

FACILITY STATUS CHANGE FORM

Date Submitted: Mar 10, 2009 Originator: Bob Cathel Phone: (509) 845-6146	Area: 100-N Facility ID: 1712-N Action Memorandum: 100-N Ancillary Facilities	Control #: D4-100N-0015
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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 isolation was performed on 1712-N prior to beginning facility deactivation.

Decontamination and Decommissioning: The following hazardous materials were removed prior to facility demolition: batteries, light bulbs, oils, grease, asbestos-containing material, mercury, refrigerant and polychlorinated biphenyls. Hazardous material removal and waste disposition was performed in accordance with the *Removal Action Work Plan for 100-N Area Ancillary Facilities*, DOE/RL-2002-70.

Demolition: Demolition of the above-grade structures was complete October 2004. Below-grade demolition was complete in June 2008. The building debris was disposed at the Environmental Restoration Disposal Facility. The contaminants of concern during demolition were radionuclides, metals, chemicals and asbestos. One anomaly was encountered during deactivation and demolition of 1712-N: a radioactive mud dauber wasp nest was discovered and handled in accordance with radiological control procedures.

Description of Deferral (as applicable):

Not applicable.

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Section 2: Underlying Soil Status

EDMC

- 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 1712-N building and concrete pad were demolished and removed. A minimal amount of soil was removed along with the concrete pad. The site has been regraded with material from the 100-N borrow pit.

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

No waste sites are present.

Section 3: List of Attachments

1. Facility Information - Building History and Characterization
2. Post-Demolition GPERS Radiological Survey
3. Pre- and Post-Demolition GPS Surveys
4. Pre- and Post-Demolition Photographs

FACILITY STATUS CHANGE FORM

Mark French		
DOE-RL		Date
John Price	<i>John B. Price</i>	<i>4-14-2009</i>
Lead Regulator	<input type="checkbox"/> EPA <input checked="" type="checkbox"/> Ecology	Date

DISTRIBUTION:

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Administrative Record, H6-08

SIS Coordinator: Sheri Harshberger, H4-22
D4 EPL: Robert Cathel, X5-50
Sample Design/Cleanup Verification: Megan Proctor, H4-22
FR Engineering: Rich Carlson, N3-30
FR EPL: Dan Saueressig, N3-30

Attachment 1: Facility Information (5 pages)

100-N D4 Project Facility Completion Form

Introduction

This document provides information regarding the 1712-N facility history, characterization and final status at the completion of deactivation, decontamination, decommissioning and demolition (D4) activities.

Site Information

The 1712-N Insulation Shop was used as an insulation fabrication shop at 100-N. The 1712-N facility was constructed in 1962 as part of the original N-Reactor complex. It was a rectangular, two-story, steel framed building with a reinforced poured concrete foundation, corrugated metal exterior wall surface, and a corrugated metal gable roof. The second story was enclosed on one-half, and open from the first floor to the roof on the second story in the second half. Interior walls were 5.1 cm by 10.2 cm (2 in by 4 in) studs with cement asbestos or gypsum wallboard. A small wood and corrugated sheet metal lean-to type storage shed was attached to the northwest corner of 1712-N. An asbestos dust collector was located on a concrete pad at the northeast corner of 1712-N. The building was 20 ft x 40 ft (800 ft²).

The 1712-N Insulation Shop was demolished to concrete slab on grade in October 2004. The slab was removed in June 2008.

No fires, releases, or spills were identified for the 1712-N facility.

Facility description information from the *Removal Action Work Plan for 100-N Area Ancillary Facilities*, DOE/RL-2002-70 (DOE-RL 2006).

Radiological Scoping and Industrial Hygiene Baseline Surveys

The 1712-N facility above grade demolition was performed under the ERC contract. A radiological scoping survey was conducted prior to building demolition and is recorded in RSR-100SMT-04-0054. An Industrial Hygiene Baseline survey was performed prior to pad removal and is documented in CCN 128066. See Table 1 for a summary of radiological and industrial hygiene scoping surveys.

Table 1. Summary of Scoping Surveys 1712-N

Type	Quantity	Method Detection Limits	Results
Radiological Scoping Surveys	1 Survey – 14 sample points	Alpha – 20 removable / 100 fixed (dpm/100cm ²) Beta-gamma – 1,000 removable / 5,000 fixed (dpm/100cm ²)	All results were below method detection limits.
Industrial Hygiene Scoping Surveys	1 Survey	N/A	No evidence of spills or any anomalies were noted.

Post Demolition Radiological Surveys

The clearance radiological surveys were performed on June 14, 2008 and documented in RSR-100N-08-1065. All areas were direct surveyed. All surveyed areas were at less than detectable levels. A post-demolition Global Positioning Environmental Radiological Survey (GPERS) was conducted on the 1712-N facility as a final survey of this site on July 8, 2008. The 1712-N facility was surveyed along with the 1705-N complex, 1714-N complex, and 105-NB. During the survey, 10858 data points were measured and no data point was greater than 2 times the average background of 1462 counts per minute. A copy of the survey map is in Attachment 2.

Facility & Waste Characterization Sampling

Samples were removed from the facility to facilitate safe demolition and proper disposal in accordance with disposal facility waste acceptance criteria.

Under the ERC contract, a certified asbestos inspection was conducted on June 17, 2004. Several items were identified as presumed asbestos containing materials (PACM) and handled as such. These PACM included insulated steam and water pipes, steam line valve gaskets, dust collection equipment and ducts, transite wall panels, electrical panels, and insulated wires. Since these items were assumed to contain asbestos, they were not sampled. Eighteen asbestos samples were collected of various items from the inside or outside of 1712-N. Items sampled for asbestos included 16'' wide rolls of attic and wall insulations, sheet rock and mud compound, steam heat unit gasket and gasket mastic, bituminous concrete joint compound, gray window putty, black foam cushion material, and black foam sealant. Two sample results were positive for asbestos, a black bituminous concrete joint compound and a black foam sealant. A single sample containing aliquots of various materials were composited and sent to the lab for Gamma Energy Analysis, Gross Alpha, and Gross Beta analysis.

See Table 2 for a summary of asbestos samples collected and Table 3 for a summary of characterization samples collected.

Table 2. Summary of Asbestos Samples 1712-N Facility

HEIS Number	Date Sampled	Location	Results (Percent Asbestos)
J01LD4	16-Jun-04	South wall, eastern most window, upper level of building	None Detected
J01LD5	16-Jun-04	South wall, eastern most window	None Detected
J01LD6	16-Jun-04	South wall, western most window	None Detected
J01LD7	16-Jun-04	Ceiling, upper level of building	None Detected
J01LD8	16-Jun-04	Ceiling, upper level of building	None Detected
J01LD9	16-Jun-04	Ceiling, upper level of building	None Detected
J01LF2	16-Jun-04	Ceiling, upper level of building	None Detected
J01LF3	16-Jun-04	Ceiling, upper level of building	None Detected

100-N D4 Project Facility Completion Form

HEIS Number	Date Sampled	Location	Results (Percent Asbestos)
J01LF4	16-Jun-04	Between wallboard, west wall of east room, lower level of building	None Detected
J01LF5	16-Jun-04	Interior wall of east room	None Detected
J01LF6	16-Jun-04	Interior wall of east room	None Detected
J01LF7	16-Jun-04	Interior wall of east room	None Detected
J01LF8	16-Jun-04	Floor in west room of building	1% – 2% Chrysotile
J01LF9	16-Jun-04	Floor in east room of building	None Detected
J01LH0	16-Jun-04	Floor in east room of building	None Detected
J01LH1	16-Jun-04	Southwest corner of east room near ceiling (on steam heat unit)	None Detected
J01MD8	29-Jun-04	East wall (on a pole)	None Detected
J01MD9	29-Jun-04	Southwest corner of west room	5% – 15% Chrysotile

Table 3. Summary of Characterization Samples 1705-N Complex

HEIS Number	Date Sampled	Location	Analysis	Results
J01LF0	16-Jun-2004	Various	Radiological	Gross Alpha – 1.08 pCi/g Gross Beta – 2.04 pCi/g Potassium 40 – 0.872 pCi/g Radium 226 – 0.069 pCi/g Thorium 228 – 0.065 pCi/g
J10WC2	29-Dec-2005	1705-N, Room 27	TCLP Metals	Antimony – < 24.8 µg/L Arsenic – < 35.8 µg/L Barium – 162 µg/L Beryllium – 6.1 µg/L Cadmium – 1470 µg/L Chromium – 35.0 µg/L Lead – 850 µg/L Mercury – 34.1 µg/L Nickel – 84.0 µg/L Selenium – < 42.1 µg/L Silver – 9.3 µg/L Thallium – < 49.6 µg/L Vanadium – < 3.9 µg/L

100-N D4 Project Facility Completion Form

Demolition

The 1712-N facility was demolished. The foundation pad removal was completed in June 2008. The demolition material was loaded into roll-off containers and sent to the Environmental Restoration Disposal Facility (ERDF).

Civil Survey Information

A pre-demolition Global Positioning Satellite (GPS) survey of the building corners was conducted December 18, 2006. A post demolition GPS survey of the old building site was conducted August 2008. Both surveys are included in Attachment 3.

Anomalies

One anomaly was encountered during deactivation and demolition of 1712-N. A radioactive mud dauber wasp nest was discovered and documented in RL-BHI-DND-2004-0010 and was handled in accordance with radiological control procedures.

Final Building Status

The 1712-N facility was demolished to the concrete pad. After demolition was completed, the building debris was stockpiled on the concrete pad, loaded out and disposed at ERDF. All traces of the 1712-N concrete pads were removed in 2008. A minimal amount of soil was removed along with the concrete pads. Backfill material from 100-N Borrow Pit was brought in to regrade the site.

Table 4. Contaminants of Concern for Facility Demolition

Contaminant of Concern	Determination of no impact to the soil
Radionuclides	A Global Positioning Environmental Radiological Survey (GPERS) conducted on the 1712-N facility as a final survey of this site for gamma contamination found that all sampling points were less than 2 times the average background of 1462 counts per minute.
Chemicals	All hazardous chemicals were removed prior to demolition. In addition, visual examination for stained soil prior to backfill was conducted to ensure no legacy or newly discovered staining was identified.
Metals	All hazardous materials were removed prior to above-grade demolition. Prior to below-grade demolition, load-out of waste was performed.
Asbestos	All asbestos was removed prior to above-grade demolition.

100-N D4 Project Facility Completion Form

References

CCN 128066, *IH Baseline for 11N 13N, 1712N, 1714N, 1714NA, 1714NB*, Strong, Ilene, June 2006, Washington Closure Hanford, LLC, Richland, Washington

DOE-RL, 2006, *Removal Action Work Plan for 100-N Area Ancillary Facilities*, DOE/RL-2002-70, Rev. 2, U.S. Department of Energy, Richland Operations Office, Richland Washington

EL-1516-3, *Miscellaneous Sampling, pp 22-33, 35-36, February 2005*, Bechtel Hanford Inc., Richland Washington

RL-BHI-DND-2004-0010, *Occurrence Report, Contaminated Mud Dauber Wasp Nest Discovered at 1712-N Insulation Shop Demolition Work Site*, September 2005, Bechtel Hanford Inc., Richland, Washington

RSR-100SMT-04-0054, *ERC Radiological Survey Record*, April 2004, Bechtel Hanford Inc., Richland, Washington

RSR-100N-08-1065, *Radiological Survey Record – Work Progress, 100N Pad demo RBA Downpost*, August 2008, Washington Closure Hanford, LLC., Richland, Washington

SDG H2617, *Eberline Laboratory Final Data Package*, August 2004, Washington Closure Hanford, LLC., Richland, Washington

SDG 20041035, *WSCF Laboratory Final Data Package*, July 2004, Washington Closure Hanford, LLC., Richland, Washington

SDG 20041115, *WSCF Laboratory Final Data Package*, July 2004, Washington Closure Hanford, LLC., Richland, Washington

Attachment 2: GPERS Survey (1 page)



COPY

Legend

NETCPM

- × < 2924
- 2924 - 5000
- 5000 - 10000
- 10000 - 25000
- > 25000

Summary Statistics

Coverage File: N190,A
 Number of Data Pnts: 10858
 Type of Survey: 'Gamma'
 Max GCPM: 2346
 Avg Bkg CPM: 1462
 Survey Date: 07/08/2008
 Area Surveyed: 5052 m2
 Project File: N190
 Pdf File: ESRFRM080109C

**100N D4 Project
 1705N Slab Village
 GPERS Radiological Survey
 Gamma Track Map**

10 0 10 Meters



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 SERVICES**
 HANFORD, INC.

Survey Map Prepared By Mike Dillon, ESI

100-N D4 Project Facility Completion Form

Attachment 3: GPS Surveys (5 pages)

Survey Data Report for the 1714N & 1712N Foundations

Project : 100N-bldgs-8-06

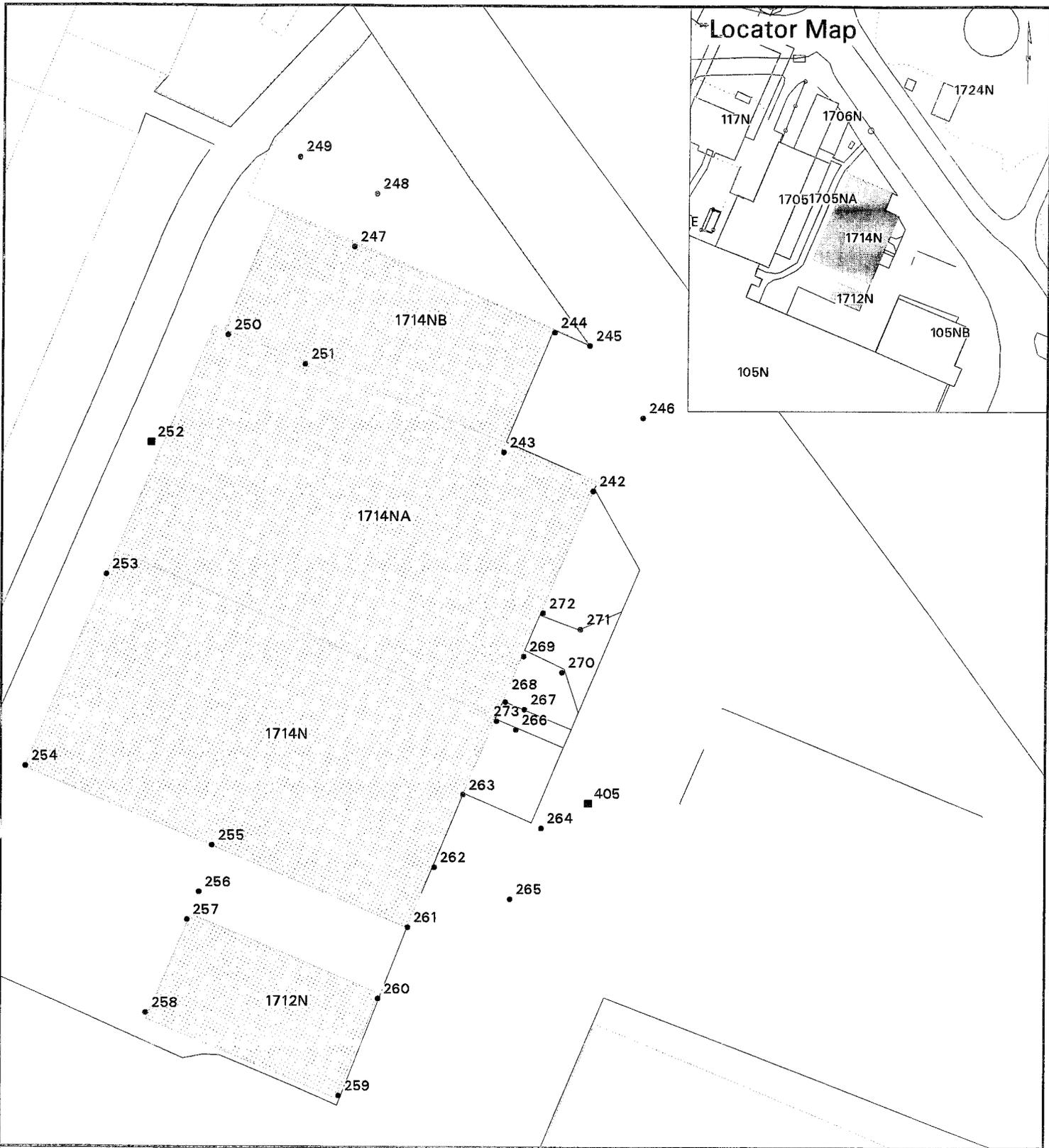
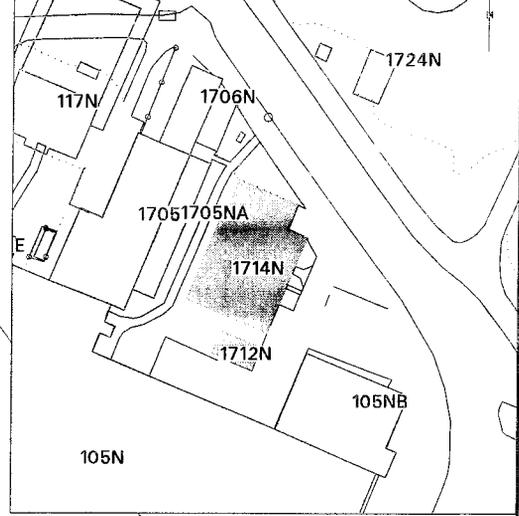
User name	maaye	Date & Time	4:11:30 PM 12/18/2006
Coordinate System	US State Plane 1983	Zone	Washington South 4602
Project Datum	NAD 1983 (Conus)		
Vertical Datum	NAD83	Geoid Model	GEOID99 (Conus)
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

Survey Project Name/Title: 1714N and 1712N Foundations
 Survey Purpose: GPS the area corners and surrounding features for the 1714N & 1712N Foundations
 Requested By: Amy Hood
 General Site Location: 100-N
 Charge Code:
 Field Surveyor: Margo Aye
 Computer Software Used: Trimble Survey Controller, and Geomatics Office V.11
 Survey Equipment Used: 5800
 Control Monuments Used:
 Survey Method: RTK
 Estimated Horizontal Precision: .002m
 Estimated Vertical Precision: .005m
 Fieldwork Start Date: 3/22/06
 Completion Date: 10/24/06
 Notes:

Name	Northing	Easting	Elevation	Feature Code	Description
242	149580.208m	571280.343m	139.616m	conc-pad-corn	
243	149582.462m	571275.091m	139.683m	conc-pad-corn	
244	149589.486m	571278.008m	139.646m	conc-pad-corn	
245	149588.726m	571280.089m	139.627m	conc-pad-corn	
246	149584.493m	571283.207m	139.564m	conc-pad-corn	
247	149594.438m	571266.198m	139.625m	conc-pad-corn	
248	149597.490m	571267.491m	139.588m	conc-pad-corn	
249	149599.620m	571262.940m	139.658m	conc-pad-corn	
250	149589.328m	571258.820m	139.626m	conc-pad-corn	
251	149587.604m	571263.327m	139.661m	conc-pad-corn	
252	149583.039m	571254.441m	139.594m	water-valve	
253	149575.266m	571251.905m	139.696m	conc-pad-corn	
255	149559.371m	571258.084m	139.690m	conc-pad-corn	
256	149556.643m	571257.309m	139.711m	conc-pad-corn	
257	149555.015m	571256.641m	139.722m	conc-pad-corn	
258	149549.543m	571254.236m	139.634m	conc-pad-corn	
259	149544.705m	571265.472m	139.603m	conc-pad-corn	
260	149550.391m	571267.811m	139.649m	conc-pad-corn	
261	149554.562m	571269.579m	139.499m	conc-pad-corn	
262	149558.087m	571271.141m	139.615m	conc-pad-corn	
263	149562.356m	571272.824m	139.669m	conc-pad-corn	
264	149560.407m	571277.359m	139.341m	conc-pad-corn	
265	149556.245m	571275.571m	139.377m	conc-pad-corn	
266	149566.166m	571275.844m	139.527m	conc-pad-corn	
267	149567.372m	571276.362m	139.521m	conc-pad-corn	
268	149567.817m	571275.240m	139.659m	conc-pad-corn	
269	149570.502m	571276.324m	139.655m	conc-pad-corn	
270	149569.569m	571278.542m	139.376m	conc-pad-corn	
271	149572.088m	571279.619m	139.415m	conc-pad-corn	
272	149573.043m	571277.448m	139.663m	conc-pad-corn	
273	149566.690m	571274.768m	139.679m	conc-pad-corn	
405	149561.854m	571280.121m	139.340m	manhole	

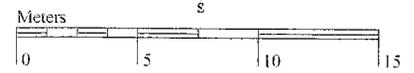
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Locator Map



-  Paved Roads and Sidewalks
-  Unpaved Roads and Trails
-  Railroad
-  Fences
-  1712N & 1714N Foundation Corner Locations Prior to Demolition
-  GPS Corner Locations for 1712N & 1714N Prior to Demolition
-  GPS Locations for Surrounding Features See Survey Report for Point Details

Pre- Demolition Survey of the 1712N & 1714N Foundation



GPS Post Demo Survey Report for 1714N, 1705N, 1706, & 105NB Foundations

Project : 1705N-Slab

User name	maaye	Date & Time	3:39:31 PM 10/7/2008
Coordinate System	US State Plane 1983	Zone	Washington South 4602
Project Datum	NAD 1983 (Conus)		
Vertical Datum	NAD83	Geoid Model	GEOID99 (Conus)
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

Survey Project Name/Title: 1705N, 1705NA, 1706N, 1712N ,1714NA, 1714NB, 105NB Slabs

Survey Purpose: Post demo surface survey

Requested By: Amy Hood

General Site Location: 100N

Charge Code:

Field Surveyor: Margo Aye

Computer Software Used: Trimble Survey Controller, and Geomatics Office V.11

Survey Equipment Used: 5800

Control Monuments Used:

Survey Method: RTK

Estimated Horizontal Precision: .020m

Estimated Vertical Precision: .050m

Fieldwork Start Date: 6/9/08

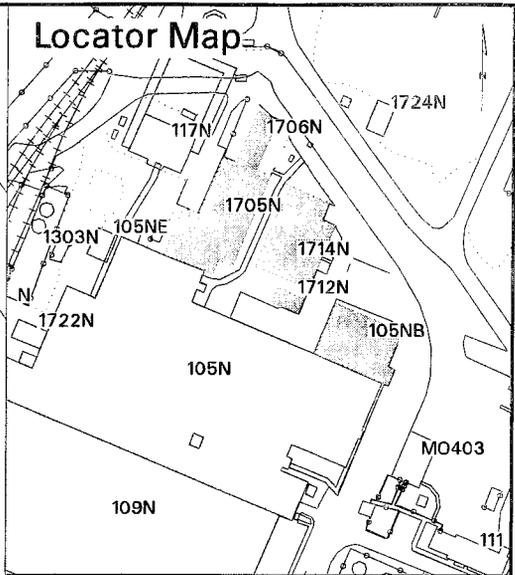
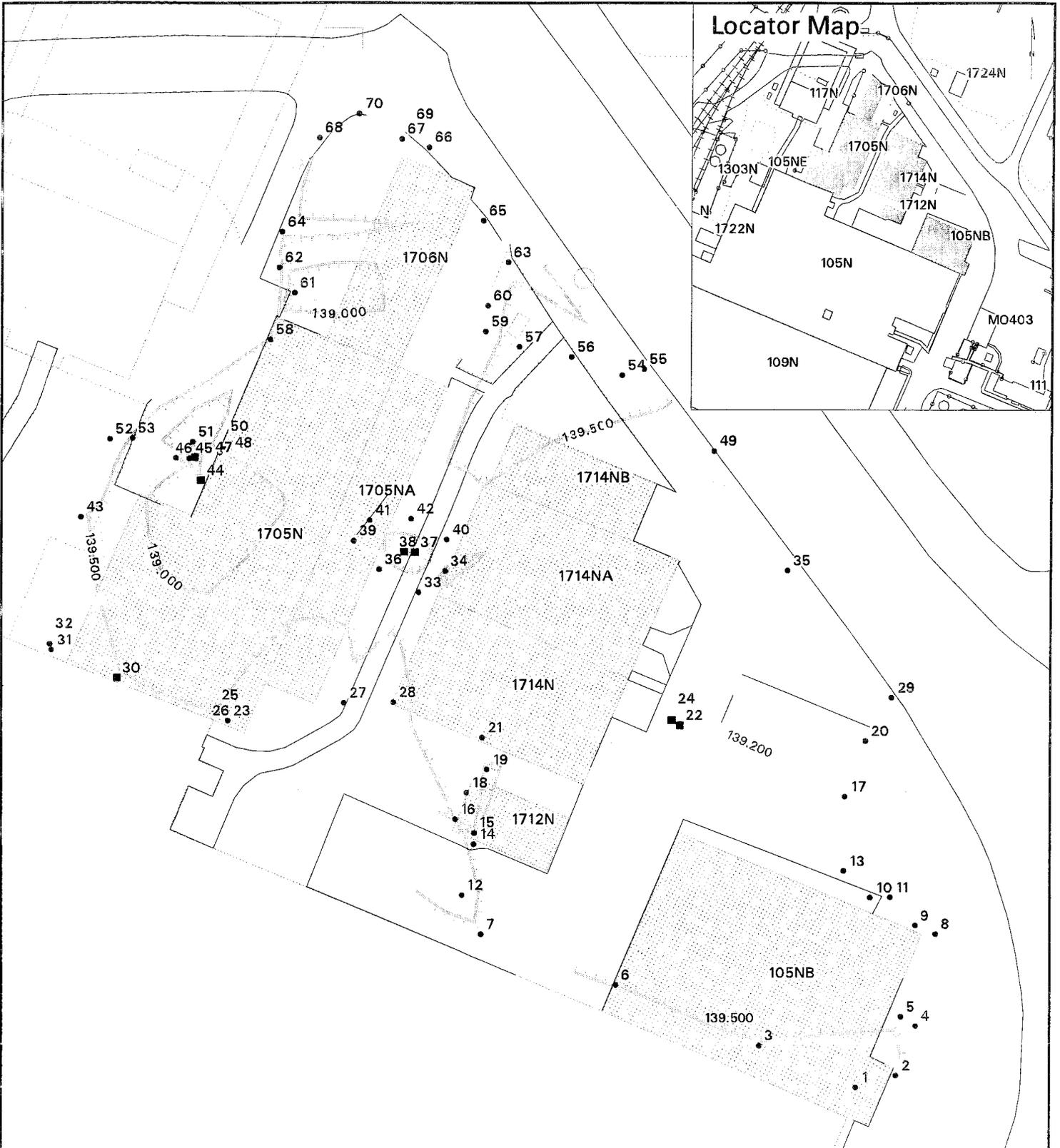
Fieldwork Completion Date: 6/9/08

Notes: Points 24 and 22 are to the edge of one manhole (not two).

Name	Northing	Easting	Elevation	Feature Code	Description
1	149519.249m	571301.148m	139.634m	post-grade	
2	149520.620m	571305.752m	139.534m	post-grade	
3	149524.132m	571289.875m	139.509m	excav-bndry-top	
4	149526.422m	571308.093m	139.409m	post-grade	
5	149527.504m	571306.343m	139.469m	post-grade	
6	149531.202m	571273.283m	139.484m	excav-bndry-top	
7	149537.083m	571257.616m	139.455m	excav-bndry-top	
8	149537.173m	571310.378m	139.257m	post-grade	
9	149538.166m	571307.970m	139.333m	post-grade	
10	149541.427m	571302.745m	139.196m	post-grade	
11	149541.470m	571305.072m	139.247m	post-grade	
12	149541.655m	571255.387m	139.599m	excav-bndry-top	
13	149544.535m	571299.675m	139.139m	post-grade	
14	149547.586m	571256.810m	139.467m	excav-bndry-top	
15	149548.889m	571256.857m	139.506m	excav-bndry-top	
16	149550.481m	571254.560m	139.498m	excav-bndry-top	
17	149553.164m	571299.797m	139.193m	post-grade	
18	149553.591m	571255.921m	139.396m	excav-bndry-top	
19	149556.306m	571258.303m	139.525m	excav-bndry-top	
20	149559.707m	571302.209m	139.253m	post-grade	
21	149560.043m	571257.753m	139.383m	excav-bndry-top	
22	149561.497m	571280.594m	139.186m	manhole-edge	
23	149562.036m	571228.077m	139.526m	excav-bndry-top	
24	149562.093m	571279.698m	139.195m	manhole-edge	
25	149562.949m	571226.692m	139.601m	pipe-end	
26	149563.009m	571226.582m	139.493m	post-grade	
27	149564.090m	571241.514m	139.578m	excav-bndry-top	
28	149564.142m	571247.298m	139.531m	excav-bndry-top	
29	149564.755m	571305.170m	139.344m	post-grade	
30	149567.023m	571215.168m	139.537m	access-hole	
31	149570.288m	571207.596m	139.751m	post-grade	
32	149570.962m	571207.444m	139.609m	post-grade	

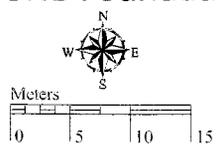
33	149577.019m	571250.249m	139.456m	edge-hole
34	149579.522m	571253.316m	139.513m	edge-hole
35	149579.589m	571293.064m	139.359m	post-grade
36	149579.701m	571245.611m	139.312m	edge-hole
37	149581.669m	571249.791m	138.533m	valve
38	149581.739m	571248.512m	138.481m	valve
39	149583.050m	571242.645m	139.413m	edge-hole
40	149583.185m	571253.494m	139.412m	edge-hole
41	149585.416m	571244.516m	139.438m	edge-hole
42	149585.599m	571249.283m	139.418m	edge-hole
43	149585.786m	571210.970m	139.558m	post-grade
44	149590.066m	571224.891m	138.529m	access-hole
45	149592.662m	571223.582m	138.311m	post-grade
46	149592.684m	571221.982m	139.281m	post-grade
47	149592.755m	571224.209m	138.451m	access-hole
48	149593.332m	571227.056m	138.633m	post-grade
49	149593.513m	571284.517m	139.425m	post-grade
50	149594.018m	571227.620m	139.321m	post-grade
51	149594.585m	571223.952m	138.514m	post-grade
52	149594.907m	571214.342m	139.676m	post-grade
53	149594.989m	571216.949m	139.470m	post-grade
54	149602.348m	571273.888m	139.560m	post-grade
55	149603.066m	571276.406m	139.548m	post-grade
56	149604.498m	571267.998m	139.708m	post-grade
57	149605.680m	571261.920m	139.666m	post-grade
58	149606.552m	571232.896m	139.497m	post-grade
59	149607.460m	571258.027m	139.377m	post-grade
60	149610.423m	571258.260m	139.377m	post-grade
61	149611.940m	571235.610m	138.680m	post-grade
62	149614.844m	571233.891m	139.638m	post-grade
63	149615.442m	571260.611m	139.443m	post-grade
64	149618.958m	571234.200m	139.578m	post-grade
65	149620.208m	571257.703m	139.443m	post-grade
66	149628.602m	571251.229m	139.444m	post-grade
67	149629.582m	571248.042m	139.018m	post-grade
68	149629.730m	571238.457m	139.478m	post-grade
69	149630.530m	571249.042m	139.397m	post-grade
70	149632.504m	571243.080m	139.101m	post-grade

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**Post Demolition Survey of
 1712N, 1714N, 1714NA, 1714NB,
 1705N, 1705NA, 1706N,
 & 105NB Foundations**

- Paved Roads and Sidewalks
- Unpaved Roads and Trails
- ++++ Railroad
- Minor Contour Lines, .10 Meters
- Major Contour Lines, .5 Meter Interval
- Incline Contour Direction Lines
-  Foundation Locations Prior to Demolition
- GPS Post Demolition Locations
- GPS Locations for Additional Features (See attached survey report for details)



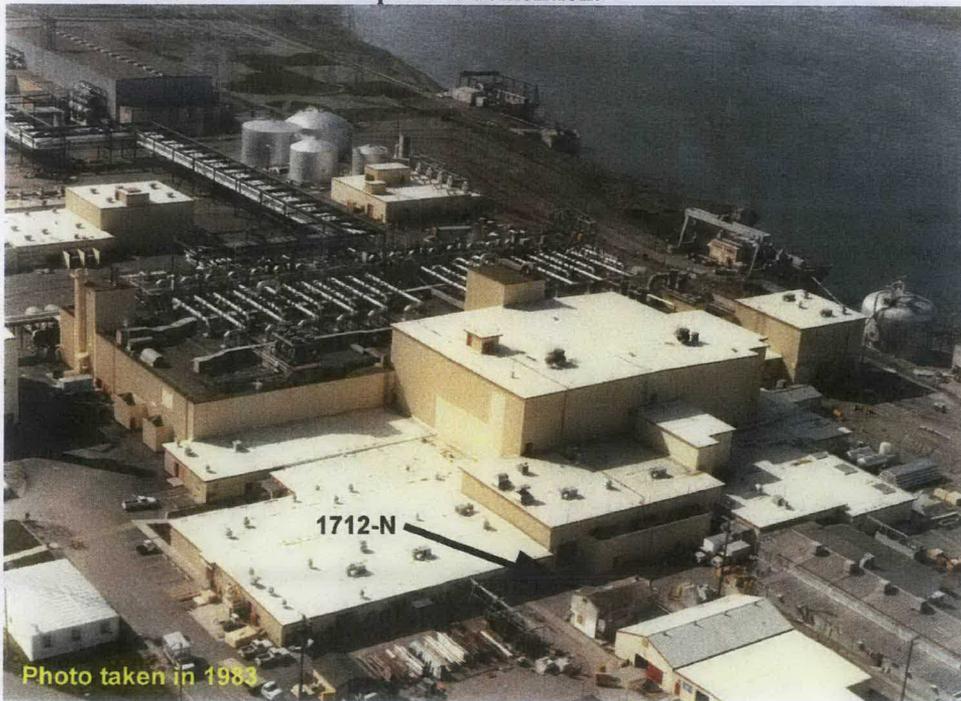
Attachment 4: Photographs (2 pages)

100-N D4 Project Facility Completion Form

Figure 1. 1712-N Building



Figure 2. The aerial photograph shows the location of the 1712-N facility prior to demolition.



100-N D4 Project Facility Completion Form

Figure 3. The aerial photograph shows the slab from the 1712-N facility prior to removal.

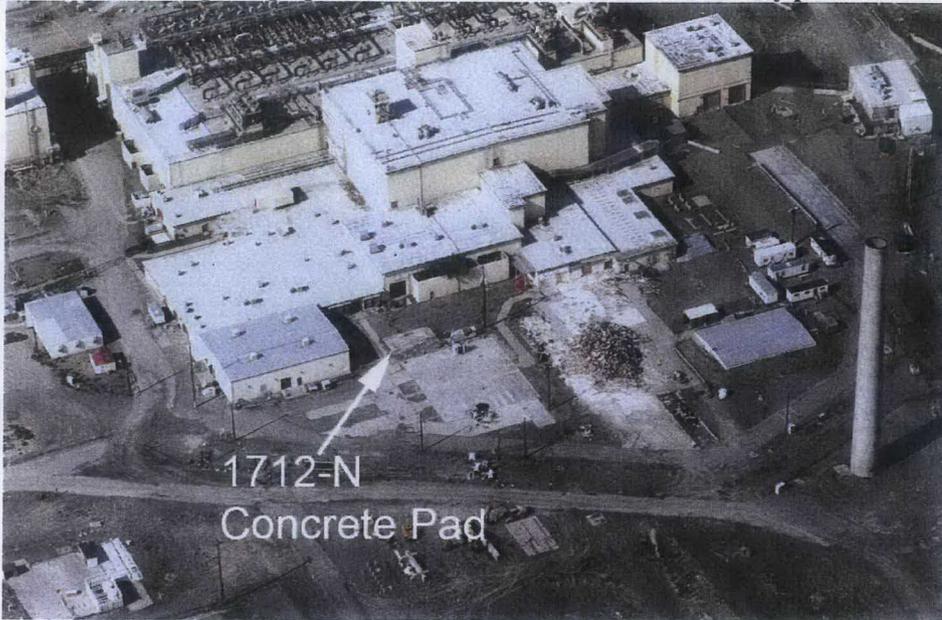


Figure 4 The aerial photograph shows the site of the 1712-N facility after demolition and slab removal.

