Control #: D4-100N-0035-1

FACILITY STATUS CHANGE FORM

Date Submitted:	Area:	Control #:
May 8, 2014	100-N	D4-100N-0035-1
Originator:	**Facility ID:**	
Clay McCurley	117N and 117NVH	
Phone:	**Action Memorandum:**	
942-8928	100-N Ancillary Facilities	

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.

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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:

NOTE: This Facility Status Change Form supercedes D4-100N-0035.

Deactivation: Utility isolation was performed at the facility prior to beginning deactivation.

Decontamination and Decommissioning: If present, 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 117N Exhaust Air Filter House and the 117NVH Valve Control House was completed in 2011. Demolition debris was loaded into roll-off containers and transported to the Environmental Restoration Disposal Facility (ERDF) where it was disposed.

Description of Deferral (as applicable):
Disposition of the southern portion of the 117N Exhaust Filter House footprint, as described in Section 2, is deferred to be performed in conjunction with disposition of Waste Information Data System (WIDS) site 100-N-66, which is the 105N/109N Reactor Building Complex.

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 117N Exhaust Air Filter House and the 117NVH Valve Control House have been demolished, excavated, and disposed at the ERDF. All WIDS sites within the excavation boundary have been removed. The excavation boundary has been documented in a post-demolition Global Positioning System (GPS) survey. Although no anomaly was encountered during demolition, multiple points of radiological contamination were detected during post-demolition Global Positioning Environmental Radiological Surveyor (GPERS) surveys. The contamination exists within the southern portion of the 117NVH facility footprint. Composites of pertinent GPERS survey maps are provided in Attachment 3 and GPS survey maps are provided in Attachment 4.

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FACILITY STATUS CHANGE FORM

Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable):
The southern-most portion of the 117N facility consists of the tunnels between the 117N and the 105N/109N facilities. These tunnels are adjacent WIDS Site 100-N-66. Contamination remains within the footprint of these tunnels and will be addressed as part of WIDS site 100-N-66. Contamination also remains within the footprint of the southern edge of the 117N building itself. This contamination will also be addressed as part of WIDS Site 100-N-66. This contamination is shown in the post-demolition GPS survey maps in Attachment 4. Therefore, the portions deferred include the footprint beneath the former tunnels between the 117N facility and 105N/109N facilities and the southern-most portion of the 117N building footprint (where GPERS results were greater than 1.5 X background). The 117N building and tunnel footprints north of the these areas do not require further dispositioning and are not deferred to WIDS Site 100-N-66.

The usage of a Sampling Determination Form is part of a process implemented by the *Removal Action Work Plan for 100-N Area Ancillary Facilities*, DOE/RL-2002-70, Revision 3. The Sampling Determination Form for the 117N Exhaust Air Filter House and the 117NVH Valve Control House (SDF-100N-012, Rev.1) represents a regulatory agreement between DOE and the Lead Regulator (Ecology), and indicates that the requirements of the Action Memorandum have been met with respect to demonstrating that cleanup criteria, MTCA Method B for Chemical Constituents and 15 mRem above Hanford Site background for Radiological Constituents, have been achieved for soils and structures remaining after facility removal. No further action will be required by the D4 organization to demonstrate that cleanup criteria have been met for the 117N facility and the 117NVH facility. However, additional actions will be performed for closeout of WIDS Site 100-N-66, which will address the radiological contamination remaining within the 117N facility footprint.

Section 3: List of Attachments

1. Facility Information
2. Photographs
3. GPERS Surveys
4. GPS Surveys
5. Sampling Determination Form for the 117-N Exhaust Air Filter House and the 117-NVH Valve Control House (SDF-100N-012, Rev. 1)

DOE-RL — Date 5/13/14

Lead Regulator ☐ EPA ☒ Ecology — Date 5/13/14

DISTRIBUTION:

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Administrative Record, H6-08 (100-NR-1 OU)
SIS Coordinator: Benjamin Cowin, H4-22
D4 EPL: Clay McCurley, L4-45
Sample Design/Cleanup Verification: Theresa Howell, H4-23
FR Engineering: Rich Carlson, H4-22
FR EPL: Dan Saueressig, X8-02

Attachment 1

Facility Information (4 pages)

Facility Information

Introduction

This document provides information regarding the history, characterization, and final status at the completion of deactivation, decontamination, decommissioning, and demolition (D4) activities of the 117N Exhaust Air Filter House and the 117NVH Valve Control House, both formerly located at the 100-N Area.

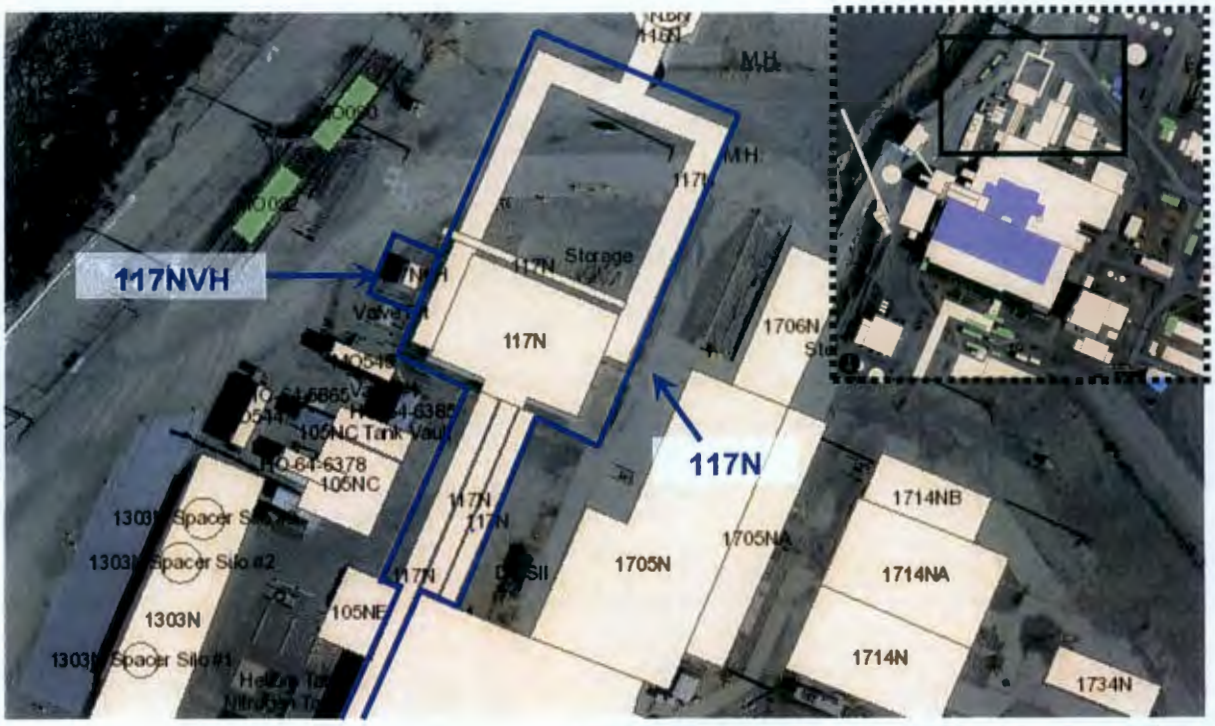
Site Information

The 117N Exhaust Air Filter House was a 4,300 square-foot reinforced-concrete structure that was constructed in 1963 as part of the original 105-N Reactor complex. It existed predominantly under ground and was comprised of three levels; a cell cover/removable roof extending slightly above ground level; an equipment level 12 feet below ground; and a cell access level 18 feet below ground. It contained sumps that were located 25 feet below ground, as well as High Efficiency Particulate Air (HEPA) filters and activated charcoal filters that were used to filter 105N Reactor exhaust from Zones 1, 2, and 3. Filtered exhaust air would be discharged to the 116N Exhaust Air Stack, located north of the 117N facility.

The 117NVH Valve Control House was a single-story pre-engineered metal building, with galvanized metal siding and roofing, that was constructed in 1963 as part of the original 105N Reactor complex. It contained instrumentation and controls for filter sprays located within the 117N Exhaust Air Filter House.

A map of these facilities is provided in Figure 1. Photographs are included in Attachment 2.

Figure 1. Location of the 117N & 117NVH Facilities



117N Exhaust Air Filter House & 117NVH Valve Control House

Radiological and Industrial Hygiene Surveys

Table 1 summarizes the industrial hygiene, radiological control, and asbestos sampling and surveying performed at the 117N Exhaust Air Filter House and the 117NVH Valve Control House.

Table 1. Summary of Samples/Surveys at the 117N & 117NVH Facilities

Type	Quantity	Method Detection Limits	Results
Radiological Scoping Surveys	2 Surveys	Beta-gamma – 1000 removable/ 5,000 fixed [a] Alpha – 20 removable/ 100 fixed [a]	Removable beta-gamma contamination was detected at the 117N facility during the 117N scoping survey. No radiological contamination was detected during the 117NVH scoping survey. Historical radiological surveys detected radiological contamination at these two facilities.
Global Positioning Environmental Radiological Surveyor (GPERS) Surveys	8 Surveys	N/A	More than 14,000 data points were taken at the 117N and 117NVH facility footprints. Data points from both the beta and gamma surveys exceeded 1.5 times the corresponding background level. It should be noted that readings that are under 1.5 times the background level are considered to be insignificant. The GPERS survey maps are included in Attachment 3.
Industrial Hygiene Surveys, Scoping and in Process	34 Samples	Wipe Samples: Trigger Limit – .1 µg/100cm^2 Bulk Samples: Trigger Limit – 1.0 µg/g	117N: Based on review of Industrial Hygiene surveys, the 117N facility did not possess any unique Industrial Hygiene hazard. The 117N facility was classified as a non-beryllium-contaminated facility. 117NVH: Based on review of Industrial Hygiene surveys, the 117NVH facility did not possess any unique Industrial Hygiene hazard. 34 samples were collected to address beryllium concerns. Two of the original 10 wipe samples exceeded the trigger limit. 20 subsequent wipe samples from the same location and did not exceed the trigger limit. None of the four bulk samples exceeded the trigger limit. The results of these samples supported the classification of the 117NVH facility as a non-beryllium-contaminated facility.

Type	Quantity	Method Detection Limits	Results
Asbestos – Thermal System Insulation and Miscellaneous Material	14 Samples	1% asbestos content	All potential asbestos-containing material (ACM) addressed below was identified during visual asbestos inspections performed by a certified asbestos inspector. 117N: Three potential ACM samples were taken. No asbestos was detected in any of these samples. 117NVH: 11 potential ACM samples were taken. Asbestos was detected above the method detection limit in two of these samples, which were taken from friable thermal system insulation coating and hard granular/fibrous exterior caulking. Although not sampled, a section of cement board was presumed to be ACM.
[a] – dpm/100 cm^2			

Civil Survey Information

A pre-demolition Global Positioning System (GPS) survey was performed at the 117N Exhaust Air Filter House and the 117NVH Valve Control House on June 6, 2006. A corresponding post-demolition GPS survey was performed on December 31, 2012. Data from the GPERS surveys (found in Attachment 3) have been superimposed on the post-demolition GPS survey map to provide a better understanding of "as left" conditions. Copies of these surveys are provided in Attachment 4.

Anomalies Discovered During Demolition

No anomaly was encountered during demolition of the 117N or 117NVH facilities.

Final Building Status and Underlying Soil

The 117NVH Valve Control House and the 117N Exhaust Air Filter House were demolished in 2011. The debris was loaded into roll-off containers and shipped to the Environmental Restoration Disposal Facility (ERDF) for disposal.

Multiple Waste Information Data System (WIDS) sites and subsites were present within, or adjacent to, the footprints of the 117N and 117NVH facilities. Table 2 describes the extent to which each nearby WIDS site or subsite was affected during demolition and excavation of the 117N and 117NVH facilities.

Various GPERS surveys were performed in and around the 117N/NVH excavation between October 2011 and March 2014. The results of these surveys have been composited, as shown in Attachment 3, to present the "as left" condition of beta and gamma contamination in the facility footprint. Contamination under the southern edge and south of the former 117N is greater than 15 feet deep and will be deferred to closeout of the 100-N-66 WIDS site. Contamination north

and east of the former 117N facility is addressed in the ***Cleanup Verification Package for the 100-N-63:2, Pipelines Between 109N, 105N, 107N, 1310N, 1322N, 1926N, and 36" Process Drain to Outfall*** (CVP-2013-00001, Rev. 0).

Table 2. Status of WIDS Sites Adjacent to the 117N and 117NVH Facilities

WIDS Site/Subsite Number	Extent of Effect During 117N & 117NVH Demolition and Excavation
100-N-89	All physical components of both of these WIDS sites were completely removed as part of the demolition and excavation of the 117N/117NVH facilities.
100-N-90	
100-N-63:2	All physical components of each of these WIDS subsites that were present within the 117N/117NVH excavation boundary were removed during demolition and/or excavation of the 117N and 117NVH facilities.
100-N-84:1	
100-N-84:2	
100-N-84:3	
100-N-84:5	
100-N-84:7	
100-N-84:8	
100-N-87	These WIDS sites/subsite were not affected by either demolition or excavation of the 117N and 117NVH facilities. Instead, they were removed in entirety during demolition and/or excavation of the 116-N Exhaust Air Stack, located immediately north of the 117N facility.
100-N-102:1	
UPR-100-N-9	
UPR-100-N-14	
100-N-66	This WIDS site was not affected by either demolition or excavation of the 117N and 117NVH facilities.

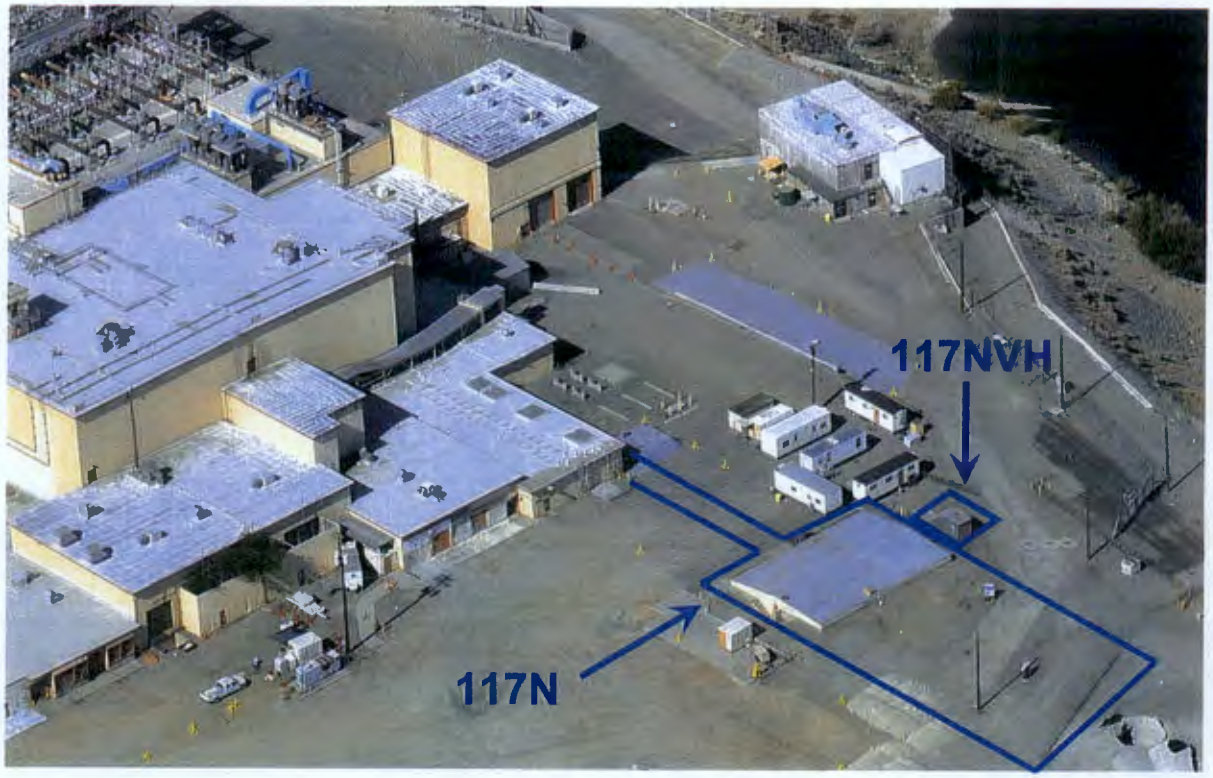
Table 3 summarizes the contaminants of concern for the demolition of the 117N and 117NVH facilities. Photographs are included in Attachment 2.

Table 3. Contaminants of Concern for Facility Demolition

Contaminant of Concern	Management Practice/Determination of No Impact to the Soil
Radiological Contamination	Demolition was performed under radiological controls. Radiological contamination was identified during multiple post-demolition GPERS surveys. The GPERS survey maps are included in Attachment 3.

Attachment 2

Photographs (4 pages)



117N & 117NVH Pre-Demolition

117N Pre-Demolition (Looking Northwest)

117NVH Pre-Demolition (Looking East)

117N Exhaust Air Filter House & 117NVH Valve Control House

117N Demolition (April 2011)

117N & 117NVH Excavation (September 2011)

117N Exhaust Air Filter House & 117NVH Valve Control House

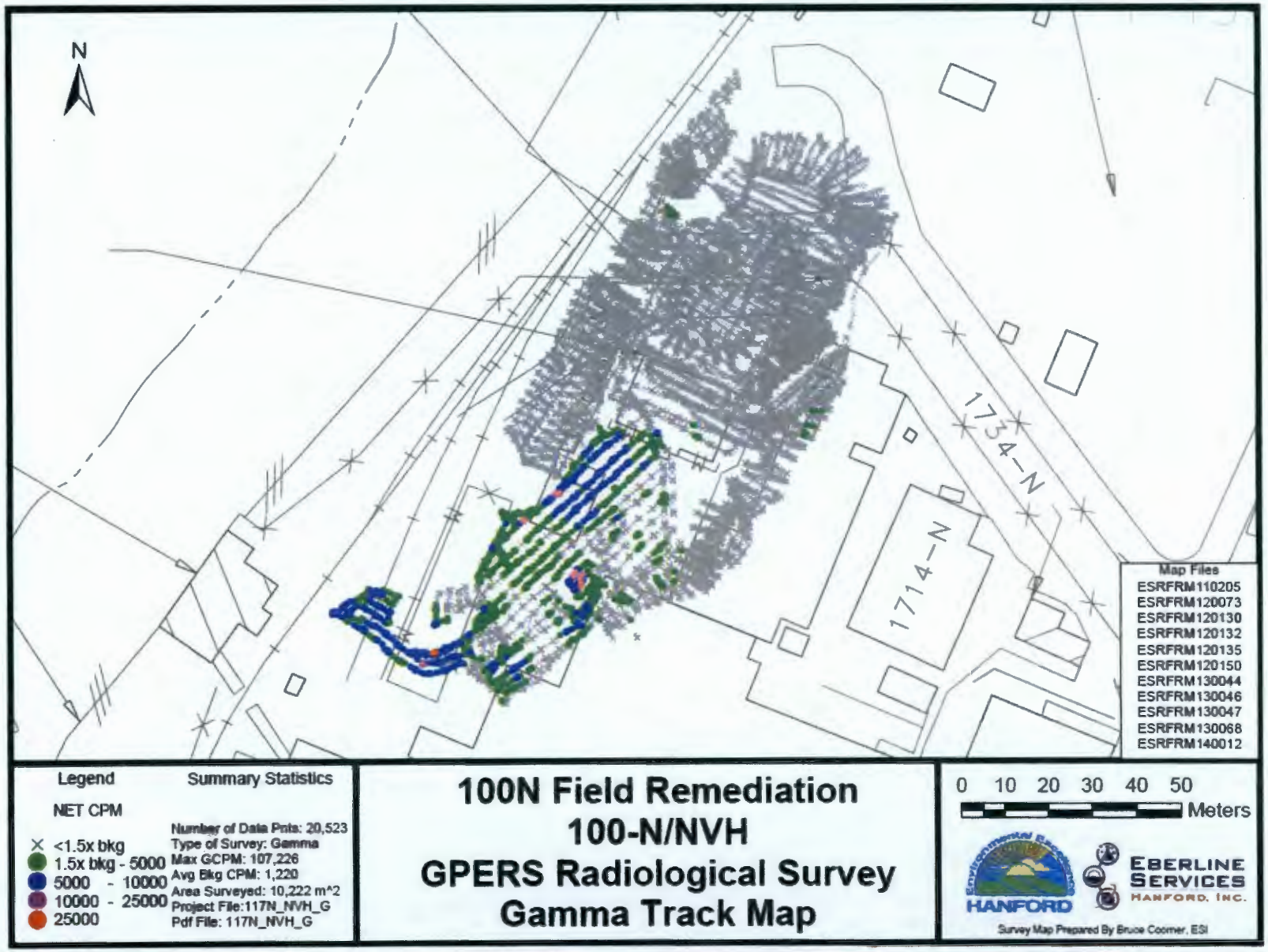
117N & 117NVH Excavation

117N & 117NVH Excavation (October 2012)

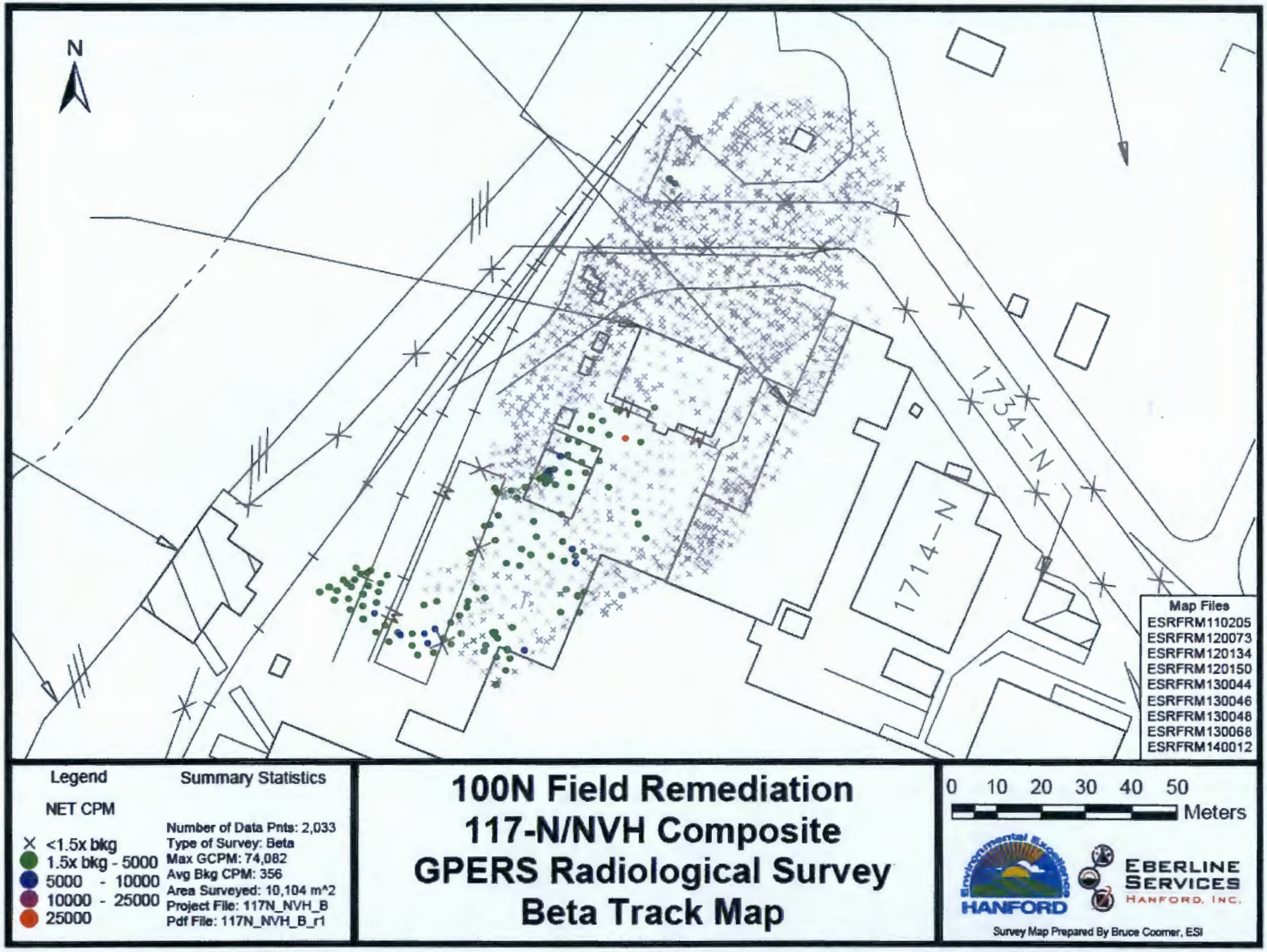
117N Exhaust Air Filter House & 117NVH Valve Control House

Attachment 3

GPERS Surveys (2 pages)



117N Exhaust Air Filter House & 117NVH Valve Control House



117N Exhaust Air Filter House & 117NVH Valve Control House

Attachment 4

GPS Surveys (7 pages)

0579169

GPS Survey Data Report for 117N &117NVH Buildings Pre Demolition

Project : Job 947

User name	maaye	**Date & Time**	5:52:27 PM 10/17/2006
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: 117N - 117NVH
Survey Purpose: GPS Building corners and surrounding features for the 117N and 117NVH Buildings
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: .020m
Estimated Vertical Precision: .050m
Fieldwork Start Date: 6/6/06
Fieldwork Completion Date: 6/6/06
Notes: LogBook# EL1571

Name	Feature Code	Northing	Easting	Elevation	Description
540	toe-of-dirt-shield	149620.636m	571228.496	139.885	
541	top-corner-of-bldg	149617.332m	571222.828	142.290	
543	toe-shield	149632.196m	571199.545	139.758	
544	toe-shield	149626.446m	571201.339	142.222	
627	pipe-end	149629.522m	571196.582	139.560	

618	corn-bldg	149624.057m	571194.087	139.835
619	corn-bldg	149625.281m	571191.367	139.623
620	french drain	149622.665m	571189.678	139.677
617	corn-bldg	149620.616m	571192.625	139.905
616	corn-bldg	149621.571m	571189.667	139.620
299	v-pit	149619.592m	571188.450	139.563
302	v-pit	149618.815m	571190.355	139.603
300	v-pit	149616.100m	571187.110	139.595
301	v-pit	149615.439m	571189.014	139.543
303	fire-hydrant-4	149614.136m	571189.683	140.176
621	toe-shield	149600.593m	571222.170	139.828
622	bldg-corn-top	149601.632m	571216.533	141.613
624	stairs-base	149599.547m	571219.732	139.845
623	stairs-base	149598.541m	571219.258	139.823
615	bldg-corn-top	149609.780m	571193.969	142.273
626	stairs-base	149611.742m	571190.776	139.820
625	stairs-base	149610.760m	571190.290	139.651
613	toe-shield	149611.862m	571189.313	139.724

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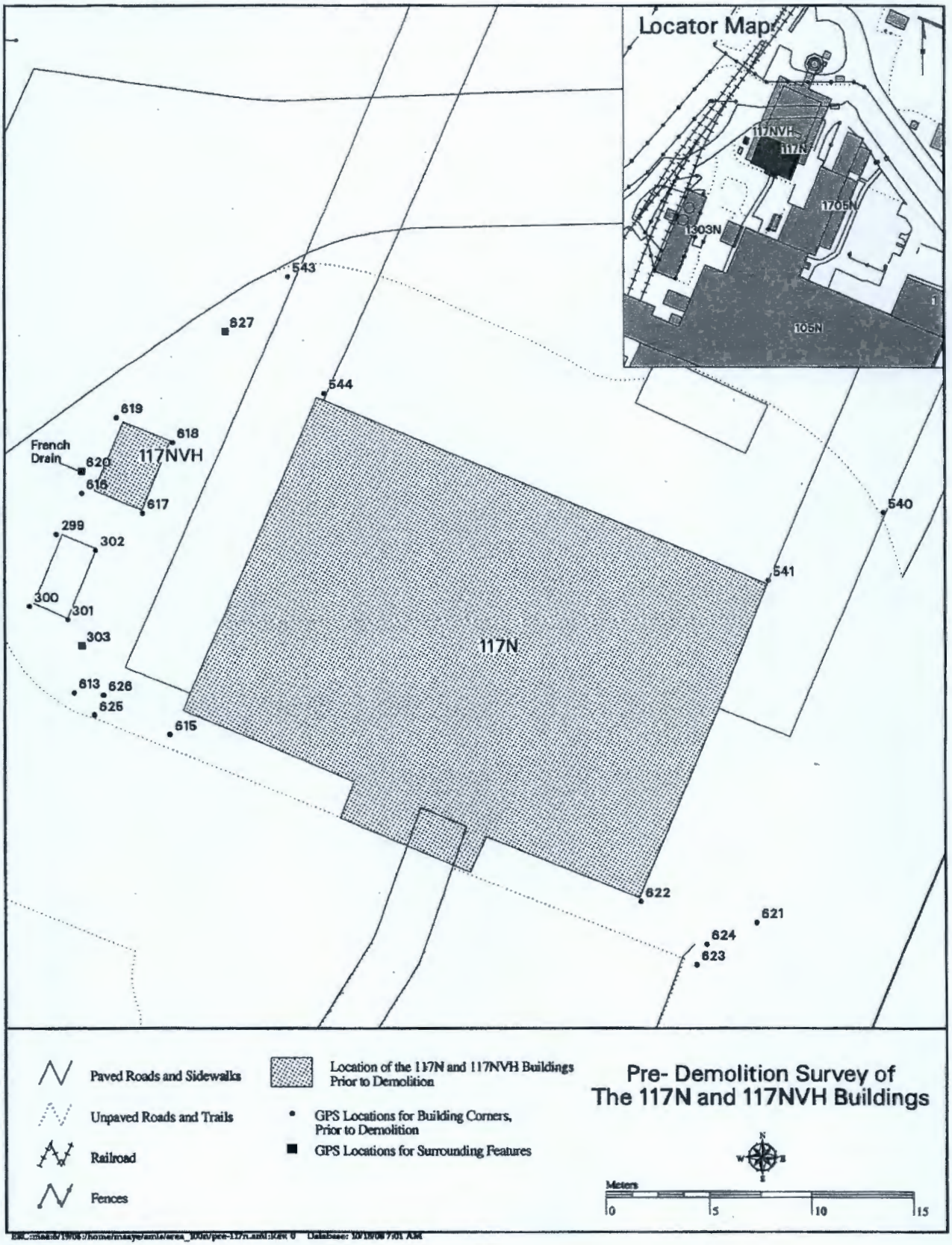

117N Exhaust Air Filter House & 117NVH Valve Control House

GPS Post Demo Survey Report for 117N & 117NVH

Project : 105N_123112

Job 1234

User name	maaye	**Date & Time**	6:14:19 PM 1/16/2013
Coordinate System	US State Plane 1983	**Zone**	Washington South 4602
Project Datum	(WGS 84)		
Vertical Datum	NAVD88	**Geoid Model**	Not selected
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

Survey Project Name:	Map top and toe in the 117N & 117NVH Excavation
Date:	12/31/2012
Equipment:	5800
Survey Purpose:	GPS post demo excavation for 117N
Requested By:	Clay McCurley
Location:	100N
Charge Code:	
Field Surveyor:	Margo Aye
Survey Software Used:	Trimble Survey Controller, and Geomatics Office V.11
Survey Equipment Used:	5800
Control Monuments Used:	N-2
Survey Method:	RTK
Horizontal Precision:	.020m
Vertical Precision:	.050m
Fieldwork Start Date:	12/31/12
Fieldwork Completion Date:	12/31/12
Notes:	

Name	Northing	Easting	Elevation	Feature Code	Description:
1	149608.870m	571192.681m	122.804m	toe	
2	149607.395m	571190.226m	122.737m	toe	
3	149604.862m	571187.773m	122.904m	toe	
4	149601.861m	571185.151m	123.108m	toe	
5	149599.024m	571183.640m	123.057m	toe	
6	149596.204m	571181.812m	122.902m	toe	
7	149594.788m	571179.972m	122.264m	toe	
8	149592.786m	571177.958m	122.219m	toe	
9	149591.822m	571175.268m	121.942m	toe	
72	149580.248m	571208.024m	122.494m	toe	
73	149582.626m	571203.766m	122.332m	topo	
74	149587.704m	571199.688m	122.252m	topo	
75	149591.212m	571194.472m	122.232m	topo	
76	149594.559m	571189.754m	122.732m	topo	
77	149597.275m	571185.729m	122.622m	topo	
78	149591.279m	571184.743m	122.425m	topo	
88	149601.704m	571192.797m	122.846m	topo	
89	149598.220m	571199.295m	122.414m	cp	
90	149594.846m	571203.710m	122.398m	cp	
91	149592.622m	571208.241m	122.697m	topo	
92	149585.965m	571207.282m	122.621m	topo	
93	149585.220m	571210.876m	122.852m	toe	
94	149589.574m	571213.121m	122.904m	toe	
95	149591.872m	571215.528m	123.092m	toe	
96	149601.541m	571207.252m	122.477m	topo	
97	149607.952m	571203.462m	122.436m	topo	
98	149616.919m	571198.925m	122.436m	topo	
99	149614.413m	571192.922m	122.710m	toe	
158	149618.753m	571196.662m	122.516m	toe	
159	149624.581m	571198.418m	122.359m	toe	
160	149629.052m	571199.792m	122.327m	toe	
161	149634.224m	571201.047m	122.222m	toe	
162	149628.890m	571202.885m	122.489m	toe	
163	149644.244m	571204.525m	122.454m	toe	

164	149648.218m	571207.060m	132.426m	toe
165	149652.436m	571208.960m	132.512m	toe
166	149647.679m	571215.717m	132.295m	topo
167	149645.026m	571220.155m	132.354m	topo
168	149641.934m	571225.334m	131.942m	topo
169	149639.287m	571229.979m	131.614m	topo
170	149636.424m	571234.101m	131.806m	topo
171	149632.321m	571232.393m	131.813m	toe
172	149628.759m	571230.508m	131.951m	toe
173	149624.163m	571228.390m	132.354m	toe
174	149620.424m	571224.713m	132.546m	toe
175	149616.763m	571220.817m	132.693m	toe
176	149612.212m	571218.063m	132.982m	toe
177	149607.239m	571216.698m	133.001m	toe
178	149602.086m	571215.642m	132.966m	toe
179	149597.276m	571214.915m	132.724m	toe
180	149606.092m	571212.895m	132.728m	topo
181	149610.336m	571209.726m	132.492m	topo
182	149614.771m	571206.026m	132.399m	topo
183	149619.755m	571202.988m	132.284m	topo
184	149625.083m	571204.003m	132.274m	topo
185	149622.541m	571208.889m	132.402m	topo
186	149619.666m	571213.788m	132.417m	topo
187	149623.212m	571219.917m	132.381m	topo
188	149627.978m	571214.206m	132.263m	topo
189	149632.553m	571208.990m	132.340m	topo
190	149639.515m	571208.989m	132.306m	topo
191	149637.873m	571215.826m	132.265m	topo
192	149634.917m	571222.011m	132.070m	topo
193	149633.108m	571228.090m	131.822m	topo
194	149628.636m	571224.412m	132.099m	topo
195	149572.865m	571220.100m	139.195m	top
196	149569.269m	571214.729m	138.287m	top
213	149583.476m	571227.838m	139.468m	top
214	149589.521m	571231.855m	139.397m	top
215	149595.933m	571236.055m	139.487m	top
216	149601.933m	571239.596m	139.369m	top
217	149607.245m	571242.186m	139.248m	top
218	149613.102m	571245.414m	139.224m	top
219	149618.772m	571249.009m	139.123m	top
220	149626.203m	571250.528m	138.926m	top
244	149655.431m	571197.261m	139.306m	top
245	149649.850m	571194.506m	139.559m	top
246	149646.057m	571191.598m	139.643m	top
247	149641.263m	571188.791m	139.656m	top
248	149635.620m	571186.012m	139.628m	top
249	149630.148m	571183.209m	139.511m	top
250	149623.991m	571180.222m	139.499m	top
300	149609.089m	571171.353m	139.512m	top

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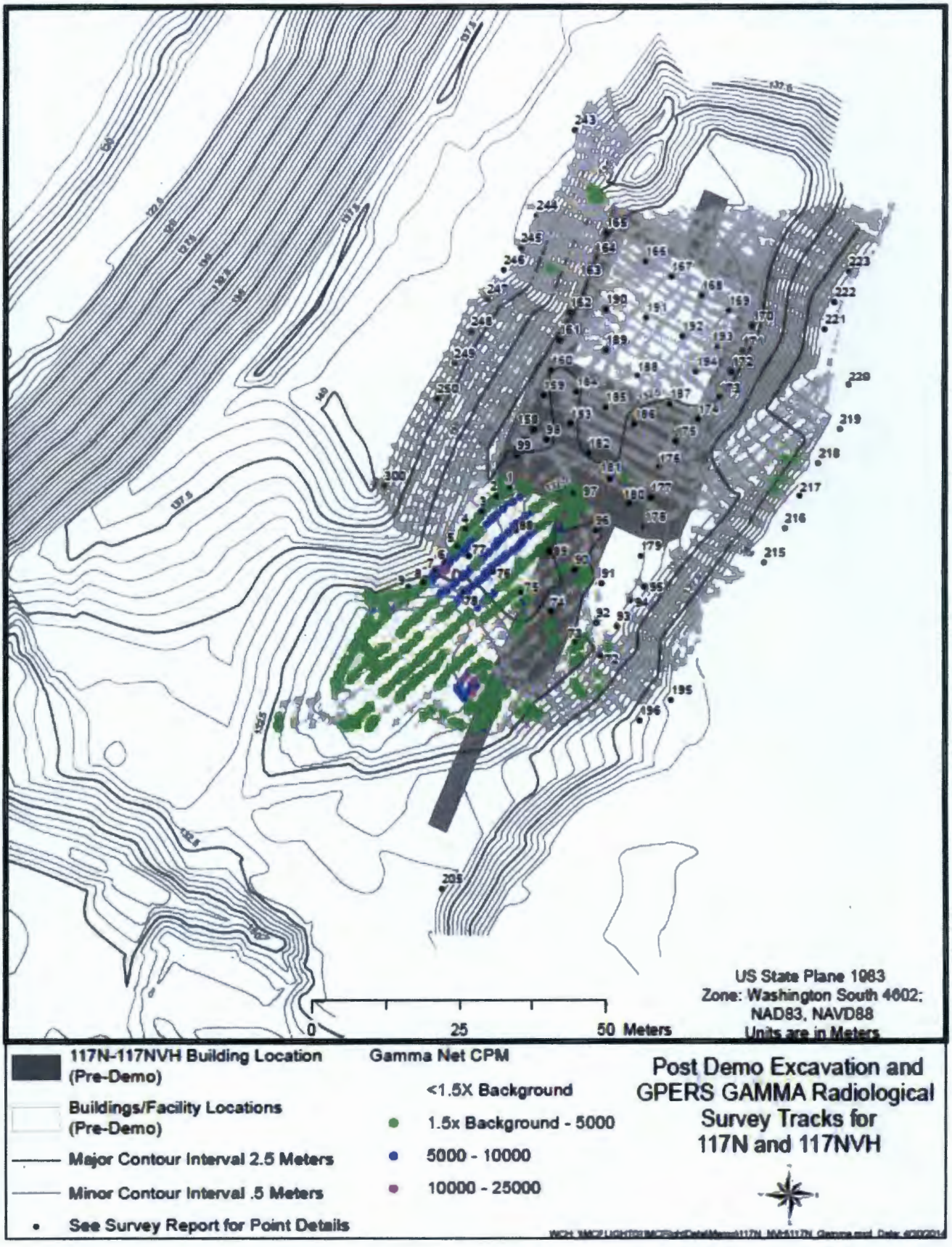
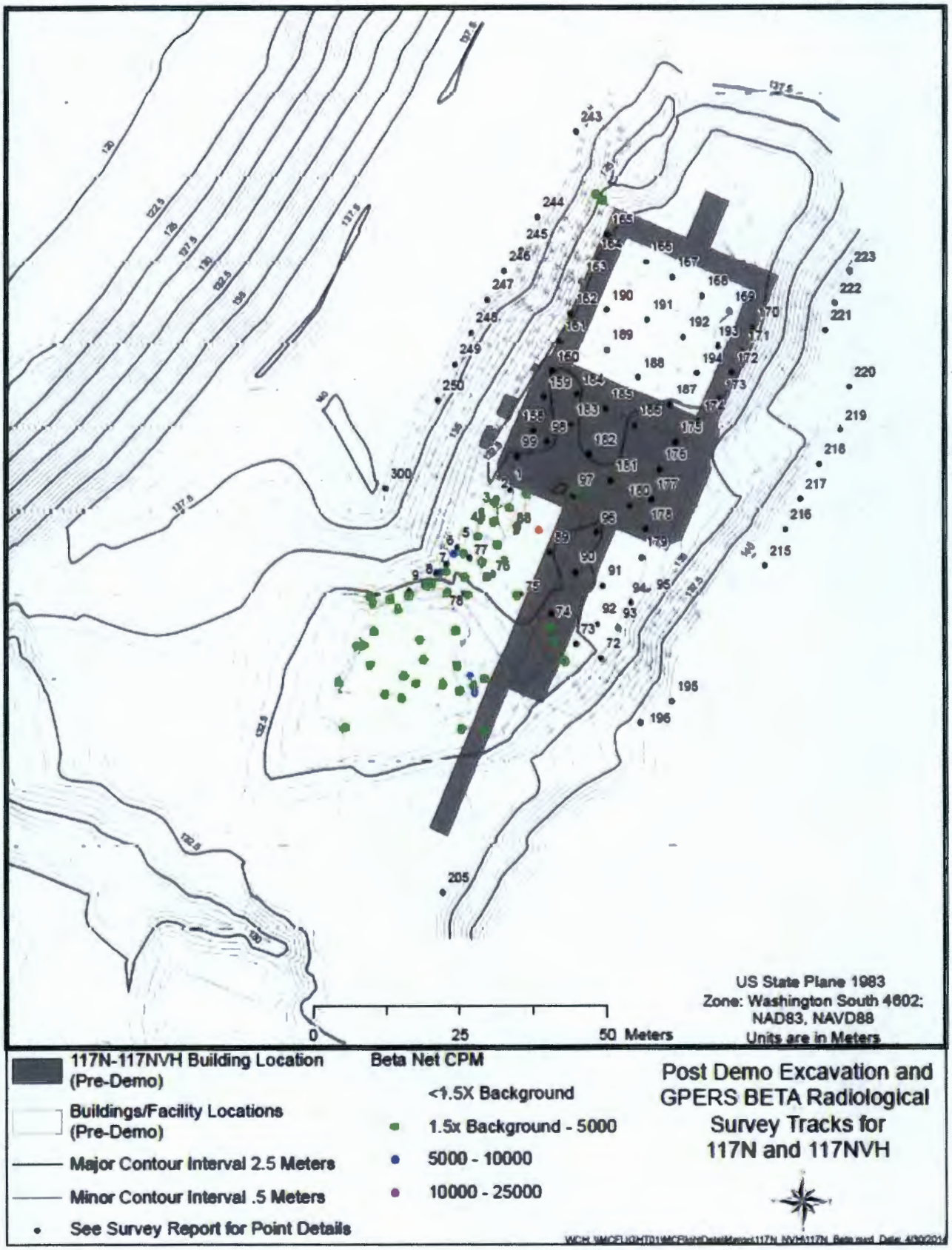


117N Exhaust Air Filter House & 117NVH Valve Control House



117N Exhaust Air Filter House & 117NVH Valve Control House

Attachment 5

Sampling Determination Form for the 117N Exhaust Air Filter House and the 117NVH Valve Control House (SDF-100N-012, Rev. 1) (9 pages)

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-012, Rev. 1

A. INSTRUCTIONS

This form must be completed to: 1) document existing data in order to determine if current data is suitable to prove completion of 100-N Ancillary Facilities, or 2) document that site-specific sampling and analyses are needed to provide completion for 100-N Ancillary Facilities.

B. GENERAL INFORMATION

Building Name: 117-N Exhaust Air Filter House / 117-N Valve Control House

Building Number: 117-N & 117-NVH

WIDS Sites Associated or Adjacent:
All WIDS sites listed below have been assigned an Accepted Classification Status and no Reclassification Status, unless otherwise noted

- 100-N-63:2
- 100-N-66
- 100-N-84:1 (No Action Reclassification Status)
- 100-N-84:2
- 100-N-84:3 (No Action Reclassification Status)
- 100-N-84:5
- 100-N-84:7 (No Action Reclassification Status)
- 100-N-84:8
- 100-N-87
- 100-N-89
- 100-N-90
- 100-N-102:1
- UPR-100-N-9
- UPR-100-N-14

Other:
Demolition of the 117-N facility was completed in 2011 (CCN 164006 pg. 4). Demolition of the 117-NVH facility was completed on April 27, 2011 (CCN 163278 pg. 3).

As detailed in this form, radiological contamination was identified within the soil underlying, and adjacent to, the footprints of the 117-N and 117-NVH facilities following their demolition. Accordingly, the contamination underlying the 117-N and 117-NVH facility footprints, including the exhaust air ventilation cells for zone 1, 2, and 3 (southern portion of the 117-N facility) is being deferred to the 100-N-66 WIDS site.

C. INFORMATION SOURCES

Available information (list document number for each if applicable):

Historical Site Assessment:
- Historical Site Assessment for 117-N: CCN 136822
- Historical Site Assessment for 117-NVH: CCN 127193

Site Walkdown: N/A

IH Characterization Report: N/A

Radiological Survey: Global Positioning Environmental Radiological Surveyor (GPERS) Surveys:
- ESR-FRM-11-0205B
- ESR-FRM-11-0205G
- ESR-FRM-12-0130C
- ESR-FRM-12-0132C
- ESR-FRM-12-0135C
- ESR-FRM-12-0134BC
- ESR-FRM-12-0150BC
- ESR-FRM-12-0150GC

IHC/FHC Document: N/A

WIDS/SIS: RCC Stewardship Information System (SIS) Facility Summary Reports: 117-N & 117-NVH

PDSR:
- Post-Demolition Summary Report for 117-N: CCN 164006
- Post-Demolition Summary Report for 117-NVH: CCN 163278

Facility Inspection: N/A

Waste Characterization Checklist: N/A

Summary Report: N/A

Other:
- Asbestos Inspection & Sampling Report for the 117 N Filter Building: CCN 128416

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- Asbestos Inspection and Sampling Report for the 117-N Filter House Roof: CCN 147734
- 117-N, 117-NVH, & Valve Pit Hazardous Material and Demolition Preparations Work Package: 100 08 10 06 001 (Rev. 1)
- 117-N, 117-NVH and Valve Pit Hazardous Material Removal Work Package: 100 07 10 01 002 (Rev. 0)
- Field Remediation Overlay Map: (attached to this form)
- GPERS Beta Map Location Overlay: (attached to this form)
- GPERS Gamma Map Location Overlay: (attached to this form)

Facility Photographs

- Photographs of 117-N and 117-NVH Facilities Pre-Demolition, With Time Stamp: SIS Facility Summary Report for 117-N pg. 4 (4/17/2007), pg. 5 (6/11/2002), and pg. 6 (3/8/2006); CCN 127293 pg. 2 (4/26/2006)
- Photographs of 117-N and 117-NVH Facilities Pre-Demolition, No Time Stamp: SIS Facility Summary Report for 117-N pgs. 3 & 7, CCN 136822 pgs. 3 & 4, and CCN 164006 pg. 6
- Photograph of 117-N and 117-NVH Facilities Post-Demolition, With Time Stamp: CCN 164006 pg. 8 (1/26/2012)
- Photographs of 117-N and 117-NVH Facilities Post-Demolition, No Time Stamp: SIS Facility Summary Report for 117-N pg. 8, CCN 164006 pg. 9, and CCN 163278 pgs. 7 and 8

D. HAZARDOUS SUBSTANCES

Check all that apply:

☐ None ☐ Asbestos containing material ☒ Lead ☒ PCBs/PCB Articles ☒ Oils/Greases

☐ Chemicals List: _____

☒ Radiological Contamination ☒ Mercury/Mercury Devices

☐ Other: _____

References/Comments:
- Lead: CCN 136822 pg. 5, CCN 127193 pg. 6, and Work Package 100 07 10 01 002 pg. 7
- PCBs/PCB Articles: CCN 127193 pg. 6 & Work Package 100 07 10 01 002 pg. 7
- Oils/Greases: Work Package 100 07 10 01 002 pg. 7
- Radiological Contamination: ESR-FRM-11-0205B, ESR-FRM-11-0205G, ESR-FRM-12-0130C, ESR-FRM-12-0150BC, ESR-FRM-12-0150GC, GPERS Beta Map Location Overlay (attached to this form), GPERS Gamma Map Location Overlay (attached to this form), CCN 136822 pg. 5, CCN 164006 Attachment 2, and Work Package 100 07 10 01 002 pg. 7
- Mercury/Mercury Devices: Work Package 100 07 10 01 002 pg. 7

Liquids: ☒ Yes ☐ No

If yes, describe source and nature of liquids:
The 117-N facility contained a water spray system in addition to drainage sumps for collecting water from the exhaust air filter cells (CCN 136822 pgs. 1 & 2).

Were the hazardous substances removed from the facility prior to demolition? ☐ Yes ☒ No

As verified by what documentation:
The Hazardous Material Removal work package pertaining to the 117-N and 117-NVH facilities identified that radiological contamination was encountered but not removed/stabilized prior to demolition (100 07 10 01 002 pgs. 7 & 25). All other hazardous substances with sampling determination relevance appear to have been removed prior to demolition (100 08 10 06 001 pgs. 4 & 12, 100 07 01 002 pgs. 7 & 25).

Was there potential for hazardous substances to be introduced into the soils during facility operations or demolition? ☒ Yes ☐ No ☐ N/A

References/Comments:
The 117-N and 117-NVH facilities received Type II designations (CCN 136822 pg. 1 & CCN 127193 pg. 1). This indicates that they had potentially been contaminated by site operations and processes (CCN 136822 pg. 1 & CCN 127193 pg. 1). Accordingly, there was potential for hazardous substance introduction into the underlying and adjacent soils.

List any hazardous materials left in the building for demolition:
- Radiological Contamination (100 07 10 01 002 pgs. 7 & 25)

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Does review of historical records and process knowledge indicate a potential for radiological or chemical contamination to be present in the facility?
The pertinent Hazardous Material Removal work package indicates that radiological contamination was not removed from the 117-N and 117-NVH facilities prior to demolition (100 07 10 01 002 pgs. 7 & 25). Residual radiological contamination was detected during post-demolition GPERS surveys of the soil remaining within, and adjacent to, the facility footprints (ESR-FRM-11-0205B, ESR-FRM-11-0205G, ESR-FRM-12-0130C, ESR-FRM-12-0150BC, ESR-FRM-12-0150GC, GPERS Beta Map Location Overlay [attached to this form], and GPERS Gamma Map Location Overlay [attached to this form]).

Comments:
A list of pertinent applicable design drawings is included in the Historical Site Assessment for the 117-N facility (CCN 136822 Attachment 1). An additional pertinent design drawing is H-1-45007 Sheet 44.

E. FIELD OBSERVATIONS

Visual Inspection

Were any stained soils/anomalies discovered during or after demolition of the facility? ☐ Yes ☒ No

References/Comments:
No anomaly was discovered for either 117-N or 117-NVH (CCN 164006 pg. 2 & CCN 163278 pg. 2). Documentation was not reviewed for an indication of soil staining.

Were samples taken of the stained soils/anomalies? ☐ Yes ☐ No ☒ N/A

References/Comments:
This question is not applicable because no anomaly was discovered for either 117-N or 117-NVH (CCN 164006 pg. 2 & CCN 163278 pg. 2). Documentation was not reviewed for an indication of soil staining.

Do results of the samples indicate that chemical contamination exists? ☐ Yes ☐ No ☒ N/A

References/Comments:
N/A

Is the area potentially a discovery site? ☒ Yes ☐ No

References/Comments:
Refer to the Radiological Surveys section below.

Radiological Surveys

Did radiological surveys (GPERS or equivalent) identify contamination? ☒ Yes ☐ No

References/Comments:
A post-demolition GPERS survey performed on October 3, 2012 identified several points of radiological contamination within the footprints of the 117-N and 117-NVH facilities (ESR-FRM-12-0130C). Two follow-up GPERS surveys were performed to focus on the locations where this contamination had been identified. Neither of these follow-up surveys identified radiological contamination (ESR-FRM-12-0132C & ESR-FRM-12-0135C). An additional GPERS survey performed at the footprints of the 117-N and 117-NVH facilities in October of 2012 did not identify radiological contamination (ESR-FRM-12-0134BC).

Final post-demolition GPERS surveys performed in December of 2012 (ESR-FRM-12-0150BC, ESR-FRM-12-0150GC, GPERS Beta Map Location Overlay [attached to this form], GPERS Gamma Map Location Overlay [attached to this form]) identified elevated levels of radiological contamination within, and adjacent to the 117-N and 117-NVH facility footprints. The contamination within the 117-N facility footprint resided primarily beneath the former locations of the exhaust air ventilation cells for zone 1, 2, and 3 (southern portion of the 117-N facility).

Were samples taken of the radiologically contaminated soils? ☐ Yes ☒ No ☐ N/A

References/Comments:
N/A

Is the area potentially a discovery site? ☒ Yes ☐ No

References/Comments:

Post-demolition GPERS surveys identified elevated levels of radiological contamination within, and adjacent to, the 117-

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N and 117-NVH facility footprints (ESR-FRM-11-0205B, ESR-FRM-11-0205G, ESR-FRM-12-0150BC, ESR-FRM-12-0150GC, GPERS Beta Map Location Overlay [attached to this form], and GPERS Gamma Map Location Overlay [attached to this form]).

Were the contaminated materials removed? ☐ Yes ☒ No ☐ N/A

References/Comments:
Radiological contamination identified during final post-demolition GPERS surveys of the 117-N and 117-NVH facility footprints (ESR-FRM-12-0150BC, and ESR-FRM-12-0150GC) has not been removed. Accordingly, the contamination remains within, and adjacent to, the 117-N and 117-NVH facility footprints.

F. WIDS SITES

Were there any WIDS sites affected by D4 activities? ☒ Yes ☐ No

If yes, list the WIDS sites:
100-N-63:2, 100-N-84:1, 100-N-84:2, 100-N-84:3, 100-N-84:5, 100-N-84:7, 100-N-84:8, 100-N-89, and 100-N-90

Note: Adjacent WIDS sites 100-N-66, 100-N-87, 100-N-102:1, UPR-100-N-9, and UPR-100-N-14 were not affected during D4 activities at the 117-N and 117-NVH facilities.

Were the WIDS site(s) completely removed? ☐ Yes ☒ No

References/Comments:
All physical components of WIDS sites 100-N-89 and 100-N-90 were completely removed during D4 activities at the 117-N and 117-NVH facilities.

For each WIDS site listed below, all physical components present within the 117-N/117-NVH excavation footprint were removed during D4 activities at the 117-N and 117-NVH facilities (radiological contamination exists within the remaining soil):

100-N-63:2, 100-N-84:1, 100-N-84:2, 100-N-84:3, 100-N-84:5, 100-N-84:7, and 100-N-84:8

Will the Ancillary Facility Footprint be deferred to FR to be closed out with a co-located Waste Site? ☒ Yes ☐ No

References/Comments:
Final GPERS surveys performed after D4 removal of the 117-N and 117-NVH facilities identified considerable contamination remaining within, and adjacent to, the footprints of these two facilities. Accordingly, the contamination underlying the 117-NVH facility footprint and the footprint of the 117-N exhaust air ventilation cells for zone 1, 2, and 3 (southern portion of the 117-N facility) is being deferred to the 100-N-66 WIDS site.

G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

What are the potential contaminants of concern for the remaining below-grade soil?

☐ None ☐ SVOC ☐ VOC ☐ Metals ☐ TPH ☒ Rad ☐ PCBs

☐ Other (Specify): _____

Comments:
N/A

Summary of in-process soil sampling requirements:
N/A

Constituents detected / concentrations / rationale
Consult Sample Collection Summary below.

Sample Collection Summary
- Sample (HEIS) Numbers J11VD7 and J11VD9 (SIS Summary Report for 117-N pg. 2)
- Roof Interior at 117-N: Sample (HEIS) Numbers J15VY0, J15VY1, and J15VY2 (CCN 147734 Attachment 2)
- Wall Insulation at 117-NVH: Sample (HEIS) Numbers J12766, J12767, and J12768 (CCN 163278 Attachment 1)

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- Ceiling Insulation at 117-NVH: Sample (HEIS) Numbers J12769, J12770, and J12776 (CCN 163278 Attachment 1)
- Caulking at 117-NVH: Sample (HEIS) Number J12777 (CCN 163278 Attachment 1)
- Pit Line at 117-NVH: Sample (HEIS) Number J12PT4 (CCN 163278 Attachment 1)
- Pit Valves at 117-NVH: Sample (HEIS) Numbers J12PT5 & J12PT6 (CCN 163278 Attachment 1)
- Pit Joint at 117-NVH: Sample (HEIS) Number J12PT7 (CCN 163278 Attachment 1)
- GIS Field Remediation Overlay Map: Attached to this form

H. NOTES / ADDITIONAL INFORMATION

☒ Check here if additional information / data / maps / sketches are attached to this form.

If checked, list the attachment(s):
- Field Remediation Overlay Map
- GPERS Beta Map Location Overlay
- GPERS Gamma Map Location Overlay

I. SAMPLING

Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards? ☐ Yes ☒ No

Based on the above information it was determined that sampling: ☐ will ☒ will not be required in order to demonstrate that cleanup criteria have been met.

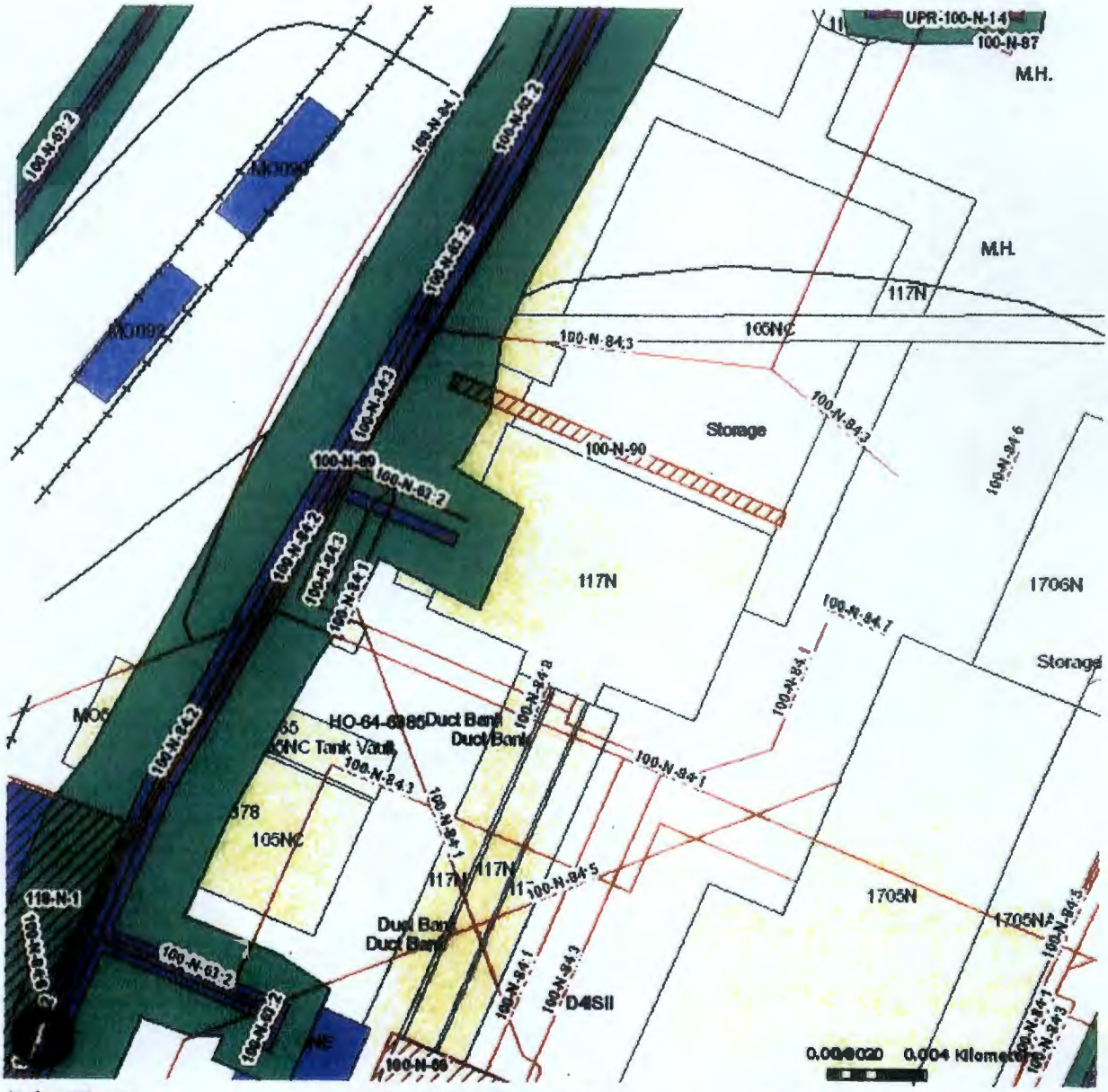
The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

Information Reviewer Signature	Printed Name	Date
David Warren	David Warren	3/4/13

The regulatory representative below agrees with the decision outlined in section I of this form for the indicated facility and supports implementation of that decision based on the information currently available.

DOE Signature	Printed Name R. F. Guercia	Date 3/4/13
Ecology Signature Nina M. Menard	Printed Name NINA M. MENARD	Date 3/14/13

Map



Hydrant Names

Fire Hydrants

WasteSitePoints

- Sitecode Missing in SIS

WasteSitesLine (continued)

- Accepted, Rejected
- Discovery,
- Not Accepted,

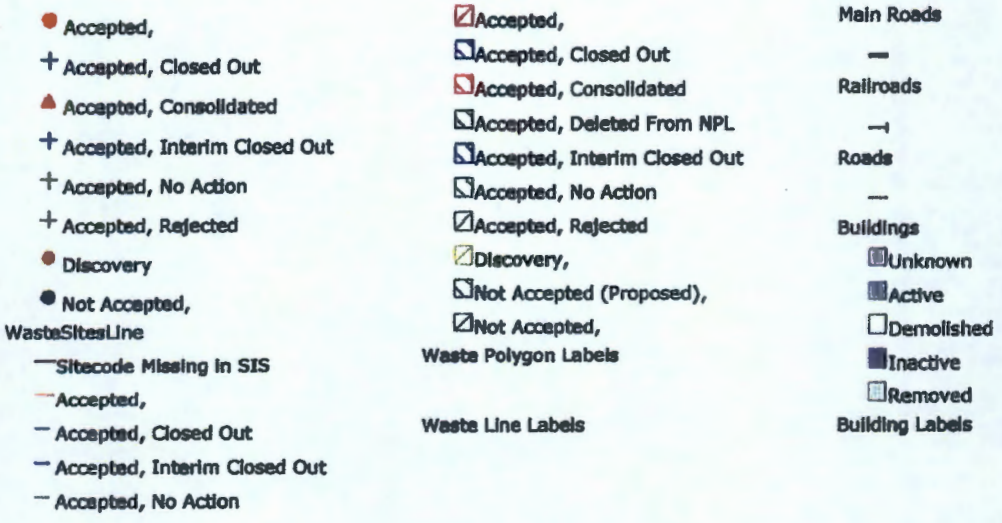
WasteSitePolys

- Sitecode Missing in SIS

Waste Point Labels

N_EXC_Toe

N_EXC_Daylight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Discovery
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Accepted, Interim Closed Out
Accepted, No Action
Accepted, Rejected
Discovery,
Not Accepted (Proposed),
Not Accepted,
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Waste Line Labels
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Railroads
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Buildings
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Inactive
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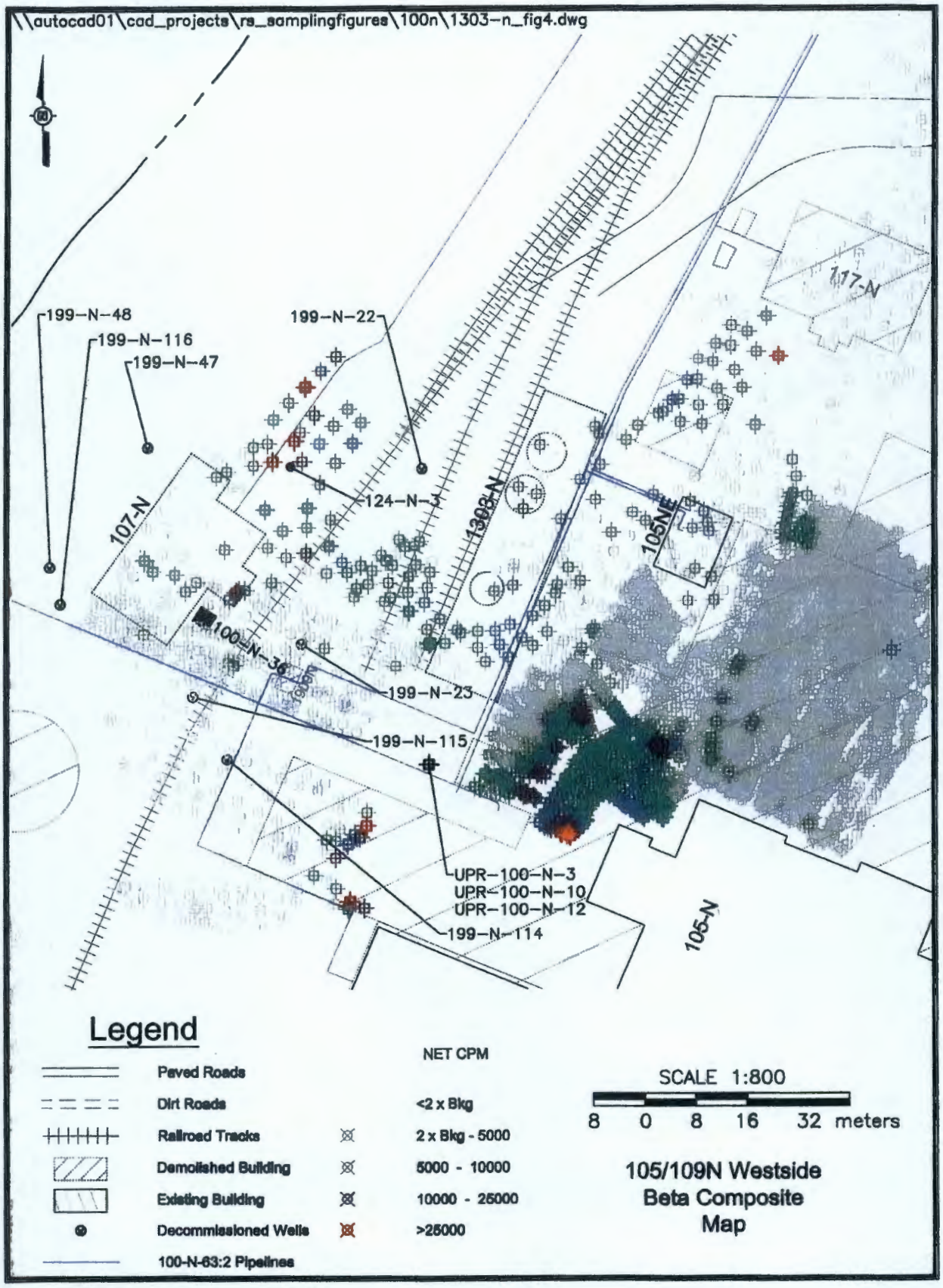
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124-N-1
107-N
1303-N
105-N
117-N
100-N-36
199-N-23
199-N-115
UPR-100-N-3
UPR-100-N-10
UPR-100-N-12
199-N-114
105-N
Legend
Paved Roads
Dirt Roads
Railroad Tracks
Demolished Building
Existing Building
Decommissioned Wells
100-N-63:2 Pipelines
NET CPM
<2 x Bkg
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5000 - 10000
10000 - 25000
>25000
SCALE 1:800
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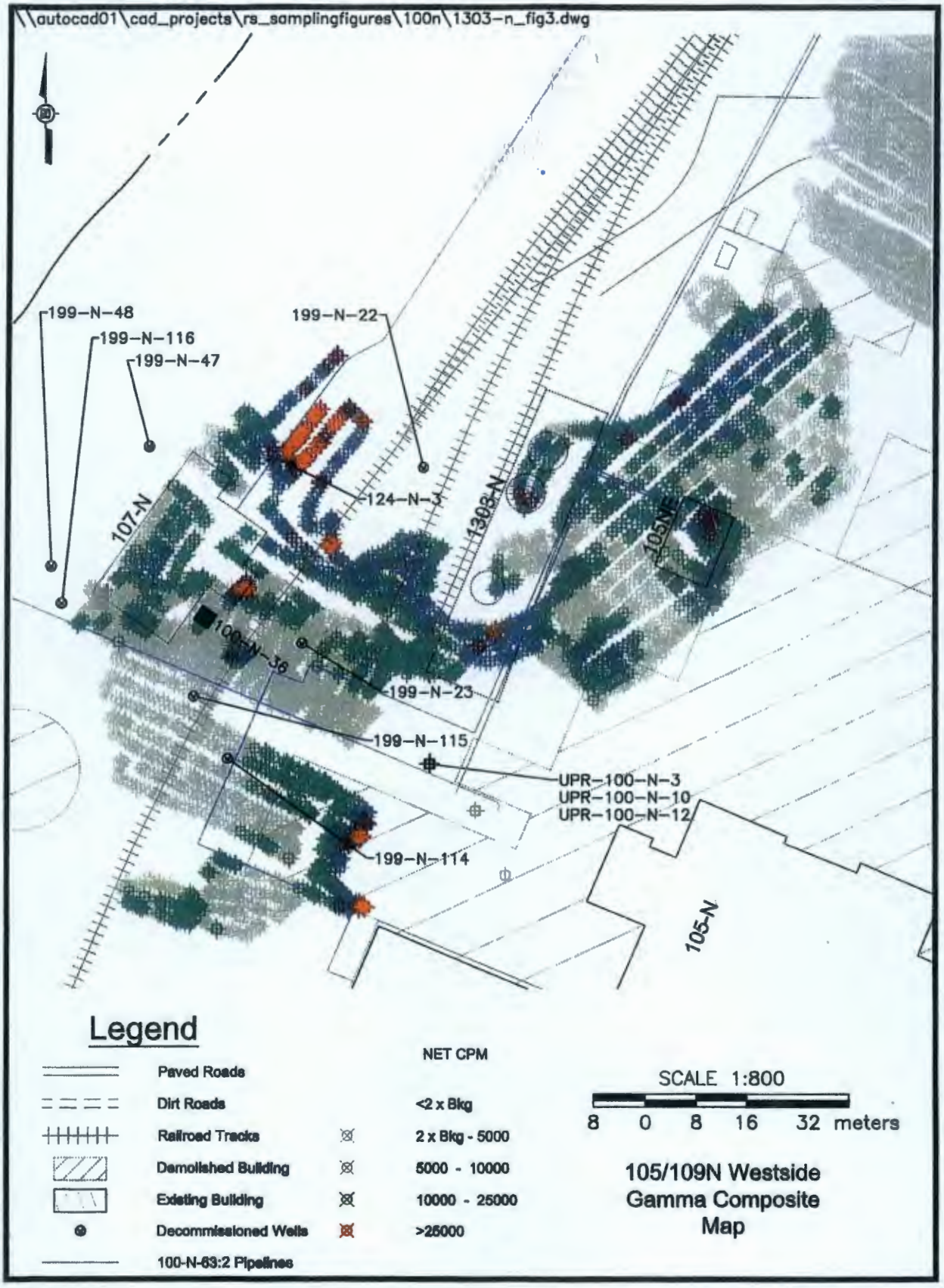
105/109N Westside
Beta Composite
Map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199-N-114
105-N
Legend
Paved Roads
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Railroad Tracks
Demolished Building
Existing Building
Decommissioned Wells
100-N-63:2 Pipelines
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2 x Bkg - 5000
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10000 - 25000
>25000
SCALE 1:800
8 0 8 16 32 meters
105/109N Westside
Gamma Composite
Map