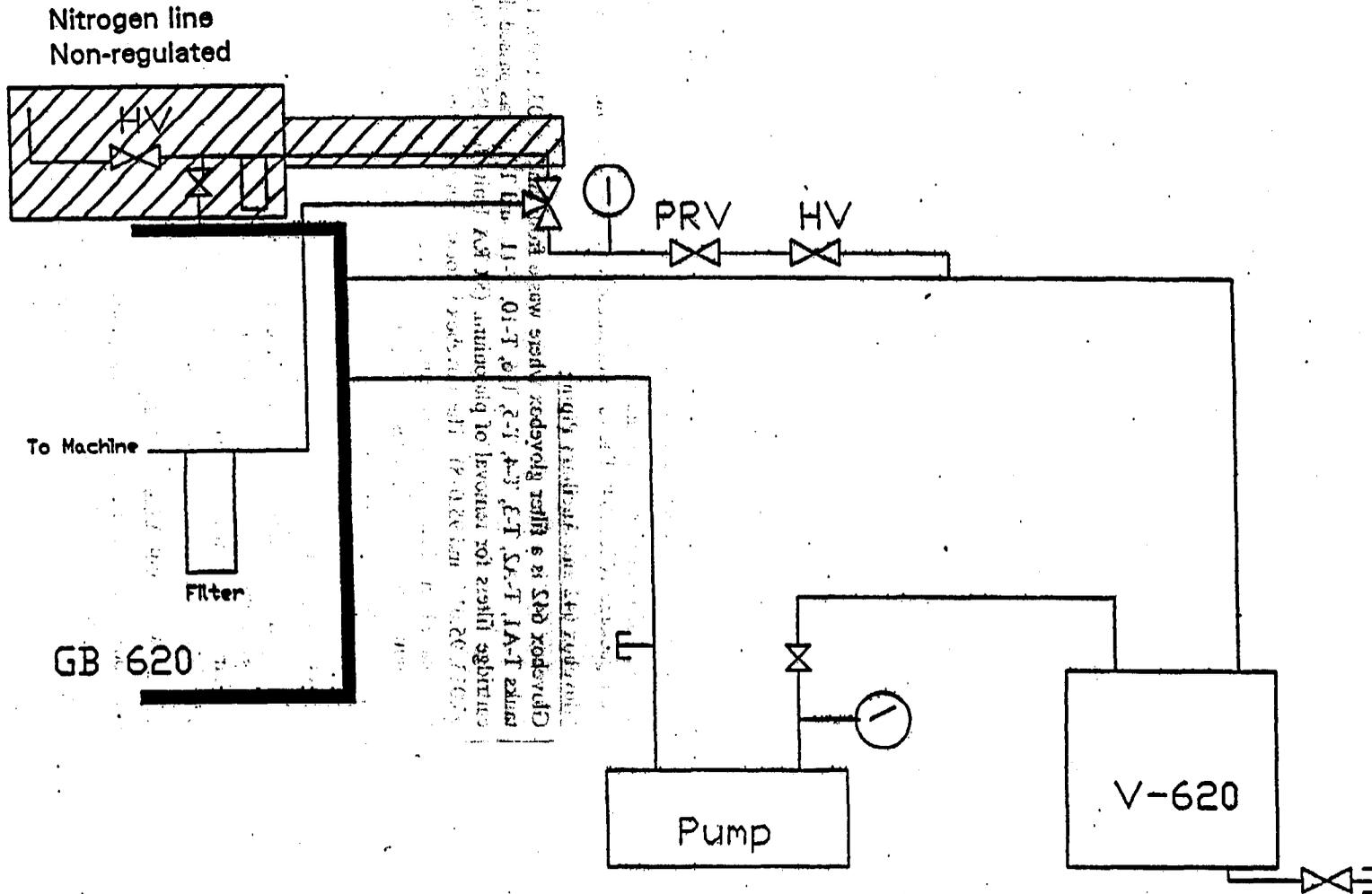
B776/777, SET 5
Building 777 Room 131
Vacuum Accumulator V-618



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B776/777, SET 5
Building 777 Room 131
Vacuum Accumulator V-620



Modification #6
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March 15, 2001 EUC

Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet

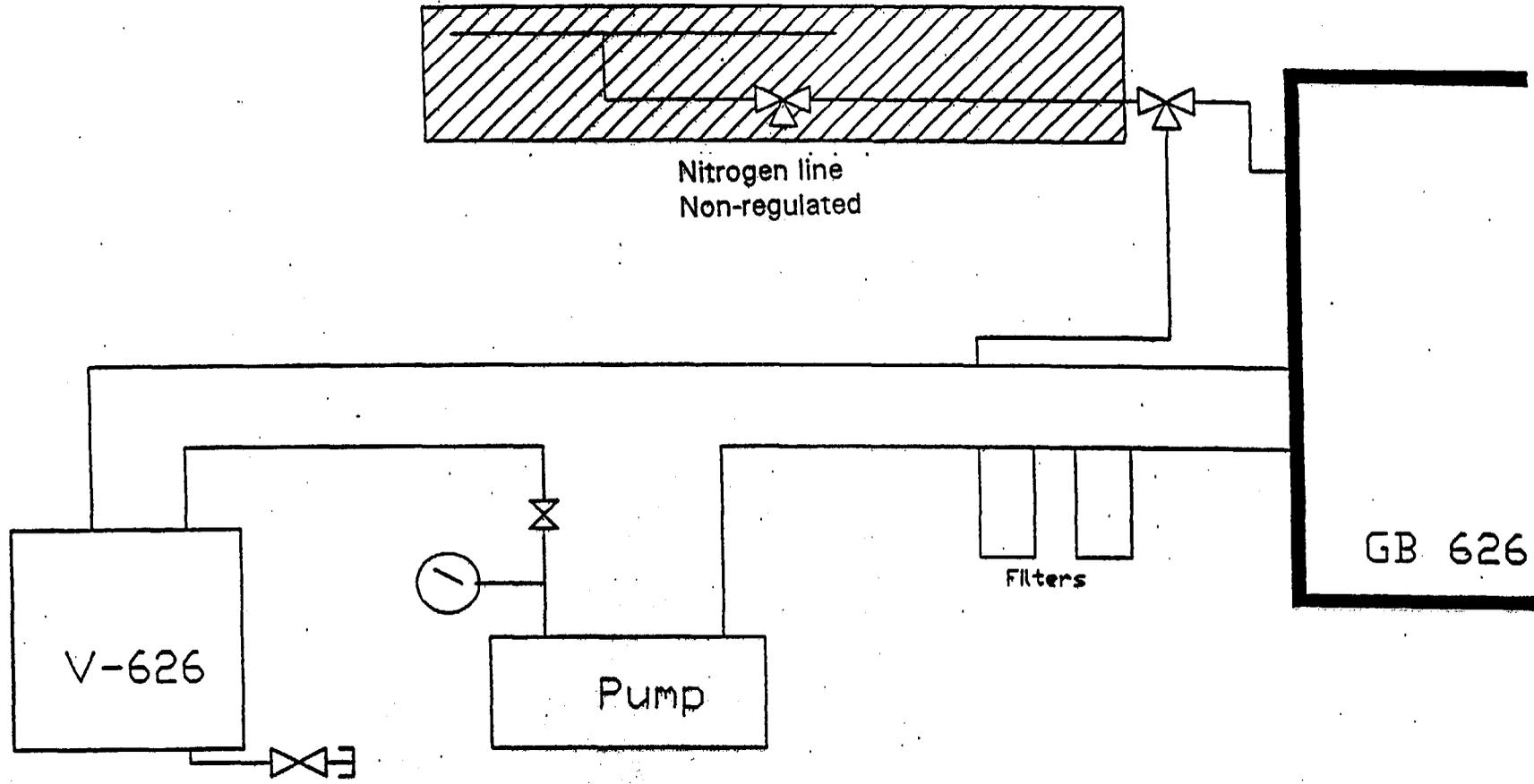
Set	RCRA Unit	Description	Regulatory Status	Closure Status
6	NA	Tank V-626	Mixed Residue	Physically Empty/RCRA Stable
	NA	Tank V-627	Mixed Residue	Physically Empty/RCRA Stable
	Ancillary to several units (see below)	Glovebox 642 and ancillary piping	Mixed Residue	Physically Empty

Unit Description:	<p><u>Tanks V-626 and V-627</u></p> <p>Tanks V-626 and V-627 are vacuum accumulator tanks. They are constructed of carbon steel and both have approximate dimensions of 12 inches in diameter by 23 inches high. The tanks are located in Building 777 Room 131 below gloveboxes 626 and 627, respectively.</p> <p>Vacuum was used to hold parts to a jig borer and a lathe in gloveboxes 626 and 627, respectively, as they were being machined. The vacuum accumulators were used in the process line between the equipment and the vacuum pump so that constant vacuum pressure could be maintained on the parts being machined. In the event of an upset condition where the part came loose from the chuck, the cutting oils and solvents used in the machining process would be pulled into the accumulators. Maintenance personnel periodically drained the accumulators of any oil and solvent that accumulated.</p> <p>Tanks V-626 and V-627 were drained to a physically empty condition in June 1999 under work package T0100104. The vacuum pumps were drained in January 2000.</p> <p><u>Glovebox 642 and Ancillary Piping</u></p> <p>Glovebox 642 is a filter glovebox where waste from tanks 1103, 1104, 1106 and pencil tanks T-A1, T-A2, T-3, T-4, T-5, T-6, T-10, T-11, and T-12 was passed through Ful-Flo cartridge filters for removal of plutonium. (RCRA Unit Nos. 95.001, 95.002, 95.006 - 95.013, 95.017, and 95.018). The glovebox is located in Building 777 Room 131. All the tanks have been closed by removal, and the six filters in the glovebox have been removed. Remaining equipment includes inlet and outlet piping, and the glovebox itself, which served as secondary containment for the filters.</p>
Unit Boundaries and Interfaces:	<p><u>Tanks V-626 and V-627</u></p> <p>The vacuum accumulator systems include the vacuum accumulator tanks, vacuum pumps, and associated piping and valves. These were small stand-alone tank systems and the ancillary equipment is minimal. These tank systems will be entirely removed as part of Set 6 D&D. The attached drawings show schematics of the tank systems.</p> <p><u>Glovebox 642 and Ancillary Piping</u></p> <p>Glovebox 642 and the ancillary equipment below approximately eight feet will be removed during Set 6 D&D, and the ends of the piping leading into the overhead will be capped or plugged. The remaining lines in the overhead in Room 131 will be removed as part of Set 78 (miscellaneous piping over eight feet). The attached drawing shows a schematic of GB642 and associated ancillary equipment.</p>

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EPA Waste Codes/ Waste Characterization:	The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.
Selected Closure Option:	Unit removal without onsite treatment. The interior of Glovebox 642 is not in sufficient condition or adequately visible to conduct debris rule treatment, so the glovebox will be managed as mixed waste.
Closure Activities:	Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated tanks and ancillary equipment.
Waste Disposal:	<p>The tanks, piping, glovebox, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges.</p> <p>Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.</p>

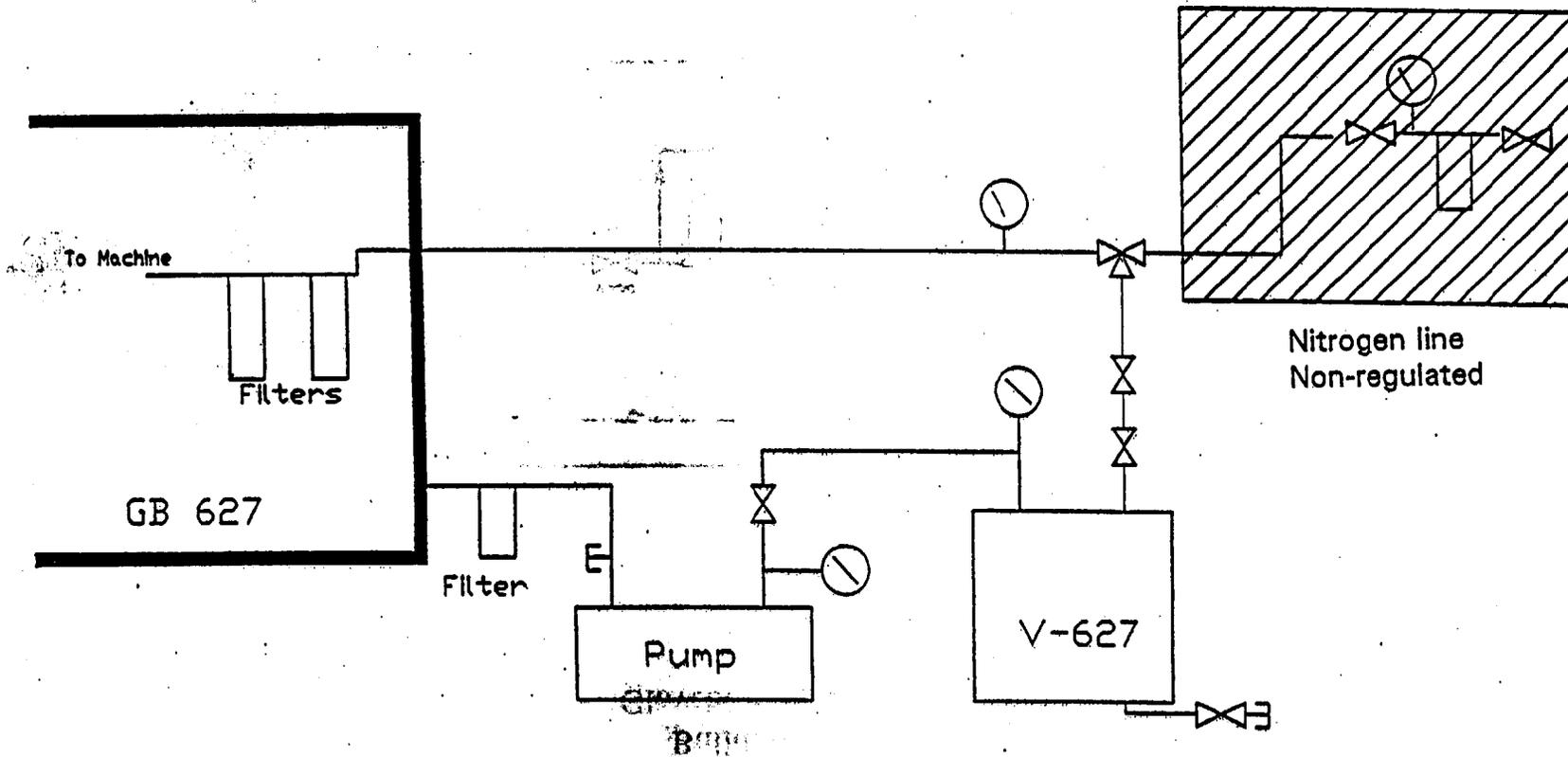
B776/777, SET 6
Building 777 Room 131
Vacuum Accumulator V-626



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March 15, 2001 AK

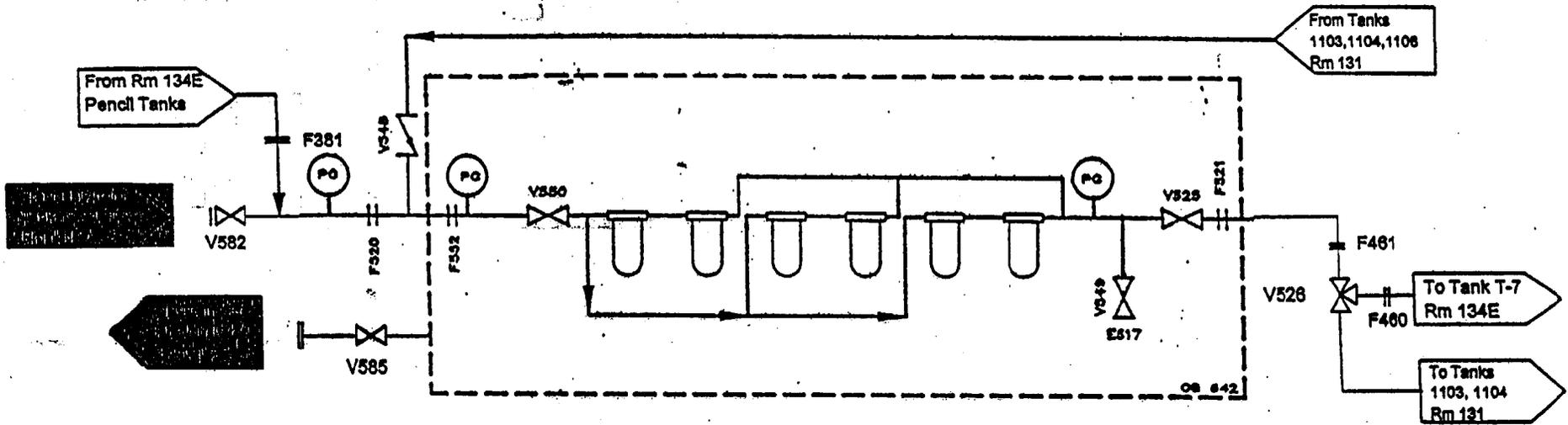
B777/776, SET 6
Building 777 Room 131
Vacuum Accumulator V-627



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KPC

B776/777, SET 6
 Building 777 Room 131
 Glovebox 642 Ancillary Piping



FROM Rm 134E
 PENCIL TANKS
 TO TANK T-7
 Rm 134E
 TO TANKS
 1103, 1104
 Rm 131

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 March 15, 2001
 AKC

March 15, 2001
FAC

Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet

Set	NA	Description	Regulation Status	Closure Status
10	NA Various	Tank V-752 Ancillary piping	Mixed Residue Mixed Residue	Physically Empty/RCRA Stable Physically Empty

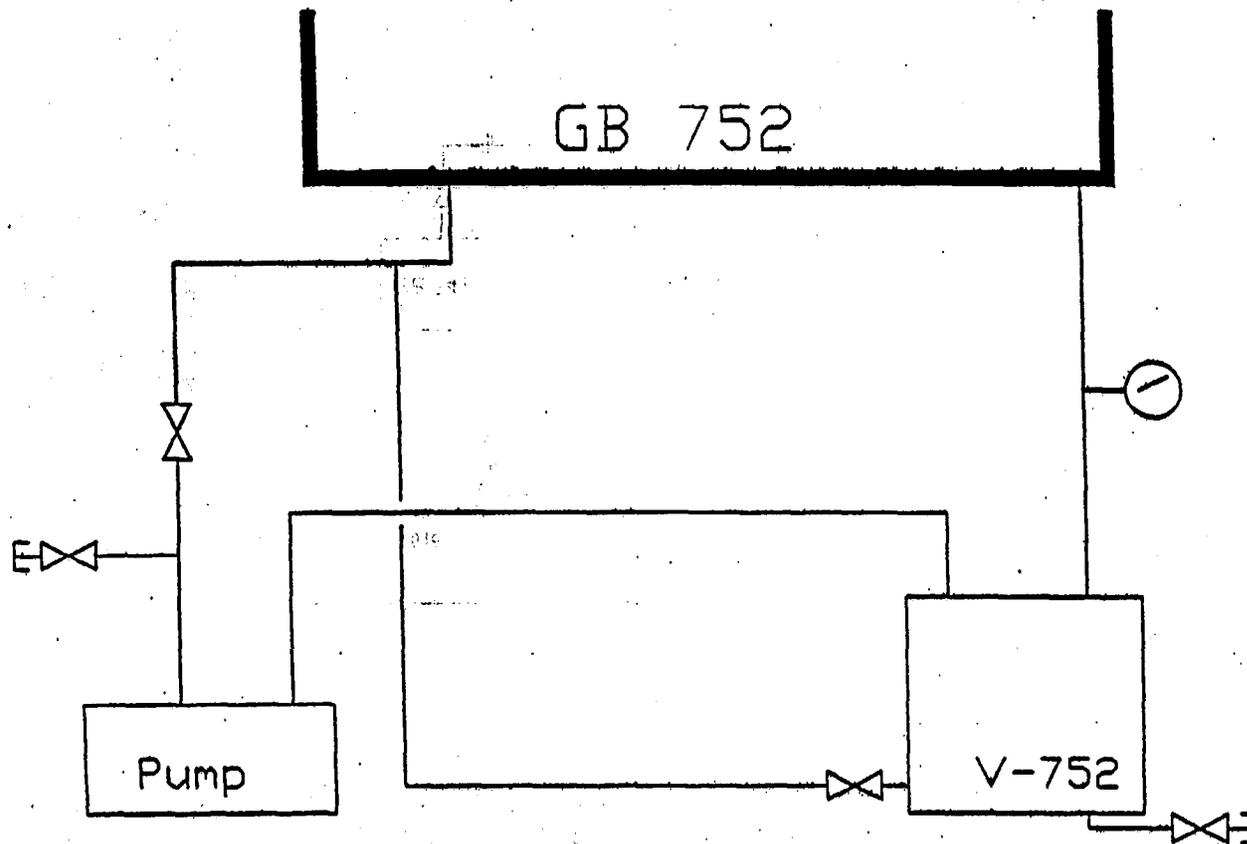
Unit Description:	<p><u>Tank V-752</u></p> <p>Tank V-752 is a vacuum accumulator tank. It is constructed of carbon steel and has approximate dimensions of 12 inches in diameter by 23 inches high. The tank is located in Building 777 Room 134 East below Glovebox 752.</p> <p>Vacuum was used to hold parts to a jig borer in the glovebox as they were being machined. The vacuum accumulator was used in the process line between the equipment and the vacuum pump so that constant vacuum pressure could be maintained on the parts being machined. In the event of an upset condition where the part came loose from the chuck, the cutting oils and solvents used in the machining process would be pulled into the accumulator. Maintenance personnel periodically drained the accumulator of any oil and solvent that accumulated.</p> <p>Tank V-752 was drained to a physically empty condition in June 1999 under work package T0100104. The vacuum pump was drained in January 2000.</p> <p><u>Ancillary Piping</u></p> <p>Set 10 contains ancillary piping that was previously used to transfer waste oil and solvents from pencil tanks in Room 134 East to filter glovebox 642 in Room 131. The tanks have been removed.</p>
Unit Boundaries and Interfaces:	<p>The vacuum accumulator system includes the vacuum accumulator tank, vacuum pump, and associated piping and valves. This was a small stand-alone tank system and the ancillary equipment is minimal. This tank system will be entirely removed as part of Set 10 D&D. The attached drawing shows a schematic of the tank system.</p> <p>The Set 10 ancillary piping includes oil/solvent transfer piping beneath the D-line and M-line. All ancillary piping beneath approximately eight feet will be removed as part of Set 10, and the ends of the piping leading into the overhead will be capped or plugged. The remaining lines in the overhead in Room 134 East will be removed as part of Set 78 (miscellaneous piping over eight feet). A drawing is attached showing ancillary equipment in Sets 10 and 11. Endpoints for piping removal associated with each set will be determined during D&D work package preparation.</p>
EPA Waste Codes/ Waste Characterization:	The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.
Selected Closure Option:	Unit removal without onsite treatment.
Closure Activities:	Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated tank and ancillary equipment.
Waste Disposal:	The tank, piping, pump, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-

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	<p>regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges.</p> <p>Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.</p>
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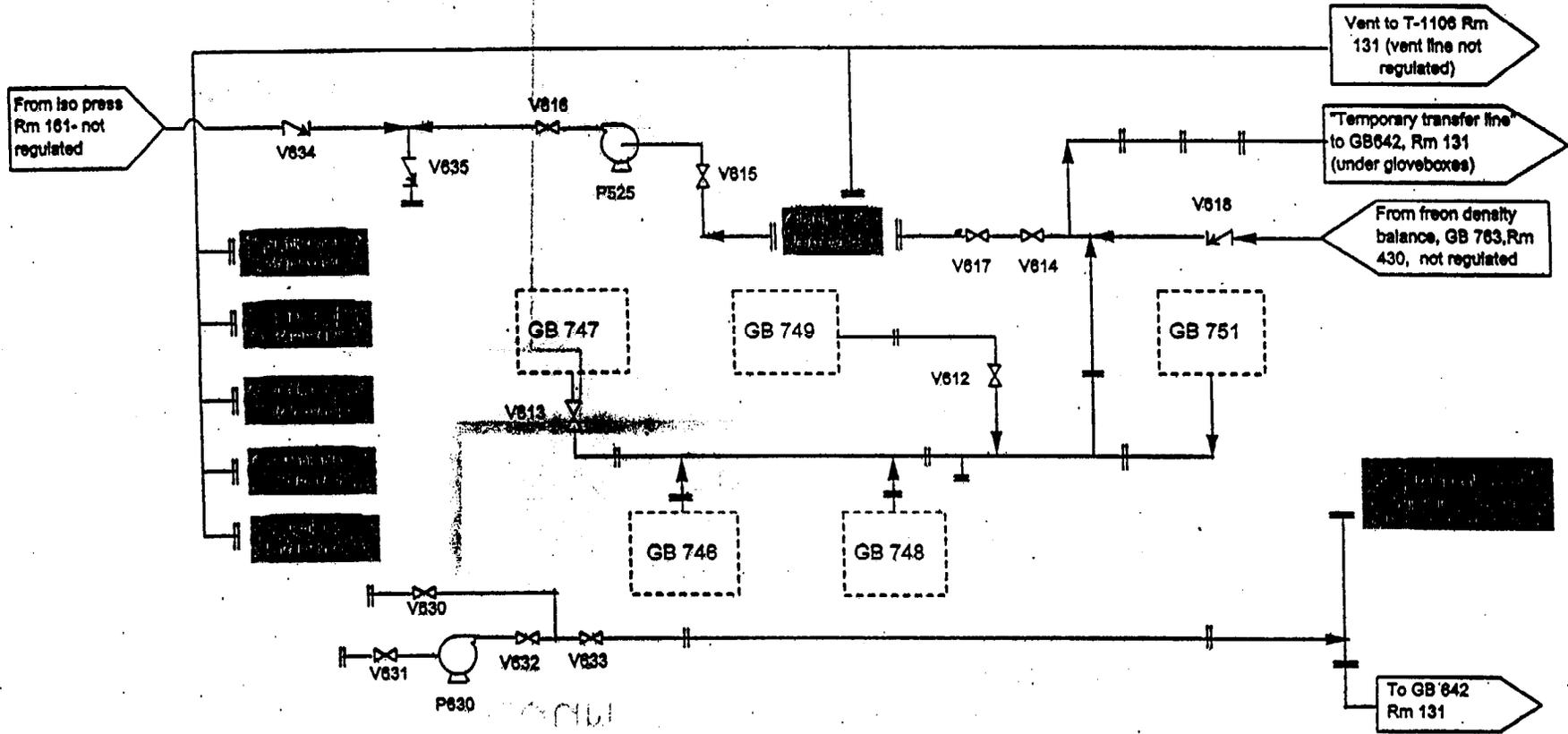
B776/777, Set 10
Building 777 Room 134E
Vacuum Accumulator V-752



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KAC

B776/777, SETS 10 and 11
 Building 777 Room 134E
 Ancillary Piping



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LRC*

**Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet**

Set #	RCRA Code	Description	Regulatory Status	Closure Status
11	NA	Tank V-746	Mixed Residue	Physically Empty/RCRA Stable
	NA	Tank V-747	Mixed Residue	Physically Empty/RCRA Stable
	NA	Tank V-747A	Mixed Residue	Physically Empty/RCRA Stable
	NA	Tank V-748	Mixed Residue	Physically Empty/RCRA Stable
	NA	Tank V-749	Mixed Residue	Physically Empty/RCRA Stable
	Various	Ancillary equipment	Mixed Residue	Physically Empty

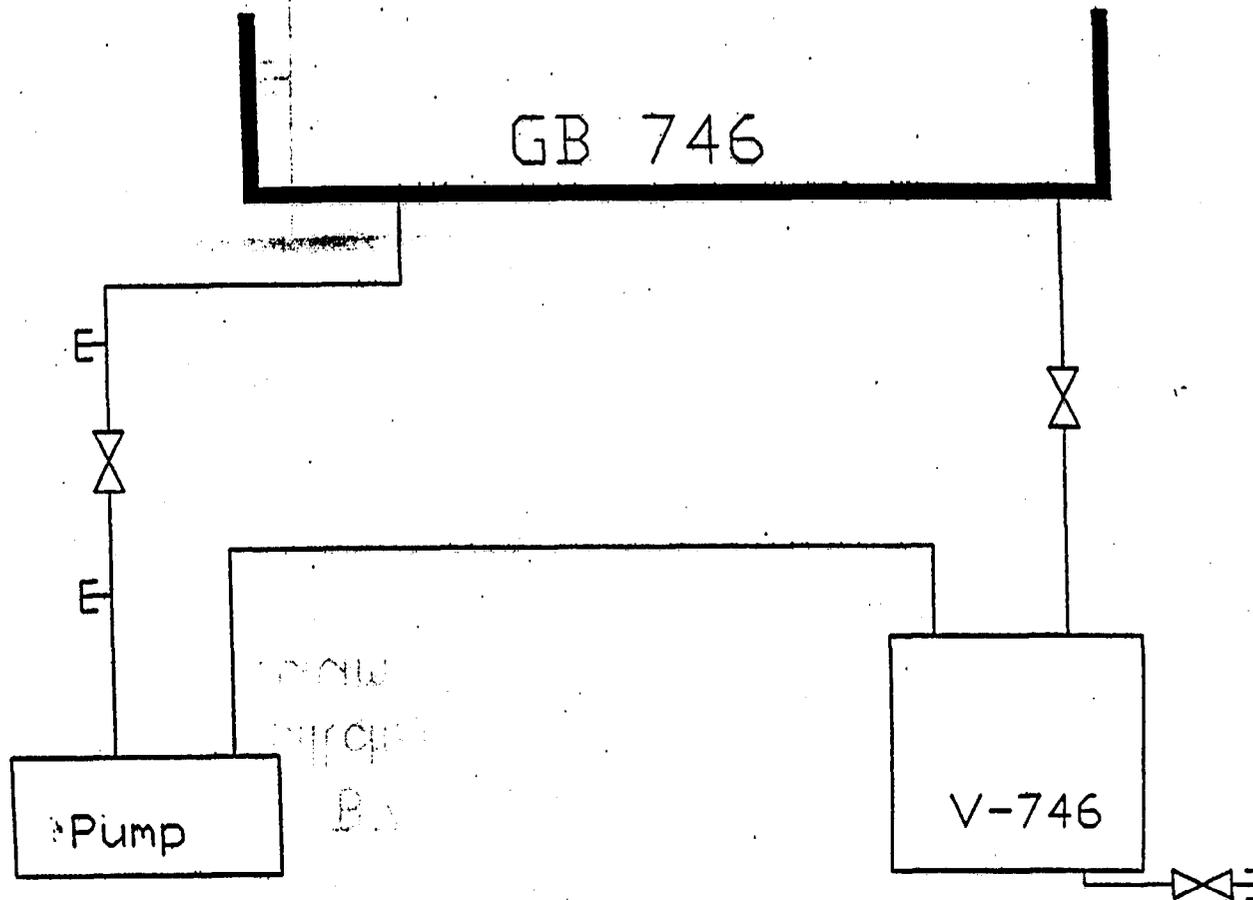
<p>Unit Description:</p>	<p><u>Tanks V-746, V-747, V-747A, V-748, V-749</u></p> <p>Tanks V-746, V-747, V-747A, V-748, and V-749 are vacuum accumulator tanks. Tanks V-746, V-747, V-748, and V-749 are constructed of carbon steel and have approximate dimensions of 12 inches in diameter by 23 inches high. Tank V-747A has approximate dimensions of 6 inches in diameter by 12 inches high. The tanks are located in Building 777 Room 134 East. Tank V-747A is below the connector line between glovebox 747 and the M-line. Tanks V-746, V-747, V-748, and V-749 are below the M-line at the junctions with Gloveboxes 746, 748, 749, and just east of 749, respectively.</p> <p>Vacuum was used to hold parts to lathes in the gloveboxes as they were being machined. The vacuum accumulators were used in the process line between the lathe and the vacuum pump so that constant vacuum pressure could be maintained on the parts being machined. In the event of an upset condition where the part came loose from the chuck, the cutting oils and solvents used in the machining process would be pulled into the accumulators. Maintenance personnel periodically drained the accumulators of any oil and solvent that accumulated.</p> <p>The tanks were drained to a physically empty condition in June 1999 under work package T0100104. The vacuum pumps were drained in January 2000.</p> <p><u>Ancillary Equipment</u></p> <p>Set 11 contains ancillary equipment that was associated with pencil tanks T-5, 6, 7, 10, 11, and 12. The tanks have all been removed. Remaining ancillary equipment includes pumps, valves, and piping.</p>
<p>Unit Boundaries and Interfaces:</p>	<p>The vacuum accumulator systems include the vacuum accumulator tanks, vacuum pumps, and associated piping and valves. These were small stand-alone tank systems and the ancillary equipment is minimal. These tank systems will be entirely removed as part of Set 11 D&D. The attached drawings show schematics of the tank systems.</p> <p>The ancillary equipment includes oil/solvent transfer piping beneath the M-line and pumps and piping associated with the removed pencil tanks. All ancillary piping beneath approximately eight feet will be removed as part of Set 11, and the ends of the piping leading into the overhead will be capped or plugged. The remaining lines in the overhead in Room 134E will be removed as part of Set 78 (miscellaneous piping over eight feet). A drawing is attached showing ancillary equipment in Sets 10 and 11. Endpoints for piping</p>

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	removal associated with each set will be determined during D&D work package preparation.
EPA Waste Codes/ Waste Characterization:	The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.
Selected Closure Option:	Unit removal without onsite treatment.
Closure Activities:	Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated tanks and ancillary equipment.
Waste Disposal:	<p>The tanks, piping, pumps, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges.</p> <p>Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.</p>

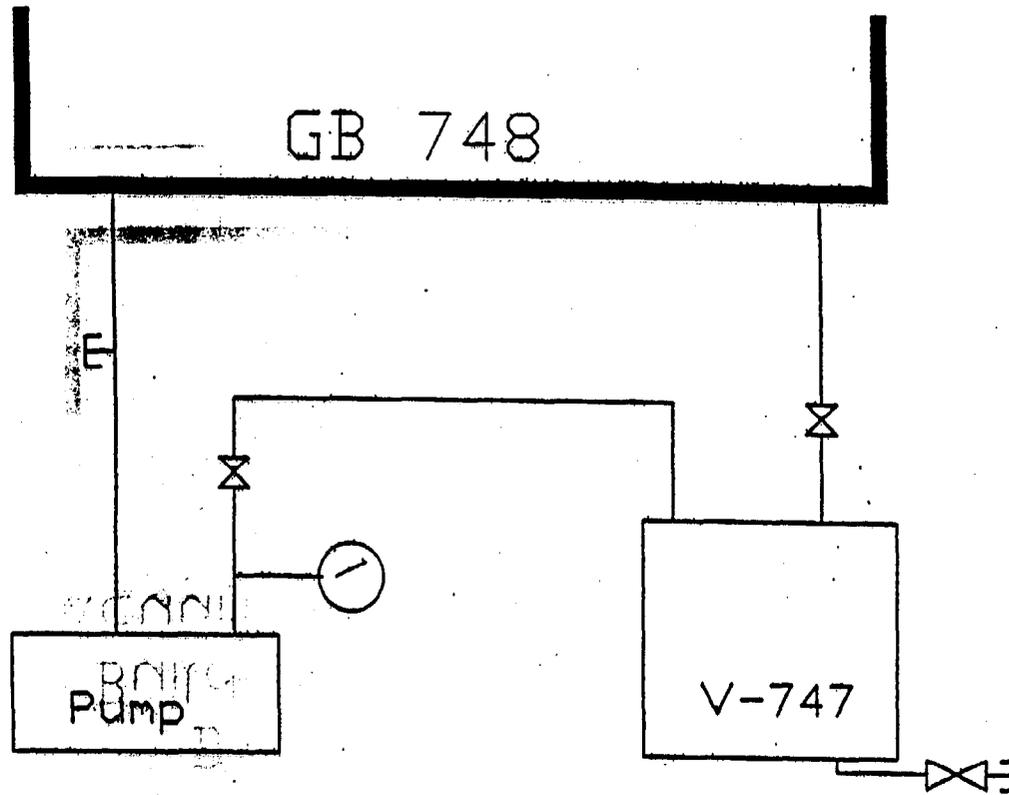
participate in the...
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B776/777, SET 11
Building 777 Room 134E
Vacuum Accumulator V-746



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March 15, 2001
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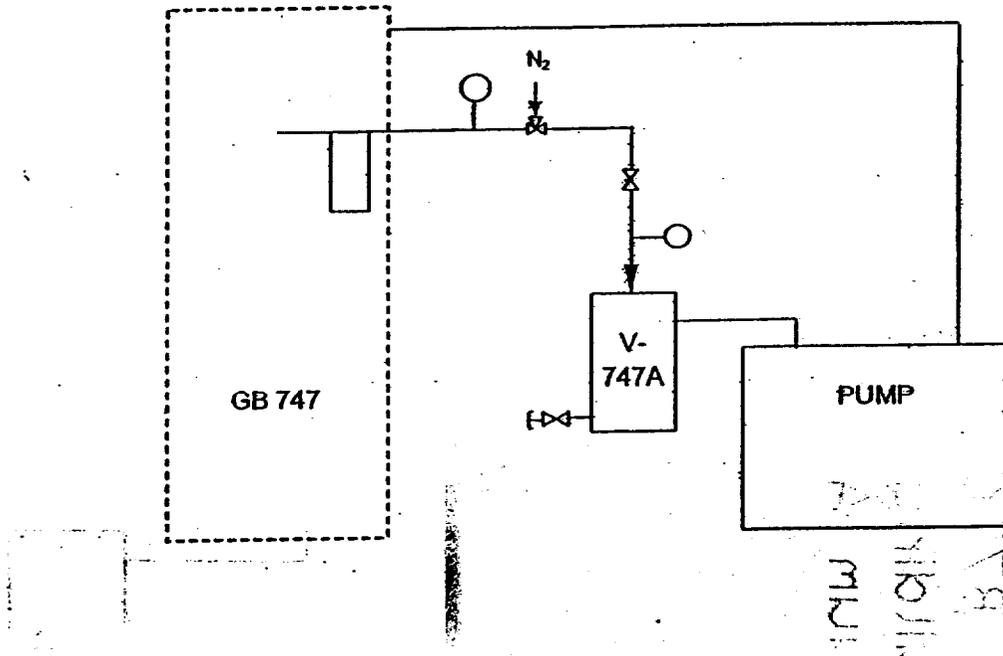
B776/777, SET 11
Building 777 Room 134E
Vacuum Accumulator V-747



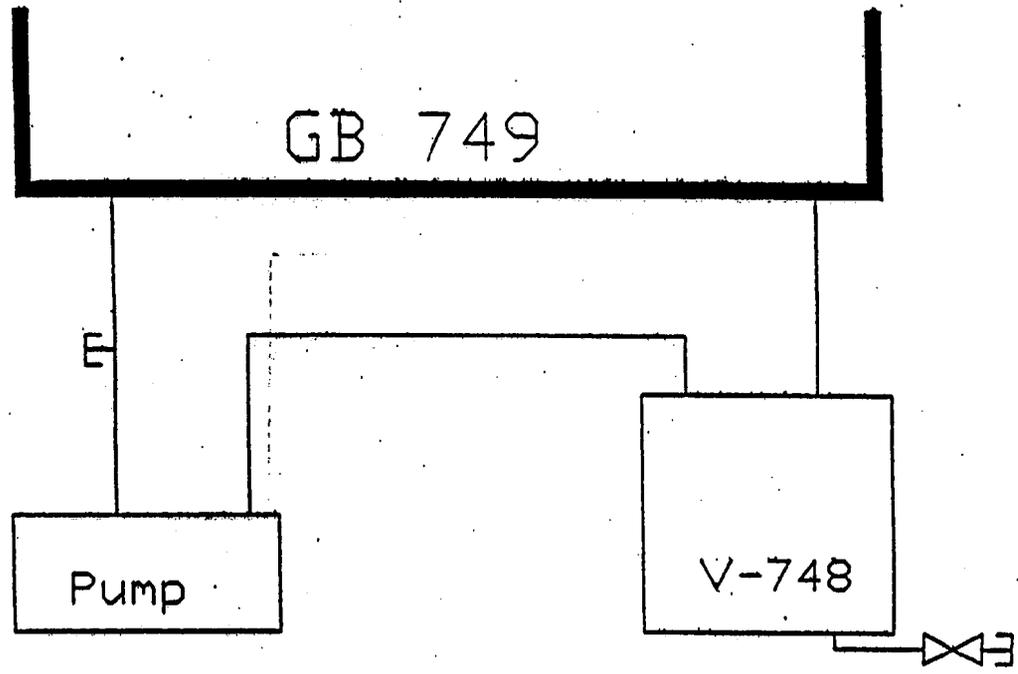
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B776/777, SET 11
Building 777 Room 134E
Vacuum Accumulator V-747A

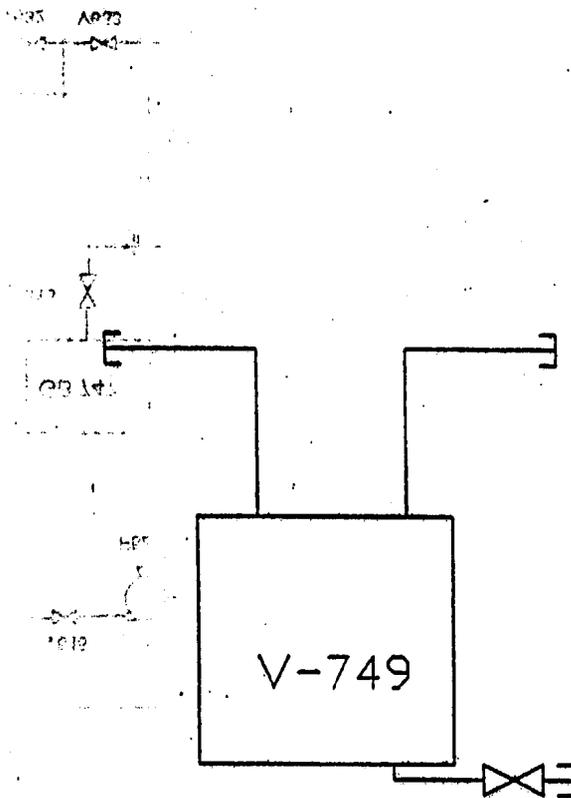


B776/777, SET 11
Building 777 Room 134E
Vacuum Accumulator V-748



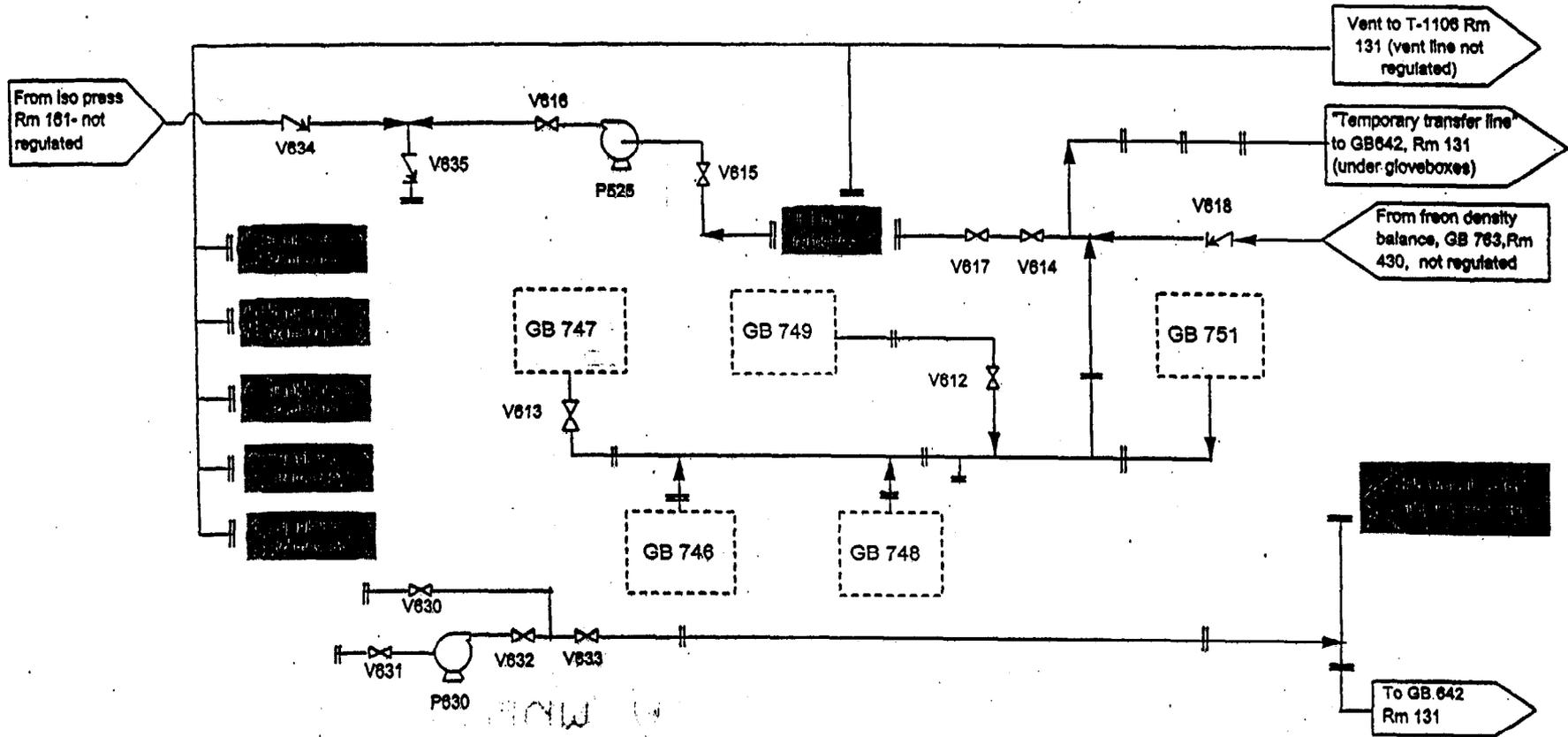
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B776/777, SET 11
Building 777 Room 134E
Vacuum Accumulator V-749



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B776/777, SETS 10 and 11
 Building 777 Room 134E
 Ancillary Piping



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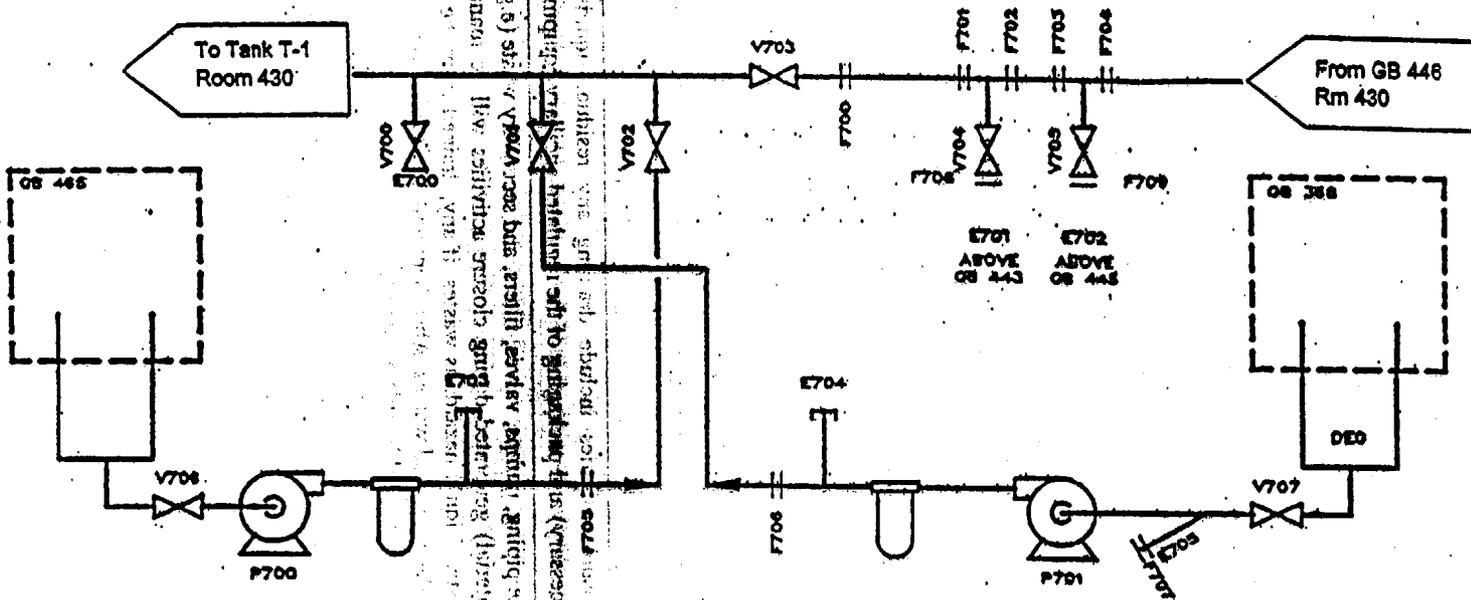
March 15, 2001
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Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet

Set #	RCRA Unit #	Description	Regulated State	Closure Status
18	95.015	Ancillary equipment – Gloveboxes 368 and 465	Mixed Residue	Physically Empty

Unit Description:	Set 18 contains ancillary equipment that was previously used to transfer waste 1,1,1-trichloroethane from degreasers/cleaning tanks in Gloveboxes 368 and 465 in Room 430 to Tank T-1 in Room 430. The tank has been removed (Set 26).
Unit Boundaries and Interfaces:	Regulated ancillary equipment associated with both Gloveboxes 368 and 465 includes a pump, filter, and associated valves and piping from a solvent cleaning tank in each glovebox. The cleaning tanks themselves are not regulated. The waste lines from the two gloveboxes join a common line in the overhead in Room 430 that transferred the waste to Tank T-1. The attached drawing shows the ancillary equipment in this set. The pumps, valves, filters, and piping below approximately eight feet will be removed as part of Set 18 D&D, and the ends of the piping leading into the overhead will be capped or plugged. The remaining line in the overhead in Room 430 will be removed as part of Set 78 (miscellaneous piping over eight feet).
EPA Waste Codes/ Waste Characterization:	The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.
Selected Closure Option:	Unit removal without onsite treatment.
Closure Activities:	Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated ancillary equipment.
Waste Disposal:	The piping, pumps, valves, filters, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges. Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.

B776/777, SET 18
Building 777 Room 430
Gloveboxes 368, 465 Ancillary Piping



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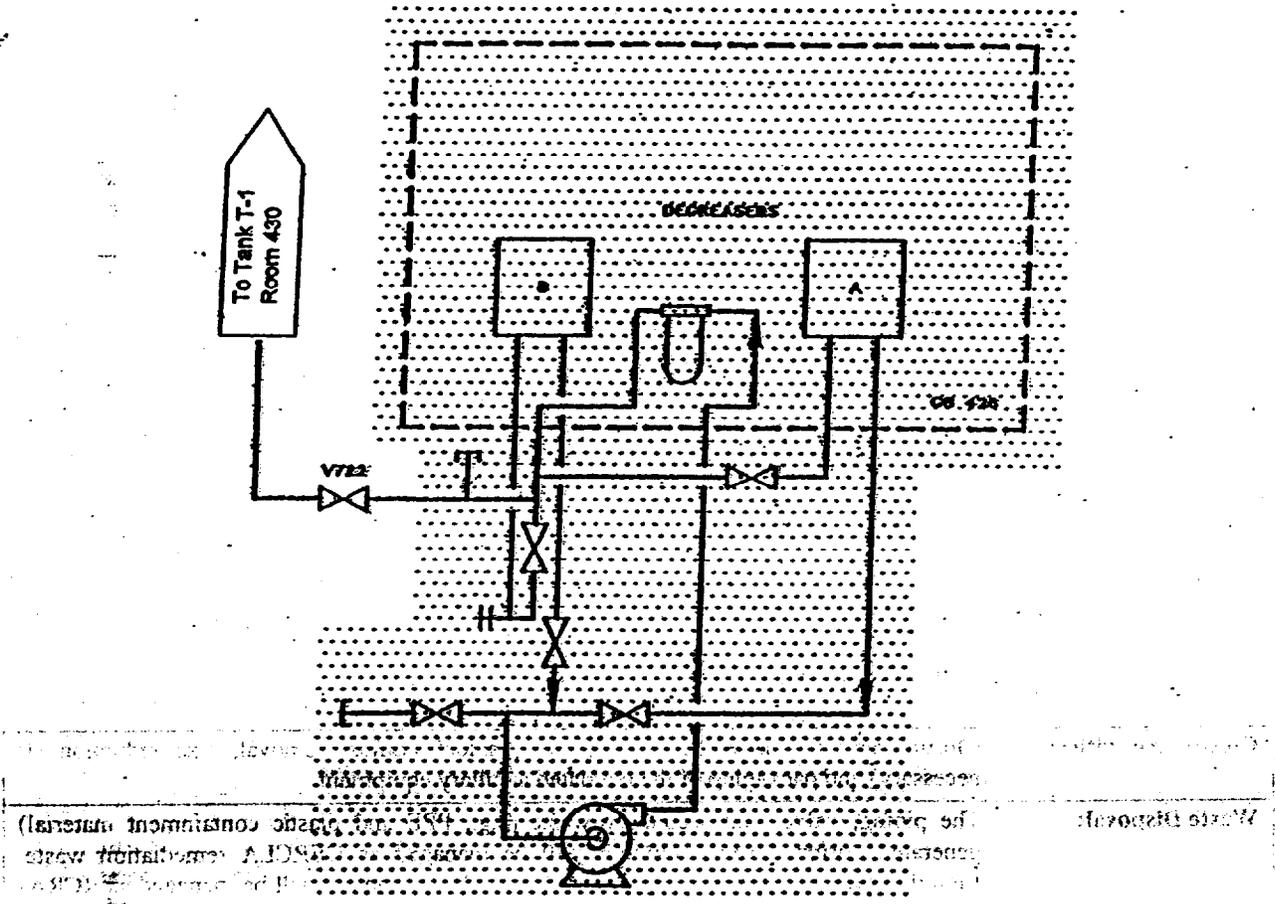
**Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet**

Set ID	RCRA Unit ID	Description	Regulated Subst	Closure Status
21	95.015	Ancillary equipment – Glovebox 426	Mixed Residue	Physically Empty

Unit Description:	Set 21 contains ancillary equipment that was previously used to transfer waste 1,1,1-trichloroethane from degreasers/cleaning tanks in Glovebox 426 in Room 430 to Tank T-1 in Room 430. The tank has been removed (Set 26).
Unit Boundaries and Interfaces:	The degreaser tanks, pump, filter, and most valves associated with glovebox 426 are not regulated because the solvent was recirculated through the system for reuse until spent, and became a waste when discharged to T-1. One valve is regulated in the line exiting the glovebox. This line joins a line in the overhead in Room 430 that transferred the waste to Tank T-1. The attached drawing shows the ancillary equipment in this set. The ancillary piping below approximately eight feet will be removed as part of Set 21 D&D, and the end of the piping leading into the overhead will be capped or plugged. The remaining line in the overhead in Room 430 will be removed as part of Set 78 (miscellaneous piping over eight feet).
EPA Waste Codes/ Waste Characterization:	The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.
Selected Closure Option:	Unit removal without onsite treatment.
Closure Activities:	Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated ancillary equipment.
Waste Disposal:	The piping, valve, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges. Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.

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B776/777, SET 21
Building 777 Room 430
Glovebox 426 Ancillary Piping



Shading indicates non-regulated equipment

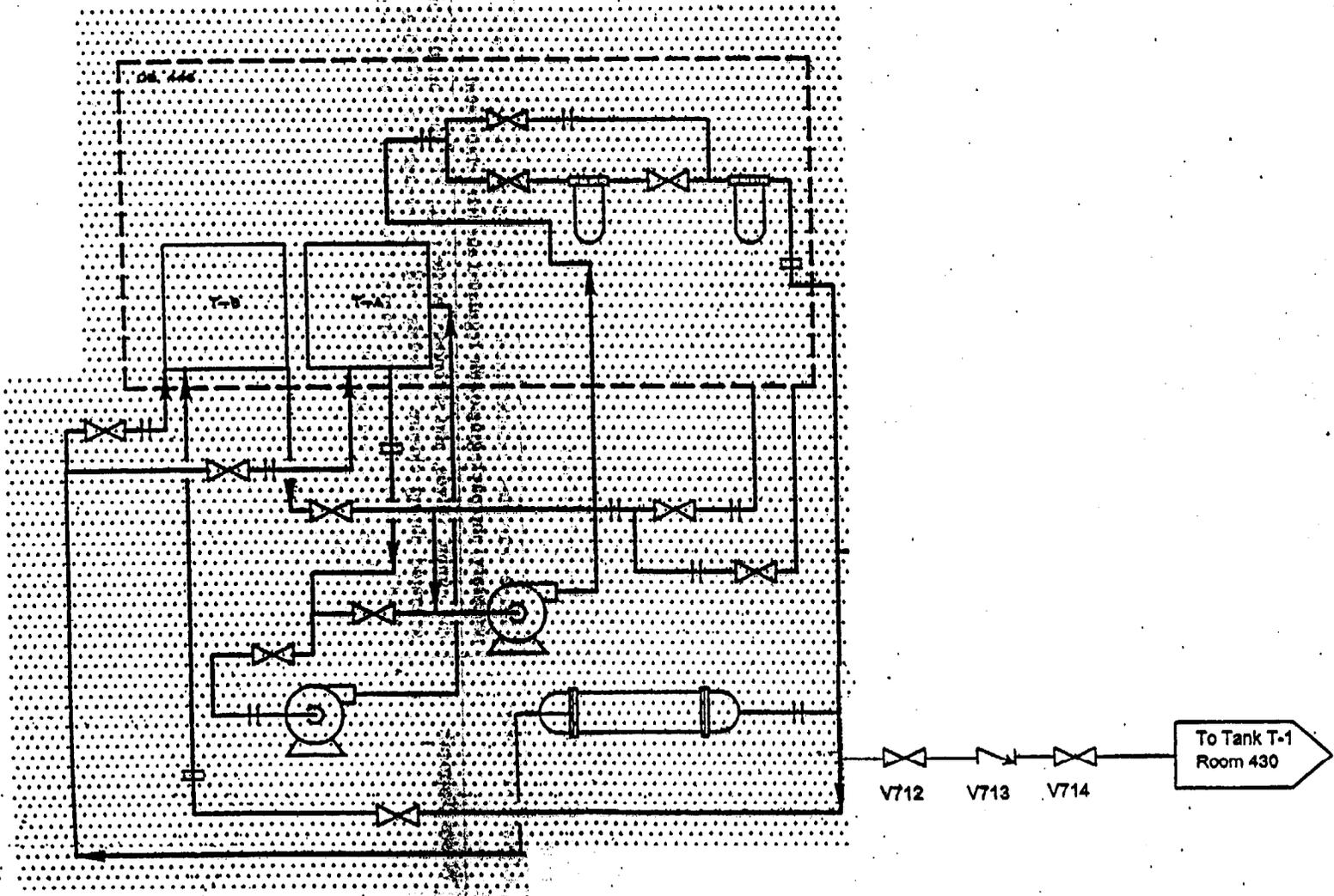
March 15, 2001
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**Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet**

Set ID	RCRA Unit ID	Description	Regulated Media	Closure Status
22	95.015	Ancillary equipment – Glovebox 446	Mixed Residue	Physically Empty

Unit Description:	Set 22 contains ancillary equipment that was previously used to transfer waste 1,1,1-trichloroethane from degreasers/cleaning tanks in Glovebox 446 in Room 430 to Tank T-1 in Room 430. The tank has been removed (Set 26).
Unit Boundaries and Interfaces:	The degreaser tanks, pumps, filters, and most valves associated with glovebox 446 are not regulated because the solvent was recirculated through the system for reuse until spent, and became a waste when discharged to T-1. There are three regulated valves in the line exiting the glovebox. This line joins a line in the overhead in Room 430 that transferred the waste to Tank T-1. The attached drawing shows the ancillary equipment in this set. The ancillary piping below approximately eight feet will be removed as part of Set 21 D&D, and the end of the piping leading into the overhead will be capped or plugged. The remaining line in the overhead in Room 430 will be removed as part of Set 78 (miscellaneous piping over eight feet).
EPA Waste Codes/ Waste Characterization:	The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.
Selected Closure Option:	Unit removal without onsite treatment.
Closure Activities:	Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated ancillary equipment.
Waste Disposal:	The piping, valves, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges. Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.

B776/777, SET 22
Building 777 Room 430
Glovebox 446 Ancillary Piping



Shading indicates non-regulated equipment

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B776/777 Closure Project
RCRA Unit Closure Information Sheet

Set	Unit	Description	Regulation	Closure Status
27	777.1	Room 432C Container Storage Unit	Permitted	Drums will be removed prior to closure

Unit Description:	Set 27 includes a permitted RCRA container storage unit in Building 777 Room 432C. It was originally permitted as Unit 17, and is now part of Unit 777.1. The room measures approximately 9'3" by 15'5". It has a stainless steel floor and a six-inch continuous stainless steel berm. The room has been used for storage of low level mixed waste containing solidified scintillation cocktail.
Unit Boundaries and Interfaces:	Room 432C provided secondary containment for RCRA container storage and is the only RCRA-regulated portion of set 27. No drawing is provided for this set, since the unit boundary is the room boundary.
EPA Waste Codes/Waste Characterization:	The solidified scintillation cocktail stored in Room 432C has been characterized with the EPA waste code of D001 because it may contain free liquid. The waste containers will be removed prior to closure.
Selected Closure Option:	Unit removal in conjunction with debris rule treatment.
Closure Activities:	The stainless steel floor will be washed using water with an appropriate detergent, such as trisodium phosphate. Following washing, the floor will be visually inspected to determine if it meets the "clean debris surface" standard. If it meets the standard, the stainless steel floor will be removed and managed as non-hazardous low level waste. If it does not meet the standard, it will either be re-washed and re-inspected until it meets the standard, or closed by removal and characterized appropriately.
Waste Disposal:	The stainless steel floor and secondary waste (e.g., PPE, mop heads) generated during closure activities will be managed as CERCLA remediation waste. Liquid from washing the floor will be characterized and managed appropriately. Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.

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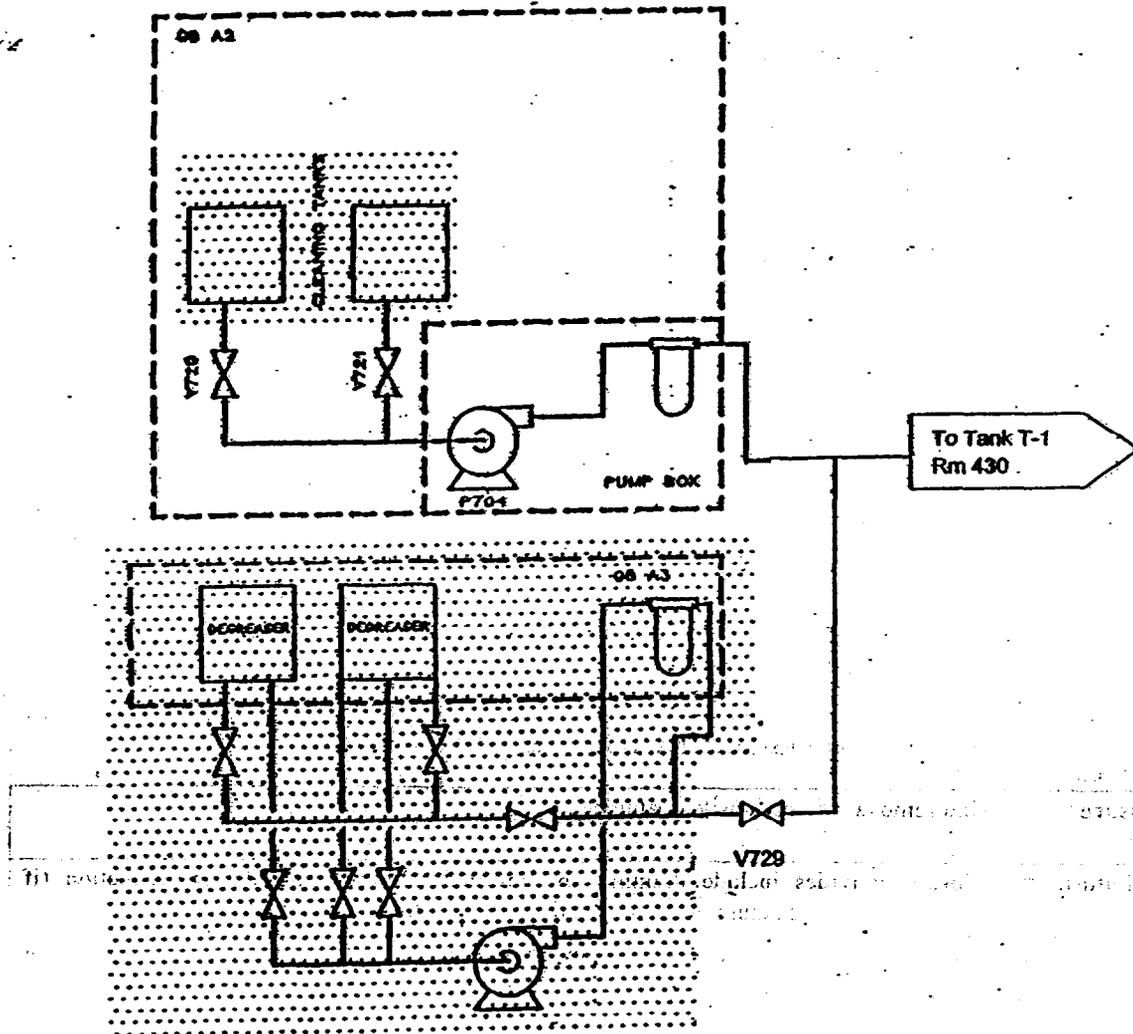
Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet

Set	RCRA Code	Description	Regulation Status	Closure Status
29	95.015	Ancillary equipment	Mixed Residue	Physically Empty

Unit Description:	Set 29 contains ancillary piping that was previously used to transfer waste 1,1,1-trichloroethane from degreasers/cleaning tanks in Gloveboxes A-2 and A-3 in Room 437 to Tank T-1 in Room 430. The tank has been removed (Set 26).
Unit Boundaries and Interfaces:	<p>Regulated ancillary equipment in Glovebox A-2 includes a pump, filter, and associated valves and piping from two solvent cleaning tanks in the glovebox. The cleaning tanks themselves are not regulated. Glovebox A-2 served as secondary containment for the ancillary equipment within it.</p> <p>In Glovebox A-3, the degreaser tanks, pump, filter, and valves are not regulated because the solvent was recirculated through the system for reuse until spent, and became a waste when discharged to T-1. The waste lines from the two gloveboxes join in Room 437 prior to exiting through the south wall into Room 430.</p> <p>The attached drawing shows the ancillary equipment in this set. Most of the regulated ancillary equipment and waste lines will be removed as part of Set 29 D&D, and the end of the piping leading into Room 430 will be capped or plugged. The remaining line in the overhead in Rooms 430 and 437 will be removed as part of Set 78 (miscellaneous piping over eight feet).</p>
EPA Waste Codes/ Waste Characterization:	<p>The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.</p> <p>If Glovebox A-2 surveys as LLW, debris rule treatment may be conducted, and if successful, the glovebox will be managed as non-hazardous LLW. Otherwise, the glovebox will be managed as mixed waste with EPA waste codes of F001 and F002.</p>
Selected Closure Option:	<p><u>Ancillary piping:</u> Unit removal without onsite treatment.</p> <p><u>Glovebox A-2:</u> Unit removal, optionally preceded by debris rule treatment.</p>
Closure Activities:	<p>Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated ancillary equipment</p> <p>If Glovebox A-2 surveys as LLW and debris treatment is determined to be feasible, it will be wiped down using trisodium phosphate solution, and will be visually inspected to determine if it meets the standard for a clean debris surface. If it meets the standard, the glovebox will be closed by removal and managed as non-hazardous waste. Otherwise, it will be closed by removal and managed as mixed waste.</p>
Waste Disposal:	<p>The piping, pump, valves, filter, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges.</p> <p>Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.</p>

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B776/777, SET 29
Building 777 Room 437
Gloveboxes A2, A3 Ancillary Piping



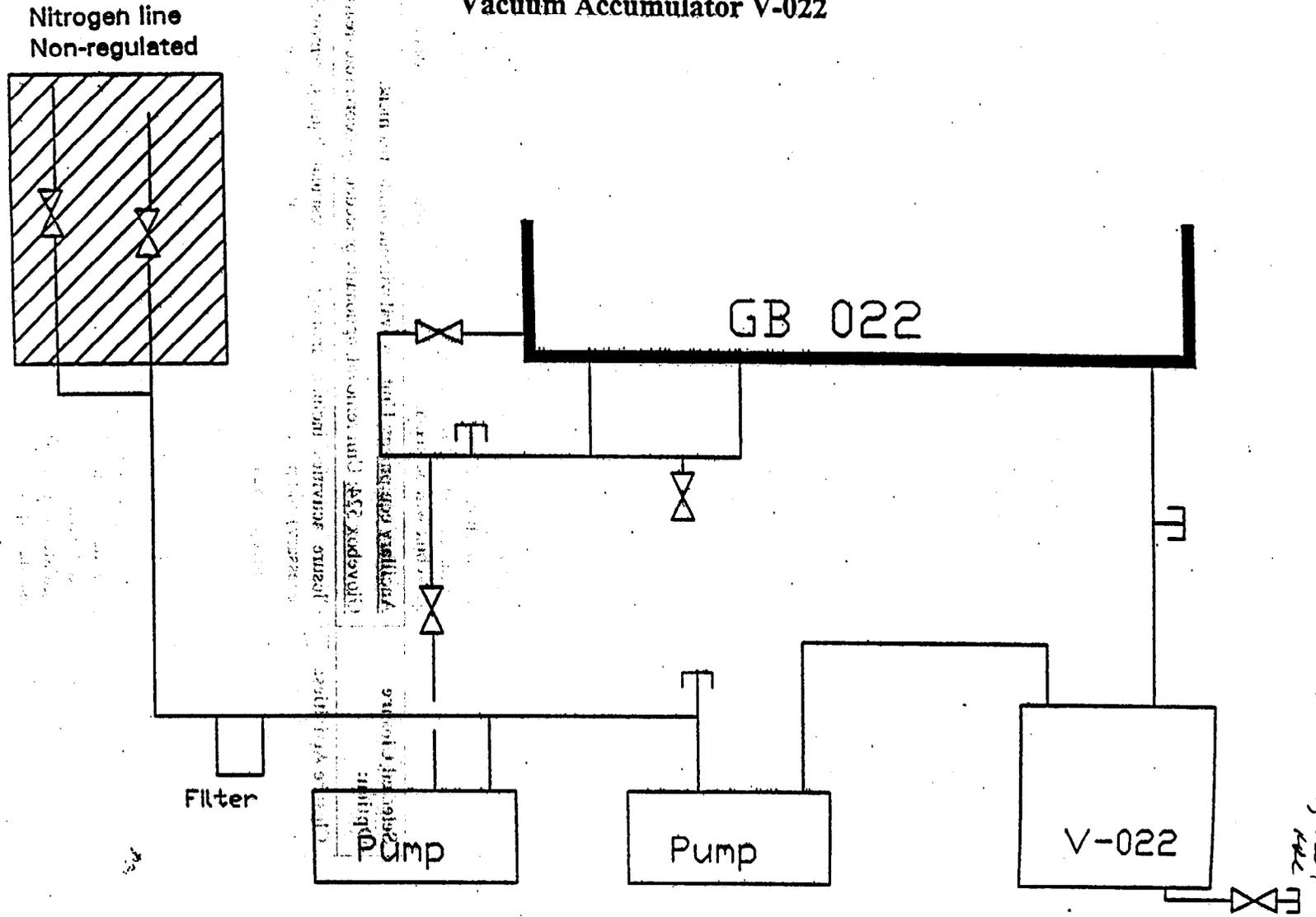
Shading indicates non-regulated equipment

Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet

Set #	RCRA Unit	Description	Regulatory Status	Closure Status
34	NA	Tank V-022	Mixed Residue	Physically Empty/RCRA Stable

Unit Description:	<p>Tank V-022 is a vacuum accumulator tank. It is constructed of carbon steel and has approximate dimensions of 12 inches in diameter by 23 inches high. The tank is located in Building 777 Room 452 below Glovebox 022.</p> <p>Vacuum was used to hold parts to equipment in the glovebox as they were being machined. The vacuum accumulator was used in the process line between the equipment and the vacuum pump so that constant vacuum pressure could be maintained on the parts being machined. In the event of an upset condition where the part came loose from the chuck, the cutting oils and solvents used in the machining process would be pulled into the accumulator. Maintenance personnel periodically drained the accumulator of any oil and solvent that accumulated.</p> <p>Tank V-022 and the associated vacuum pumps were drained to a physically empty condition in January 2000 under work package T0100104.</p>
Unit Boundaries and Interfaces:	The vacuum accumulator system includes the vacuum accumulator tank, vacuum pumps, and associated piping and valves. This was a small stand-alone tank system and the ancillary equipment is minimal. This tank system will be entirely removed as part of Set 34 D&D. The attached drawing shows a schematic of the tank system.
EPA Waste Codes/ Waste Characterization:	The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.
Selected Closure Option:	Unit removal without onsite treatment.
Closure Activities:	Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the tank and regulated ancillary equipment.
Waste Disposal:	<p>The tank, piping, pumps, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges.</p> <p>Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.</p>

B776/777, SET 34
Building 777 Room 452
Vacuum Accumulator V-022



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RCRA Unit Closure Information Sheet

Set ID	RCRA Unit ID	Description	Regulation Status	Closure Status
35	95.015	GB 524 Ancillary equipment	Mixed Residue	Physically Empty

Unit Description:	Set 35 contains ancillary piping that was previously used to transfer waste 1,1,1-trichloroethane from a vapor degreaser in Glovebox 524 in Room 452 to Tank T-1 in Room 430. The tank has been removed (Set 26).
Unit Boundaries and Interfaces:	Regulated ancillary equipment associated with Glovebox 524 includes a pump, filter, and associated valves and piping from a vapor degreaser in the glovebox. The degreaser tank itself is not regulated. Glovebox 524 served as secondary containment for the ancillary equipment within it. The waste line from the glovebox goes through the overhead in Room 452 prior to exiting through the west wall on the north side of the Modulab. The pump, valves, filter, and piping below eight feet will be removed as part of Set 35 D&D and the end of the piping leading into the overhead will be capped or plugged. The remaining line in Room 452 will be removed as part of Set 36 and/or Set 78 (miscellaneous piping over eight feet). Endpoints for piping removal associated with each set will be determined during D&D work package preparation. The attached diagram shows the regulated equipment associated with Glovebox 524.
EPA Waste Codes/Waste Characterization:	The lines and equipment will be drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002. If Glovebox 524 surveys as LLW, debris rule treatment may be conducted, and if successful, the glovebox will be managed as non-hazardous LLW. Otherwise, the glovebox will be managed as mixed waste with EPA waste codes of F001 and F002.
Selected Closure Option:	<u>Ancillary equipment:</u> Unit removal without onsite treatment. <u>Glovebox 524:</u> Unit removal, optionally preceded by debris rule treatment.
Closure Activities:	Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the regulated ancillary equipment associated with GB 524. If Glovebox 524 surveys as LLW and debris treatment is determined to be feasible, it will be wiped down using trisodium phosphate solution, and will be visually inspected to determine if it meets the standard for a clean debris surface. If it meets the standard, the glovebox will be closed by removal and managed as non-hazardous waste. Otherwise, it will be closed by removal and managed as mixed waste.
Waste Disposal:	The piping, pump, filter, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges. Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.

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B776/777 Closure Project
RCRA Unit Closure Information Sheet

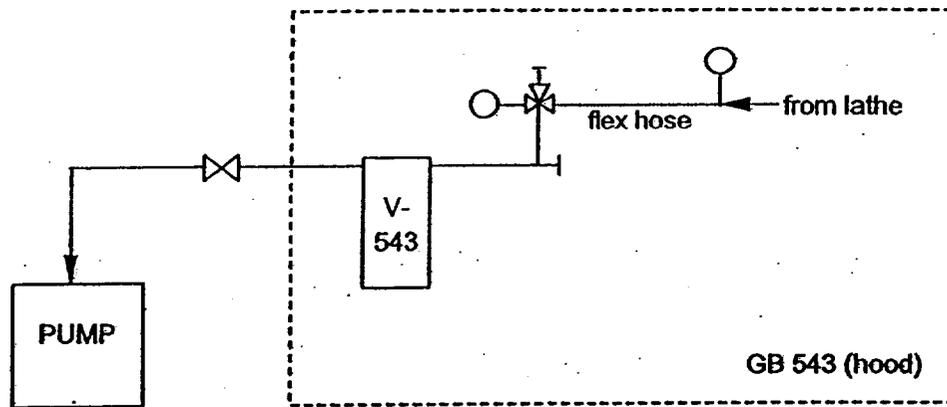
Set	RCRA Unit	Description	Regulatory Status	Closure Status
36	NA	Tank V-543	Mixed Residue	Physically Empty/RCRA Stable

Unit Description:	<p>Tank V-543 is a vacuum accumulator tank. It is constructed of carbon steel and has approximate dimensions of four inches in diameter by eight inches high. The tank is located in Building 777 Room 452 inside Glovebox 543. The vacuum pump is located outside the glovebox.</p> <p>Vacuum was used to hold parts to a lathe in Glovebox 543 as they were being machined. The vacuum accumulator was used in the process line between the equipment and the vacuum pump so that constant vacuum pressure could be maintained on the parts being machined. In the event of an upset condition where the part came loose from the chuck, the cutting oils and solvents used in the machining process would be pulled into the accumulator. Maintenance personnel periodically drained the accumulator of any oil and solvent that accumulated.</p> <p>Tank V-543 and the associated vacuum pump were drained to a physically empty condition in January 2000 under work package T0100104.</p>
Unit Boundaries and Interfaces:	<p>The vacuum accumulator system includes the vacuum accumulator tank, vacuum pump, and associated piping and valves. This was a small stand-alone tank system and the ancillary equipment is minimal. This tank system will be entirely removed as part of Set 36 D&D. Glovebox 543 served as secondary containment for the ancillary equipment within it. The attached drawing shows a schematic of the tank system.</p>
EPA Waste Codes/ Waste Characterization:	<p>The lines and equipment will have been drained prior to packaging as waste. The waste generated at closure will be assigned EPA waste codes of F001 and F002.</p> <p>If Glovebox 543 surveys as LLW, debris rule treatment may be conducted, and if successful, the glovebox will be managed as non-hazardous LLW. Otherwise, the glovebox will be managed as mixed waste with EPA waste codes of F001 and F002.</p>
Selected Closure Option:	<p><u>Tank and ancillary equipment:</u> Unit removal without onsite treatment.</p> <p><u>Glovebox 543:</u> Unit removal, optionally preceded by debris rule treatment.</p>
Closure Activities:	<p>Closure activities include draining any residual liquids, removal, size reduction (if necessary) and packaging of the tank and ancillary equipment .</p> <p>If Glovebox 543 surveys as LLW and debris treatment is determined to be feasible, it will be wiped down using trisodium phosphate solution, and will be visually inspected to determine if it meets the standard for a clean debris surface. If it meets the standard, the glovebox will be closed by removal and managed as non-hazardous waste. Otherwise, it will be closed by removal and managed as mixed waste.</p>
Waste Disposal:	<p>The tank, piping, pump, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, drained from the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges.</p>

	Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.
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B776/777, SET 36
Building 777 Room 452
Vacuum Accumulator V-543



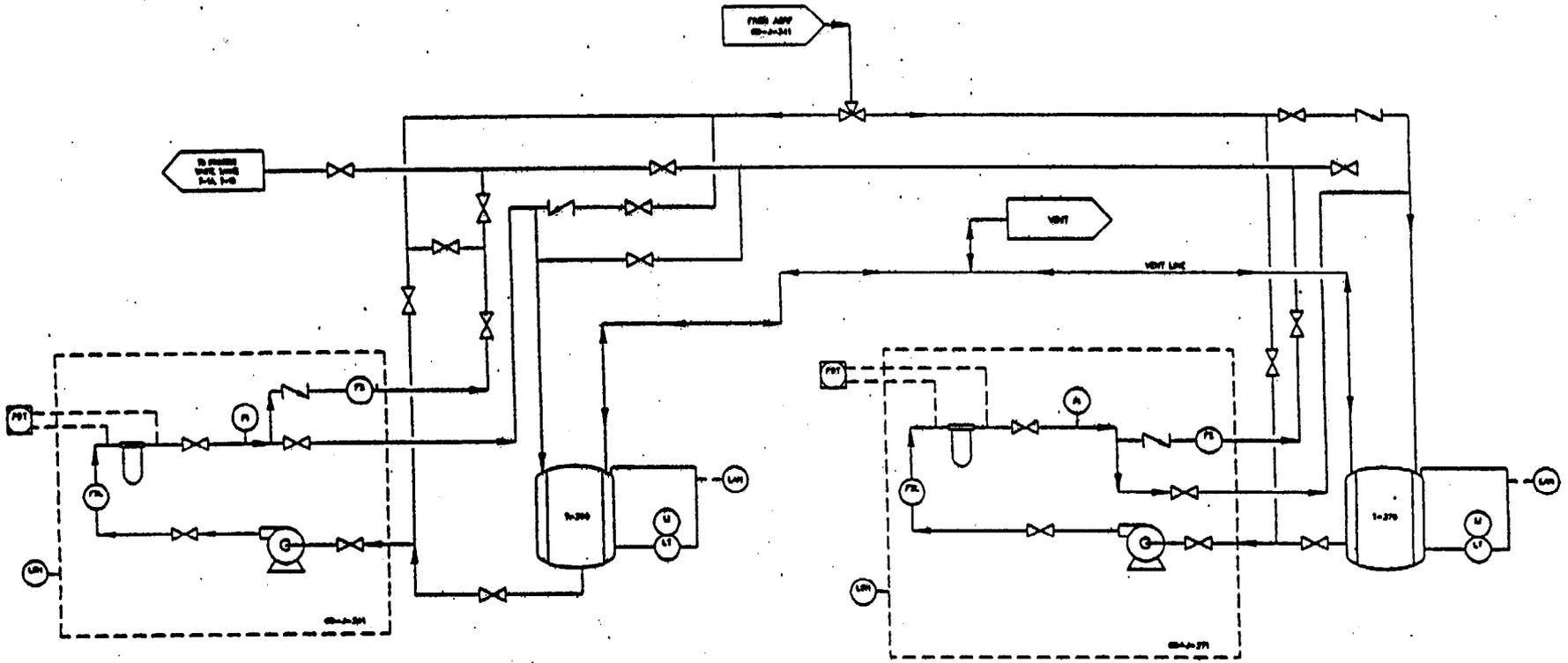
Appendix H
B776/777 Closure Project
RCRA Unit Closure Information Sheet

SET	RCRA Unit #s	Description	Regulatory Status	Closure Status
52	94.007	Tank T-360	Mixed Residue	Physically Empty
	94.008	Tank T-370	Mixed Residue	Physically Empty

Unit Description:	<p>Tanks T-360 and T-370 (RCRA Units 94.007 and 94.008) are annular tanks located in Room 134 in Building 776. The stainless steel tanks are 60.5" outside diameter by 106" high, with an annular thickness of 2". The operational capacities were approximately 127 gallons each.</p> <p>The tanks were used to collect steam condensate generated in the Advanced Size Reduction Facility (ASRF). The condensate was initially collected in the ASRF pencil tanks T-344 and T-345 (in set 66) prior to shipment to the annular tanks. The waste from Tanks T-360 and T-370 was filtered in Gloveboxes 361 and 371 respectively prior to transfer to Tanks T-1A and T-1B in Room 127 (RCRA Unit 776.2, set 69). Each glovebox contains a pump, Ful-Flo filter, valves, and ancillary piping. The gloveboxes served as secondary containment for the ancillary equipment within them. A bermed concrete area provided secondary containment for the tanks.</p>
Unit Boundaries and Interfaces:	<p>SET 52 includes Tanks T-360 and T-370, Gloveboxes 361 and 371, and ancillary equipment in Room 134. Associated ancillary equipment includes inlet piping coming from Tanks T-344 and T-345, pumps, filters and piping in gloveboxes 361 and 371, recirculation piping, and outlet piping leading to Tanks T-1A and T-1B in Room 127 (SET 69, RCRA Unit 776.2).</p> <p>All ancillary piping beneath approximately eight feet will be removed as part of Set 52, and the ends of the piping leading into the overhead will be capped or plugged. The remaining lines in the overhead in Room 134 will be removed as part of Set 78 (miscellaneous piping over eight feet). A drawing is attached showing the tanks and ancillary equipment. Endpoints for piping removal associated with this set will be determined during D&D work package preparation.</p>
EPA Waste Codes/ Waste Characterization:	<p>The tanks were drained to a physically empty condition in June 2000. Analytical results show that the liquid waste contains low levels of listed solvents (1,1,1 trichloroethane at up to 1100 ug/l and carbon tetrachloride at up to 570 ug/l) and levels of RCRA metals below TCLP.</p> <p>EPA waste codes of F001 and F002 will be applied to the tanks and ancillary equipment upon removal.</p> <p>If Gloveboxes 361 and 371 survey as LLW, debris rule treatment may be conducted, and if successful, the gloveboxes will be managed as non-hazardous LLW. Otherwise, the gloveboxes will be managed as mixed waste with EPA waste codes of F001 and F002.</p> <p>The metal secondary containment berm will be cleaned using debris rule technology and managed as LLW.</p>

<p>Selected Closure Option:</p>	<p><u>Tanks and ancillary piping:</u> Unit removal without onsite treatment.</p> <p><u>Gloveboxes 361 and 371 and metal berm:</u> Unit removal in conjunction with debris rule treatment.</p> <p><u>Concrete floor:</u> Clean closure by decontamination</p>
<p>Closure Activities:</p>	<p>Closure activities for Tanks 360 and 370 and ancillary piping, pumps, valves, and filters include draining any residual liquids, removal, size reduction (if necessary) and packaging of the tanks and ancillary equipment as mixed waste.</p> <p>Gloveboxes 361 and 371 and the metal secondary containment berm will be wiped down using trisodium phosphate solution, and will be visually inspected to determine if they meet the standard for a clean debris surface. If they meet the standard, the gloveboxes and berm will be closed by removal and managed as non-hazardous waste. If they do not meet the standard, they will either be re-washed and re-inspected until they meet the standard, or closed by removal and managed as mixed waste.</p> <p>The concrete floor will be cleaned and rinsed, and the rinse water will be sampled to determine if it meets the closure performance standards listed in Section 4.5.1.1 of the DOP. If test results indicate the standard has been met, the concrete will be considered clean closed. If the standard is not met, CDPHE will be consulted to determine whether the results are protective of human health and the environment, in accordance with the DOP.</p>
<p>Waste Disposal:</p>	<p>The tanks, ancillary equipment, secondary containment, and secondary waste (e.g., PPE and plastic containment material) generated during closure activities will be managed as CERCLA remediation waste. Liquid hazardous wastes, if any, from draining the equipment will be managed as RCRA-regulated wastes. Absorbent will be added to waste packages with items that could contain residual liquids or sludges.</p> <p>Upon final radiological characterization, the waste will be packaged and managed in accordance with waste management requirements in Section 6 of the DOP.</p>

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Building 776 Room 134
Annular Tanks T-360, T-370
RCRA Units 94.007, 94.008



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Modification #6
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