



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

0076498

08-AMRC-0138

MAR 14 2008

Mr. Nicholas Ceto, Program Manager
Office of Environmental Cleanup
Hanford Project Office
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Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354

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EDMC

Addressees:

COMPLETION OF THE M94-06 TRI-PARTY AGREEMENT MILESTONE

The U.S. Department of Energy, Richland Operations Office has completed all activities required by the subject Tri-Party Agreement milestone and is declaring that the milestone is complete. Milestone completion is documented by the completion form for 305-B, as well as the deferral forms for 306-E and 333. Copies of the completion and deferral forms are provided for your information. If you have questions, please contact me or your staff may contact Rudy Guercia, of my staff on (509) 376-5494.

Sincerely,


Joe R. Franco, Assistant Manager
for the River Corridor

AMRC:RFG

Attachments (3)

1. 305-B completion form
2. 306-E deferral form
3. 333 deferral form

cc w/attachs:

F. W. Bond, Ecology
A. L. Boyd, EPA
R. E. Piippo, FHI
J. G. Vance, FHI

Administrative Record, H6-08

D4 PROJECT FACILITY COMPLETION FORM

Date Submitted: 4/17/07	Associated Building/ Facility: 305-B	Document Number:
Originator: D. M. Yasek	Associated Action Memorandum: Action Memorandum #1 for the 300 Area	D4-300-0002 20 5/8/07
Phone: 372-9978		

Description:

Building History: The 305-B Building was known as the Test Reactor Facility, the Process Engineering Laboratory, and the Hazardous Waste Storage Facility. The building was constructed in 1954 and was operated until June 2006. PNNL operated the facility as a permitted storage facility under the Hanford Site RCRA Permit. Based on documented project knowledge of the facility operation and observations during facility demolition, there are no indications of releases of hazardous materials from the facility.

Characterization (see attached summary Table 1): Characterization was performed in accordance with the *300 Area D4 Waste Sampling and Analysis Plan* (DOE/RL-2004-84, Rev. 1). Radiological scoping surveys found that all radiological contamination had previously been fixed. Industrial Hygiene survey samples for beryllium were found to be below the release criterion ($<0.2\mu\text{g}/100\text{ cm}^2$). An asbestos inspection, and sampling, found that building contained asbestos primarily in the form of insulation and floor tiles.

D4 Activities:

Deactivation: Utility isolations were performed on the facility prior to beginning facility decontamination.

Decontamination and Decommissioning: The following hazardous materials were removed prior to facility demolition: oils, grease, asbestos-containing material, beryllium, mercury, lead, freon, HEPA filters, and polychlorinated biphenyls. Hazardous material removal and waste disposition was performed in accordance with *Removal Action Work Plan #1 for the 300 Area*, (DOE/RL-2004-77) Revision 1 (RAWP). Some Class II nonfriable asbestos-containing material (floor tile and vinyl sheeting) was left in place to be removed during demolition, as described in Section 2.1.4 of the RAWP. Fixative (paint) was applied to the inside of the building as necessary to lock down any remaining contamination prior to demolition.

Demolition: Demolition of the building and below grade structure was completed in December 2006. The building debris, and approximately 1 meter of surrounding soil was removed and disposed at ERDF under waste profile 305B001, Rev. 0. The contaminants of concern remaining in the facility during demolition were radionuclides, asbestos (Class II non-friable), beryllium, and lead and cadmium in dried paint. An assessment of the remaining contaminants is attached (Table 2).

As left condition:

- Radiological surveys were completed after building demolition and no radiological contamination was identified (GPERS Report is attached).
- No construction debris (e.g., paint chips, insulation) or soil staining was identified during the visual inspection of the excavated area.
- The related/adjacent waste sites were not considered to be affected by the removal action.

Evaluation of related/adjacent waste sites:

See attachment.

D4 PROJECT FACILITY COMPLETION FORM

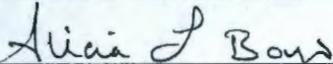
Documentation of Decisions:

In accordance with the associated action memorandum hazardous material was removed from the 305-B facility, the building and basement/foundation were demolished, and the debris was disposed at ERDF, an evaluation of the contaminants of concern was performed, and visual inspection and field surveys of the area were performed.

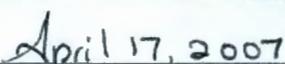
Completion of this removal action does not leave contamination that requires subsequent remedial actions.

The basis for this determination is supported as follows:

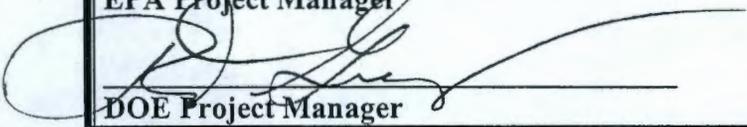
- Based on the historical information and field data, no soil sampling is required to complete this removal action
- The layback pile generated during facility demolition may be used to backfill excavated area



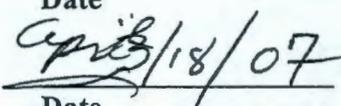
EPA Project Manager



Date



DOE Project Manager



Date

Distribution:

Alicia Boyd, B1-46
Rick. Bond, H0-57
Rudy Guercia, A3-04
WCH Records and Document Control, H0-30
Administrative Record, H6-08

Linda Dietz, H4-22
Donna Yasek, L1-06
Lorna Dittmer, H4-23

D4 PROJECT FACILITY COMPLETION FORM

**ATTACHMENT
(SUPPLEMENTAL INFORMATION)**

D4 PROJECT FACILITY COMPLETION FORM

Table 1. Summary of Characterization Samples Collected from 305B.

Type	Quantity	Results	Method Detection Limit	Sample #
Radiological Scoping surveys	56 internal	All results were below method detection limits	1,000 removable /5,000 fixed beta-gamma ^a 20 removable /100 fixed alpha ^a	NA
Industrial Hygiene Scoping Surveys	40 beryllium wipe samples	All results were below 0.2 ug/100cm ²	0.1 ug/100cm ²	NA
Radiological analysis of building material	1 scabbled concrete from the basement	Am-241 = 32,900 pCi/g	14.8 pCi/g	J12PN6
Asbestos – Thermal System Insulation and mixed media	26 samples	13 – below detection limits 3 – less than 1% asbestos 10 – found to be at levels requiring removal	<1% weight	J12PM1-J12PM9 J12PN0-J12PN5 J12PV4-J12PV9 J12PW0-J12PW4

^a – dpm/100 cm²

Table 2. Contaminants of Concern for Facility Demolition

Contaminant of Concern	Determination of no impact to the soil
Radionuclides	Any loose radiological contamination was locked down prior to demolition. GPERS analysis for beta and gamma contamination found that all sampling points were 2 times below background.
Lead and Cadmium in dried paint	Building interior was locked down prior to demolition. Visual inspection of the demolition area was performed to ensure
Beryllium	Building interior was locked down prior to demolition. Visual inspection of the demolition area was performed to ensure
Class II non-friable Asbestos	Demolition was performed in accordance with 40 CFR 61.145(c) and 40 CFR 61.150.

Evaluation of related/adjacent waste sites:

- 300-16 – *Contamination Found During Utility Pole Replacements* – The waste site was not impacted by D4 activities. The site will be addressed under the 300-FF-2 Interim Action ROD.
- 300-29 – *305-B Berm* – This waste site was reclassified as a no action waste site in 2005 (Control Number 2004-100).
- 300-58 – *Steam Condensate Injection Well (MS #449)* – rejected WIDS Site, closed under WAC 173-218

D4 PROJECT FACILITY COMPLETION FORM

300-63 - *Steam Condensate Injection Well (MS #458)* – rejected WIDS Site, closed under WAC 173-218.

305-B SF – *305-B Storage Facility* - WCH completed the RCRA closure activities, and submitted the certification of closure documentation to Ecology on September 1, 2006.

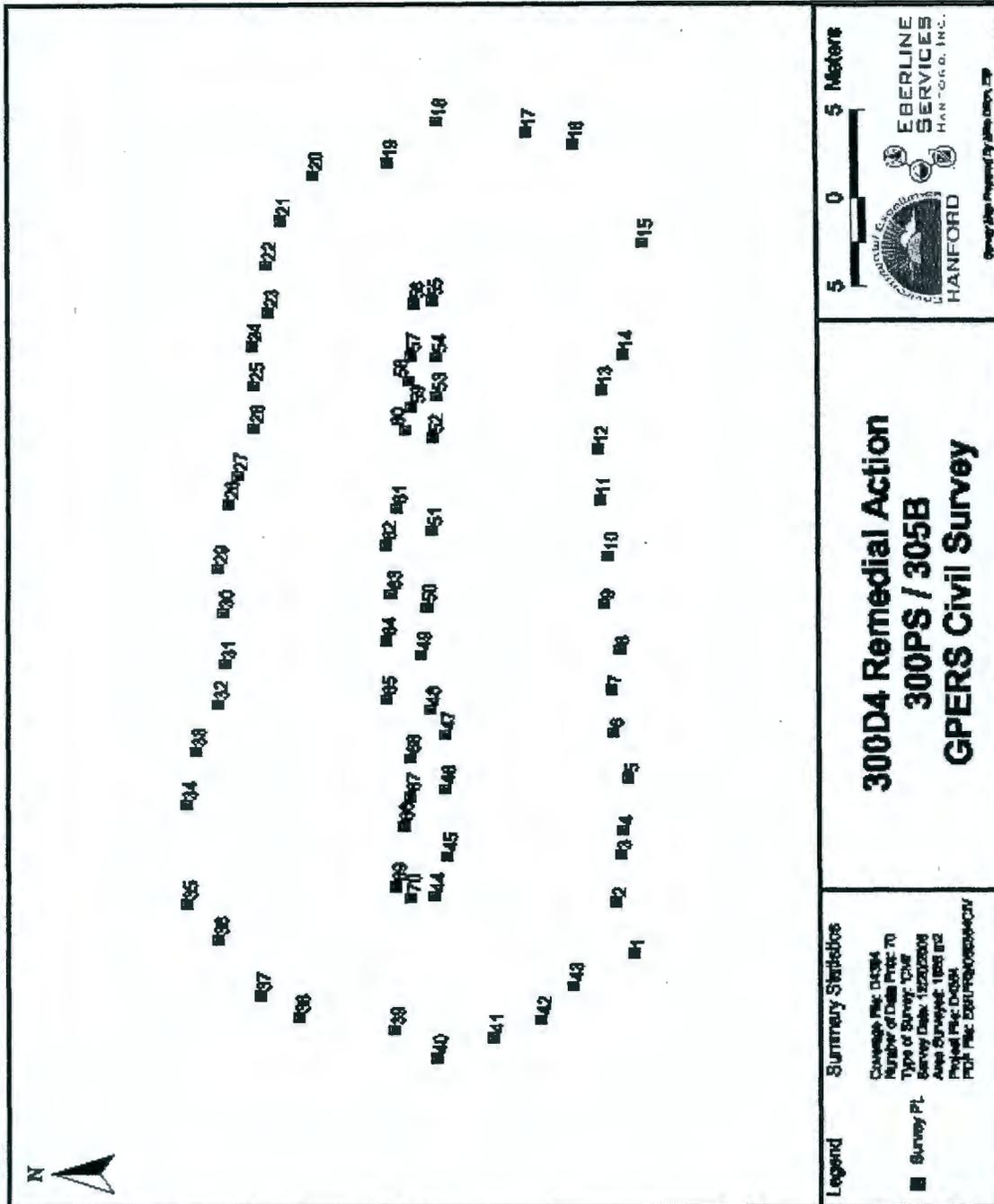
D4 PROJECT FACILITY COMPLETION FORM

Table 3. 305B Excavation GPS Coordinates and Elevations (m)

Location	Northing (m)	Easting (m)	Elevation (m)	Location	Northing (m)	Easting (m)	Elevation (m)
1	116147.27	593715.61	120.69	36	116169.25	593716.39	118.84
2	116148.29	593718.48	119.29	37	116167.02	593713.20	118.84
3	116147.95	593721.10	120.52	38	116165.04	593711.91	118.90
4	116147.89	593722.49	120.74	39	116160.04	593711.23	118.52
5	116147.62	593725.46	121.01	40	116157.81	593709.65	120.30
6	116148.35	593727.99	121.06	41	116154.76	593710.82	120.57
7	116148.49	593730.46	120.44	42	116152.30	593711.83	120.48
8	116148.01	593732.68	119.75	43	116150.58	593713.75	120.16
9	116148.87	593735.29	119.37	44	116157.87	593718.83	117.75
10	116148.68	593737.97	122.21	45	116157.19	593721.07	117.80
11	116149.04	593741.13	121.84	46	116157.34	593724.78	117.52
12	116149.13	593743.99	118.51	47	116157.35	593727.88	117.98
13	116148.93	593747.38	118.80	48	116158.06	593729.33	117.20
14	116147.81	593749.44	119.09	49	116158.52	593732.42	117.17
15	116146.74	593755.83	119.24	50	116158.23	593735.11	117.14
16	116150.37	593761.44	119.11	51	116157.95	593739.43	118.42
17	116152.91	593762.13	119.01	52	116157.89	593744.65	117.06
18	116157.56	593762.72	118.99	53	116157.65	593747.07	117.20
19	116160.19	593760.35	118.37	54	116157.70	593749.22	117.45
20	116164.14	593759.71	118.91	55	116157.86	593752.52	116.42
21	116165.86	593757.11	118.28	56	116158.87	593752.28	117.27
22	116166.62	593754.55	118.29	57	116159.07	593749.31	117.64
23	116166.59	593751.78	118.48	58	116159.14	593747.95	117.53
24	116167.41	593749.85	118.25	59	116159.02	593746.40	115.67
25	116167.36	593747.61	118.04	60	116159.35	593745.15	117.22
26	116167.30	593745.22	118.13	61	116159.81	593740.67	117.16
27	116168.18	593742.50	118.35	62	116160.39	593738.64	117.04
28	116168.64	593740.96	118.22	63	116160.15	593735.85	117.17
29	116169.32	593737.30	118.29	64	116160.35	593733.24	117.03
30	116168.99	593734.79	118.73	65	116160.39	593729.86	117.49
31	116168.89	593731.93	118.65	66	116159.17	593726.56	117.45
32	116169.28	593729.63	118.51	67	116159.10	593724.36	117.53
33	116170.41	593726.95	118.56	68	116159.48	593722.73	116.24
34	116170.89	593723.90	118.81	69	116159.93	593719.35	117.82
35	116170.89	593718.37	119.43	70	116159.15	593718.75	116.68

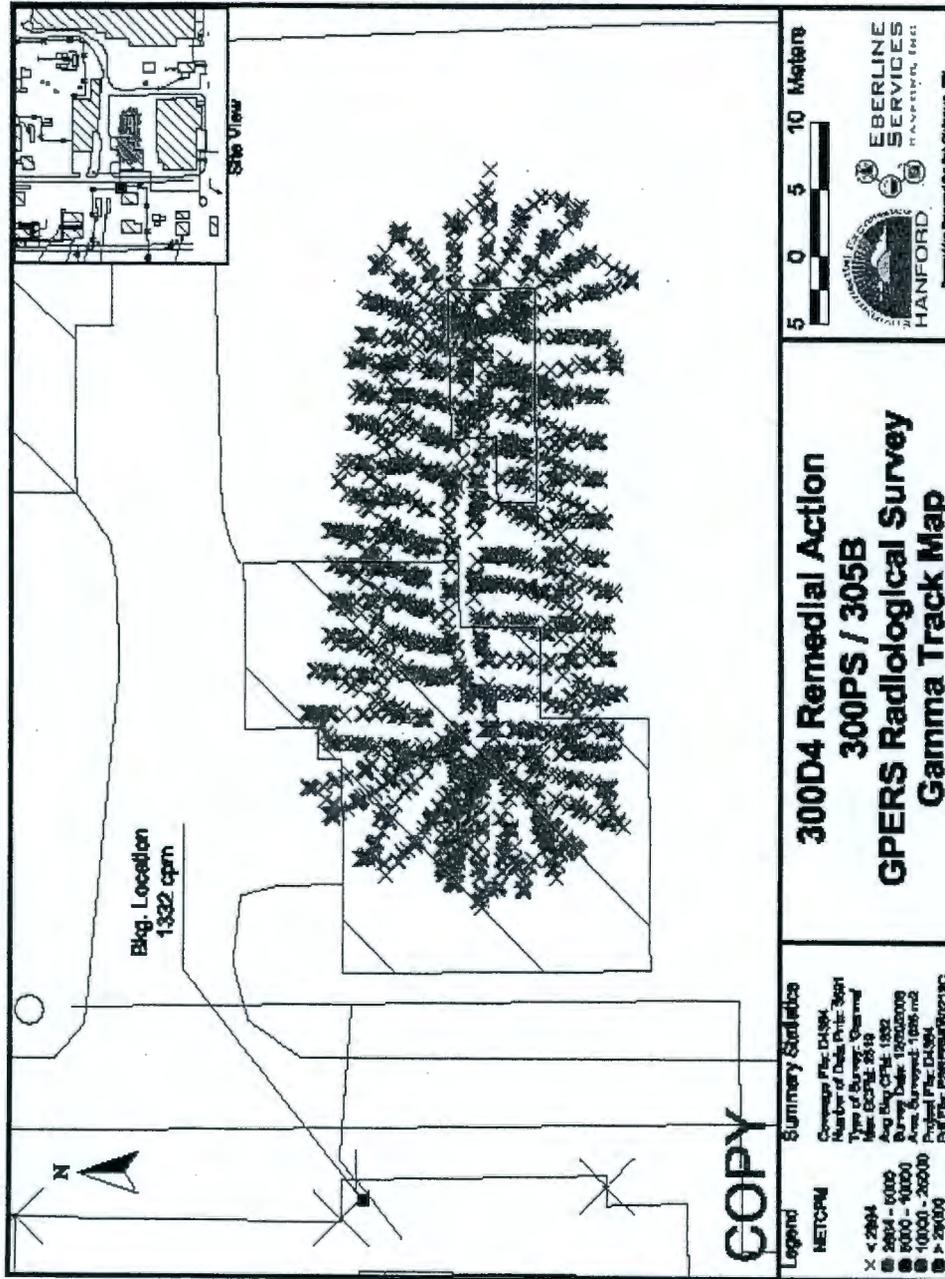
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Figure 1. 305B Building Complex Excavation GPR Survey Map



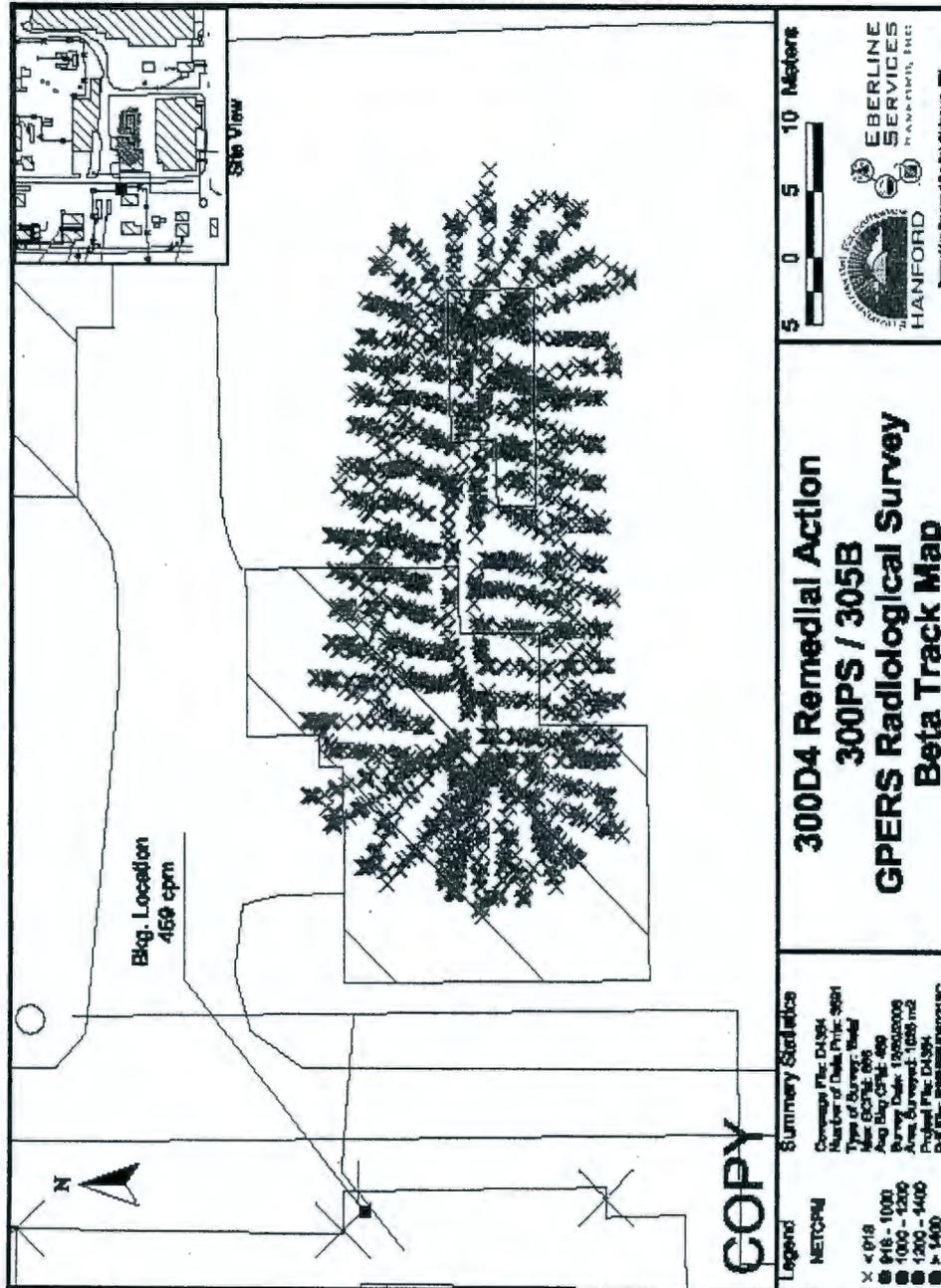
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Figure 2. 305B Building Complex Excavation GPERS Survey Results – Gamma Track Map



D4 PROJECT FACILITY COMPLETION FORM

Figure 3. 305B
 Building Complex Excavation GPERs Survey Results – Beta Track Map



D4 PROJECT FACILITY COMPLETION FORM

Figure 4. 305B Building Complex in Foreground (facing north).

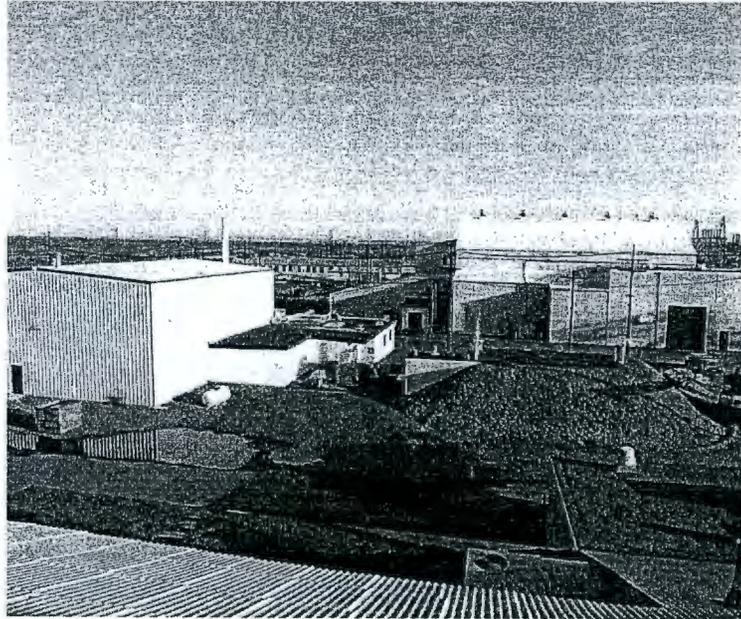


Figure 5. 305B Building Complex Site after Demolition prior to Backfill (facing east).



FACILITY STATUS CHANGE FORM

Date Submitted: 02/04/2008 Originator: Megan Proctor Phone: 373-4596	Area: 300 Facility ID: 306E Action Memorandum: #1 for the 300 Area	Control #: D4-300-004
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This form documents agreement among the parties listed below on the status of the facility D&D operations and the disposition of underlying soil in accordance with the applicable regulatory decision documents.

Section 1: Facility Status

- All D4 operations required by action memo complete.
- D4 operations required by action memo partially complete, remaining operations deferred.

Description of Completed Activities and Current Conditions:

Deactivation: Utility isolations were performed on the facilities prior to beginning decontamination.

Decontamination and Decommissioning: The following hazardous materials were removed prior to facility demolition: oils, grease, asbestos-containing material, beryllium, mercury, Freon, and polychlorinated biphenyls. Hazardous material removal and waste disposition was performed in accordance with *Removal Action Work Plan #1 for the 300 Area*, DOE/RL-2004-77, Revision 1 (RAWP). Some Class II non-friable asbestos-containing material (flooring, roofing material, and a small amount of inaccessible transite) was left in place to be removed during demolition, as described in Section 2.1.4 of the RAWP. Fixative (paint) was applied to the inside of the building to lock down any remaining contamination prior to demolition.

Demolition: Demolition of the above grade structures was completed in November 2006. Due to the facility history, the demolition was performed under asbestos and radiological controls. The building debris was removed and disposed at ERDF. The contaminants of concern remaining in the facility during demolition were radionuclides, metals, asbestos (Class II non-friable), and beryllium.

Description of Deferral (as applicable):

Active water lines are in close proximity to the 306E foundation. These water lines cannot currently be isolated as they are part of the fire water supply loop for the 300 Area. In addition, the 306E foundation is located above the 300-256 and 300-41 waste sites. Removal of the foundation will occur prior to waste site remediation and/or once the water lines are isolated and no longer impact excavation activities.

Section 2: Underlying Soil Status

- No waste site(s) present. No additional actions anticipated.
- Documented waste site(s) present. Cleanup and closeout to be addressed under Record of Decision.
- Potential waste site discovered during D4 operations. Waste site identification number <to be> assigned.
 Cleanup and closeout to be addressed under Record of Decision.

Description of Current/As-Left Conditions:

The 306E foundation is currently posted as a radiological control area.

Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable):

300-15: Area Process Sewer - The site is an underground process sewer extending throughout the 300 Area for the disposal of process wastes such as steam condensate, cooling water and non-regulated liquids. The site is located in the 300 Area and is a network of underground piping extending throughout the area. 300-15 is a 300-FF-2 waste site.

300-32: 333 Building, 333N Fuels Manufacturing Building, New Fuel Cladding Facility - The 333 building was a large steel frame building with double metal insulated panel exterior walls.

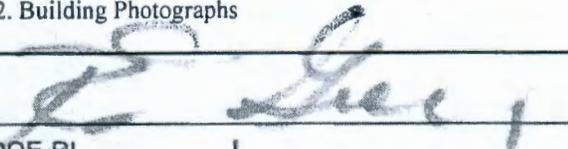
300-33: 306W Metal Fabrication Development Building Release - The site is the contaminated soil around and under the 306W Building.

FACILITY STATUS CHANGE FORM

The site is located in the main 300 Area on the north side of Ginkgo Street between Wisconsin and California Streets. 300-33 is a 300-FF-2 waste site.
 300-41: 306E Fabrication and Testing Laboratory - The site includes a neutralization tank and valve pit. The site is located west/northwest of the northeast corner of where the 306E Building stood. 300-41 is a 300-FF-2 waste site.
 300-71: 306E Building - HVAC Condensate, Miscellaneous Stream #454 - The site is an injection well that used to receive HVAC condensate. The site is located west of the northeast corner of where the 306E Building stood. 300-71 is a 300-FF-2 waste site.
 300-256: 306E Fabrication and Testing Laboratory Releases - The site is contaminated soil under and around the 306E Building. 300-256 is a 300-FF-2 waste site.
 300-257: Abandoned Pipe Trench Between 334 Tank Farm and 306E - The site is process sewer piping that was originally connected to the 309 Building's Rupture Loop Holding Tank. The site begins southeast of the location of the 309 Rupture Loop Holding Tank (WIDS Site 300-55), joins other process sewer lines and runs due east to a sump (overflow structure) at the top of the river bank. 300-257 is a 300-FF-2 waste site.

Section 3: List of Attachments

1. Facility Information - Building History and Characterization
2. Building Photographs

	
DOE-RL	Date
	
Lead Regulator	Date
<input checked="" type="checkbox"/> EPA <input type="checkbox"/> Ecology	

DISTRIBUTION:

EPA: Alicia Boyd, B1-46
 Ecology: Rick Bond, H0-57
 DOE: Rudy Guercia, A3-04
 Document Control, H0-30
 Administrative Record, H6-08

SIS Coordinator: Linda Dietz, H4-22
 D4 EPL: Megan Proctor, L1-07
 Sample Design/Cleanup Verification:
 FR Engineering: Rich Carlson, X4-08
 FR EPL: Jim Golden, X2-07

**ATTACHMENT 1 – FACILITY INFORMATION
BUILDING HISTORY AND CHARACTERIZATION**

Building Characterization:

Table 1: Summary of Samples Collected

Type	Quantity	Method Detection Limits	Results	HEIS #
Radiological Scoping surveys	51	Beta-gamma - 1,000 removable /5,000 fixed	12 - Beta-gamma greater than 1,000 removable /5,000 fixed	N/A
Industrial Hygiene Scoping Surveys	148 wipe samples	0.02 ug/100cm ²	Beryllium - 64 samples 0.02-0.1 µg/100cm ² 3 samples 0.1-0.2 µg/100cm ² 1 sample = 0.37 µg/100cm ²	N/A

Table 2: Summary of Characterization Samples Collected at 306E

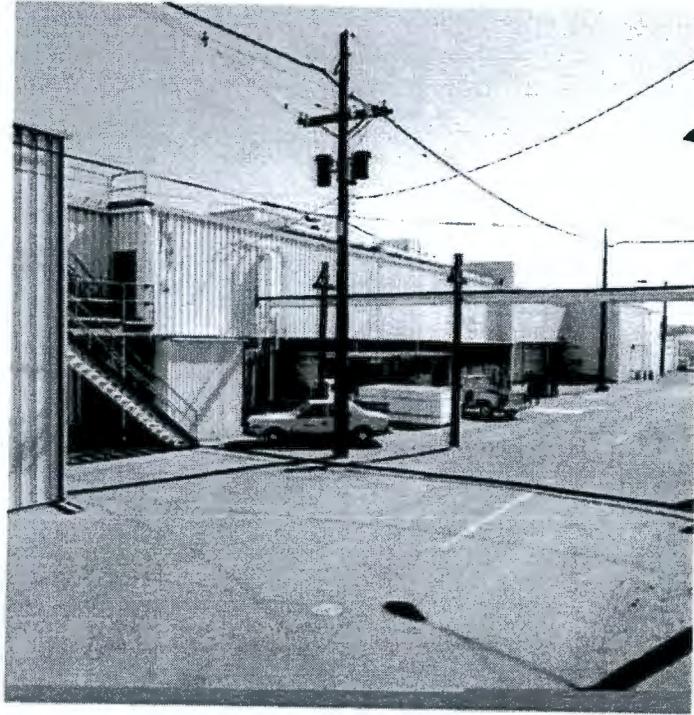
Sample Description and Location	Results that exceeded the Method Detection Limits	Method detection limit	HEIS #
Paint - Orange color from overhead crane and shield door (Solid)	PCB (Aroclor 1254) - 79000 µg/kg PAH (Naphthalene) - 340 µg/kg Barium TCLP - 113µg/L Cadmium TCLP - 60.2 µg/L Chromium TCLP - 189000 µg/L Mercury TCLP - 1.2 µg/l	41000 ug/kg 33.3 µg/kg 1.2 ug/L 4.2 ug/L 7.8 ug/L 0.10 ug/L	J12BX8
Machine Filings (Solid)	Zirconium, Total - 34.1 mg/kg Arsenic TCLP - 45.7 µg/L Barium TCLP - 64.7 µg/L Cadmium TCLP - 18.5 µg/L Chromium TCLP - 155 µg/L Lead TCLP - 8670 µg/L Mercury TCLP - 0.30 µg/L Selenium TCLP - 40.8 µg/L	7.5 mg/kg 24.6 µg/L 3 µg/L 4.2 µg/L 6.4 µg/L 26 µg/L 0.10 µg/L 36.5 µg/L	J12652, J12653, J12654, J12655, J12656
Electrical Equipment (Liquid)	Chloride - 34.8 mg/L Sulfate 2.2 mg/L pH - 7.2 unit Aluminum Total - 241 µg/L Barium Total - 6.2 µg/L Calcium Total - 10200 µg/L Chromium Total - 1.4 µg/L Copper Total - 5.3 µg/L Iron Total - 14200 µg/L Lead Total - 48.4 µg/L Lithium Total - 4.2 µg/L Magnesium Total - 306 µg/L Manganese Total - 258 µg/L Nickel Total - 2.3 µg/L Potassium Total - 3890 µg/L Silica Total - 5200 µg/L Sodium Total - 29000 µg/L Vanadium Total - 2.4 µg/L Zinc Total - 502 µg/L Gross Beta - 3.54 pCi/L	1.2 mg/L 0.25 mg/L 0.01 unit 24.9 µg/L 0.20 µg/L 8.6 µg/L 0.70 µg/L 0.80 µg/L 24.3 µg/L 1.2 µg/L 0.20 µg/L 7.2 µg/L 0.20 µg/L 1.3 µg/L 21.2 µg/L 8.4 µg/L 2.1 µg/L 0.50 µg/L 0.30 µg/L 1.8 pCi/L	J13J37
Asbestos Containing Materials (Solid)	51 out of 91 samples collected was asbestos containing material (greater than 1% weight)	<1 wt%	J125Y2 - J125Y9, J12600 - J12644, J12BW8 - J12BX7, J12N57 - J12N78

Table 3. Contaminants of Concern for Facility Demolition

Contaminant of Concern	Determination of no impact to the soil
Radionuclides	The 306E Building foundation has been surveyed and is posted as necessary
Beryllium	Building interior was locked down prior to demolition.
Class II non-friable Asbestos	Demolition was performed in accordance with 40 CFR 61.145 (c) and 40 CFR 61.150

ATTACHMENT 2 – BUILDING PHOTOGRAPHS

306 E Prior to Demolition



306 E After Demolition



FACILITY STATUS CHANGE FORM

Date Submitted: 3/6/2008 Originator: Gus Aljure Phone: 372-9987	Area: 300 Facility ID: 333 Action Memorandum: #1 for the 300 Area	Control #: D4-300-005
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This form documents agreement among the parties listed below on the status of the facility D&D operations and the disposition of underlying soil in accordance with the applicable regulatory decision documents.

Section 1: Facility Status

- All D4 operations required by action memo complete.
 D4 operations required by action memo partially complete, remaining operations deferred.

Description of Completed Activities and Current Conditions:

Deactivation: Utility isolations were performed on the facility prior to beginning facility decontamination.

Decontamination and Decommissioning: The following hazardous materials were removed prior to facility demolition: oils, grease, asbestos-containing material, beryllium, mercury, Freon, and polychlorinated biphenyls. Hazardous material removal and waste disposition was performed in accordance with *Removal Action Work Plan #1 for the 300 Area, DOE/RL-2004-77, Revision 1 (RAWP)*. Some Class II non-friable asbestos-containing material (flooring and roof material) was left in place to be removed during demolition, as described in Section 2.1.4 of the RAWP. Fixative (paint) was applied to the inside of the building to lock down any remaining contamination prior to demolition.

Demolition: Demolition of the above-grade structure was completed in September 2006. Due to the facility history, the demolition was performed under radiological controls. The building debris was removed and disposed at ERDF. The contaminants of concern remaining in the facility during demolition were radionuclides, metals, volatile organics, semi-volatile organics, asbestos (Class II non-friable), beryllium and cadmium.

Description of Deferral (as applicable):

The 333 building foundation and any potential soil excavation will be deferred to the 618-1 remedial action. The foundation is located directly adjacent to the 618-1 burial ground. Removal of the foundation prior to burial ground remediation could result in potential exposure of contaminants from the underlying waste site.

Section 2: Underlying Soil Status

- No waste site(s) present. No additional actions anticipated.
 Documented waste site(s) present. Cleanup and closeout to be addressed under Record of Decision.
 Potential waste site discovered during D4 operations. Waste site identification number <to be> assigned.
 Cleanup and closeout to be addressed under Record of Decision.

Description of Current/As-Left Conditions:

The 333 building foundation is currently posted as a radiological control area. Debris from trenches and pits in the foundation have been removed and disposed at ERDF. Fall hazards, as defined by OSHA 1926.501(b)(1) (i.e., unprotected sides or edges of six feet or more), will be mitigated with backfill or a barrier.

The Loewy Press was decommissioned and removed from the foundation and disposed at ERDF in February 2008.

Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable):

UPR-300-17: The asphalt area located at the southeast corner of the 333 Building and resulted from a fire in a dumpster by 3716. This is a 300-FF-2 operable unit waste site.

FACILITY STATUS CHANGE FORM

300-109: A below-grade injection well on the north side of the 333 Building. The injection well was plugged prior to facility demolition. It is a 300-FF-2 operable unit waste site.

300-110: A stormwater runoff drain located on the southeast side of the 333 Building. It is a 300-FF-2 operable unit waste site.

300-224: The Waste Acid Treatment System (WATS) and Uranium bearing pipe trench. WATS was an acid treatment system that was connected between 334-A, the 334 Tank Farm, 333, 303-F, 311 Tank Farm, and 313. Excluding two soil contamination areas, the TSD unit has been clean closed under the Hanford Facility RCRA Permit. 300-224 is a 300-FF-2 operable unit waste site.

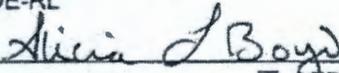
333 ESHWSA: The 333 East Side Hazardous Waste Storage Area is the asphalt paved area located at the northeast corner of the 333 Building. The area provided temporary storage for miscellaneous hazardous wastes. It is a 300-FF-2 operable unit candidate waste site.

333 WSTF: The site was an above grade tank farm that housed three cylindrical tanks on the west side of the 333 Building. The tanks were located in a concrete containment that would recover any leakage. Upon removal of the building foundation, no further actions will be required to close this waste site as it is not a 300-FF-2 operable unit waste site.

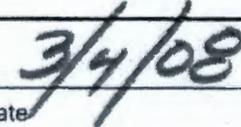
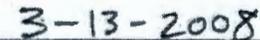
Section 3: List of Attachments

1. Facility information (building history and characterization)
2. Asbestos Inspection Results
3. Project photographs

DOE-RL



Date

Lead Regulator

 EPA Ecology

Date

DISTRIBUTION:

EPA: Alicia Boyd, B1-46
 Ecology: Rick Bond, H0-57
 DOE: Rudy Guercia, A3-04
 Document Control, H0-30
 Administrative Record, H6-08

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Attachment 1: Facility Information

Building History:

The 333 Building was constructed in 1959 and 1960 to manufacture fuel elements for the N Reactor using the co-extrusion process. The components were extruded in an extrusion press and machined to create fuel sections. Nitric acid and sulfuric acids were used to clean the elements and mill excess uranium on the fuel element ends. In 1973, the Waste Acid Treatment System (WATS) began operating to treat waste acids from the 333 Building operations. The system was constructed to end direct discharge of uranium, other metals, and acids to the process sewer and ponds. The WATS components located in 333 Building were removed when RCRA closure of the TSD unit was completed in December 2001.

Building Characterization:

Table 1 summarizes the industrial hygiene and radiological control samples collected in the 333 Building. Table 2 summarizes the results of the characterization samples collected in the 333 Building. Not all sample numbers and requested analyses are included in Table 2. Only sample numbers with elevated values greater than the minimum detection limits are summarized in Table 2.

Table 1: Summary of Industrial Hygiene and Radiological Control Samples Collected

Type	Quantity	Method Detection Limits	Results
Tritium Smears	2	10,000 dpm/100 cm ²	Less than action levels
Radiological Scoping surveys	470	Beta-gamma: 1,000 removable /5,000 fixed ^a Alpha: 1,000 removable /5,000 fixed ^a	444 – below the method detection limits (MDL) 17 - Beta-gamma greater than 1,000 removable /5,000 fixed ^a 9 - Alpha greater than 1000 removable /5000 fixed ^a
Industrial Hygiene Scoping Surveys (wipe samples): Beryllium	174	0.02 µg/100cm ²	62 – below 0.02 µg/100cm ² 58 – between 0.02 and 0.1 µg/100cm ² 39 – between 0.11 and 1.0 µg/100cm ² 15 – between 1.1 and 10 µg/100cm ²
Cadmium	27	0.01 µg/100cm ²	5 – Between 1.0 and 10.0 µg/100cm ² 9 – Between 10.1 and 50.0 µg/100cm ² 6 – Between 50.1 and 100.0 µg/100cm ² 7 – Greater than 100.1 µg/100cm ²

^a – dpm/100 cm²

Table 2: Summary of Characterization Samples Collected

Sample Description and Location	Results	Required Detection Limit ¹	HEIS #
Chemical Bay Trench System - Acid Brick (Solid)	Aroclor-1254 – 0.48 mg/kg	0.017 mg/kg	J12Y32
	Aroclor-1260 – 0.31 mg/kg	0.017 mg/kg	
	Lead – 94.3 mg/kg	5 mg/kg	
	Lead (TCLP) – 0.441 mg/L	0.075 mg/L	
	Gross Alpha – 49.5 pCi/g	3.7 pCi/g	
	Gross Beta – 74.5 pCi/g	5.3 pCi/g	
	Potassium 40 – 53.1 pCi/g	0.4 pCi/g	
	Radium 226 – 1.68 pCi/g	0.075 pCi/g	
	Radium 228 – 2.62 pCi/g	0.17 pCi/g	

Sample Description and Location	Results	Required Detection Limit ¹	HEIS #
	Technetium 99 - 11.8 pCi/g Thorium 228 - 2.55 pCi/g Thorium 230 - 0.918 pCi/g Thorium 232 - 2.62 pCi/g Thorium 234 - 7.53 pCi/g Uranium 233/234 - 33.5 pCi/g Uranium 235 - 5.71 pCi/g Uranium 238 - 23.4 pCi/g	0.52 pCi/g 0.051 pCi/g 0.44 pCi/g 0.17 pCi/g 1.36 pCi/g 0.46 pCi/g 0.14 pCi/g 0.44 pCi/g	
Grit Blaster System (Solid)	Beryllium - 4.9 mg/kg Fluoranthene - 0.12 mg/kg Vanadium - 5.8 mg/kg Zirconium - 1020 mg/kg Actinium 228 - 8.55 pCi/g Europium 155 - 1.92 pCi/g Potassium 40 - 0.911 pCi/g Radium 226 - 21.4 pCi/g Radium 228 - 9.95 pCi/g Thorium 228 - 8.03 pCi/g Thorium 232 - 9.95 pCi/g Thorium 234 - 15.3 pCi/g Uranium 233/234 - 13.2 pCi/g Uranium 235 - 1.62 pCi/g Uranium 238 - 21.9 pCi/g	0.5 mg/kg 0.05 mg/kg ² 2.5 mg/kg 2.5 mg/kg 1.32 pCi/g 0.364 pCi/g 0.4 pCi/g 4.91 pCi/g 0.16 pCi/g 0.074 pCi/g 0.16 pCi/g 2.11 pCi/g 0.25 pCi/g 0.13 pCi/g 5.6 pCi/g	J12793
West Side Trench System (Water)	Aluminum - 0.65 mg/L Antimony - 0.107 mg/L Barium - 0.0541 mg/L Calcium - 69.1 mg/L Chloride - 23.5 mg/L Chromium - 0.0143 mg/L Copper - 0.463 mg/L Iron - 3.57 mg/L Magnesium - 11.4 mg/L Manganese - 0.0542 mg/L Nitrate - 100 mg/L Potassium - 14.5 mg/L Silica - 25.7 mg/L Sodium - 46.3 mg/L Sulfate - 126 mg/L Zinc - 0.475 mg/L Gross Alpha - 50.3 pCi/L Gross Beta - 35.8 pCi/L Technetium 99 - 27.1 pCi/L Uranium 233/234 - 29.6 pCi/L Uranium 235 - 4.11 pCi/L Uranium 238 - 19.7 pCi/L	0.05 mg/L 0.06 mg/L 0.02 mg/L 1 mg/L 0.2 mg/L 0.01 mg/L 0.01 mg/L 0.05 mg/L 0.75 mg/L 0.005 mg/L 0.25 mg/L 4 mg/L 0.02 mg/L 0.5 mg/L 0.5 mg/L 0.01 mg/L 3.5 pCi/L 2.8 pCi/L 6 pCi/L 0.84 pCi/L 0.54 pCi/L 0.84 pCi/L	J124F9, J124H0
Beta Heat Treat Trench System (Water)	Calcium - 3.43 mg/L Chloride - 3.61 mg/L Iron - 0.162 mg/L Manganese - 0.0071 mg/L Silica - 0.371 mg/L Sodium - 4.72 mg/L Gross Alpha - 4.41 pCi/L Gross Beta - 4.41 pCi/L Uranium 233/234 - 2.54 pCi/L Uranium 235 - 0.216 pCi/L Uranium 238 - 1.97 pCi/L	1 mg/L 0.2 mg/L 0.05 mg/L 0.005 mg/L 0.02 mg/L 0.5 mg/L 1.2 pCi/L 1.9 pCi/L 0.11 pCi/L 0.1 pCi/L 0.11 pCi/L	J12WW2
Chemical Bay Scrubber System (Water)	Aluminum - 0.0844 mg/L Barium - 0.0589 mg/L Calcium - 40.1 mg/L	0.05 mg/L 0.02 mg/L 1 mg/L	J12XH3

Sample Description and Location	Results	Required Detection Limit ¹	HEIS #
	Chloride - 10.5 mg/L Iron - 0.405 mg/L Magnesium - 8.77 mg/L Manganese - 0.0061 mg/L Nickel - 0.0666 mg/L Nitrate - 0.64 mg/L Phosphate - 2.9 mg/L Silica - 87.7 mg/L Sodium - 14.3 mg/L Sulfate - 20.3 mg/L Zinc - 0.238 mg/L Gross Beta - 10.1 pCi/L Uranium 233/234 - 2.75 pCi/L Uranium 238 - 1.84 pCi/L	0.2 mg/L 0.05 mg/L 0.75 mg/L 0.005 mg/L 0.04 mg/L 0.25 mg/L 0.5 mg/L 0.02 mg/L 0.5 mg/L 0.5 mg/L 0.01 mg/L 6.8 pCi/L 0.88 pCi/L 0.88 pCi/L	
Oil in Over-packed Drums (Liquid)	Barium - 5.1 mg/kg Bis(2-ethylhexyl)phthalate - 120 mg/kg Cadmium - 5.2 mg/kg Cadmium (TCLP) - 6.24 mg/L Chromium - 3.2 mg/kg Chromium (TCLP) - 2.48 mg/L Copper - 20.7 mg/kg Di-n-butylphthalate - 92 mg/kg Iron - 20.8 mg/kg Lead (TCLP) - 2.8 mg/L Nickel (TCLP) - 0.574 mg/L N-Nitrosodiphenylamine - 31 mg/kg Phenanthrene - 25 mg/kg Phenol - 120 mg/kg Phosphorus - 168 mg/kg Silica - 4.5 mg/kg Silver (TCLP) - 0.149 mg/L Zinc - 100 mg/kg Potassium 40 - 6.95 pCi/g Uranium 235 - 0.083 pCi/g	2 mg/kg 0.33 mg/kg 0.5 mg/kg 0.01 mg/L 1 mg/kg 0.06 mg/L 1 mg/kg ² 0.33 mg/kg ² 5 mg/kg ² 0.075 mg/L 0.1 mg/L ² 0.33 mg/kg 0.33 mg/kg 0.33 mg/kg ² 1 mg/kg ² 2 mg/kg ² 0.01 mg/L 1 mg/kg 2.59 pCi/g 0.14 pCi/g	J12NC3, J12NF9
Container Storage Sump (Liquid)	Radium 226 - 80 pCi/sample Thorium 234 - 87.2 pCi/sample Uranium 235 - 4.95 pCi/sample	42.6 pCi/sample 13.9 pCi/sample 2.64 pCi/sample	J135M4
Uranium Scrubber System - Scrubber Media (Solid)	Cadmium - 0.52 mg/kg Lead - 8.4 mg/kg Phenanthrene - 0.056 mg/kg Radium 226 - 158 pCi/sample Thorium 234 - 162 pCi/sample Uranium 233/234 - 18.9 pCi/g Uranium 235 - 2.32 pCi/g Uranium 238 - 43 pCi/g	0.5 mg/kg 5 mg/kg 0.05 mg/kg ² 90.7 pCi/sample 53.9 pCi/sample 0.29 pCi/g 0.5 pCi/g 11 pCi/g	J12792
Press Exhaust System - Penthouse Housing (Solids)	Cadmium - 11.1 mg/kg Lead - 276 mg/kg Radium 226 - 48.2 pCi/g Thorium 234 - 37.9 pCi/g Uranium 235 - 2.98 pCi/g	0.5 mg/kg 5 mg/kg 11.1 pCi/g 6.97 pCi/g 0.69 pCi/g	J12781
Chemical Bay Scrubber System (Solid)	Fluoranthene - 0.15 mg/kg Lead - 14 mg/kg Lead (TCLP) - 0.0767 mg/L Molybdenum - 11.1 mg/kg Naphthalene - 0.33 mg/kg Nickel - 8.7 mg/kg Phenanthrene - 0.051 mg/kg Phosphorus - 131 mg/kg Potassium - 18400 mg/kg	0.05 mg/kg ² 5 mg/kg 0.075 mg/L 2 mg/kg ² 0.1 mg/kg ² 4 mg/kg ² 0.05 µg/kg ² 1 mg/kg ² 400 mg/kg ²	J12X68

Sample Description and Location	Results	Required Detection Limit ¹	HEIS #
	Silica - 315 mg/kg Sodium - 88600 mg/kg Strontium - 113 mg/kg Titanium - 112 mg/kg Vanadium - 8.9 mg/kg Zinc - 66.1 mg/kg Zirconium - 60.9 mg/kg Potassium 40 - 299 pCi/g	2 mg/kg ² 50 mg/kg ² 1 mg/kg ² 0.5 mg/kg ² 2.5 mg/kg ² 1 mg/kg ² 2.5 mg/kg ² 189 pCi/g	
Chemical Bay Exhauster System (Tech Smears)	Radium 236 - 12.3 pCi/g Thorium 234 - 9.63 pCi/g Uranium 235 - 0.764 pCi/g	9.49 pCi/g 5.83 pCi/g 0.587 pCi/g	J12XF5 & J12XF6
Oil and Grease (Liquid)	1,1,1-Trichloroethane - 1.3 mg/kg Acenaphthene - 1.7 mg/kg Acenaphthylene - 0.88 mg/kg Aluminum - 6.8 mg/kg Anthracene - 0.24 mg/kg Aroclor 1254 - 0.38 mg/kg Barium - 74.4 mg/kg Benzo(a)anthracene - 1.5 mg/kg Benzo(a)pyrene - 0.81 mg/kg Benzo(b)fluoranthene - 0.63 mg/kg Benzo(ghi)perylene - 0.55 mg/kg Benzo(k)fluoranthene - 0.12 mg/kg Bis(2-ethylhexyl)phthalate - 85 mg/kg Butylbenzylphthalate - 210 mg/kg Cadmium - 25.4 mg/kg Chrysene - 3.3 mg/kg Copper - 12.4 mg/kg Dibenz(a,h)anthracene - 0.056 mg/kg Fluoranthene - 3.6 mg/kg Fluorene - 1.4 mg/kg Iron - 24.1 mg/kg Methylenechloride - 2 mg/kg Naphthalene - 2 mg/kg Phenanthrene - 9.2 mg/kg Pyrene - 2 mg/kg Silica - 20.3 mg/kg Sulfide - 102 mg/kg Tetrachloroethene - 2.2 mg/kg Toluene - 5.8 mg/kg Xylenes (Total) - 0.62 mg/kg Zinc - 211 mg/kg	0.005 mg/kg ² 0.1 mg/kg ² 0.1 mg/kg ² 5 mg/kg ² 0.05 mg/kg ² 0.017 mg/kg 2 mg/kg ² 0.015 mg/kg ² 0.015 mg/kg ² 0.015 mg/kg ² 0.03 mg/kg ² 0.015 mg/kg ² 0.33 mg/kg 0.33 mg/kg 0.5 mg/kg ² 0.1 mg/kg ² 1 mg/kg ² 0.03 mg/kg ² 0.05 mg/kg ² 0.03 mg/kg ² 5 mg/kg ² 0.005 mg/kg 0.33 mg/kg ² 0.05 mg/kg ² 0.05 mg/kg ² 2 mg/kg ² 5 mg/kg 0.005 mg/kg 0.005 mg/kg 0.01 mg/kg ² 1 mg/kg ²	J135L1
Beryllium Duct System - HEPA Filter Media (Solid)	Acenaphthene - 2.5 mg/kg Benzo(a)anthracene - 0.077 mg/kg Benzo(b)fluoranthene - 0.12 mg/kg Beryllium - 12.2 mg/kg Cadmium - 5 mg/kg Chrysene - 0.31 mg/kg Fluoranthene - 0.12 mg/kg Lead - 54.1 mg/kg Mercury - 0.82 mg/kg Phenanthrene - 0.18 mg/kg Pyrene - 0.29 mg/kg Silver - 1.5 mg/kg Uranium - 18700 mg/kg Potassium 40 - 152 pCi/g Thorium 228 - 23 pCi/g Thorium 234 - 12600 pCi/g Uranium 233/234 - 10400 pCi/g	0.1 mg/kg ² 0.015 mg/kg ² 0.015 mg/kg ² 0.5 mg/kg 0.5 mg/kg ² 0.1 mg/kg ² 0.05 mg/kg ² 5 mg/kg 0.2 mg/kg ² 0.05 mg/kg ² 0.05 mg/kg ² 1 mg/kg ² 20 mg/kg ² 41.9 pCi/g 3.2 pCi/g 95.7 pCi/g 30 pCi/g	J12WT8

Sample Description and Location	Results	Required Detection Limit ¹	HEIS #
	Uranium 235 - 1100 pCi/g Uranium 238 - 24300 pCi/g	14 pCi/g 250 pCi/g	
Autoradiography Lab Exhaust System - HEPA Filter Media (Solid)	Benzo(b)fluoranthene - 0.022 mg/kg Cadmium - 8.8 mg/kg Cadmium (TCLP) - 0.282 mg/L Chromium (TCLP) - 1.16 mg/L Lead - 773 mg/kg Lead (TCLP) - 0.159 mg/L Phenanthrene - 0.16 mg/kg Cesium 137 - 90.5 pCi/g Potassium 40 - 27.1 pCi/g Uranium 233/234 - 11.1 pCi/g Uranium 235 - 1.12 pCi/g Uranium 238 - 8.33 pCi/g	0.015 mg/kg ² 0.5 mg/kg 0.01 mg/L 0.06 mg/L 5 mg/kg 0.075 mg/L 0.05 mg/kg ² 0.24 pCi/g 10.1 pCi/g 0.28 pCi/g 0.19 pCi/g 0.28 pCi/g	J12NR3
Potential Asbestos Containing Materials (Solid)	See Attachment 2	1% wt	See Attachment 2

Notes:

¹ Required Detection Limits listed for nonradiological constituents are in accordance with the 300 Area D4 Waste Sampling and Analysis Plan (DOE/RL-2004-84, Revision 1), unless otherwise noted. Required Detection Limits listed for radiological constituents are the actual Minimum Detectable Activity (MDA) recorded.

² Constituent not listed as a required analyte in the 300 Area D4 Waste Sampling and Analysis Plan (DOE/RL-2004-84, Revision 1). The specified RDL is in accordance with contractually required minimum detection limits.

Table 3. Contaminants of Concern for Facility Demolition

Contaminant of Concern	Determination of no impact to the soil
Radionuclides	The 333 Building was locked down prior to demolition as a precautionary measure because of the facility history. Foundation has been surveyed and is posted as necessary.
Beryllium and Cadmium	Building interior was locked down prior to demolition. Foundation has been surveyed and is posted as necessary.
Class II non-friable Asbestos	Demolition was performed in accordance with 40 CFR 61.145 (c) and 40 CFR 61.150

Attachment 2: Asbestos Inspection Results

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY 333 BUILDING						
HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
HOMOGENOUS MISCELLANEOUS MATERIAL (MM)						
MM-1	A, 10	J117K0	Maintenance Office	MM - mastic - black	2/13/06	<1
MM-1	B, 15	J11HX4	NW center entrance	MM - mastic	3/21/06	<1
MM-2	A, 10	J117K1	Maintenance Office	MM - ceiling tile, white, 1X1' acoustical	2/13/06	<1
MM-3	A, 14	J11HW3	West Mezzanine, hall	MM - ceiling tile- 2X4', fibrous, white face, gray mass	3/21/06	<1
MM-3	NA	J11HW4	West Mezzanine Room 230	MM - ceiling tile- 2X4', fibrous, white face, gray mass	3/21/06	<1
MM-3	NA	J11HW5	West Mezzanine Room 229	MM - ceiling tile- 2X4', fibrous, white face, gray mass	3/21/06	<1
MM-4	NA	J11HW6	West Mezzanine Room 228	MM - wall board, white chalky, paper face	3/21/06	<1
MM-4	NA	J11HW7	West Mezzanine Room 230	MM - wall board, white chalky, paper face	3/21/06	<1
MM-4	NA	J11HW8	West Mezzanine Room 229	MM - wall board, white chalky, paper face	3/21/06	<1
MM-4	NA	J11HX0	West Mezzanine Room 226	MM - wall board mud, white crystalline, chalky	3/21/06	<1
MM-5	NA	J11HW9	West Mezzanine Room 227 Hall	MM - wall board mud, white chalky, fibrous wrap	3/21/06	<1
MM-6	B, 2	J11LC5	Men's SW Change room	MM - mastic, black for floor tile	3/23/06	>3≤5 Chrysotile
MM-6	A, 4	J11LC7	SW Hall	MM - black mastic	3/23/06	>1≤3 Chrysotile
MM-6	A, 4	J11LC9	SW hall to exit	MM - mastic for floor tile, black	3/23/06	Trace
MM-6		J11WK3	Press Room Office	MM - mastic, black, resinous	4/10/06	>1≤3 Chrysotile
MM-6	B, 2	J11LC4	Men's SW Change room	MM - black mastic for floor tile	3/23/06	>1≤3 Chrysotile
MM-7	A, 10	J11HX1	West Mezzanine hall outside of Women's washroom	MM - mud Joint, white crystalline, chalky	3/21/06	<1
MM-8	A, 10	J11HX2	West Mezzanine Men's Washroom	MM - ceiling tile, 2X4', acoustical, white faced, fibrous gray	3/21/06	<1
MM-9	B, 15	J11HX3	NW center entrance	MM - floor tile, knobby circles, tan	3/21/06	<1

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
MM-10	C, 14	J11HX5	North Mezzanine, Room 1	MM - ceiling tile, 2X4', white faced, gray, fibrous	3/21/06	<1
MM-10	F, 14	J11HX8	North Mezzanine, Room 5	MM - ceiling tile, 2X4', white faced, gray, fibrous	3/21/06	<1
MM-11	C, 14	J11HX6	North Mezzanine, Room 1	MM - wall board, white, under metal	3/21/06	<1
MM-11	F, 14	J11HX7	North Mezzanine, Room 5	MM - wall board under metal	3/21/06	<1
MM-12	H, 14	J11HY0	NE Fire room.	MM - flat ceiling tile, 2X4', painted, yellow fibers, plastic face	3/21/06	<1
MM-13	G, 14	J11HY1	NE Lab Room 1	MM - textured ceiling tile, 2X4', Yellow fibers	3/21/06	<1
MM-14	G, 14	J11HY2	NE Lab Room 1	MM - acoustical ceiling tile, 2X4', Yellow fibers	3/21/06	<1
MM-15	G, 9	J11HY3	E side office, 1 st floor, under stairs in middle of east side	MM - black, fibrous mat, insulation or sound deadener	3/21/06	<1
MM-16	G, 8	J11HY4	East side office, 1 st floor, under stairs in middle of east side	MM - ceiling tile, 2X4', white faced, fibrous	3/21/06	<1
MM-17	H, 9	J11HY5	East side office, 1 st floor, under stairs in middle of east side under stairs	MM - wall board, gypsum plaster and kraft paper	3/21/06	<1
MM-18	H, 9	J11HY6	E side Room 11, Room under stairs	MM - wall board mud	3/21/06	<1
MM-19	B, 1	J11LC2	Men's SW Change room	MM - floor tile with raised circles med. gray-green	3/23/06	<1
MM-20	B, 1	J11LC3	Men's SW Change room	MM - mastic, gray, hard	3/23/06	Trace of Chrysotile
MM-21	B, 2	J11LC4	Men's SW Change room	MM - floor tile, med. gray-green	3/23/06	Trace of Chrysotile
MM-	B, 3	J11LC6	Men's SW Change room	MM - cove base, black, no recoverable mastic,	3/23/06	<1

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
22				water damaged		
MM-22	A, 4	J11LD0	SW hall to exit	MM - cove base (mastic was not recoverable), water damage in this area	3/23/06	<1
MM-23	A, 4	J11LC7	SW Hall	MM - tan floor sheeting, circle design	3/23/06	<1
MM-24	A, 2	J11LC8	Men's SW Change room	MM - insulation from steel acoustical ceiling tile, yellow- brown, dirty	3/23/06	<1
MM-24	NA	J11WJ4	East wall, first floor	MM - acoustical wall tile white with holes, layered brown-gray, fibrous, crumbly	4/10/06	<1
MM-25	NA	J11WJ5	East wall, first floor	MM - acoustical wall tile white with holes, yellow/gray fibers, crumbly, layered	4/10/06	<1
MM-26	NA	J11WJ7	Room 212	MM - ceiling tile, white finish, fibrous, crumbly, gray	4/10/06	<1
MM-26	NA	J11WJ7	Room 212	MM - mastic, brown, resinous for ceiling tile, white finish, fibrous, crumbly, gray	4/10/06	<1
MM-27	NA	J11WJ8	Room 212	MM - wall board, gay-tan, crumbly, fibrous	4/10/06	<1
MM-27	NA	J11WJ9	Room 218	MM - wall board, Gray-tan, crumbly, fibrous	4/10/06	<1
MM-27	NA	J11WK0	Room 214	MM - wall board, gray-tan, crumbly, fibrous, between metal	4/10/06	<1
MM-28	NA	J11WK1	Press Room Office	MM - wall board, Transite-like, gray, compact, fibrous	4/10/06	≥10≤20 Chrysotile
MM-29	NA	J11WK2	Women's change room on first floor in the south west part of the building	MM - linoleum, gray, flexible, fibrous	4/10/06	<1
MM-29	NA	J11WK2	Women's change room on first floor in the south west part of the building	MM - mastic, black, resinous for linoleum, gray, flexible, fibrous	4/10/06	<1
MM-	NA	J11WK3	Press Room Office	MM - floor tile, 9X9," beige, compact	4/10/06	>1≤3

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
30						Chrysotile
MM-31	G, 10	J11WN0	East Mezzanine, Room 209, men's room	MM - wall board, white	4/25/06	<1
MM-32	G, 4	J11WM5	East Mezzanine, Room 215	MM - wall board, gray	4/25/06	≥10≤20 Chrysotile
MM-33	G, 8	J11WM7	East Mezzanine, Room 211	MM - wall board, white, with steel sheet	4/25/06	<1
MM-34	B, 3	J11WM1	First Floor, SW, Women's Change Room	MM - wall board, tan, fibrous	4/25/06	<1
MM-35	B, 2	J11WL7	First Floor, SW, Women's Change Room	MM - ceiling tile, 2X4', textured	4/25/06	<1
MM-36	H, 9	J11WK9	East wall, nook,	MM - wall board, mud, tape	4/25/06	<1
MM-37	E, 10	J11WL0	Radioactive material storage area in middle of the High Bay	MM - floor tile/ mastic, beige, 12X12"	4/25/06	<1
MM-38	A, 10	J11WL1	Maintenance shop office	MM - floor tile/ mastic, beige, 9X9," tan	4/25/06	≥10≤20 Chrysotile
MM-39	A, 4	J11WL2	Janitor's room	MM - floor tile/ mastic, beige, 12X12, " tan	4/25/06	<1
MM-40	A, 4	J11WL3	Janitor's room	MM - wall board, mud, tape	4/25/06	<1
MM-41	G, 2	J11WK4	Step Cut Lathe area in SE	MM - flooring, no slip, gray, painted on with grit, deteriorating	4/25/06	<1
MM-42	G, 1	J11WK5	Lab in SE	MM - floor tile/ mastic, beige, 12X12, " tan	4/25/06	<1
MM-43	G, 1	J11WK6	Hallway near lab in SE	MM - wall board, mud, tape, peach	4/25/06	<1
MM-44	F, 1	J11WK7	Change room in SE	MM - floor tile/ mastic, beige, 12X12, " tan	4/25/06	<1
MM-	F, 1	J11WK8	Change room in SE	MM - wall board, mud, tape, white	4/25/06	<1

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
45						
MM-46	A, 15	J12483	NW Office	MM - cove base, black with black mastic with white lockdown paint	5/3/06	<1
MM-47	A, 15	J12484	NW Office	MM - wall board and mud and tape with white lockdown paint	5/3/06	<1
MM-48	A, 14	J12485	NW Office	MM - floor sheeting with yellow thin mastic with white lockdown paint	5/3/06	<1
MM-49	A, 14	J12486	North Office in NW Office	MM - floor tile, patch-12"X12" with white lockdown paint	5/3/06	>1≤3 Chrysotile
MM-50	A, 14	J12487	North Office in NW Office	MM - floor tile- 12"X12" and thin, yellow mastic with white lockdown paint	5/3/06	>1≤3 Chrysotile
MM-51	B, 10	J12489	Maintenance Office	MM - wall board	5/3/06	<1
MM-52	B, 10	J12490	Maintenance Office	MM - cove base, black, 4 "	5/3/06	<1
MM-53	B, 10	J12491	Maintenance Office	MM - floor tile, tan-gray mottled, 12X12"	5/3/06	>1≤3 Chrysotile
MM-54	A, 2	J12492	Second Floor Lunch Room	MM - acoustical fiber board, gray, with holes with cloth surface finish	5/3/06	<1
MM-55	A, 4	J124D4	Small "L" north of second floor lunch room	MM - floor tile, 9X9"	5/3/06	>1≤3 Chrysotile
MM-56	B, 5	J124D8	Evacuation area under stairway	MM - floor tile, 12X12, tan	5/3/06	>1≤3 Chrysotile
MM-57	NA	J12NP8	Roof walkway	MM - Tar, black, fibrous roofing material	6/19/06	<1
MM-58	NA	J12NP9	Roof penthouse	MM - Tar, black, fibrous roofing material	6/19/06	<1
MM-59	NA	J12NR0	Roof vents	MM - Patch repair coating, gray, patch for roofing material	6/19/06	≥10≤20 Chrysotile
MM-	NA	J12NR1	Roof vents	MM - Flashing, fibrous tar material	6/19/06	>5≤10%

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
60						Chrysotile
MM-61	NA	J12NR2	Roof vents	MM – Tar, fibrous roofing material with yellow fibers underneath	6/19/06	<1
MM-62	NA	J12R38	Grit Blaster Gasket	MM – Gray cloth over rubber	7/6/06	<1
HOMOGENOUS THERMAL SYSTEM INSULATION (TSI)						
TSI-1	B, 15	J117K2	High Bay- NW Center Entrance	TSI - ~3' high sanitary water; large diameter, vertical, fabric wrapped, yellow fibrous	2/13/06	<1
TSI-1	NA	J117J1	Overhead on Stairs from the West Mezzanine	TSI - ~12' high, canvas cloth wrap, yellow, fibrous	2/13/06	<1
TSI-1	H, 11	J11848	Non-Destruct Test Area	TSI – NS, straight, yellow fiber, canvas cover	3/7/06	<1
TSI-1	H, 11	J11851	Non-Destruct Test Area	TSI – EW, straight, soft, yellow, fibrous, white mat	3/7/06	<1
TSI-1	G, 11	J11HV8	Non-Destruct Test Area	TSI - NS to vertical, straight, yellow, fibrous	3/7/06	<1
TSI-2	B, 15	J117K3	High Bay- NW Center Entrance	TSI - ~4' high, upper vertical sanitary water, foil wrapped, white fabric cover, yellow-brown, fibrous	2/13/06	<1
TSI-2	B, 15	J117H5	High Bay- NW Center Entrance	TSI - ~4' high, vertical sanitary water, foil wrapped, white fabric, yellow-brown, fibrous	2/13/06	<1
TSI-2	B, 15	J117H6	High Bay- NW Center Entrance	TSI - ~4' high sanitary water, foil wrapped, white fabric cover, yellow-brown fibrous	2/13/06	<1
TSI-2	B, 12	J117H8	High Bay- on N. Stairs to West Mezzanine	TSI - ~12' high, foil wrap, white canvas, yellow-brown, fibrous	2/13/06	<1
TSI-2		J117J0	High Bay- on N. Stairs to West Mezzanine	TSI- ~12' high, foil wrap, white canvas cover, yellow-brown, fibrous	2/13/06	<1
TSI-3	B, 12	J117H7	High Bay- on N. Stairs to West Mezzanine	TSI - ~12' high, white fabric, white chalky gray-white inner	2/13/06	<1
TSI-4	NA	J117H9	High Bay- on N. Stairs to West Mezzanine	TSI - ~ 12' high, white fabric, white chalky gray inner	2/13/06	<1
TSI-5	NA	J117J2	North wall by Autoradiograph	TSI - foil wrap, fibrous, yellow-brown	2/13/06	<1

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
			behind photo developer			
TSI-6	NA	J117J3	North wall by Autoradiograph behind photo developer	TSI - canvas cover, chalky, fibrous, elbow	2/13/06	<1
TSI-7	NA	J117J4	North wall by Autoradiograph behind photo developer	TSI - canvas cover, chalky, fibrous, yellowish	2/13/06	<1
TSI-8	G, 15	J117J5	NE Entrance on Stairs	TSI - vertical pipe, canvas cover, white chalky fibrous material	2/13/06	>5≤10% Chrysotile
TSI-8	G, 15	J117J6	NE Entrance on Stairs	TSI - vertical pipe, canvas cover, white chalky fibrous material	2/13/06	>5≤10% Chrysotile
TSI-8	G, 15	J117J7	NE Entrance on Stairs	TSI - vertical pipe, canvas cover, white chalky fibrous material	2/13/06	>5≤10% Chrysotile
TSI-9	H, 14	J117J8	Extreme Northeast Fire Room	TSI - lower pipe, foil , yellow brown	2/13/06	<1
TSI-10	H, 14	J117J9	Extreme Northeast Fire Room	TSI - upper pipe, foil, white chalky	2/13/06	<1
TSI-11	B, 12	J11833	W Side of High Bay	TSI - ~12' high, over steam cleaner shed, vertical to EW, elbow hard, chalky, ~4", white canvas cover, exterior rust staining on canvas	3/1/06	<1
TSI-12	B, 12	J11834	W Side of High Bay	TSI - ~12' high, horizontal, small diameter, straight run, white canvas, soft fibrous yellow	3/1/06	<1
TSI-13	B, 12	J11835	W Side of High Bay	TSI - ~14' high, medium diameter, horizontal, hard, orange-dark tan cover on exterior, straight, interior white chalky	3/1/06	<1
TSI-14	B, 12	J11836	E Side Instrument Shop	TSI - ~12' high, elbow, small diameter, white chalky interior	3/1/06	<1
TSI-14	H, 11	J11840	High Bay East Side Non-Destruct Test Area, E. wall	TSI - elbow, NS, white, chalky, canvas cover	3/7/06	<1
TSI-14	H, 11	J11841	Non-Destruct Test Area, E wall	TSI - NS, straight, white, chalky, canvas cover	3/7/06	<1
TSI-14	G, 11	J11852	Non-Destruct Test Area	TSI - NS to vertical, elbow, white, hard, chalky	3/7/06	<1
TSI-15	B, 12	J11837	E Side Instrument Shop	TSI - ~12' high, NS, straight, horizontal, yellow, fibrous, white canvas covered with foil	3/1/06	<1

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
TSI-15	B, 12	J11838	E Side Instrument Shop	TSI - ~12' high, NS, medium diameter, white exterior canvas and foil, straight, horizontal, yellow, fibrous inside	3/1/06	<1
TSI-15	C, 9	J11839	S Side center of High Bay, adjacent to Chem Bay	TSI - ~15' high, NS, straight yellow fibers, white canvas exterior with foil	3/1/06	<1
TSI-16	H, 11	J11842	Non-Destruct Test Area, E wall	TSI - NS, straight, mottled tan and white exterior, gray chalky	3/7/06	1-5% amosite 1-5% Chrysotile
TSI-16	H, 11	J11845	Non-Destruct Test Area, E wall	TSI - NS, straight, cold process water, gray, chalky	3/7/06	<1
TSI-16	H, 11	J11846	Non-Destruct Test Area, E wall	TSI - vertical to valve, elbow, gray, chalky	3/7/06	<1
TSI-16	H, 11	J11847	Non-Destruct Test Area, E wall	TSI - vertical, elbow, medium diameter, gray, chalky	3/7/06	<1
TSI-16	H, 11	J11849	Non-Destruct Test Area, E wall	TSI - elbow, gray, chalky, (NS-EW)	3/7/06	<1
TSI-16	H, 11	J11850	Non-Destruct Test Area	TSI - elbow, gray, chalky, EW and vertical	3/7/06	<1
TSI-17	H, 11	J11843	Non-Destruct Test Area, E. wall	TSI - NS, straight, hot sanitary water, yellow, fibrous	3/7/06	<1
TSI-17	H, 11	J11844	Non-Destruct Test Area, E wall	TSI - NS, straight, cold process water, yellow, fibrous	3/7/06	<1
TSI-18	D, 14	J11HX9	North Mezzanine, Room 2	TSI - insulation over ceiling duct, yellow	3/21/06	<1
TSI-19	H, 9	J11HY7	E side Room 11, Room under stairs	TSI - wall and pipe insulation, fibrous, pale yellow	3/21/06	<1
TSI-20	A, 3	J11LB2	Men's SW Change room	TSI - hard cold water, white canvas cover, white chalky, foil covered	3/23/06	<1
TSI-20	A, 2	J11LB6	Men's SW Change room	TSI - hot water, white chalky, canvas- foil covered, larger diameter	3/23/06	<1
TSI-21	A, 3	J11LB3	Men's SW Change room	TSI - soft, hot water, narrower than J11LB2	3/23/06	<1

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
				pipe, yellow-brown, fibrous, white canvas cover		
TSI-22	A, 3	J11LB4	Men's SW Change room	TSI - hot water, white chalky, foil, canvas cover	3/23/06	<1
TSI-23	A, 2	J11LB5	Men's SW Change room	TSI - cold water, fibrous yellow, canvas covered	3/23/06	<1
TSI-23	A, 2	J11LB7	Men's SW Change room	TSI - cold, yellow, fibrous, canvas covered, smaller diameter	3/23/06	<1
TSI-24	F, 12	J11LD1	Autoclave pit	TSI - NS ~5" pipe, yellow, fibrous, foil wrap	3/23/06	<1
TSI-25	F, 12	J11LD2	Autoclave pit	TSI - vertical mat over white fluff on copper pipe ~3"OD	3/23/06	<1
TSI-26	F, 12	J11LD3	Autoclave pit	TSI - NS ~4" pipe near floor, painted over, fibrous, yellow, canvas, foil	3/23/06	<1
TSI-27	F, 12	J11LD4	Autoclave pit	TSI - ~3 1/2" mat over copper tube attached to autoclave, with white fluff	3/23/06	<1
TSI-28	F, 12	J11LD5	Autoclave pit	TSI - mat on autoclave with white fluff insulation, fabric exterior	3/23/06	<1
TSI-29	F, 12	J11LD6	Autoclave pit	TSI - ~20" NS duct, Al covered vent at portal; height ~6', insulation, yellow, fibrous, covered by white painted canvas; white powder	3/23/06	>1≤3 Chrysotile >5≤10 Amosite >6≤13 total
TSI-30	F, 12	J11LD7	Autoclave pit	TSI - wire, fibrous, light gray insulation, woven on autoclave bottom	3/23/06	>30≤40 Chrysotile
TSI-30	F, 11	J11LD8	Autoclave pit	TSI - wire, insulation, light gray, woven	3/23/06	>20≤30 Chrysotile
TSI-31	F, 11	J11LD9	Autoclave pit	TSI - woven sheath over wires, silver colored	3/23/06	<1
TSI-32	E, 13	J11IF0	Heater core for billet heater, loose on the floor in storage.	TSI - electrode insulation, white, fibrous- wool like	3/23/06	<1

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
TSI-33	D, 14	J11WN3	High Bay, north end	TSI - small diameter pipe, overhead	4/25/06	<1
TSI-34	D, 14	J11WL4	High Bay, north end	TSI - ~20 ft high, elbow	4/25/06	<1
TSI-34	D, 14	J11WL5	High Bay, north end	TSI - ~20 ft high, elbow	4/25/06	<1
TSI-35	A, 3	J124D5	First Floor Men's change room, above ceiling above showers	TSI - elbow	5/3/06	<1
TSI-35	A, 3	J124D7	First Floor Men's change room, above ceiling above showers	TSI - elbow	5/3/06	<1
TSI-36	A, 3	J124D6	First Floor Men's change room, above ceiling above showers	TSI - straight section	5/3/06	<1
TSI-37	NA	J124D9	Roof piping elbow	TSI - White chalky insulation material on elbow	5/24/06	<1
TSI-37	NA	J124F0	Roof piping elbow	TSI - White chalky insulation material on elbow	5/24/06	Trace
TSI-37	NA	J124F4	Roof piping elbow	TSI - White/grey chalky on yellow fibrous mat insulation material on elbow	5/24/06	<1
TSI-38	NA	J124F1	Roof piping elbow	TSI - Yellow fibrous, white chalky, and black fabric insulation material on elbow	5/24/06	>5≤10 Chrysotile
TSI-38	NA	J124F2	Roof piping elbow	TSI - White chalky, fabric, and pale yellow fibrous insulation material on elbow	5/24/06	>5≤10 Chrysotile
TSI-38	NA	J124F3	Roof piping elbow	TSI - White chalky, fabric, and pale yellow fibrous insulation material on elbow	5/24/06	>5≤10 Chrysotile
TSI-39	NA	J12R35	Grit Blaster Insulation	TSI - White chalky fibrous material	7/6/06	<1
TSI-40	NA	J12R36	Grit Blaster Insulation	TSI - Black tar-like, fibrous material with silver coating	7/6/06	>5≤10 Chrysotile
TSI-40	NA	J12R37	Grit Blaster Insulation	TSI - Black tar-like, fibrous material with silver coating	7/6/06	>5≤10 Chrysotile
TSI-41	F, 2	J12WV5	Beta Heat Treat	TSI - White cotton-like outer layer on the Main Furnace Unit.	7/11/06	<1

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
TSI-41	F, 2	J12WV6	Beta Heat Treat	TSI - White chalky inner layer on the Main Furnace Unit.	7/11/06	<1
TSI-41	F, 2	J12WV7	Beta Heat Treat	TSI - White chalky brick-like layer on the Main Furnace Unit.	7/11/06	<1
TSI-42	F, 2	J12WV8	Beta Heat Treat	TSI - White chalky fibrous insulation on pink painted smaller furnace.	7/11/06	>5≤10 Chrysotile >20≤30 Amosite
TSI-43	F, 2	J12WV9	Beta Heat Treat	TSI - Tan soft fibrous material on the round carousel lifts.	7/11/06	<1
HOMOGENOUS SURFACING MATERIAL (SM)						
SM-1	B, 2	J11LB8	Men's SW Change room	SM - inside wall, lime plaster with sand over steel mesh, degraded and water damaged wall	3/23/06	<1
SM-1	B, 2	J11LB9	Men's SW Change room	SM - inside wall top coat, gypsum thin plaster, white	3/23/06	<1
SM-1	B, 1	J11LC0	Men's SW Change room	SM - wall, top coat	3/23/06	<1
SM-1	B, 1	J11LC1	Men's SW Change room	SM - wall, salt and pepper lime plaster with sand	3/23/06	<1
SM-1	B, 3	J11WL8	First Floor, SW, Women's Change Room	SM - wall top coat, gypsum plaster, white	4/25/06	<1
SM-1	B, 3	J11WL9	First Floor, SW, Women's Change Room	SM - wall top coat, gypsum plaster, white	4/25/06	<1
SM-1	B, 3	J11WM0	First Floor, SW, Women's Change Room	SM - wall top coat, gypsum plaster, white	4/25/06	<1
SM-2	G,14	J11WJ6	Room 201	SM - Plaster, gray-black crumbly	4/10/06	<1
SM-2	G,14	J11WJ6	Room 201	SM - Skim Coat, gray, crumbly	4/10/06	<1
SM-2	G,14	J11WM9	East Mezzanine, Room 202	SM - wall top coat, gypsum plaster, white	4/25/06	<1
SM-2	H, 13	J11WN1	East Mezzanine, north end of hall	SM - wall top coat, gypsum plaster, white	4/25/06	<1
SM-2	H, 10	J11WN2	East Mezzanine, Room 209	SM - wall top coat, gypsum plaster, white	4/25/06	<1
SM-2	H, 3	J11WM4	East Mezzanine, Room 216	SM - wall top coat, gypsum plaster, white	4/25/06	<1

LIMITED ASBESTOS INSPECTION SAMPLING SUMMARY
333 BUILDING

HA #	333 Grid	Sample Number	Location	Material/Description	Sample Date	Percent Asbestos
SM-2	G, 5	J11WM6	East Mezzanine, Room 213	SM - wall top coat, gypsum plaster, white	4/25/06	<1
SM-2	G, 9	J11WM8	East Mezzanine, Room 210	SM - wall top coat, gypsum plaster, white	4/25/06	<1
SM-2	G, 3	J11WM2	East Mezzanine, Room 217	SM - wall top coat, gypsum plaster, white	4/25/06	<1
SM-2	H, 2	J11WM3	East Mezzanine, south hallway	SM - wall top coat, gypsum plaster, white	4/25/06	<1



Building 333 - As it appeared in 1987.



Building 333 Slab after Demolition