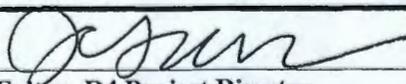
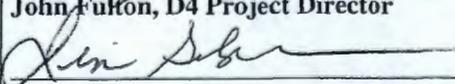
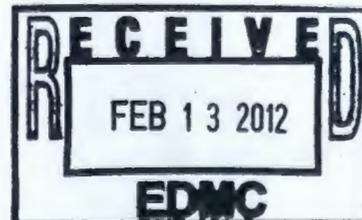


D4 Project Soils and/or Below Grade Structures Completion Form 151-N Electrical Substation

Date Submitted: 3/28/06 Originator: J. W. Golden Phone: 521-0877	Associated Building/ Facility: 151N Electrical Substation Associated Action Memorandum: Action Memorandum 100N Ancillary Facilities	Document Number: <u>D4-100N-0002</u>
<p>This form, documents that the soil and/ or below grade structures meet the requirements of the Associated Action Memorandum.</p>		
<p><u>Basis for Determination (attach pertinent documentation):</u></p> <p>The D4 activities for 151N have been completed in accordance with the requirements of the action memorandum. There was one existing waste site near the building (100-N-54 French drain). The French drain was removed as part of a teaming effort between the entity performing the removal action (building) and the entity performing the remedial action (the WIDS site). Closeout sampling was performed as part of the remedial action and will be documented separately in a cleanup verification package (CVP). The closeout of WIDS site 100-N-54 is not addressed under this document.</p> <p>With the exception of waste site 100-N-54, there were no indications that suggested the presence of additional waste sites in the underlying soil; this determination was based on documented project knowledge of the facility operation and data collected during the demolition of the facility. The basis for this determination is supported as follows:</p> <ul style="list-style-type: none"> • The area was not a previously posted as a radiological area nor was the area previously identified within WIDS. • Post demolition radiological surveys following demolition did not result in the area being managed as a radiological area. • The facility did not manage dangerous waste. • There were no documented spills of hazardous/ mixed waste. • Process history. <p>Detailed information pertaining to waste profiles, radiological survey data and sampling data are contained within the attached demolition summary report (CCN 127176).</p>		
 _____ John Fulton, D4 Project Director		_____ 3/30/06 Date
 _____ Jim Golden, D4 Environmental Project Lead		_____ 3/30/06 Date



ES/FR Data Transfer Checklist

Reviewed Facility Operation and WIDS?

Yes. One WEDs site impacted. FR will address the WEDs site closeout.

Reviewed Waste Data?

Yes.

Reviewed Rad Data?

Reviewed conclusions. The area was downposted.

Reviewed Sample Data?

Yes.

Functional Review?

Yes

GPS Data Provided?

Yes

Items Discovered During Demolition Provided?

Nothing out of the ordinary. Conclusions shown in the pictures, but is not considered to be part of the removal action

Rad Survey Data Provided?

Links to data

Waste Profile Numbers Provided?

Yes

CVP Provided?

N/A

Interoffice Memorandum

127176

TO: R. R. Nielson X5-50

DATE: March 28, 2006

COPIES: See Below
Records and Document Control H0-30

FROM: *D B Encke*
D. B. Encke
100 Area D4 Characterization
X5-50/373-9733

SUBJECT: **POST-DEMOLITION SUMMARY REPORT FOR THE 151-N ELECTRICAL
SUBSTATION**

Attached is the Post-Demolition Summary Report for the 151-N Electrical Substation. This report documents the final status of the area at the completion of D4 activities. The information in this report includes references to radiological and industrial hygiene surveys, waste profiles used to ship debris to the ERDF, and a status of WIDS sites associated with the 151-N facility.

Please contact myself at 373-9733, or Dave Shea at 373-1171, if you have any questions on this information.

DBE:mkb

Attachment: Post-demolition Summary Report for the 151-N Electrical Substation

Copies (all w/a):

G. J. Borden X7-85
S. L. Lachmann X5-50
R. G. Egge X5-50
D. B. Encke X5-50
G. J. Gibbons X5-50
J. W. Golden L1-04
I. D. Jacques L1-04
D. W. Shea X5-50
C. R. Watson X5-50

Post Demolition Summary Report for the 151-N Electrical Substation

Site Information

The 151-N Electrical Substation (151-N) converted 230 KV input to 13.8 KV output , provided power from off of the grid until N reactor could provide its own electrical power, and supplied electric power during shutdown operations.

A Characterization Summary Report (CSR) was developed for the 151-N (WCH, 2005).

Demolition activities began in December of 2005 and continued into March of 2006.

Close-out documentation and sampling requirements are set forth in a facility specific sampling plan (WCH, 2006).

Radiological and IH Scooping Surveys

Radiological and Industrial Hygiene (IH) scooping surveys were performed on the 151-N prior to demolition. Results of the radiological surveys are documented on RSR-IFSM-05-0357. Contamination attributed to biological vectors (mud daubers) was observed on the rooflines. Consequentially, during demolition, the site was controlled as a contamination area (CA).

Following demolition of the facility, D4 Project Radiological Control Technicians (RCTs) performed down-posting surveys to release the excavation from radiological controls. See survey RSR-IFSM-06-0192.

An industrial hygiene baseline survey was conducted in the fall of 2005, but the survey yielded no results that would cause a concern.

Waste and other Characterization Samples

The 151-N was constructed of standard building materials (wood, metal, concrete, glass, fiberglass insulation). Existing waste profiles adequately described the waste stream therefore, no samples were collected to designate the buildings.

Samples were collected to identify potential asbestos containing materials (WCH, 2005b). Historical data revealed that there were no processes within 151-N facility which could have led to contamination of surrounding soils. When soil was discovered that appeared to be darker than normal, a sample was collected to verify the project assumptions. Additionally as part of the "teaming effort" with Field Remediation (FR), one sample was collected to verify adequate remediation of the 100-N-54 French drain. This last sample was collected as required in the sampling plan (WCH, 2006). FR will use the data to make conclusions about the WIDS site (100-N-54 French Drain).

All sampling is summarized in Attachment 1.

Waste Profiles

Waste profile 100N007 rev. 0 was used to disposition generated waste at the ERDF.

Post Demolition Radiological Survey

Following demolition, the excavation of the former 151-N facility was surveyed for transferable surface β and γ contamination by the D4 project's Radiological Control's organization. The results were favorable and the area was downposted. See survey: RSR-IFSM-06-0009.

Civil Survey Information (GPS, including elevation)

A GPS civil survey was performed on the 151-N prior to demolition. This survey located the corners of the building, the 100-N-54 French Drain, and corners and extents of nearby structures. A post demolition civil survey was performed. This survey documented the extent of the excavation (footprint and depth) as well as remaining structures (electrical conduits and concrete structures) extending into the excavation. It should be noted, that these remaining concrete structures are not from the 151-N facility but rather footings from adjacent structures.

These surveys are included as Attachment 2.

A simplified floor plan of the 151-N prior to its demolition is included as Figure 1.

Status of WIDS Sites Associated with Building Site

The 100-N-54 French Drain is the only WIDS site associated with the 151-N facility. This French drain received discharge from a sink and from a sump in the basement. Owing to its location, this site was disturbed by demolition activities in that the entire engineered structure of the French drain fell within the layback of the excavation and was consequentially dispositioned as waste. As discussed previously, and as directed per the Sampling and Analysis Instruction (SAI) (WHC, 2006), a sample was collected of the soils underlying the French drain. The analytical results of this sample indicated that the soils below the 100-N-54 French drain exceed the action levels identified in the SAI. As further remediation of the 100-N-54 site was outside of the work scope of D4, residual soil from below the 100-N-54 French drain was returned to the its excavation.

During sampling of the 100-N-54 French drain, both IH and radiological surveys were performed. The soil from below the engineered structure of the 100-N-54 French drain was documented on RSR-IFSM-05-0112. The industrial hygiene survey was performed on 12/27/05.

Anomalies Discovered during Demolition

As demolition/excavation effort progressed, differences in the appearance of the sidewall soil lithography became apparent. The major difference is that of appearance; in portions of the sidewall, soils are dark, almost black, where-as in other areas, soils appear tan/brown. Sorting appears similar between the dark and light material. A single soil sample was collected of the dark soil. The lab results of this soil sample revealed no unusual values for the parameters tested (metals, semi-volatile organics, diesel range organics). See sample delivery group K0241.

Final Building Status

All of the 151-N Electrical Substation including the basement slab, footings, and transformers were dispositioned to the ERDF.

During demolition activities, a ramp was excavated through native soils to allow heavy equipment access to the bottom of the excavation. This soil was stockpiled as potentially clean material acceptable for use as backfill material. This soil was included in the down-posting survey RSR-IFSM-06-0192.

The site is scheduled for backfill in FY '06. The current plan for backfill is to mark the French drain excavation with straw to delineate its extent prior to backfilling with clean fill. Backfill material will be the ramp material discussed previously and soils obtained from borrow pit "D" near D reactor.

There is no deferral to the Field Remediation project. The 100-N-54 French Drain requires additional remediation, however, this WIDS site was never part of D4's workscope, it was and still remains, within the FR project. The only subsurface structures associated with the 151-N excavation are concrete conduit encasements and concrete footings of adjacent structures.

Documentation

Documents referenced in this summary are available through the Document Control organization.

References

WCH, 2006, *Sampling and Analysis Instruction to Support Demolition of the 151-N and 153-N Facilities*, WCH-35, Washington Closure Hanford, Richland, Washington.

WCH, 2005, *Characterization Summary Report for the 151-N & 153-N Electrical Substations, 119-N Exhaust and 119-N Stack Air Monitoring Buildings, 1313-N Change Control Building, and 181-NC Sample Stack*, IOM 122923, dated November 10, 2005, Washington Closure Hanford, Richland, Washington.

WCH, 2005b, *Asbestos Summary Report, 151N Electrical Substation*, IOM dated 12/14/05, CCN# 125283, Richland, WA.

Figure 1
151-N Electrical Substation

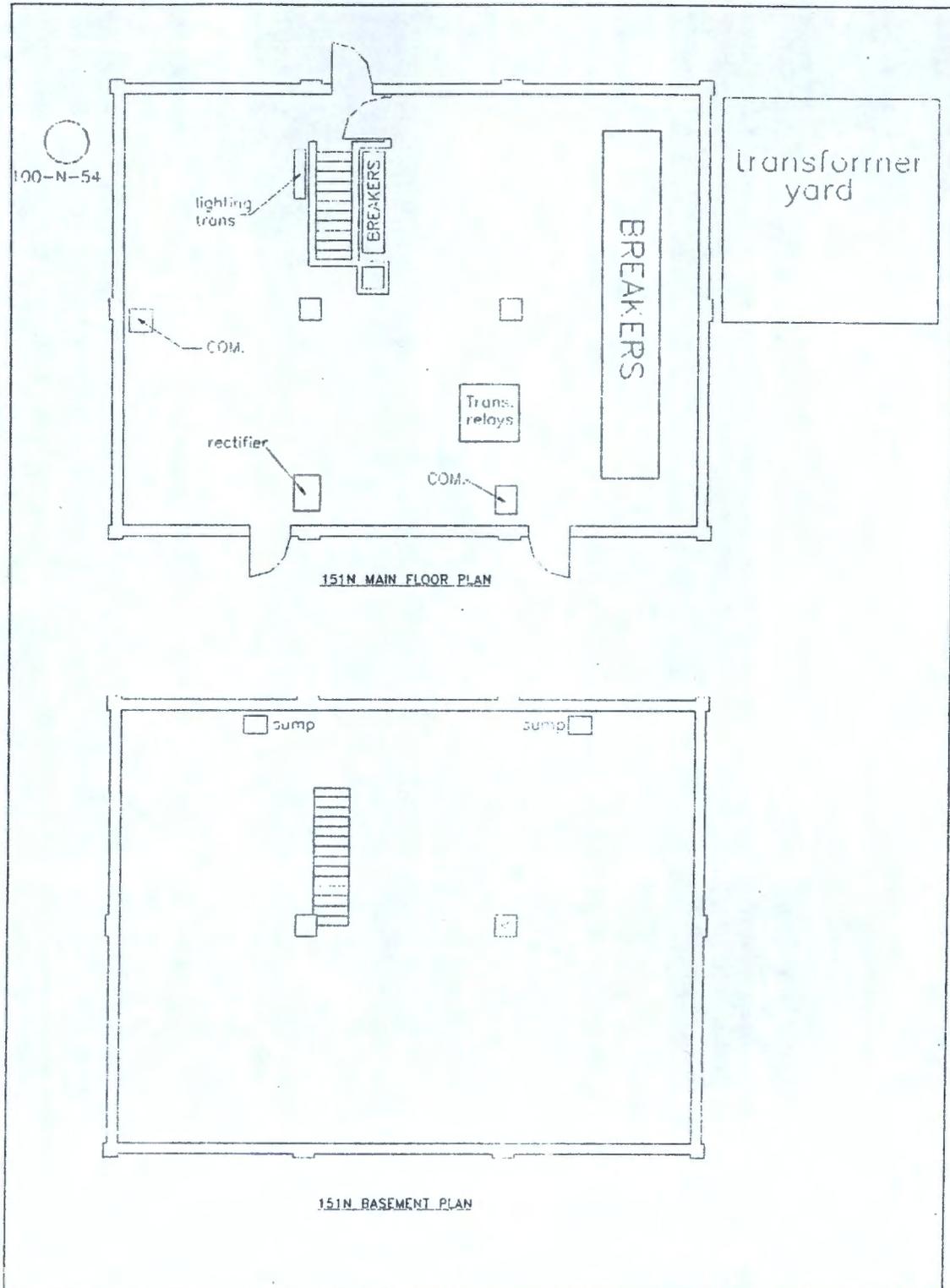
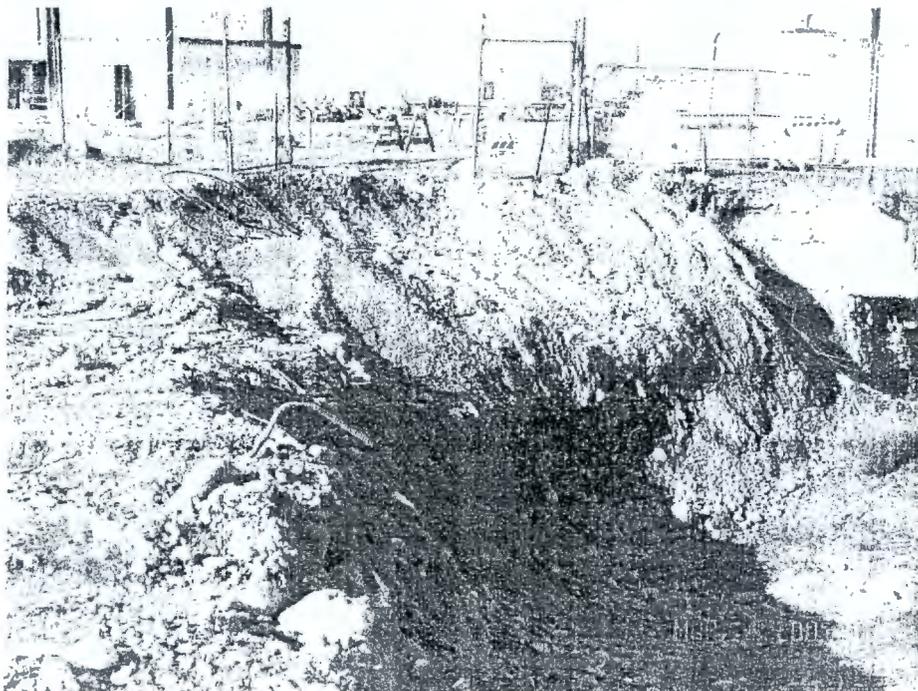
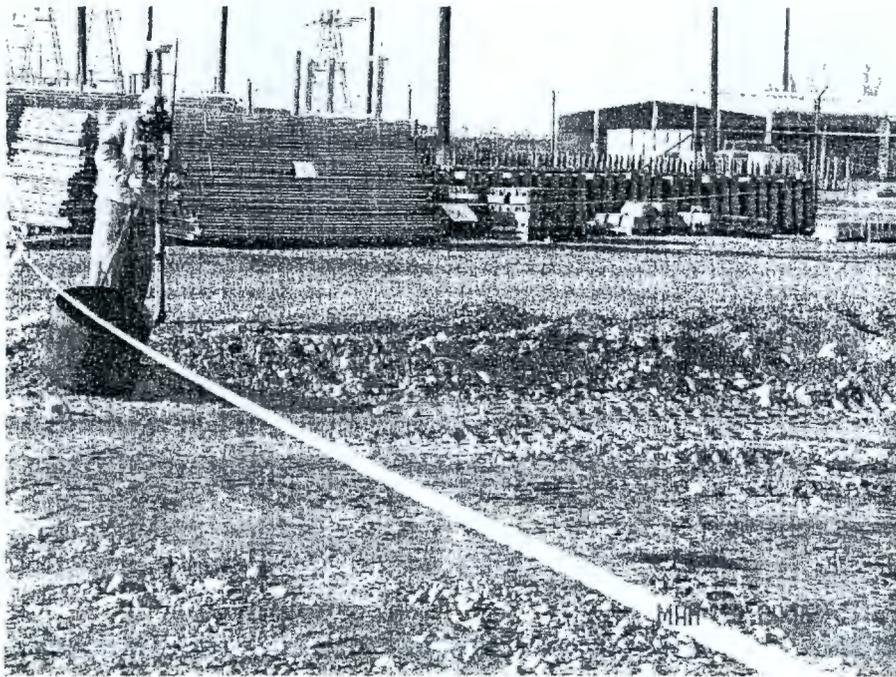
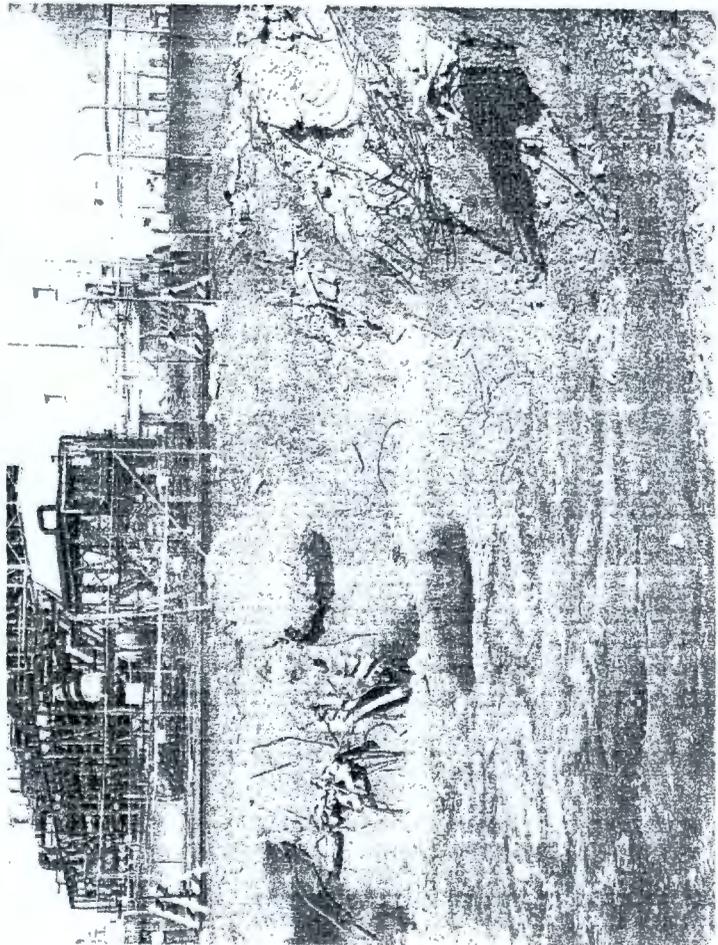
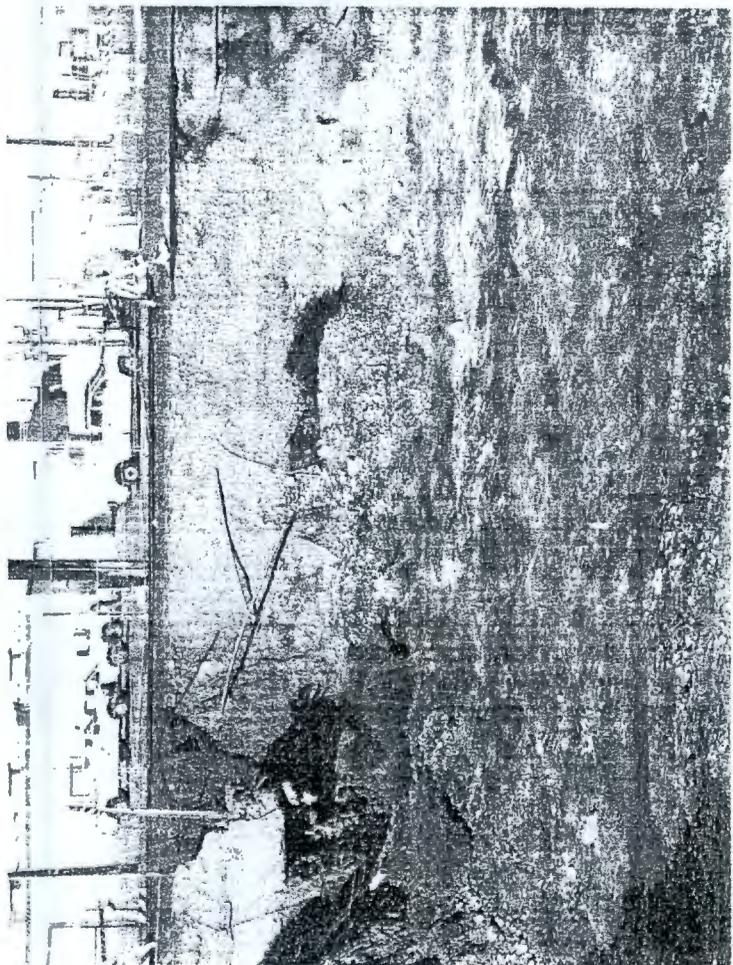


Figure 2
Post Demolition Photographs
151-N Electrical Substation







Attachment 1

Summary of Analytical Results

Characterization Sample Summary

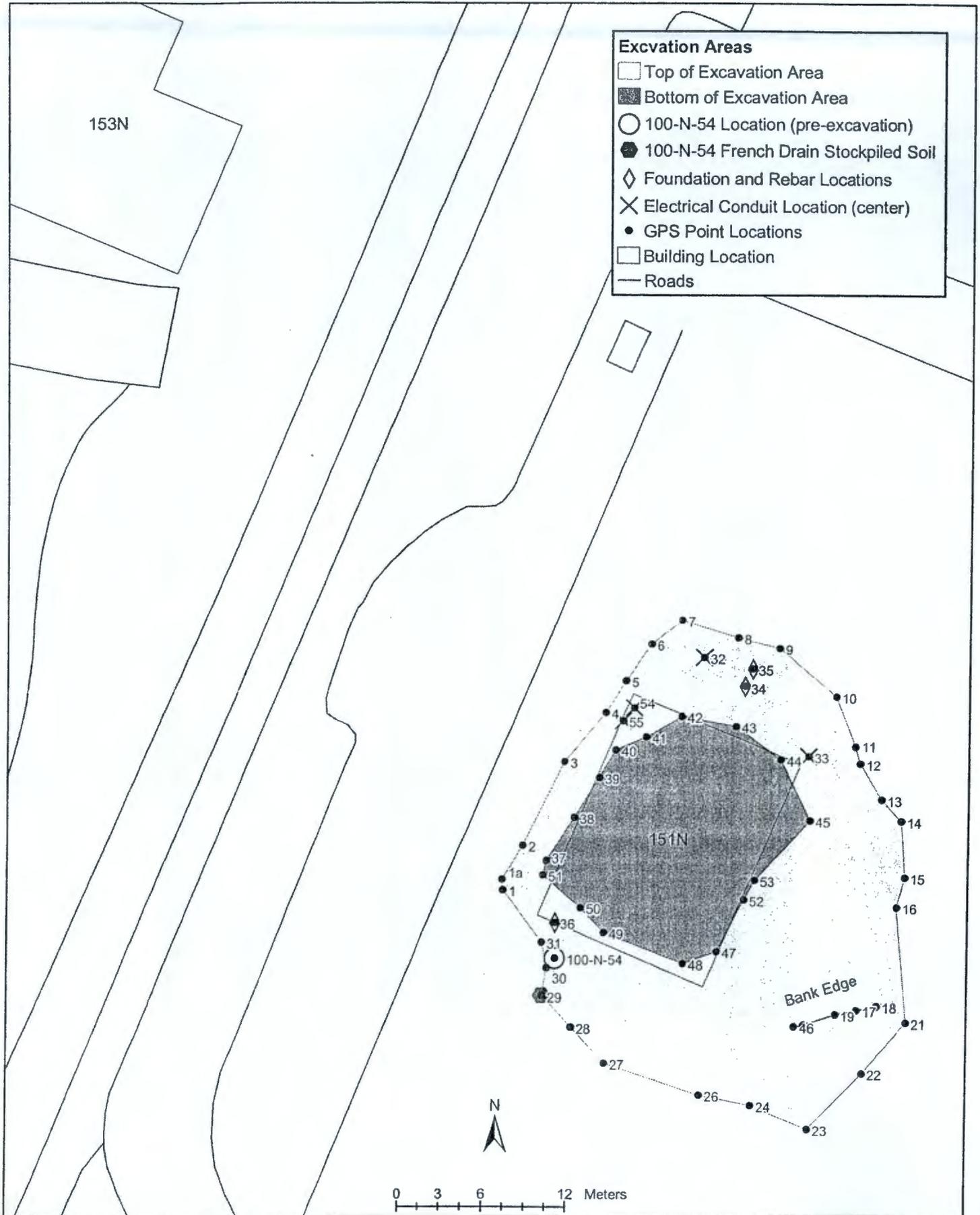
151-N Electrical Substation

HEIS #	Sample Date	logbook	logbook page	Location	Location detail	comments	COC	SDG
J10DY9	31-Oct-2005	EL-1516-7	88	151-N	roof,	white paint/tar surface, yellow foam, tar/gravel on base	RC-006-020	05-A-6065
J10F00	31-Oct-2005	EL-1516-7	88	151-N	roof,	white paint/tar surface, yellow foam, tar/gravel on base	RC-006-020	05-A-6065
J10F01	31-Oct-2005	EL-1516-7	88	151-N	roof,	white paint/tar surface, yellow foam, tar/gravel on base	RC-006-020	05-A-6065
J10F02	31-Oct-2005	EL-1516-7	93	151-N	drain line, basement, straight runs	white painted cloth wrap over yellow fibrous insulation	RC-006-020	05-A-6065
J10F03	31-Oct-2005	EL-1516-7	93	151-N	drain line, basement, straight runs	white painted cloth wrap over yellow fibrous insulation	RC-006-020	05-A-6065
J10F04	31-Oct-2005	EL-1516-7	93	151-N	drain line, basement, elbow	white painted cloth wrap over white granular & fibrous mud	RC-006-020	05-A-6065
J10F05	31-Oct-2005	EL-1516-7	93	151-N	drain line, basement, straight runs	white painted cloth wrap over yellow fibrous insulation	RC-006-020	05-A-6065
J10F06	31-Oct-2005	EL-1516-7	94	151-N	fire line, elbow	red painted cloth over yellow fibrous insulation	RC-006-020	05-A-6065
J10F07	31-Oct-2005	EL-1516-7	94	151-N	fire line, straight run	red painted cloth over yellow fibrous insulation	RC-006-020	05-A-6065
J10F08	31-Oct-2005	EL-1516-7	94	151-N	fire line, valve	red painted cloth over yellow fibrous insulation	RC-006-020	05-A-6065
J10F09	31-Oct-2005	EL-1516-7	94	151-N	cold water supply, elbow, basement	white painted cloth wrap over yellow fibrous insulation	RC-006-020	05-A-6065
J10F10	31-Oct-2005	EL-1516-7	94	151-N	cold water supply, straight runs, main level	white painted cloth wrap over yellow/white fibrous insulation	RC-006-020	05-A-6065
J10F11	31-Oct-2005	EL-1516-7	94	151-N	cold water supply, straight runs, main level	white painted cloth wrap over yellow/white fibrous insulation	RC-006-020	05-A-6065
J10W38	28-Dec-2005	EI-1516-8	22	151-N	silica sand	silica sand	RC-006-035	RCF1380
J10W39	28-Dec-2005	EI-1516-8	22	151-N	soil from bottom of 100-N-54 French drain	material was red stained soil	RC-006-035	RCF1380
J10W40	28-Dec-2005	EI-1516-8	22	151-N	soil from bottom of 100-N-54 French drain	material was red stained soil	RC-006-035	RCF1380
J10W41	28-Dec-2005	EI-1516-8	22	151-N	silica sand	silica sand		K0160
J10W42	28-Dec-2005	EI-1516-8	22	151-N	soil from bottom of 100-N-54 French drain	material was red stained soil		K0160
J10W43	28-Dec-2005	EI-1516-8	22	151-N	soil from bottom of 100-N-54 French drain	material was red stained soil		K0160
J118T5	22-Feb-2006	EI-1516-8	92	151-N	151-N excavation "black sands"	soil was collected by a front end loader from a point within the excavation opposite of the 100-N-45 french drain and	RC-006-052	K0241

Attachment 2

Civil Survey

Excavation Boundary of the 151-N Building



GPS Point Report

Project : 100N-blds2

User name	maaye	Date & Time	7:37:16 AM 3/23/2006
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		

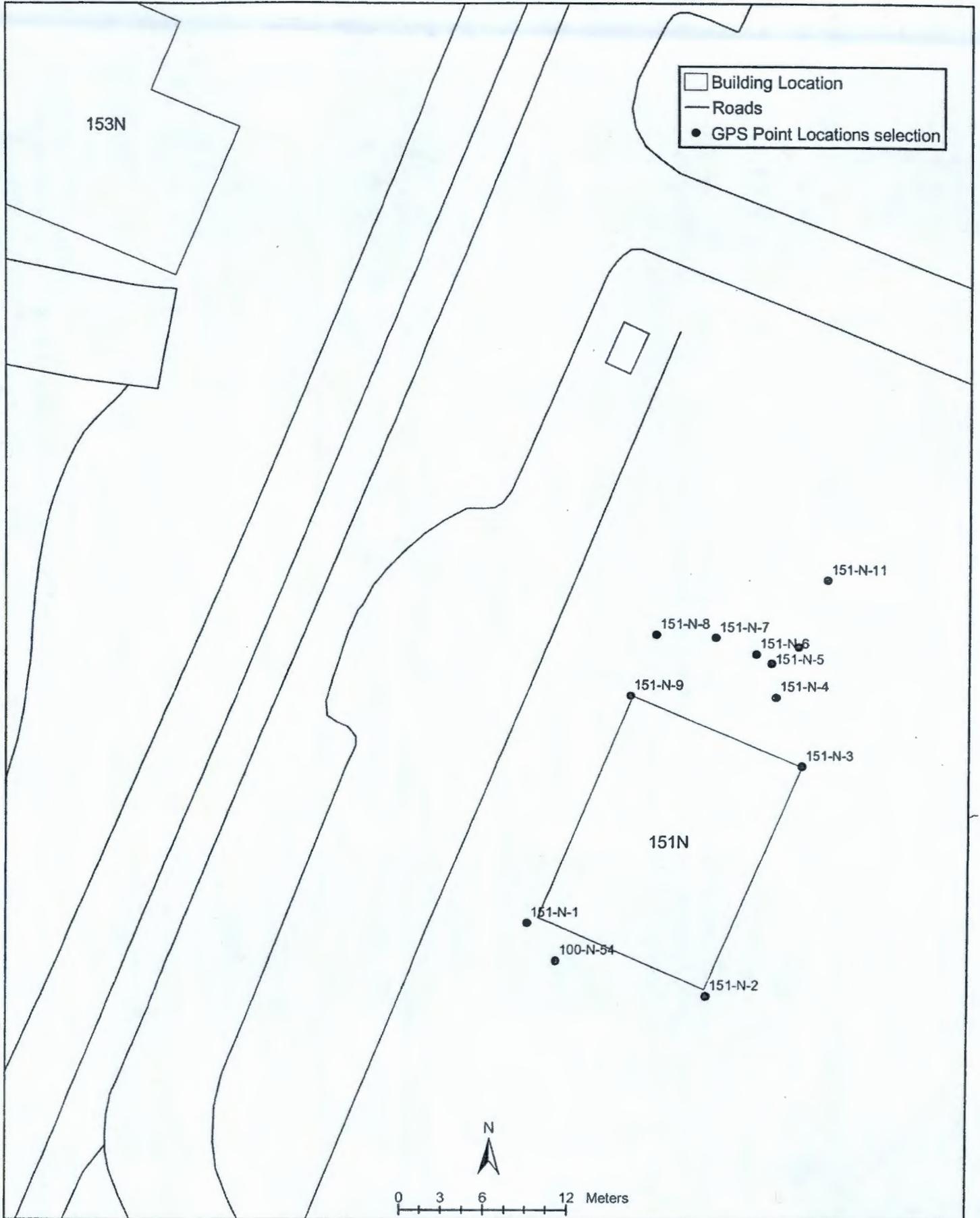
Name	Northing	Easting	Elevation	Feature Cod
1	149308.246m	571311.783m	140.197m	excav-bndry-top
2	149311.454m	571313.158m	140.273m	excav-bndry-top
3	149317.470m	571316.095m	140.183m	excav-bndry-top
4	149321.001m	571319.051m	140.305m	excav-bndry-top
5	149323.314m	571320.482m	140.371m	excav-bndry-top
6	149325.972m	571322.283m	140.287m	excav-bndry-top
7	149327.690m	571324.450m	140.181m	excav-bndry-top
8	149326.444m	571328.409m	140.161m	excav-bndry-top
9	149325.674m	571331.361m	140.188m	excav-bndry-top
10	149322.193m	571335.459m	140.206m	excav-bndry-top
11	149318.588m	571336.896m	139.872m	excav-bndry-top
12	149317.366m	571337.248m	139.745m	excav-bndry-top
13	149314.790m	571338.805m	139.616m	excav-bndry-top
14	149313.231m	571340.239m	139.713m	excav-bndry-top
15	149309.213m	571340.540m	139.733m	excav-bndry-top
16	149307.095m	571339.971m	139.722m	excav-bndry-top
17	149299.797m	571337.160m	139.958m	excav-bndry-top
18	149300.087m	571338.595m	140.058m	excav-bndry-top
19	149299.462m	571335.594m	139.952m	excav-bndry-top
20	149298.698m	571333.329m	139.885m	excav-bndry-top
21	149298.919m	571340.717m	140.150m	excav-bndry-top
22	149295.303m	571337.591m	140.122m	excav-bndry-top
23	149291.319m	571333.668m	140.369m	excav-bndry-top
24	149293.043m	571329.601m	140.355m	excav-bndry-top
26	149293.778m	571325.935m	140.212m	excav-bndry-top
27	149296.012m	571319.152m	140.314m	excav-bndry-top
28	149298.569m	571316.716m	140.323m	excav-bndry-top
29	149300.797m	571314.596m	140.656m	fd
30	149302.747m	571314.946m	140.254m	excav-bndry-top
31	149304.543m	571314.558m	140.317m	excav-bndry-top
32	149325.003m	571326.041m	139.040m	pipe-center
33	149317.888m	571333.502m	138.686m	pipe-center
34	149322.942m	571328.930m	137.865m	rebar-bottom
35	149324.179m	571329.463m	138.563m	rebar-top
36	149305.938m	571315.510m	139.133m	rebar-top
37	149310.369m	571314.846m	137.392m	toe
38	149313.472m	571316.823m	137.300m	toe
39	149316.324m	571318.602m	137.117m	toe
40	149318.316m	571319.790m	136.934m	toe

41	149319.247m	571321.978m	136.743m	toe
42	149320.749m	571324.484m	136.521m	toe
43	149320.048m	571328.303m	136.374m	toe
44	149317.658m	571331.530m	136.509m	toe
45	149313.263m	571333.641m	137.032m	toe
46	149298.606m	571332.667m	139.893m	toe
47	149303.894m	571327.080m	136.842m	toe
48	149303.050m	571324.710m	136.643m	toe
49	149305.237m	571319.011m	136.828m	toe
50	149307.007m	571317.340m	137.106m	toe
51	149309.320m	571314.609m	137.043m	toe
52	149307.568m	571328.967m	136.555m	toe
53	149308.979m	571329.729m	136.390m	toe
54	149321.346m	571321.092m	138.465m	pipe-end
55	149320.421m	571320.296m	138.506m	pipe-end
100-N-54	149303.414m	571315.526m	140.095m	french-drain
1a	149309.025m	571311.736m	140.213m	excav-bndry-top
lz13	149290.854m	571331.809m	140.219m	cp
lz14	149311.181m	571342.645m	139.859m	cp

3/23/2006C:\Program Files\Trimble\Trimble Geomatics Office

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Excavation Boundary of the 151-N Building



Survey Data Report

Project : 100N-BUILDINGS

User name	maaye	Date & Time	1:08:07 PM 3/20/2006
Coordinate System	US State Plane 1983	Zone	Washington South 4602
Project Datum	NAD 1983 (Conus)		
Vertical Datum		Geoid Model	GEOID99 (Conus)
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

Survey Project Name/Title: 100N-BUILDINGS
 Survey Purpose: GPS 151N building and features prior to D&D
 Requested By: Dave Shea
 General Site Location: 100-N
 Charge Code: per building- so several
 Field Surveyor: MARGO AYE
 Computer Software Used: MARGO AYE
 Survey Equipment Used: 5800
 Control Monuments Used: Wells 119-N-26 and 119-N-72
 Survey Method: RTK
 Estimated Horizontal Precision: <=0.020m
 Estimated Vertical Precision: <=0.050m
 Fieldwork Start Date: November 29, 2005
 Fieldwork Completion Date: December 12, 2005
 Notes:

Name	Northing	Easting	Elevation	Feature Cod
100-N-54	149303.414m	571315.526m	140.095m	french-drain
151-N-1	149306.079m	571313.471m	138.298m	corner of building
151-N-10	149325.921m	571332.689m	139.890m	old-conc-piling
151-N-11	149330.720m	571334.729m	139.895m	old-conc-piling
151-N-2	149300.956m	571326.268m	139.715m	corner of building
151-N-3	149317.364m	571332.933m	139.900m	corner of building
151-N-4	149322.299m	571331.082m	139.953m	concrete-transformer
151-N-5	149324.738m	571330.748m	139.958m	concrete-transformer
151-N-6	149325.393m	571329.664m	139.913m	concrete-transformer
151-N-7	149326.569m	571326.831m	139.792m	concrete-transformer
151-N-8	149326.793m	571322.652m	139.801m	concrete-transformer
151-N-9	149322.412m	571320.830m	139.938m	corner of building

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