

Variance Report

Variance No.: <u>LMS-FER-S03496-7.0-02</u>	Significant: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Document No.: <u>S03496-7.0</u>	Page: <u>1</u> of <u>2</u>
Document Title: <u>Comprehensive Legacy Management and Institutional Controls Plan (LMICP), Rev. 7.0</u>	Date: <u>5/27/2014</u>

Variance
(Include Justification)

Requirements: Section 3.6.1.1 (Page 40) of the Integrated Environmental Monitoring Plan (IEMP) (LMICP, Attachment D) states that; "Up to 27 locations will also be sampled each year for total uranium using a direct-push sampling tool."

Variance: Continuous soil cores will be collected at all Geoprobe locations planned within the watershed of a closed basin that is located west of Former Waste Pit 3 (referred to as the Swale Area). Soil descriptions (using Unified Soil Classification Protocols) will be completed for the purpose of refining subsurface soil interpretations. The attached map shows the location of the watershed area and two Geoprobe locations currently planned in the area (Location 13467 and 13480).

Continuous soil cores will be collected in accordance with the "Fernald Preserve and Mound, Ohio, Sites Environmental Monitoring Procedures" using a dual tube sampler. Continuous soil cores will be collected from the surface to three feet below the contact of the fill/glacial till and the sand and gravel of the Great Miami Aquifer. The outside of the core tubes will be scanned by a radiological technician using a beta/gamma frisker prior to moving the cores from the sample site, for occupational radiological protection purposes.

(Continued on second page)

Justification: Core descriptions will be used to refine subsurface soil interpretations and the conceptual model that was used to design the ongoing groundwater remediation.

Requested By: Ken Broberg **Date:** 5/27/2014

Variance Approvals				Variance Approvals			
Required				Required			
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	M Hoge <i>Michael B Hoge</i>	<u>5/28/14</u> Date	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Environmental Compliance	Date
<input checked="" type="checkbox"/>	<input type="checkbox"/>	W Hertel <i>Will W Hertel</i>	<u>5/28/14</u> Date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	D Foster <i>Don Foster</i>	<u>5-28-14</u> Date
<input checked="" type="checkbox"/>	<input type="checkbox"/>	C White <i>Charles White</i>	<u>5/28/14</u> Date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	K Broberg <i>Ken Broberg</i>	<u>5/28/14</u> Date
<input checked="" type="checkbox"/>	<input type="checkbox"/>	K Voisard <i>K Voisard</i>	<u>5/28/14</u> Date	<input type="checkbox"/>	<input type="checkbox"/>	Other	Date

Revision Required Yes No **Document No. and Title:** S03496/LMICP, Rev. 7.0

Distribution	<input checked="" type="checkbox"/> Records Management	<input checked="" type="checkbox"/> EPA
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Variance Report (continued)

Variance LMS-FER S03496-7.0-02 (Continued):

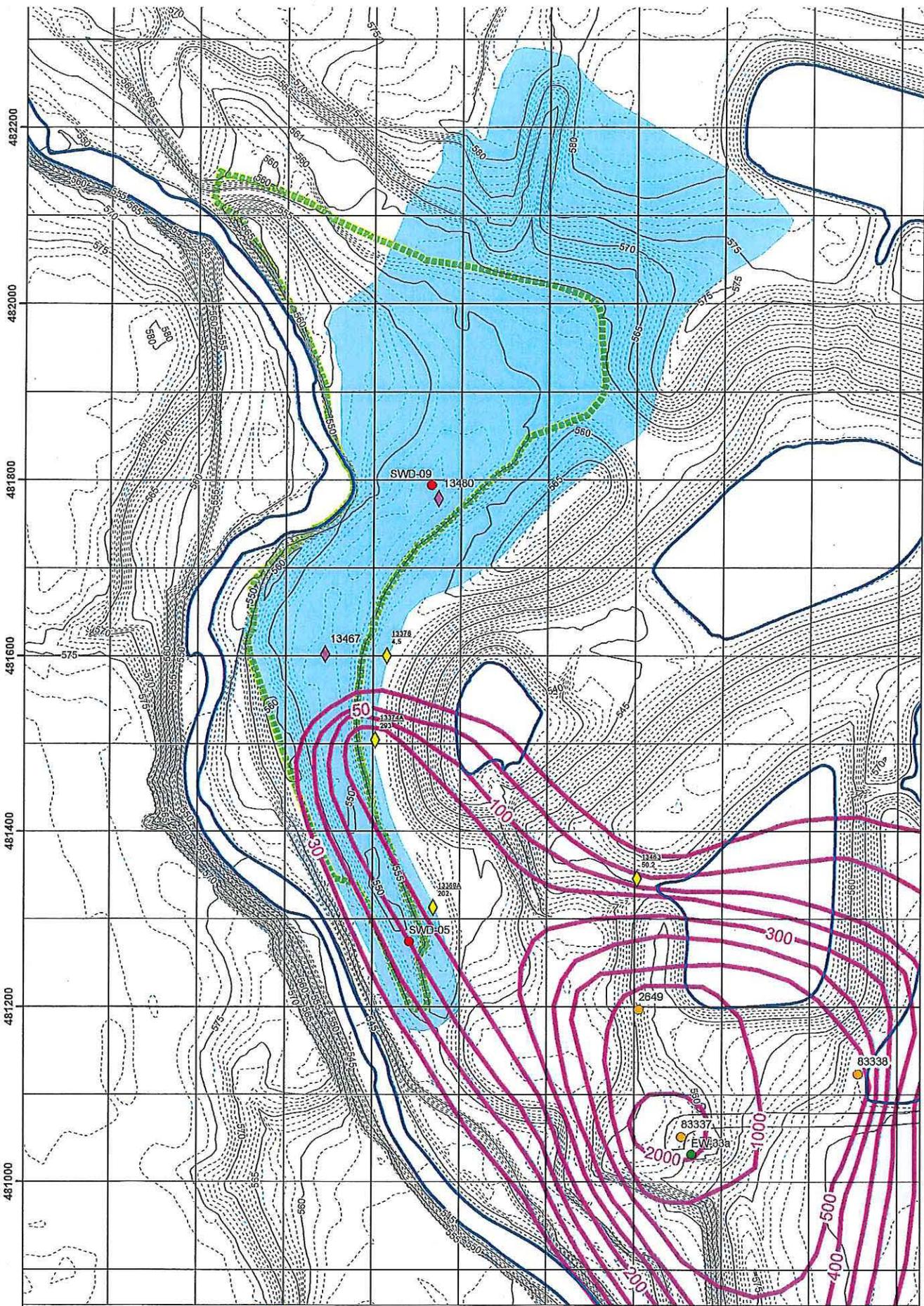
Immediately following opening of the cores, the radiological technician will radiologically screen the soil cores using a beta/gamma frisker. The core depth interval, each one foot interval, and any important contacts will be clearly marked and the core will be photographed. The core will be described per "Fernald Preserve and Mound, Ohio, Sites Environmental Monitoring Procedures." Of importance is the thickness of glacial till or fill present beneath the ground surface, and the contact between the overlying fill and/or glacial till and the underlying sand and gravel of the Great Miami Aquifer.

Sample intervals displaying above background beta/gamma readings will be documented in the "Visual Classification of Soils" (LMS 3020FER). A representative sample of the above-background interval will be shipped to an off-site laboratory for analysis of total uranium in accordance with the table below.

After the cores have been described, remaining soil will be archived in plastic sample containers for six months from the date of sampling. Any additional radiological analyses required from the archived samples at a later date will be detailed in a separate variance. After the six-month archived period, the cores will be disposed of by scattering on the ground at the sample location, with concurrence from a radiological technician.

IEMP – Soil Cores				
Parameter	Holding Time	Chemical Preservative	Sample Container & Volume (Weight)	Lab QC Sample Container & Volume (Weight)*
Total Uranium (single analyte) MET-A-028	6 months	None	1 – 500 ml plastic (at least 50 mg)	1 – 500 ml plastic (at least 50 mg)

* For Laboratory QC samples denote in the special instructions of the Chain of Custody:
 "Sample designated for laboratory QC."



- Surface Water Sample Location
- ◆ Planned Geoprobe Location
- ◆ Geoprobe Location
- Monitoring Wells
- Extraction Well
- Swale
- Watershed
- Model Grid
- Maximum Total Uranium Contours Through the Second Half of 2013



U.S. DEPARTMENT OF ENERGY GRAND ARCHAION, COLORADO	Work Performed by The S.M. Stoller Corporation <small>Under DOE Contract No. ES-AW01-07-ET-00000</small>
Fernald Preserve Aquifer Remedy within the Area of Concern	
DATE PREPARED: May 28, 2014	FILENAME: S1166302