Department of Energy
Ohio Field Office
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

3331

OCT 26 2000

Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0083-01

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF CHANGE PAGES TO THE FINAL CERTIFICATION DESIGN LETTER OF THE AREA 2, PHASE I ACTIVE FLYASH PILE FOOTPRINT AND ADJACENT AREA EAST OF THE SOUTH CONSTRUCTION ROAD

Enclosed are change pages to the Final Certification Design Letter (CDL) of the Area 2, Phase I (A2PI) Active Flyash Pile Footprint and Adjacent Area East of the South Construction Road. These change pages are in response to a verbal request by the Ohio Environmental Protection Agency (OEPA) to add Neptunium-237 as an area-specific constituent of concern for Certification Unit A2PI-AFP-05. Changes to the Project Specific Plan (PSP) will be made as a Variance/Field Change Notice. Also, enclosed are figures previously omitted from Appendix B during the production of this CDL.

If you have any questions or require additional information, please contact Robert Janke at (513) 648-3124.

Sincerely,

Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:R.J. Janke

Enclosure

1

cc w/enclosure:
G. Jablonowski, USEPA-V, SRF-5J
T. Schneider, OEPA-Dayton (three copies of enclosure)
F. Bell, ATSDR
M. Schupe, HSI GeoTrans
R. Vandegrift, ODH
F. Hodge, Tetra Tech
AR Coordinator, Fluor Fernald, Inc./78

cc w/o enclosure:
N. Hallein, EM-31/CLOV
D. Carr, Fluor Fernald, Inc./2
J. D. Chiou, Fluor Fernald, Inc./52-0
T. Crawford, Fluor Fernald, Inc./52-0
R. Janke, DOE-FEMP
T. Hagen, Fluor Fernald, Inc./65-2
J. Harmon, Fluor Fernald, Inc./90
S. Hinnefeld, Fluor Fernald, Inc./31
M. Jewett, Fluor Fernald, Inc./52-2
M. Rolfes, Fluor Fernald, Inc./60
T. Walsh, Fluor Fernald, Inc./65-2
ECDC, Fluor Fernald, Inc./52-7

CERTIFICATION DESIGN LETTER FOR AREA 2, PHASE I ACTIVE FLYASH PILE FOOTPRINT AND ADJACENT AREA EAST OF THE SOUTH CONSTRUCTION ROAD

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

OCTOBER 2000

U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

20402-RP-0001
REVISION 0
PCN 1

REVISION SUMMARY

Revision	Date	Description of Revision
Rev. 0	10-12-00	Initial controlled issuance
PCN 1	10-24-00	Addition of Neptunium-237 to ASCOC list for CU A2PI-AFP-05 per Agency request. Addition of omitted Appendix B figures.

TABLE 2-1
AREA 2 SECONDARY ASCOC LIST

Area 2 Secondary ASCOC	Number of Above-FRL Hits	Number of Samples	Retained as ASCOC	Reason for Not Retaining as ASCOC
Aroclor-1254 and 1260	23	102	No	All hits are non-detections with CRDLs greater than the FRL. Compound not expected in area and no unusual odors or organics encountered during AFP excavation
Arsenic	30	91	Yes	N/A
Benzo(a)pyrene	0	59	No	No hits at or greater than FRL
Beryllium	26	48	Yes	N/A
Bromodichloromethane	0	29	No	No hits at or greater than FRL
Cesium-137	0	76	No	No hits at or greater than FRL
Dibenzo(a,h)anthracene	0	59	No	No hits at or greater than FRL
1,1-dichloroethene	5	65	No	All hits are non-detections with CRDLs greater than the FRL. Compound not expected in area and no unusual odors or organics encountered during AFP excavation
Dieldrin	16	63	No	All hits are non-detections with CRDLs greater than the FRL. Compound not expected in area and no unusual odors or organics encountered during AFP excavation
Lead	0	91	No	No hits at or greater than FRL
Neptunium-237	1	55	Yes	The above-FRL sample is within the flyash and will be remediated. In addition, the sample at same location within the soil beneath flyash is below FRL (sample ID 112123). However, Neptunium-237 will be sampled and analyzed for CU-05 only.
Technetium-99	0	68	No	No hits at or greater than FRL
Thorium-230	0	75	No	No hits at or greater than FRL

3.0 AREA-SPECIFIC CONSTITUENTS OF CONCERN

In the OU5 Record of Decision (ROD, DOE 1996), there are 80 soil COCs with established FRLs which were retained for further investigation based on a screening process that considered the presence of the constituent in site soil and the potential risk to a receptor exposed to soil containing this constituent. In spite of the conservative nature of this COC retention process, many of the COCs with established FRLs have a limited distribution in site soil or the presence of the COC is based on high CRDLs. When the FRLs were established for these COCs in the OU5 ROD, they were initially screened against site data presented on spatial maps to establish a picture of potential remediation areas.

By reviewing existing RI/FS data presented on spatial distribution maps, the sitewide list of soil COCs was reduced from 80 to 30. This reduction was possible because the majority of the COCs with FRLs listed in the OU5 ROD have no detections on site above their corresponding FRL, thus eliminating them from further consideration. The 30 remaining sitewide COCs account for over 99 percent of the combined risk to a site receptor model, and they comprise the list from which all of the remediation ASCOCs are drawn. When planning certification for a remediation area, additional selection criteria are used to derive an area specific subset of these 30 COCs.

3.1 SELECTION CRITERIA

The selection process for retaining ASCOCs for a remediation area is driven by applying a set of decision criteria. A soil constituent will be retained as an ASCOC if:

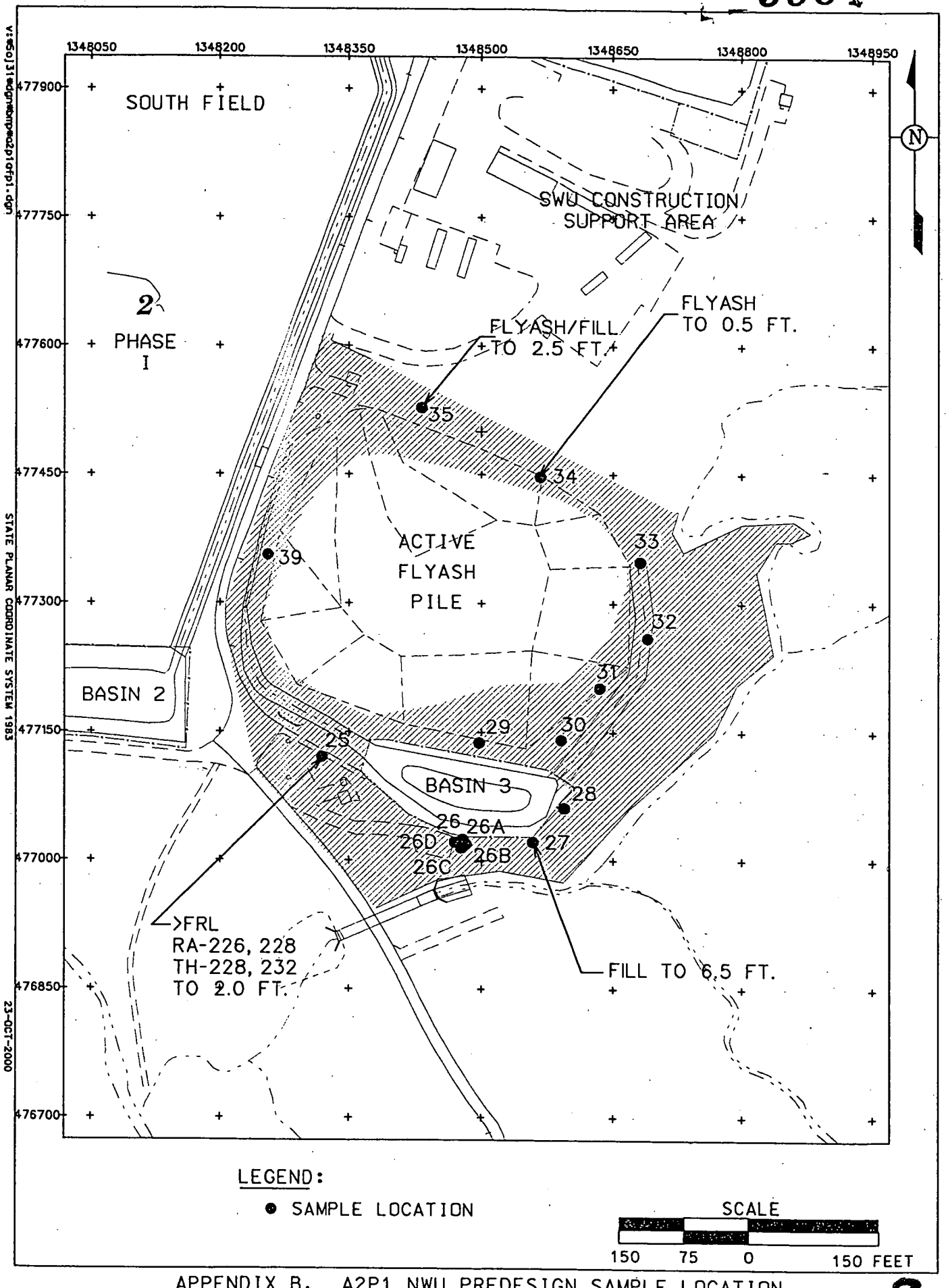
- It is listed as a soil COC in the OU5 ROD
- It can be traced to site use, either through process knowledge or known release of the constituent to the environment
- Analytical results indicate the constituent is present above its FRL, and the above-FRL concentrations are not attributable to false positives or elevated CRDLs
- Physical characteristics of the contaminant, such as degradation rate and volatility, indicate it is likely to persist in the soil between time of release and remediation
- The contaminant is one of the sitewide primary COCs (total uranium, radium-226, radium-228, thorium-232, and thorium-228).

Using this process, the ASCOCs are identified and listed in Table 3-1 along with the ecological COCs required for the AFP area (per Appendix C of the SEP). The ecological COCs are added to the list of analytes, but certification is not contingent on benchmark toxicity value (BTV) exceedences.

TABLE 3-1
ASCOC LIST FOR ALL CUs

ASCOC	FRL	Reason Retained
Total Uranium	82 mg/kg (10 mg/kg for CU A2P1-AFP-05 and -06)	Retained as a primary ASCOC sitewide
Radium-226	1.7 pCi/g	Retained as a primary ASCOC sitewide
Radium-228	1.8 pCi/g	Retained as a primary ASCOC sitewide
Thorium-228	1.7 pCi/g	Retained as a primary ASCOC sitewide
Thorium-232	1.5 pCi/g	Retained as a primary ASCOC sitewide
Arsenic	12 mg/kg	Retained as a secondary ASCOC per the discussion in Table 2-1
Beryllium	1.5 mg/kg	Retained as a secondary ASCOC per the discussion in Table 2-1
Antimony	10 mg/kg	Retained as an ecological ASCOC
Cadmium	5 mg/kg	Retained as an ecological ASCOC
Molybdenum	10 mg/kg	Retained as an ecological ASCOC
Neptunium-237	4.99 pCi/g	Retained as a secondary ASCOC for CU-05 per the discussion in Table 2-1
Silver	10 mg/kg	Retained as an ecological ASCOC

mg/kg - milligrams per kilogram
pCi/g - picoCuries per gram



LEGEND:

● SAMPLE LOCATION

SCALE

150 75 0 150 FEET

APPENDIX B. A2P1 NWU PREDESIGN SAMPLE LOCATION

Appendix B

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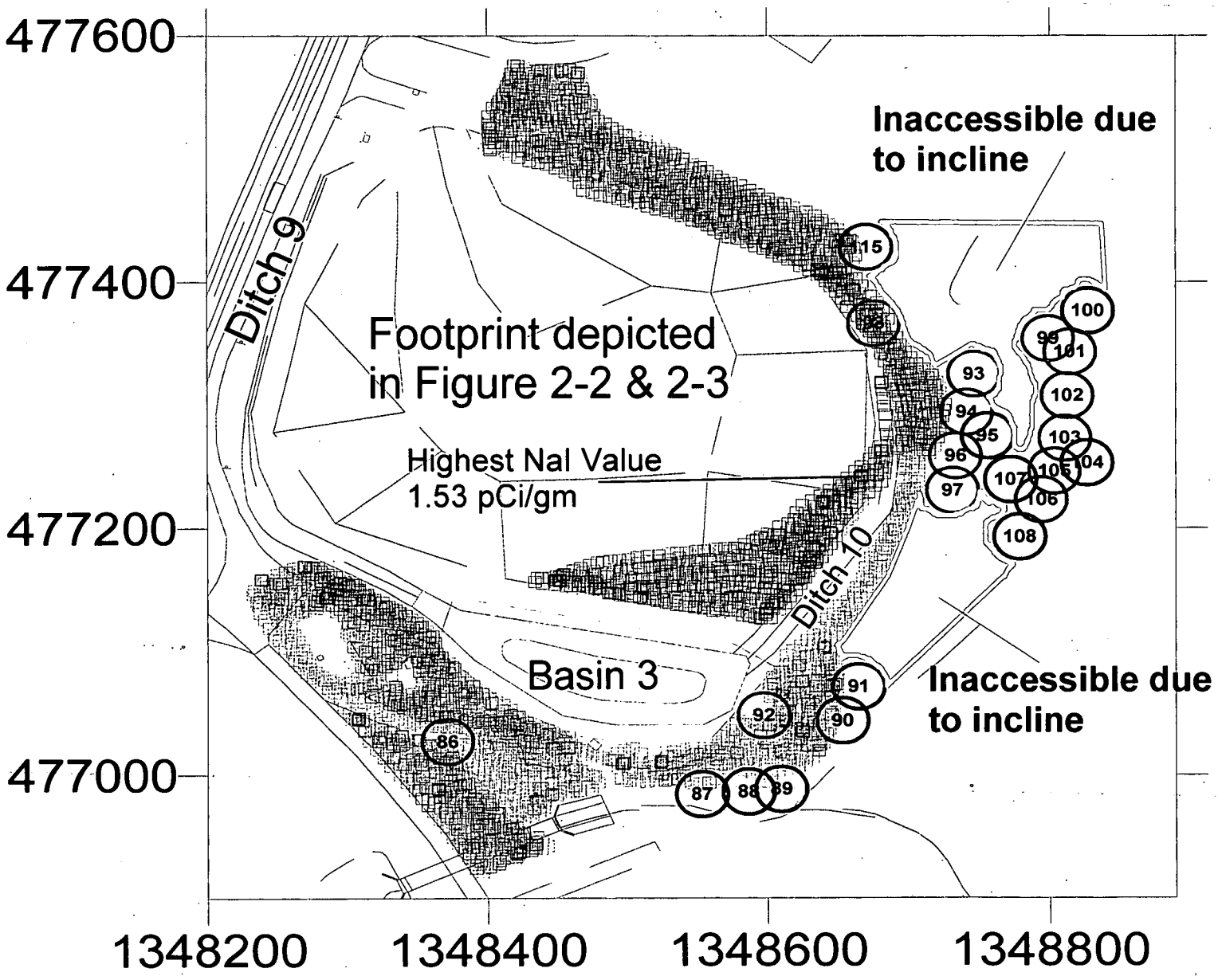
A2P1 NWU EAST

Moisture Corrected Thorium 232

RTRK batch#: 764,767
RSS batch#: 512,516,517
Measurement dates from 11/17/99 to 1/06/00
Field of View to scale



RMS
Th-232 pCi/gm
- -0.10 to 0.75
- 0.75 to 1.50
- 1.50 to 3.00
- 3.00 to 4.50
- 4.50 to 10000.00

HPGe
Th-232 pCi/gm
- 0.00 to 0.75
- 0.75 to 1.50
- 1.50 to 3.00
- 3.00 to 4.50
- 4.50 to 10000.00

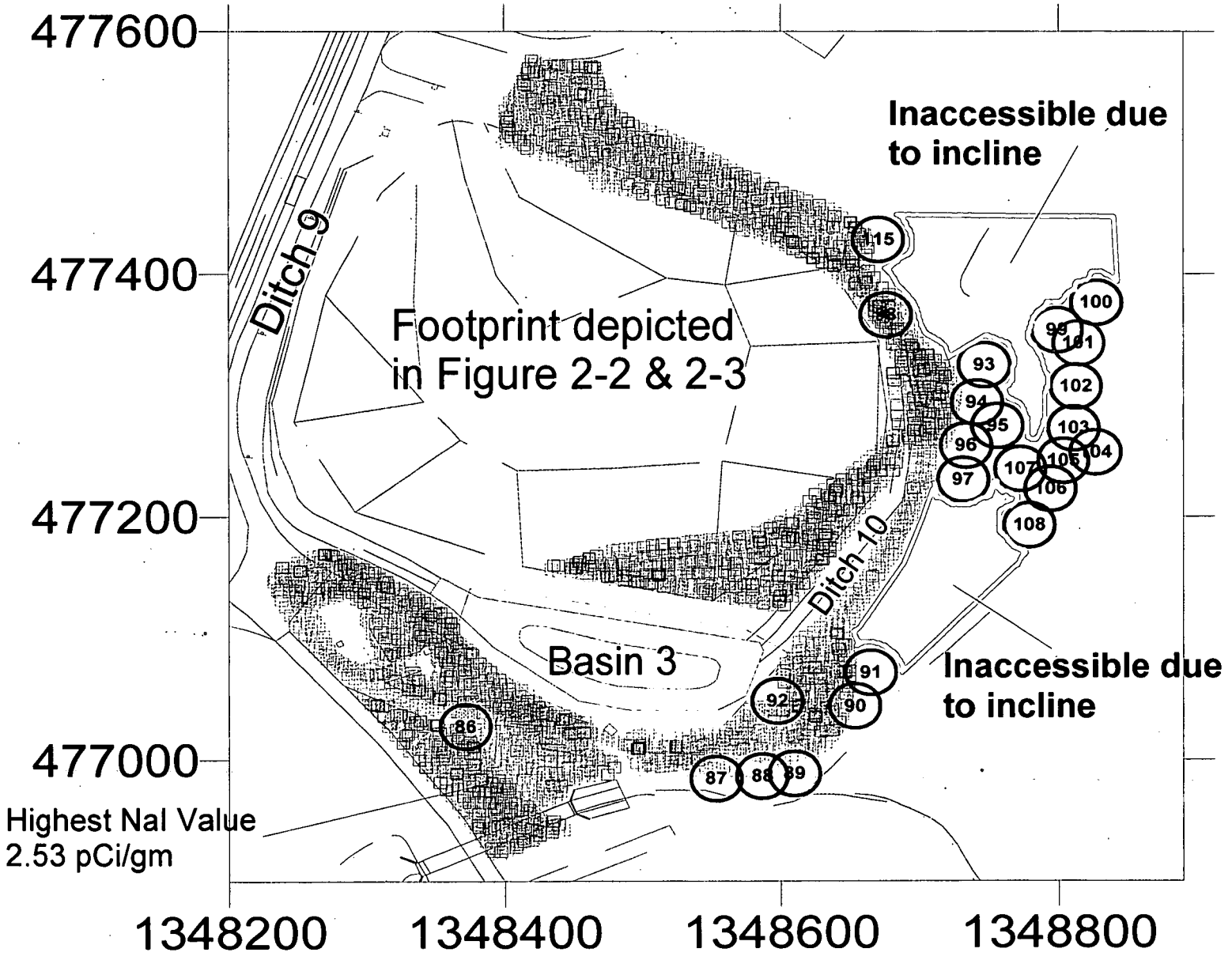
RTIMP DWG Title: A2P1-NWU-EAST-TH-2PT-MC.srf
Project #: 20400-PSP-0002
Project Name: A2P1 NWU & A2P2 PT1 PreDesign Sampling
Prepared By: Brian McDaniel
File: A2P1_NWU_EAST_TH_2PT_MC.srf
Date Prepared: 04/05/00

Appendix B

A2P1 NWU EAST

Moisture and Radon Corrected Radium 226

RTRK batch#: 764,767
RSS batch#: 512,516,517
Measurement dates from 11/17/99 to 1/06/00
Field of View to scale



RMS
Ra-226 pCi/gm

- -0.20 to 0.85
- 0.85 to 1.70
- 1.70 to 3.40
- 3.40 to 5.10
- 5.10 to 10000.00

HPGe
Ra-226 pCi/gm

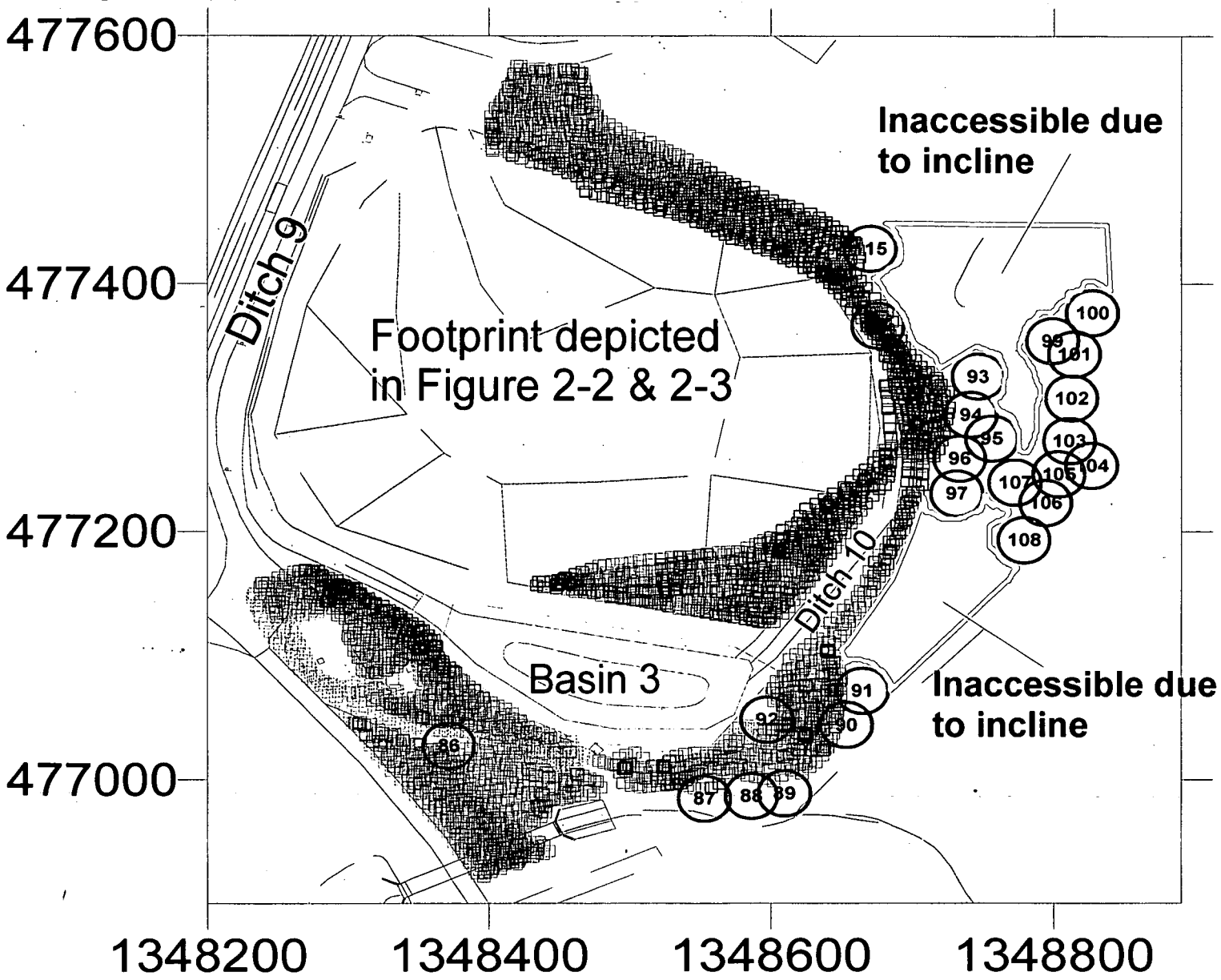
- 0.00 to 0.85
- 0.85 to 1.70
- 1.70 to 3.40
- 3.40 to 5.10
- 5.10 to 10000.00

RTIMP DWG Title: A2P1-NWU-EAST-RA-2PT-MC.srf
Project #: 20400-PSP-0002
Project Name: A2P1 NWU & A2P2 PT1 PreDesign Sampling
Prepared By: Brian McDaniel
File: A2P1_NWU_EAST_RA_2PT_MC.srf
Date Prepared: 04/05/00

Appendix B

A2P1 NWU EAST
Total Gross Counts per Second

RTRK batch#: 764,767
RSS batch#: 512,516,517
Measurement dates from 11/17/99 to 1/06/00
Field of View to scale



HPGE locations shown for coverage only

RMS
Counts per Second (CPS)

- 0.00 to 2000.00
- 2000.00 to 2500.00
- 2500.00 to 3000.00
- 3000.00 to 3500.00
- 3500.00 to 10000.00

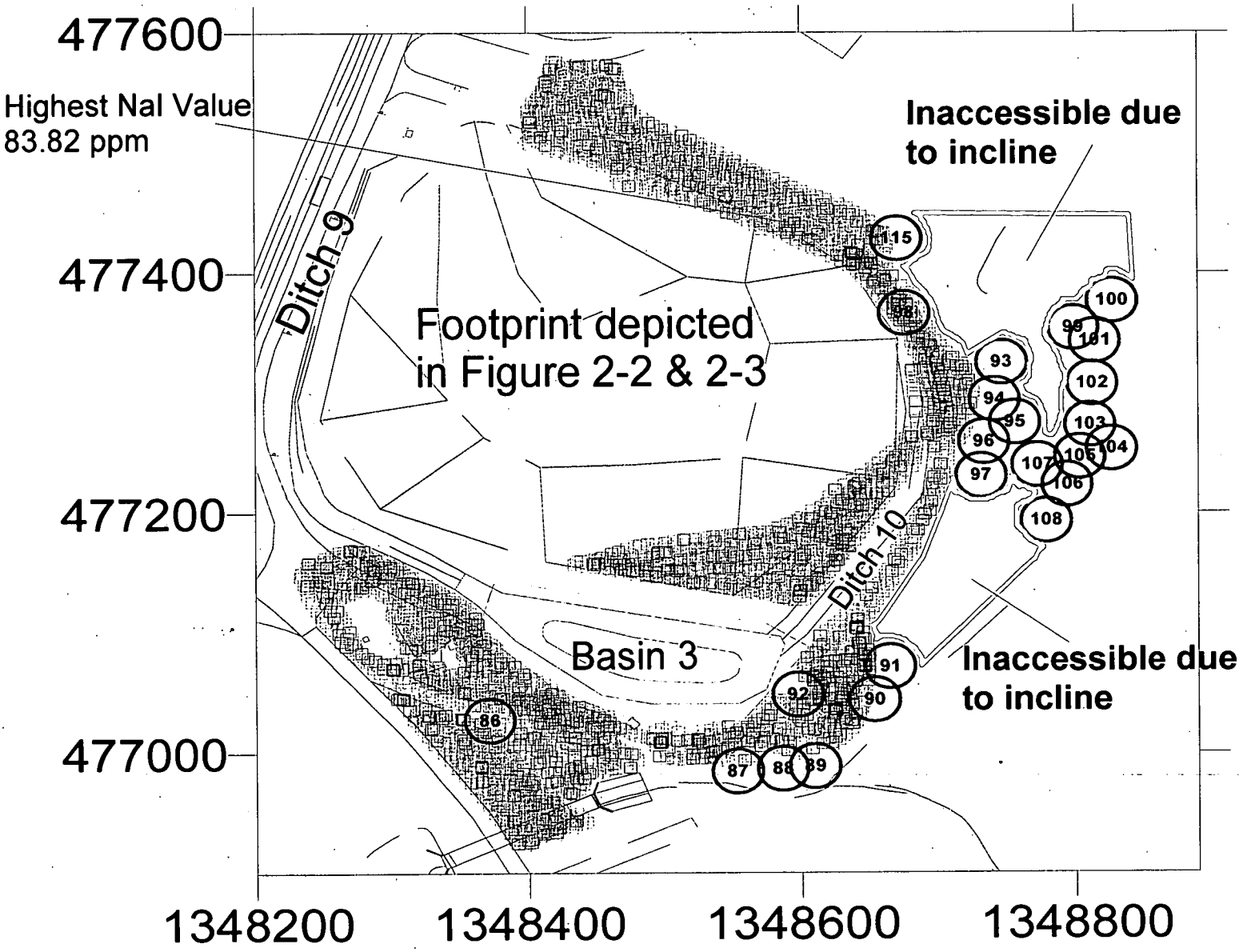
RTIMP DWG Title: A2P1-NWU-EAST-TC-1PT-MC.srf
Project #: 20400-PSP-0002
Project Name: A2P1 NWU & A2P2 PT1 PreDesign Sampling
Prepared By: Brian McDaniel
File: A2P1_NWU_EAST_TC_1PT_MC.srf
Date Prepared: 04/05/00

Appendix B

A2P1 NWU EAST

Moisture Corrected Total Uranium

RTRK batch#: 764,767
RSS batch#: 512;516,517
Measurement dates from 11/17/99 to 1/06/00
Field of View to scale



RMS Total Uranium in ppm
-54.00 to 41.00
41.00 to 82.00
82.00 to 164.00
164.00 to 246.00
246.00 to 10000.00

HPGe Total Uranium in ppm
0.00 to 41.00
41.00 to 82.00
82.00 to 164.00
164.00 to 246.00
246.00 to 10000.00

RTIMP DWG Title: A2P1-NWU-EAST-TU-2PT-MC.srf
Project #: 20400-PSP-0002
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