



**Department of Energy**

**Ohio Field Office  
Fernald Closure Project  
175 Tri-County Parkway  
Springdale, Ohio 45246**



JUL 20 2006

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

DOE-0170-06

Mr. Thomas Schneider, Project Manager  
Ohio Environmental Protection Agency  
Southwest District Office  
401 East Fifth Street  
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

**TRANSMITTAL OF THE ADDENDUM TO THE CERTIFICATION DESIGN LETTER  
AND CERTIFICATION PROJECT SPECIFIC PLAN FOR AREA 4B - PART ONE**

- References:
- 1) Letter, T. Schneider to J. Reising, "Disapproval - Recertification Plan for Certified Areas and Certification-In-Progress Areas within the FPA Footprint," dated July 7, 2006
  - 2) Letter DOE-0148-06, J. Reising to J. Saric/T. Schneider, "Recertification Plan for Certified Areas and Certification-In-Progress Areas within the Former Production Area Footprint," dated June 12, 2006
  - 3) Letter DOE-0123-06, J. Reising to J. Saric/T. Schneider, "Sampling Methodology for Collecting Soil/Sediment Cores Beneath Water in Submerged Soil Certification Areas and Certification-in-Progress Areas," dated May 16, 2006
  - 4) "Certification Design Letter and Certification Project Specific Plan for Area 4B - Part One," Document 20810-PSP-0008, dated September 2005

This addendum presents the plan to recertify a portion of the certified area within the Area 4B - Part One footprint. Excessive rainfall events in the spring caused storm water runoff from non-certified areas to overwhelm and breach the run-on control berms and ditches of Certified Area 4B - Part One. The storm water runoff may have impacted this area. Therefore, a recertification/resampling effort is necessary to demonstrate that soils in Area 4B - Part One has not been impacted by the water crossing the certification boundaries from non-certified areas to

an extent that soil remediation in the certified area becomes necessary. The enclosed Figure 1 shows the maximum extent of storm water overflow in the area.

The recertification approach discussed in Letter DOE-0148-06, Recertification Plan for Certified Areas and Certification-In-Progress Areas within the Former Production Area Footprint (Reference 1), was verbally approved by the U.S. Environmental Protection Agency during the July 11, 2006 Conference Call; however, Ohio Environmental Protection Area (OEPA) disapproved the approach in a July 7, 2006 response citing insufficient coverage of the flooded areas (Reference 1). Therefore, this addendum also addresses OEPA's concern by providing 100 percent coverage of the flooded areas using both real-time scans of the now dry areas and recertification sampling of the submerged areas.

#### Extent of Recertification

On May 10, 2006, samples were collected under Variance 20810-PSP-0008-07 from the southern end of previously certified Area 4B - Part One [certification unit (CU) A4B01] at the same locations of the original certification samples (see Figures 1 and 2). This CU is considered most likely to be recontaminated among all the areas due to the relatively higher concentrations of contaminants detected in the surface water in Area 4B - Part Two, which is immediately south of Area 4B - Part One. Additionally, this area has been drained, and the normal soil sampling procedure could be followed to access the extent of potential impacts in Area 4B - Part One by water crossing the certification boundary from Area 4B - Part Two. No significant changes in residual area-specific constituent of concern (ASCOC) concentrations were detected at most locations. All sample results from this sampling effort were below-final remediation level (FRL), with the exception of one location (A4B-C17-14W), which was 63 milligrams per kilogram for total uranium. This location is at the downgradient edge of the CU adjacent to Area 4B - Part Two (see Figure 2) and will be excavated to remove the contamination.

Based on the results of this recertification sampling effort and discussions with the OEPA, the U.S. Department of Energy (DOE) believes that total uranium is the best indicator parameter to reveal any potential recontamination of these areas (Reference 2). Therefore, total uranium will be analyzed as part of the recertification effort. Additionally, as discussed with the OEPA on July 7, 2006, real-time scans will be performed on all areas that were covered by water, but are now dry, and sampling will occur in those areas that remain covered by water.

#### Certification Unit Design

Three CUs have been designed to cover the sub-areas within Area 4B - Part One that were impacted by storm water run-on. Figure 3 shows the extent of the storm water run-on and the three CUs (A4B01, A4B02, and A4B03).

Certification Unit A4B01 was designed to cover a large swath of the previously certified area along the certification area breach line (i.e., the boundary between Area 4B - Part One and Area 4B - Part Two). This swath represents worst-case conditions of potential contamination for the area that has been inundated with water, as the particulate contamination would have settled closest to the breach line. The CU overlaps portions of previously sampled CUs from the

Mr. James Saric  
Mr. Thomas Schneider

-3-

DOE-0170-06

southern end of the original Area 4B - Part One certification effort. This area was sampled for the Area 4B - Part One ASCOCs for the previously sampled CUs (i.e., radium-226, radium-228, thorium-228, thorium-232, total uranium, technetium-99, aroclor-1254, and beryllium). The certification sample locations that fall within the new CU match the locations of the previous certification effort. As mentioned earlier, recertification sampling of this CU has been completed. The entire southern area that was submerged, including CU A4B01, will be real-time scanned.

Certification Unit A4B02 was designed to cover a large swath of the previously certified area along the certification area breach line (i.e., the boundary between Area 4B - Part One and Area 6 Former Production Area and Main Drainage Corridor). This swath was potentially impacted with water from the previously uncertified Main Drainage Corridor (MDC) - South area. The CU overlaps portions of previously sampled CUs from the northwestern portion of the original Area 4B - Part One certification effort. This area was sampled for the Area 4B - Part One ASCOCs for the previously sampled CUs (i.e., radium-226, radium-228, thorium-228, thorium-232, total uranium, technetium-99, aroclor-1254, and beryllium). The certification sample locations that fall within the new CU match the locations of the previous certification effort.

Certification Unit A4B03 was designed to cover the remaining portion of the previously certified area that is submerged and was not cover by CUs A4B01 and A4B02. This CU overlaps portions of previously sampled CUs from the northern and central portion of the original Area 4B - Part One certification effort. The recertification sample locations that fall within the new CU match 12 locations from the original certification effort. These 12 sampling locations have been randomly selected and will be sampled for total uranium because this is the agreed upon indicator parameter.

It should be noted that the four remaining CUs in Area MDC - South have been sampled. All four CUs pass certification; therefore, it is expected that Area 4B - Part One will pass recertification.

#### Sampling Approach

The northern submerged section of Area 4B - Part One will be treated as two CUs. The area will be re-certified using both real-time scans in areas that have been drained and physically sampling the areas that remain under water. The sampling methodology for the area that remains under water has been documented in Letter DOE-0123-06, Sampling Methodology for Collecting Soil/Sediment Cores Beneath Water in Submerged Soil Certification Areas and Certification-in-Progress Areas (Reference 2). The sampling method documented in the letter was successfully tested at previous certification sampling locations A4B-C11-3, 6, 7, 9, 11, and 14; and A4B-C09-7, 8, and 13 from Area 4B CU A4B02. A settling period and decanting protocol to retain suspended fine particles were also incorporated into the sampling procedure based on the OEPA's comment.

Mr. James Saric  
Mr. Thomas Schneider

-4-

DOE-0170-06

The samples listed above were collected under variance 20810-PSP-0008-08. The six other samples listed in this variance were collected when the area was dry (A4B-C09-14 and 16, A4B-C11-5, 12, 13, and 16). An additional CU has been designed for the remaining submerged footprint in the northern half of the area that has not yet been resampled.

#### Data Evaluation

Certification criteria and soil FRLs specified in the Sitewide Excavation Plan will be used to determine whether a CU still passes soil certification or not. The data collected during this recertification process will also be compared to the data collected under the original certification effort from these locations. Based on the recertification results, any necessary soil remediation will be identified and implemented with your approvals.

#### Documentation

As discussed above, variance 20810-PSP-0008-08 was used to layout a CU in the northeast portion of the area that was submerged. The samples associated with this variance have been collected. The remaining submerged area will be re-certified under variance 20810-PSP-0008-13. Both variances are attached.

Once all of the samples have been collected, analyzed, reported, and evaluated, the results of the data from CUs A4B01, A4B02, and A4B03 will be reported in an addendum to the Certification Report for Area 4B - Part One.

If you have any questions or require additional information, please contact me at (513) 648-3139.

Sincerely,

  
Johnny W. Reising  
Director

Enclosures

Mr. James Saric  
Mr. Thomas Schneider

-5-

DOE-0170-06

cc w/enclosures:

J. Desormeau, DOE-OH/FCP  
T. Schneider, OEPA-Dayton (three copies of enclosures)  
G. Jablonowski, USEPA-V, SRF-5J  
M. Cullerton, Tetra Tech  
M. Shupe, HSI GeoTrans  
S. Helmer, ODH  
AR Coordinator, Fluor Fernald, Inc./MS6

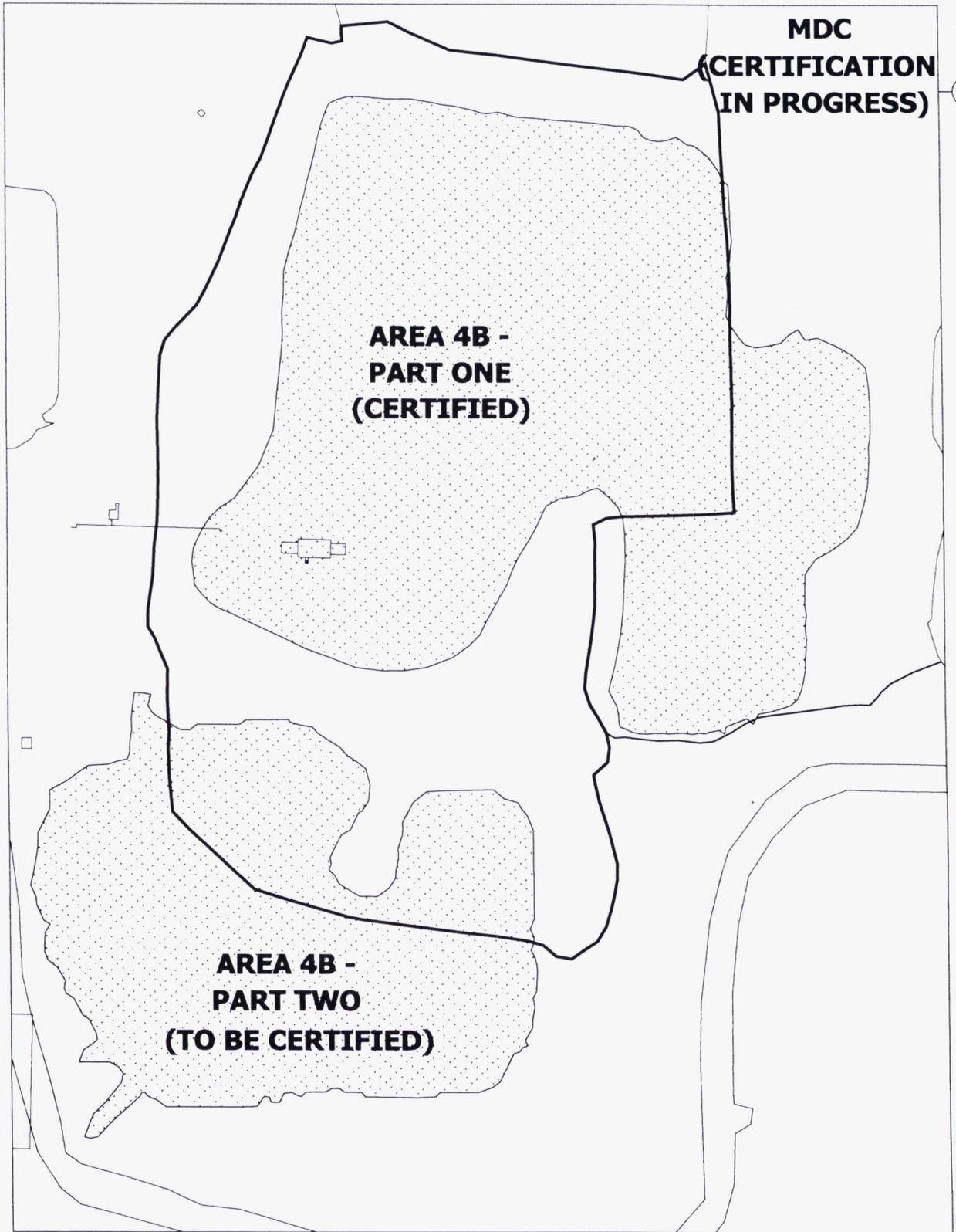
cc w/o enclosures:

J. Chiou, Fluor Fernald, Inc./MS88  
F. Johnston, Fluor Fernald, Inc./MS12  
C. Murphy, Fluor Fernald, Inc./MS1

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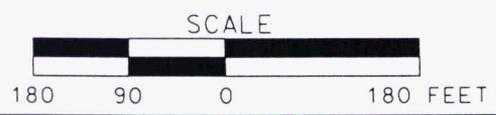
STATE PLANNING COORDINATE SYSTEM 1983

17-JUL-2006



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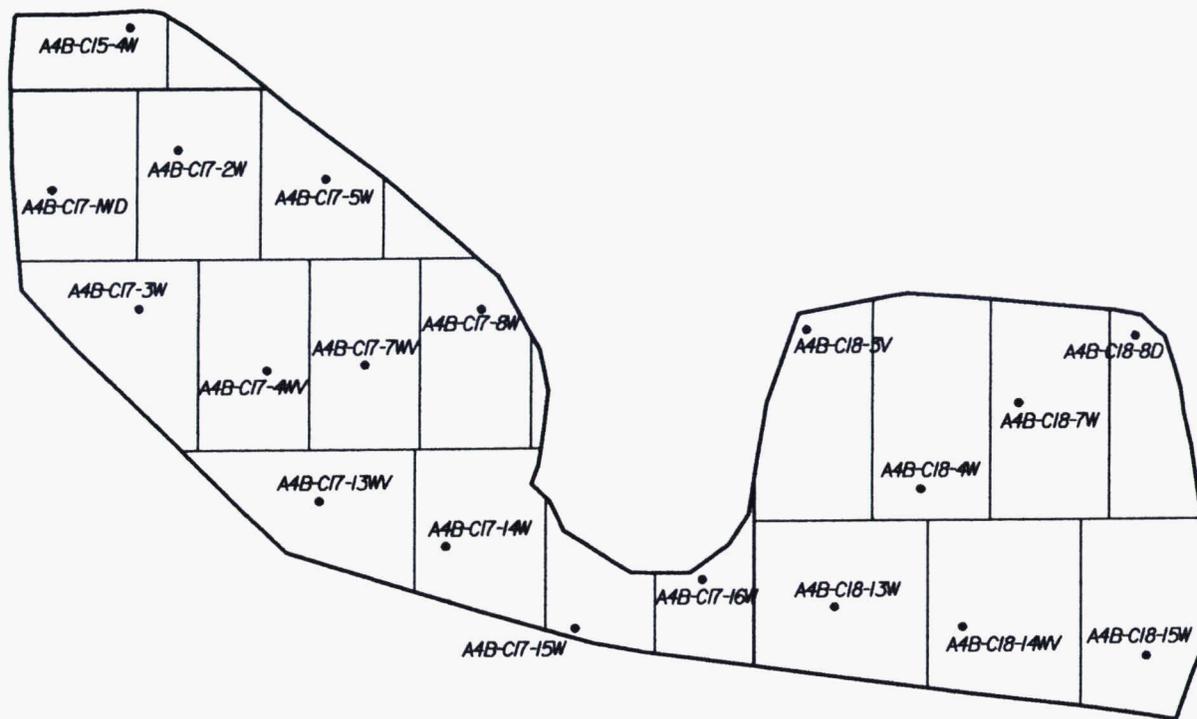
 FLOODED AREA



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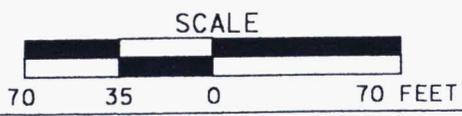
FIGURE 1. MAXIMUM EXTENT OF STORM WATER OVERFLOW IN CERTIFIED AREAS

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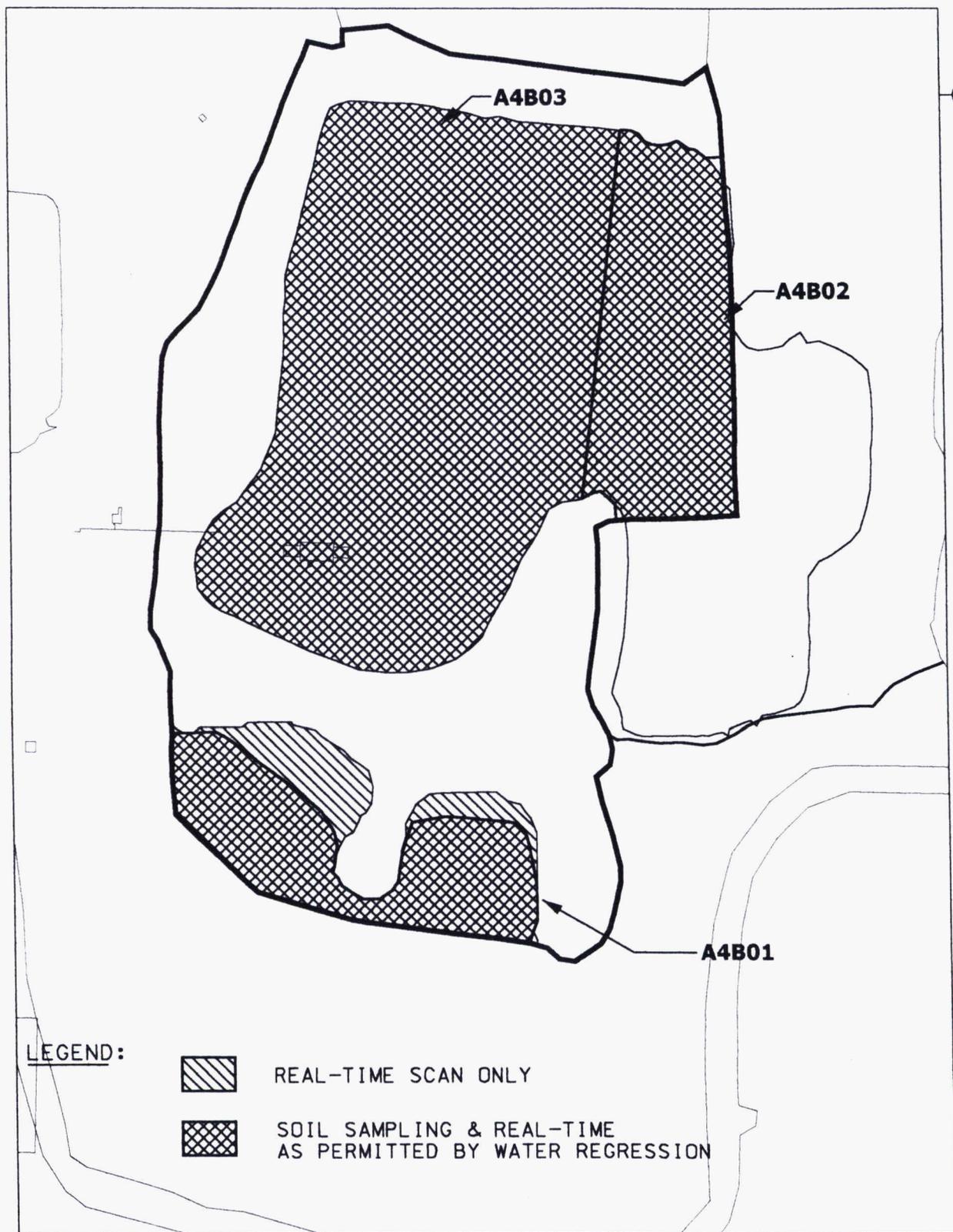
LEGEND:

• SAMPLE LOCATION



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FIGURE 2. RE-CERTIFICATION SAMPLING LOCATIONS FOR CU A4B01



DRAFT

FIGURE 3. MAXIMUM EXTENT OF STORM WATER OVERFLOW IN CERTIFIED AREAS

**VARIANCE / FIELD CHANGE NOTICE**

Significant?

(Yes or No): **YES**

V/F: 20810-PSP-0008-08

WBS NO.: PROJECT/DOCUMENT/ECDC #20810-PSP-0008 REV 1

Page: 1 of 8 **00615**

**PROJECT TITLE: Certification Design Letter And Certification Project Specific Plan For Area 4B - Part One**

Date: 5/22/06

**VARIANCE / FIELD CHANGE NOTICE (Include justification):**

This Variance/Field Change Notice (V/FCN) documents the addition of one certification unit (CU), consisting of 15 soil sampling locations. These samples are being collected because potentially contaminated storm water runoff from the southern end of the Main Drainage Corridor breached the run-on control berms and ditches of the certified area (see Figure 1). The CU overlaps portions of previously sampled locations that were part of two former CUs from the original Area 4B – Part One certification effort (see Figure 2). Re-certification samples shall be collected and analyzed for radium-226, radium-228, thorium-228, thorium-232, total uranium, and technetium-99 (TAL A); beryllium (TAL B); and aroclor-1254.

Attachment 1 contains the Sampling and Analytical Requirements and TALs. Attachment 2 contains the sample location information. Attachment 3 outlines the methodology to be followed to collect the samples, which is based on the methodology summarized in the letter (DOE-0123-06) from DOE to USEPA and OEPA dated May 16, 2006, "Sampling Methodology for Collecting Soil/Sediment Cores Beneath Water in Submerged Soil Certified Areas and Certification-In-Progress Areas."

**Justification:**

The purpose of this Re-Certification effort is to demonstrate that soil in Area 4B – Part One has not been impacted from water crossing the certification boundary from southern end of the Main Drainage Corridor and that ASCOCs still meet the risk-based FRLs. The new certification unit has been designed to cover a swath of the previously certified area along the certification area breach line. This swath represents worst-case conditions of potential contamination for the area that has been inundated with water, as the particulate contamination would have settled closest to the breach line. The certification sample locations that fall within the new CU match the locations of the previous certification effort. The data collected under this V/FCN will be compared to the data collected under the original certification effort from these locations. If the CU fails certification for any constituent, then this re-certification effort will be re-evaluated and additional sampling will occur. Per Section 4.3 of the PSP, the changes to the PSP will be documented with a V/FCN.

REQUESTED BY: Greg Lupton

Date: 5/22/06

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE: R. Fricke <i>R. Fricke</i>	7-13-06	X	PROJECT MANAGER: J.D. Chou <i>J.D. Chou</i>	5/22/06
	DATA QUALITY MANAGEMENT		X	CHARACTERIZATION MANAGER: R. Miller <i>R. Miller</i>	22 May 06
X	ANALYTICAL CUSTOMER SUPPORT: WAO <i>Paul S. McMurrian</i>	5/23/06		RTIMP Manager	
			X	Sampling Manager: T. Doherty <i>T. Doherty</i>	6/7/06

VARIANCE/FCN APPROVED [X] YES [ ] NO

REVISION REQUIRED: [ ] YES [x] NO

**DISTRIBUTION**

PROJECT MANAGER:	DOCUMENT CONTROL: Jeannie Rosser	OTHER:
QUALITY ASSURANCE:	CHARACTERIZATION MANAGER: Frank Miller	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

**Attachment 1  
Sampling and Analytical Requirements**

TAL(s)	Method <sup>a</sup>	Matrix	Preservative	ASL	TAT	Container <sup>b</sup>	Minimum Mass/Volume
Radiological/Metals/P CBs TALs A, B, C	Gamma Spec	Solid	None	D/E	10 days PEDD	Glass with Teflon- lined lid	500 g (1500 g) <sup>c</sup>
	-----				30 days final		
	LSC				10 days		
	ICP or ICP/MS				10 days		
-----	GC	10 days					

<sup>a</sup> Samples will be analyzed according to ASL D requirements but the minimum detection level may cause some analyses to be considered ASL E.

<sup>b</sup> Sample container types may be changed at the direction of the Field Sampling Lead, as long as the volume requirements, container compatibility requirements, and SCQ requirements are met.

<sup>c</sup> At the direction of the Field Sampling Lead, triple the specified volume must be collected for all samples at one location in the CU in order for the contract laboratory to perform the required quality control analysis. The samples shall be identified on the Chain of Custody/Request for Analysis forms as “designated for laboratory QC”.

<sup>d</sup> If “push tubes” are used for sampling, the off-site laboratories will be sent container blanks. If an alternative sample method is used, the Field Technicians will collect a rinsate.

**Target Analyte List**

**20810-PSP-0008-A, 16 - 32 samples  
(Radiological - ASL D/E\*)**

Analyte	On-Property FRL	MDL (soil)	MDL (water)
Total Uranium	20 mg/kg	2.0 mg/kg	3000 µg/L
Radium-226	1.7 pCi/g	0.17 pCi/g	255 pCi/L
Radium-228	1.8 pCi/g	0.18 pCi/g	270 pCi/L
Thorium-228	1.7 pCi/g	0.17 pCi/g	255 pCi/L
Thorium-232	1.5 pCi/g	0.15 pCi/g	225 pCi/L
Technetium-99	30 pCi/g	3.0 pCi/g	45,000 pCi/L

**20810-PSP-0008-B, 16 - 32 samples  
(Metals - ASL D/E\*)**

Analyte	On-Property FRL	MDL	MDL (water)
Beryllium	1.5 mg/kg	0.15 mg/kg	0.22 mg/L

**20810-PSP-0008-C, 16 - 32 samples  
(PCBs - ASL D/E\*)**

Analyte	On-Property FRL	MDL
Aroclor-1254	0.13 mg/kg	0.013 mg/kg

**Attachment 2**  
**Area 4B Certification Sample Locations and Identifiers**

CU	Location	Depth	Sample ID*	TAL	North-83	East-83	MSL
A4B02	9-7W	0"-6"	A4B-C09-7W^RMP	ABC	480808.29	1349055.30	559.92
	9-8W	0"-6"	A4B-C09-8W^RMP	ABC	480786.93	1349103.81	559.89
	9-13W	0"-6"	A4B-C09-13W^RMP	ABC	480731.69	1349035.57	558.84
	9-14W	0"-6"	A4B-C09-14W^RMP	ABC	480725.16	1349109.75	558.81
	9-15WV	0"-6"	A4B-C09-15W^V	Archive	480667.46	1349042.01	NA
	9-16W	0"-6"	A4B-C09-16W^RMP	ABC	480687.50	1349108.74	558.42
	11-3W	0"-6"	A4B-C11-3W^RMP	ABC	480587.77	1349014.42	557.89
	11-4WV	0"-6"	A4B-C11-4W^V	Archive	480611.47	1349050.54	NA
	11-5W	0"-6"	A4B-C11-5W^RMP	ABC	480620.85	1349109.04	558.67
	11-6W	0"-6"	A4B-C11-6W^RMP	ABC	480537.45	1349030.07	558.04
	11-7W	0"-6"	A4B-C11-7W^RMP	ABC	480510.85	1349052.61	558.29
	11-8WV	0"-6"	A4B-C11-8W^V	Archive	480553.09	1349119.37	NA
	11-9WD	0"-6"	A4B-C11-9W^RMP	ABC	480526.62	1348980.73	557.42
			A4B-C11-9W^RMP-D				
	11-10WV	0"-6"	A4B-C11-10W^V	Archive	480415.80	1348990.13	NA
	11-11W	0"-6"	A4B-C11-11W^RMP	ABC	480463.84	1349014.07	557.40
	11-12W	0"-6"	A4B-C11-12W^RMP	ABC	480433.22	1349091.79	558.53
	11-13W	0"-6"	A4B-C11-13W^RMP	ABC	480425.74	1349135.51	563.00
	11-14W	0"-6"	A4B-C11-14W^RMP	ABC	480385.31	1348974.53	559.84
11-15WV	0"-6"	A4B-C11-15W^V	Archive	480373.19	1349051.01	NA	
11-16W	0"-6"	A4B-C11-16W^RMP	ABC	480386.83	1349133.64	563.01	

\* If the bottom sampling depth is > 0.5 feet (6 inches), then the bottom depth (in feet) shall be multiplied by 2, and the resulting value will be added to the end of the sample ID. For example, if the bottom depth of the sampling interval for sample A4B-C09-7W^RMP is 1 foot, then the sample ID shall be modified by adding a "-2" (i.e. 1 x 2 = 2) to the end of the sample ID (A4B-C09-7W^RMP-2).

## Attachment 3

### Re-Certification of Area 4B - Part 1, CU A4B02

#### Submerged Sediment/Soil Sampling Requirements

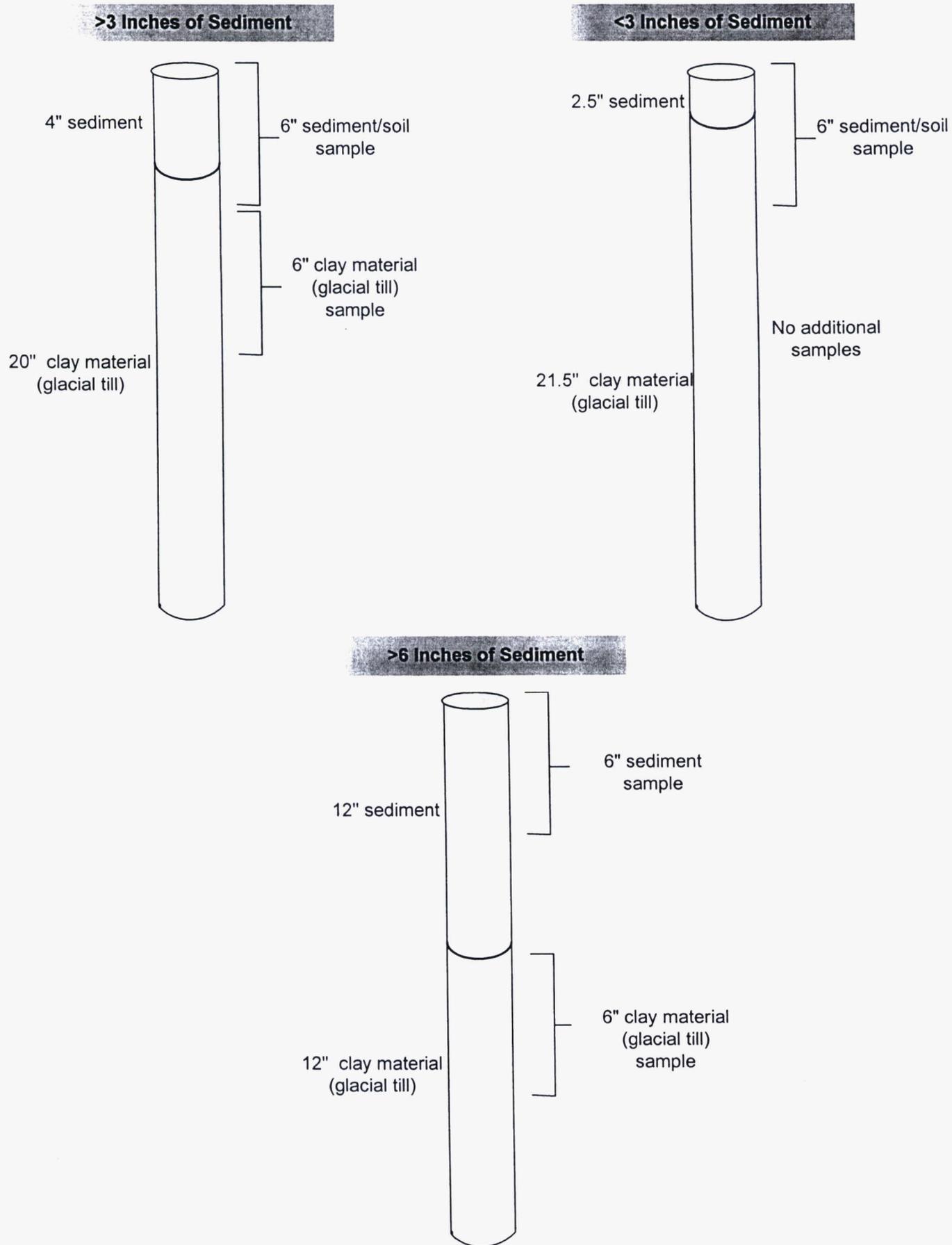
1. After locating the sampling point, determine the depth to the basin floor (top of sediment) using the water surface as a reference. A sounding device that will not penetrate the soft sediment should be used for this step (nylon measuring tape attached to disk). Determine the basin floor (sediment) elevation and record in Table 1 (attached).
2. A two-foot continuous core sample will be collected initially. With the tool string fully assembled on the platform, mark a reference point on the sampling tool string that will correspond to either the “top of platform” or “top of water” after the core sampler has been driven to a depth of 2.0 feet into the basin floor.
3. Drive the core sampler assembly into the basin floor until the reference mark is reached (e.g., aligns with “top of platform”).
4. Retrieve the core sampler using upward action of the slide hammer. Once the core sampler is free from the soil/sediment surface, ensure that the core sampler is slowly pulled up through the water to the surface to prevent sample loss.
5. Examine the soil/sediment core and record the depth range of the sediment (e.g., 0-4”) and the depth range of the glacial till material (probably a clay consistency).
6. The following samples will be collected based on examination of the core (see core illustrations for various scenarios):
  - a. If the sediment layer is <3 inches or nonexistent, then only one 6-inch sample will be collected from the sample point (note that this 6-inch sample could be partially comprised of both sediment and glacial till (clayey material) layers).
  - b. If the sediment layer is >3 inches, then a second sample from the glacial till (clayey material) will be collected. This second sample will be collected from the next 6-inch interval that consists solely of glacial till (clayey material).
7. If additional volume is necessary, then repeat the core sample collection process within approximately two feet radius of the first core location (verify with GPS). On this second core sample, the sampling depth may be reduced to 1.5 feet if the sediment layer is observed to be <6 inches dependent.

Attachment 3

Table 1: Sample Collection Log -- Area 4B-Part 1 Re-Certification

CU	Location	Sample ID	TAL	North-83	East-83	Previous Elevation (feet)	Water Elevation (feet)	Depth to Floor (feet)	New Floor Elevation (feet)	Sample #1 Interval Collected (inches)	Sample #2 Interval Collected (inches)
A4B02	9-7W	A4B-C09-7W^R	ABC	480808.3	1349055.3	559.92				to	to
	9-8W	A4B-C09-8W^R	ABC	480786.9	1349103.8	559.89				to	to
	9-13W	A4B-C09-13W^R	ABC	480731.7	1349035.6	558.84				to	to
	9-14W	A4B-C09-14W^R	ABC	480725.2	1349109.7	558.81				to	to
	9-15WV	A4B-C09-15W^V	Archive	480667.5	1349042.0	NA				to	to
	9-16W	A4B-C09-16W^R	ABC	480687.5	1349108.7	558.42				to	to
	11-3W	A4B-C11-3W^R	ABC	480587.8	1349014.4	557.89				to	to
	11-4WV	A4B-C11-4W^V	Archive	480611.5	1349050.5	NA				to	to
	11-5W	A4B-C11-5W^R	ABC	480620.9	1349109.0	558.67				to	to
	11-6W	A4B-C11-6W^R	ABC	480537.5	1349030.1	558.04				to	to
	11-7W	A4B-C11-7W^R	ABC	480510.8	1349052.6	558.29				to	to
	11-8WV	A4B-C11-8W^V	Archive	480553.1	1349119.4	NA				to	to
	11-9WD	A4B-C11-9W^R	ABC	480526.6	1348980.7	557.42				to	to
		A4B-C11-9W^R-D								to	to
	11-10WV	A4B-C11-10W^V	Archive	480415.8	1348990.1	NA				to	to
	11-11W	A4B-C11-11W^R	ABC	480463.8	1349014.1	557.40				to	to
	11-12W	A4B-C11-12W^R	ABC	480433.2	1349091.8	558.53				to	to
	11-13W	A4B-C11-13W^R	ABC	480425.7	1349135.5	563.00				to	to
11-14W	A4B-C11-14W^R	ABC	480385.3	1348974.5	559.84				to	to	
11-15WV	A4B-C11-15W^V	Archive	480373.2	1349051.0	NA				to	to	
11-16W	A4B-C11-16W^R	ABC	480386.8	1349133.6	563.01				to	to	

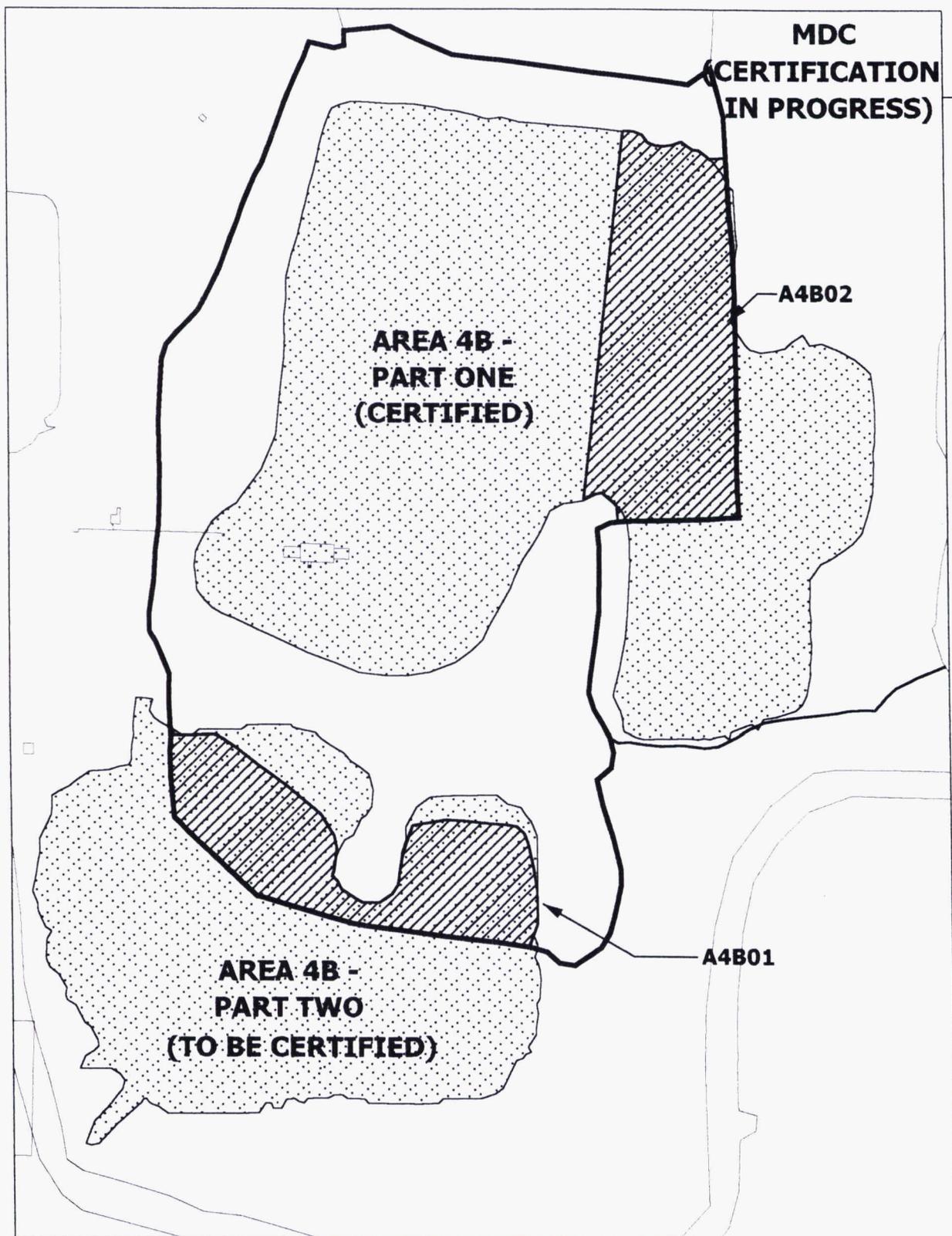
Figure 1: Sample Collection Scenarios



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STATE PLANAR COORDINATE SYSTEM 1983

14-JUL-2006



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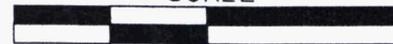


PROPOSED RECERTIFICATION BOUNDARY



FLOODED AREA

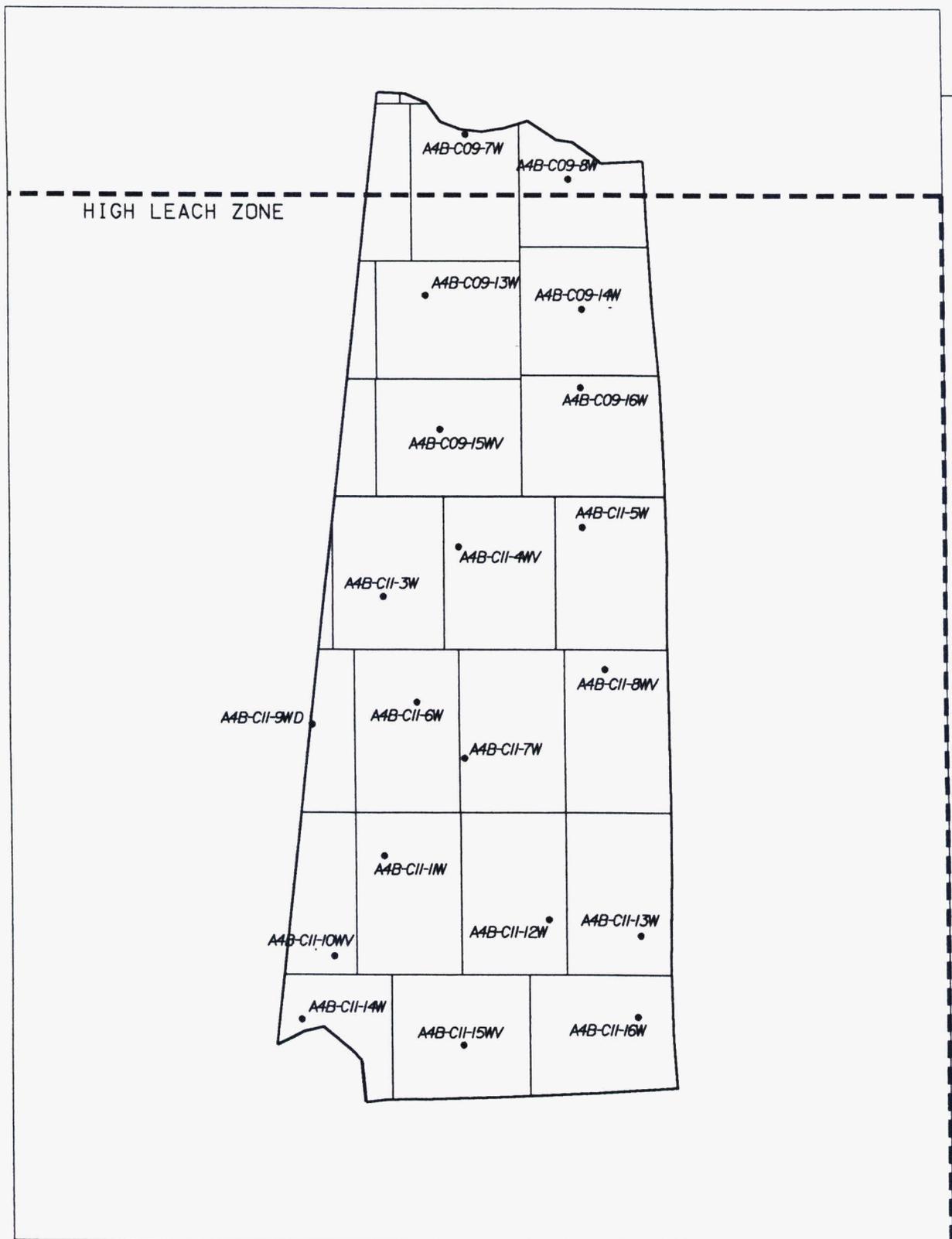
**SCALE**



180 90 0 180 FEET

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FIGURE 1. MAXIMUM EXTENT OF STORM WATER OVERFLOW IN CERTIFIED AREAS



LEGEND:

• SAMPLE LOCATION

SCALE



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FIGURE 2. RE-CERTIFICATION SAMPLING LOCATIONS FOR CU A4B02

**VARIANCE / FIELD CHANGE NOTICE**

Significant?  
(Yes or No): **YES**

V/F: 20810-PSP-0008-13

WBS NO.: PROJECT/DOCUMENT/ECDC #20810-PSP-0008 REV 1

Page: 1 of 8

**PROJECT TITLE: Certification Design Letter And Certification Project Specific Plan For Area 4B - Part One**

Date: 7/14/06

**VARIANCE / FIELD CHANGE NOTICE (Include justification):**

This Variance/Field Change Notice (V/FCN) documents the addition of one certification unit (CU), consisting of 12 soil sampling locations. These samples are being collected because potentially contaminated storm water runoff from the southern end of the Main Drainage Corridor breached the run-on control berms and ditches of the certified area (see Figure 1). Certification Unit A4B03 overlaps portions of previously sampled locations from the original Area 4B – Part One certification effort (see Figure 2). Re-certification samples shall be collected and analyzed for total uranium (TAL M).

Attachment 1 contains the Sampling and Analytical Requirements and TAL. Attachment 2 contains the sample location information. Attachment 3 outlines the methodology to be followed to collect the samples that are beneath the surface of existing ponds of water, which is based on the methodology summarized in the letter (DOE-0123-06) from DOE to USEPA and OEPA dated May 16, 2006, "Sampling Methodology for Collecting Soil/Sediment Cores Beneath Water in Submerged Soil Certified Areas and Certification-In-Progress Areas." If the sampling location is no longer submerged, then the location elevation shall be measured directly and steps 5-7 of Attachment 3 shall be followed.

**Justification:**

The purpose of this Re-Certification effort is to demonstrate that soil in northern and central portions of Area 4B – Part One has not been impacted from water crossing the certification boundary from southern end of the Main Drainage Corridor and that total uranium still meets the risk-based FRL. The new certification unit has been designed to cover the previously certified area that is currently submerged and has not been resampled. The certification sample locations that fall within the new CU match the locations of the previous certification effort. The data collected under this V/FCN will be compared to the data collected under the original certification effort from these locations. Per Section 4.3 of the PSP, the changes to the PSP will be documented with a V/FCN.

REQUESTED BY: Greg Lupton

Date: 7/14/06

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE: E. Friske <i>[Signature]</i>	7-18-06	X	PROJECT MANAGER: J.D. Chiu <i>[Signature]</i>	7/17/06
	DATA QUALITY MANAGEMENT		X	CHARACTERIZATION MANAGER: K. Allen <i>[Signature]</i>	7/18/06
X	ANALYTICAL CUSTOMER SUPPORT: WAO <i>Paul S. McDermigan</i>	7/17/06		RTIME Manager	
			X	Sampling Manager: Buhlaire <i>Niche [Signature] for TB</i>	7-19-06
VARIANCE/FCN APPROVED [X] YES [ ] NO			REVISION REQUIRED: [ ] YES [x] NO		

**DISTRIBUTION**

PROJECT MANAGER:	DOCUMENT CONTROL: Jeannie Rosser	OTHER:
QUALITY ASSURANCE:	CHARACTERIZATION MANAGER: Frank Miller	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

**Attachment 1  
Sampling and Analytical Requirements**

TAL(s)	Method <sup>a</sup>	Matrix	Preservative	ASL	TAT	Container <sup>b</sup>	Minimum Mass/Volume	Min. Vol. Water (rinsate) <sup>d</sup>
Radiological TAL M	ICP/MS	Solid	None	D/E	7 days final	Glass or Plastic	50 g (150 g) <sup>c</sup>	1 L

<sup>a</sup> Samples will be analyzed according to ASL D requirements but the minimum detection level may cause some analyses to be considered ASL E.

<sup>b</sup> Sample container types may be changed at the direction of the Field Sampling Lead, as long as the volume requirements, container compatibility requirements, and SCQ requirements are met.

<sup>c</sup> At the direction of the Field Sampling Lead, triple the specified volume must be collected for all samples at one location in the CU in order for the contract laboratory to perform the required quality control analysis. The samples shall be identified on the Chain of Custody/Request for Analysis forms as "designated for laboratory QC".

<sup>d</sup> If "push tubes" are used for sampling, the off-site laboratories will be sent container blanks. If an alternative sample method is used, the Field Technicians will collect a rinsate.

**Target Analyte List**

20810-PSP-0008-M, 13 samples

(Radiological - ASL D/E\*)

Analyte	On-Property FRL	MDL (soil)	MDL (water)
Total Uranium	20 mg/kg	2.0 mg/kg	350 ug/L

**Attachment 2**  
**Area 4B Certification Sample Locations and Identifiers**

CU	Location	Depth	Sample ID*	TAL	North-83	East-83	MSL
A4B03	8-12W	0"-6"	A4B-C08-12W^R	M	480777.00	1348774.00	557.72
	9-10W	0"-6"	A4B-C09-10W^R	M	480734.53	1348993.72	558.66
	10-4W	0"-6"	A4B-C10-4W^R	M	480648.03	1348706.30	558.38
	10-8W	0"-6"	A4B-C10-8W^R	M	480688.27	1348842.93	558.20
	13-2W	0"-6"	A4B-C13-2W^R	M	480560.44	1348777.59	557.87
	13-3WD	0"-6"	A4B-C13-3W^R	M	480483.22	1348728.52	554.76
			A4B-C13-3W^R-D				
	13-6W	0"-6"	A4B-C13-6W^R	M	480558.43	1348904.03	557.64
	13-13W	0"-6"	A4B-C13-13W^R	M	480439.14	1348858.01	557.49
	14-4W	0"-6"	A4B-C14-4W^R	M	480275.45	1348538.04	558.47
	14-6W	0"-6"	A4B-C14-6W^R	M	480347.44	1348688.75	557.25
	14-12W	0"-6"	A4B-C14-12W^R	M	480257.40	1348810.93	557.27
15-9W	0"-6"	A4B-C15-9W^R	M	480209.09	1348622.53	559.07	

\* If the bottom sampling depth is > 0.5 feet (6 inches), then the bottom depth (in feet) shall be multiplied by 2, and the resulting value will be added to the end of the sample ID. For example, if the bottom depth of the sampling interval for sample A4B-C09-7W^RMP is 1 foot, then the sample ID shall be modified by adding a "-2" (i.e. 1 x 2 = 2) to the end of the sample ID (A4B-C09-7W^RMP-2).

## Re-Certification of Area 4B-Part 1

### Submerged Sediment/Soil Sampling Requirements

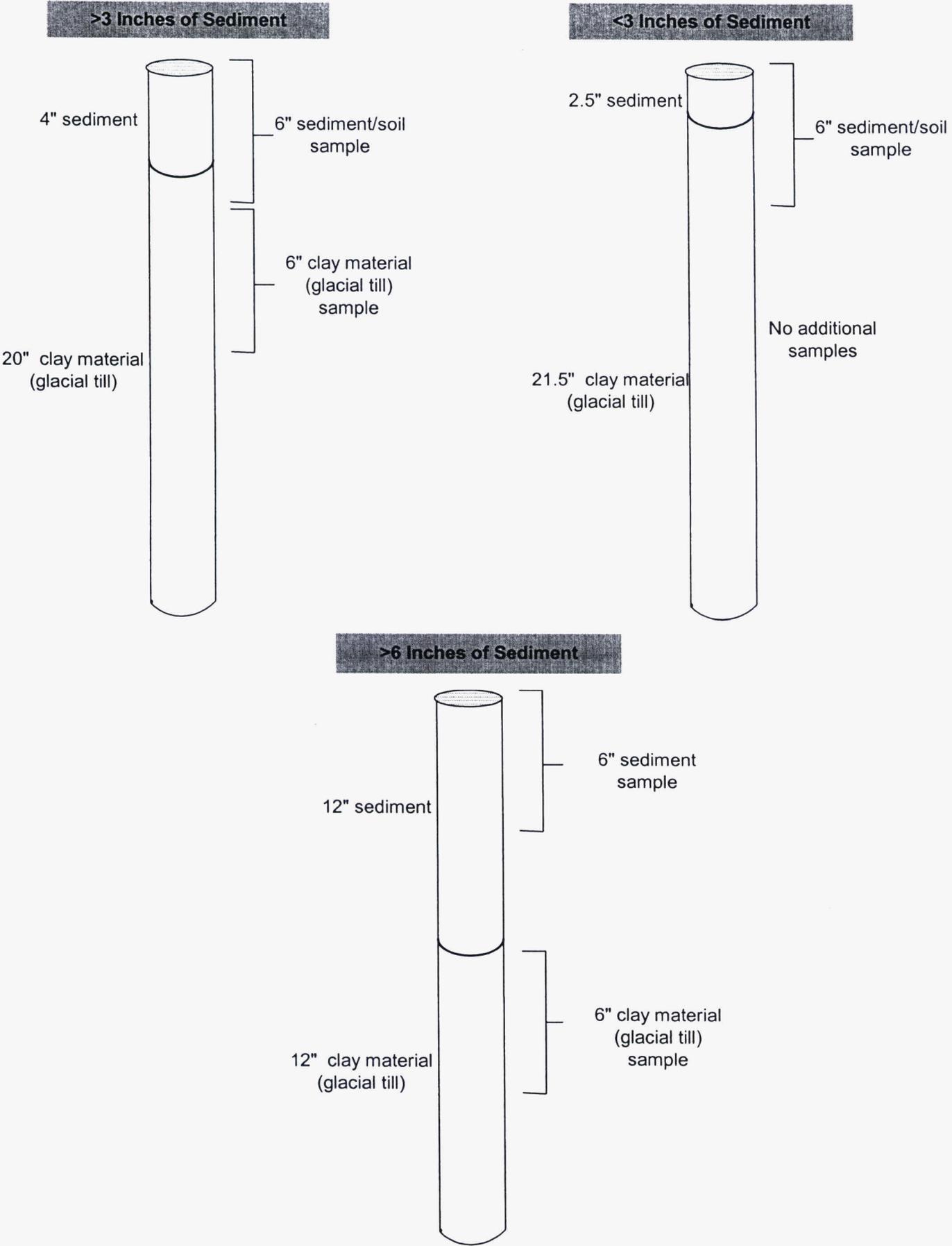
1. After locating the sampling point, determine the depth to the basin floor (top of sediment) using the water surface as a reference. A sounding device that will not penetrate the soft sediment should be used for this step (nylon measuring tape attached to disk). Determine the basin floor (sediment) elevation and record in Table 1 (attached).
2. A two-foot continuous core sample will be collected initially. With the tool string fully assembled on the platform, mark a reference point on the sampling tool string that will correspond to either the "top of platform" or "top of water" after the core sampler has been driven to a depth of 2.0 feet into the basin floor.
3. Drive the core sampler assembly into the basin floor until the reference mark is reached (e.g., aligns with "top of platform").
4. Retrieve the core sampler using upward action of the slide hammer. Once the core sampler is free from the soil/sediment surface, ensure that the core sampler is slowly pulled up through the water to the surface to prevent sample loss.
5. Examine the soil/sediment core and record the depth range of the sediment (e.g., 0-4") and the depth range of the glacial till material (probably a clay consistency).
6. The following samples will be collected based on examination of the core (see core illustrations for various scenarios):
  - a. If the sediment layer is <3 inches or nonexistent, then only one 6-inch sample will be collected from the sample point (note that this 6-inch sample could be partially comprised of both sediment and glacial till (clayey material) layers).
  - b. If the sediment layer is >3 inches, then a second sample from the glacial till (clayey material) will be collected. This second sample will be collected from the next 6-inch interval that consists solely of glacial till (clayey material).
7. If additional volume is necessary, then repeat the core sample collection process within approximately two feet radius of the first core location (verify with GPS). On this second core sample, the sampling depth may be reduced to 1.5 feet if the sediment layer is observed to be <6 inches dependent.

Attachment 3

Table 1: Sample Collection Log -- Area 4B-Part 1 CU A4B03 Re-Certification

CU	Location	Sample ID	TAL	North-83	East-83	Previous Elevation (feet)	Water Elevation (feet)	Depth to Floor (feet)	New Floor Elevation (feet)	Sample #1 Interval Collected (inches)	Sample #2 Interval Collected (inches)	
A4B03	8-12W	A4B-C08-12W^R	M	480611.5	1349050.5	557.72				to	to	
	9-10W	A4B-C09-10W^R	M	480620.9	1349109.0	558.67				to	to	
	10-4W	A4B-C10-4W^R	M	480537.5	1349030.1	558.04				to	to	
	10-8W	A4B-C10-8W^R	M	480510.8	1349052.6	558.29				to	to	
	13-2W	A4B-C13-2W^R	M	480553.1	1349119.4	557.87				to	to	
	13-3WD	A4B-C13-3W^R	M	480526.6	1348980.7	557.42					to	to
		A4B-C13-3W^R-D									to	to
	13-6W	A4B-C13-6W^R	M	480415.8	1348990.1	557.64				to	to	
	13-13W	A4B-C13-13W^R	M	480463.8	1349014.1	557.40				to	to	
	14-4W	A4B-C14-4W^R	M	480433.2	1349091.8	558.53				to	to	
	14-6W	A4B-C14-6W^R	M	480425.7	1349135.5	563.00				to	to	
	14-12W	A4B-C14-12W^R	M	480385.3	1348974.5	559.84				to	to	
15-9W	A4B-C15-9W^R	M	480373.2	1349051.0	559.07				to	to		

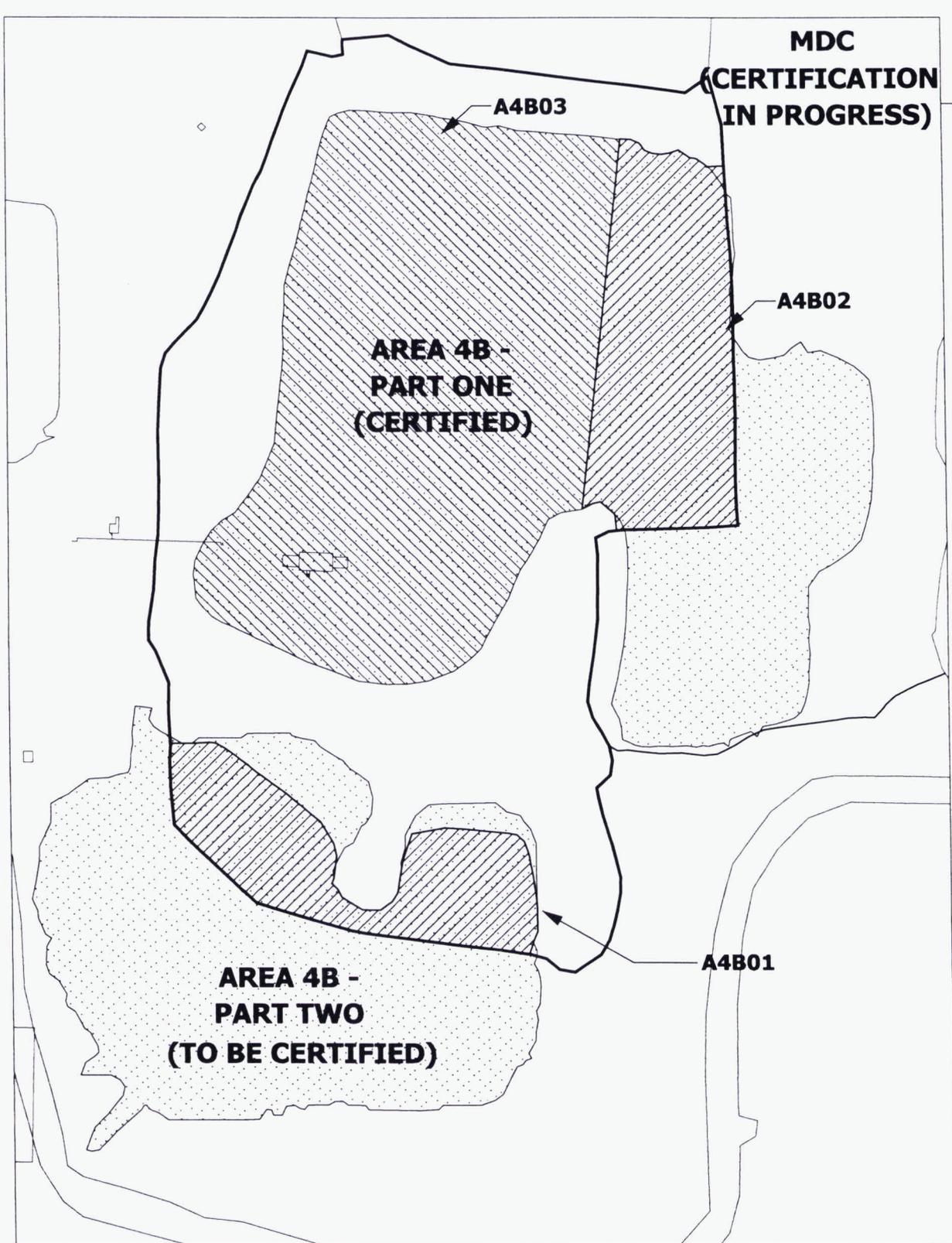
Figure 1: Sample Collection Scenarios



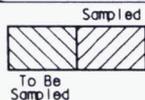
v:\\*2 fmi\2\\*dgn\\*4b\_water\_101.dgn

STATE PLANAR COORDINATE SYSTEM 1983

17-JUL-2006



LEGEND:



RECERTIFICATION BOUNDARIES

FLOODED AREA

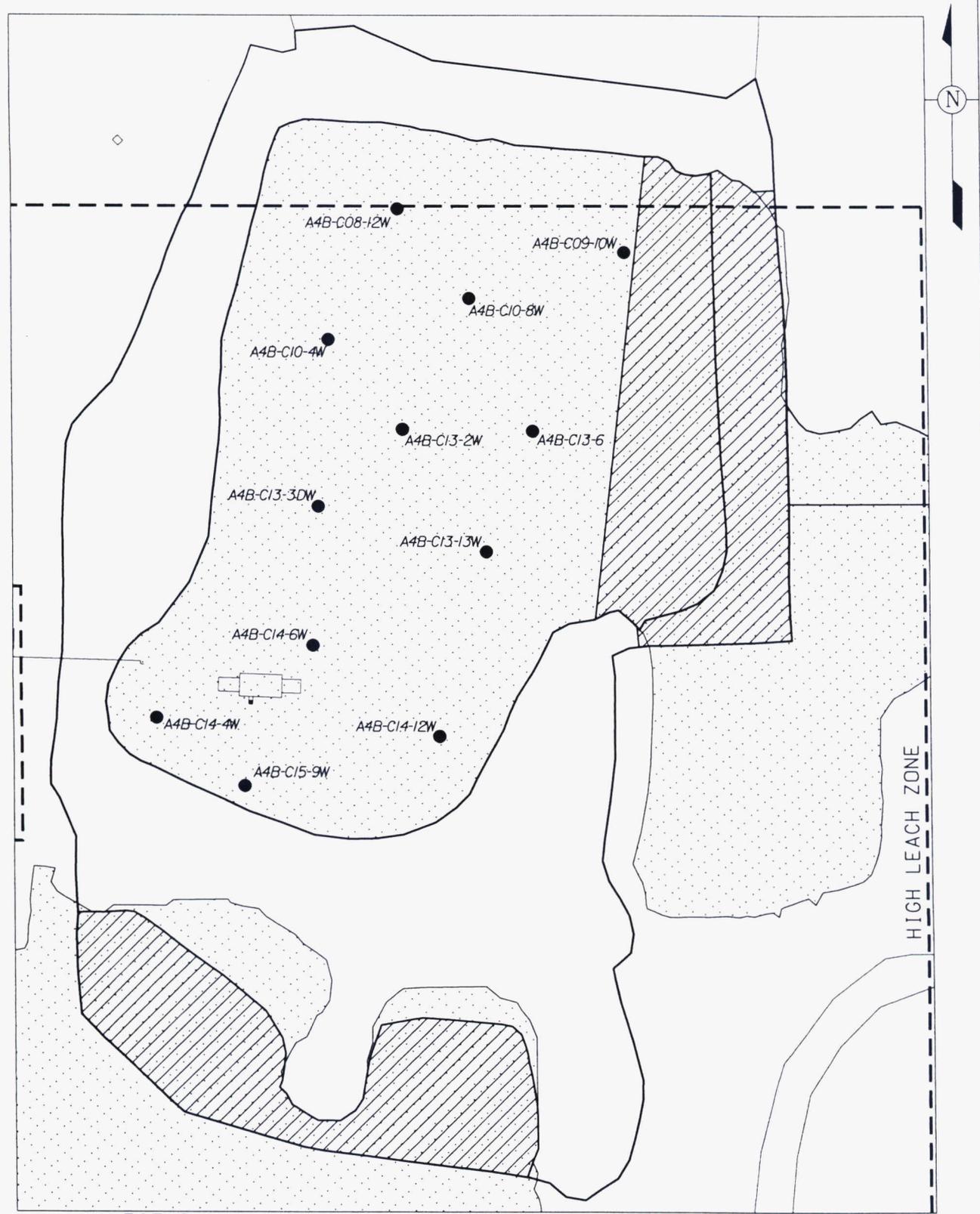
SCALE



180 90 0 180 FEET

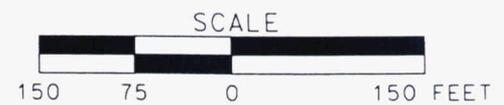
DRAFT

FIGURE 1. MAXIMUM EXTENT OF STORM WATER OVERFLOW IN CERTIFIED AREAS



LEGEND:

- SAMPLE LOCATION
-  PREVIOUSLY SAMPLED
-  FLOODED AREA



DRAFT

FIGURE 2. CERTIFICATION SAMPLING LOCATIONS FOR CUA4B03