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Our ref: LTR-RAC-19-45

Southern Storage Area Operable Unit Sampling Work Plan - Remedial Investigation Work Plan Addendum 1

June 18, 2019

Dear Ms. Kuhn:

Westinghouse has prepared the following multi-phase sampling work plan to investigate the Southern Storage Area (SSA) Operable Unit (OU). The SSA OU is described in the AECOM Remedial Investigation Work Plan that Westinghouse submitted to the Department on April 26, 2019 under the Consent Agreement signed on February 26, 2019.

One activity performed within the SSA OU is the storage of materials awaiting uranium (U) recovery within intermodal containers. On May 30, 2019, a scheduled inspection of intermodal containers within this OU was completed and identified impaired roofing and degraded drums due to rainwater intrusion in intermodal container C-40. The drums within this intermodal contained solid combustible materials, such as mop heads and filters, awaiting U reclamation by onsite incineration. C-40 was safely emptied of its contents by June 5, 2019; all drums were transferred to the main building for processing; and C-40 was wrapped with tarps to minimize further water intrusion. Three soil samples were collected 1 foot below soil surface (bss) in the areas of the degraded drums, with results ranging in U concentrations from 2-4 ppm. Soil containing less than 11 ppm U is below the limit for free release (i.e., clean).

The initial extent of condition (EOC) evaluation for other onsite intermodal containers identified a degraded floor in C-44 and roof leaks in C-35 and C-65, with no visible drum degradation. The roof leaks were immediately repaired. Corrective Action Program entry 2019-8970 was created, and a prioritized plan, starting with C-44 was developed for emptying each intermodal to inspect its contents. Implementation of the inspection plan will begin following installation of gravel described in Phase 1 of this work plan. DHEC approval is requested to begin the Phase 1 investigation.

WORK PLAN

Three Phase Approach

A multi-phase work plan for the SSA OU is described below. Upon completion of the scope of work for each phase, a hold point is established to discuss with DHEC the work that was completed, assessment of the results and proposed next actions. DHEC approval is required prior to the start of work on each subsequent phase.

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Phase 1: Sampling in Northwest Corner of OU

The goal of the Phase 1 work plan is to create a safe work area for operation of a forklift and/or other mobile machinery. This will allow Westinghouse to begin implementation of the inspection plan and remove C-40 for disposal as low level radioactive waste.

The area of the Phase 1 investigation is in the northwestern corner of the SSA OU. Because the area gets muddy when it rains, approximately 4 inches of gravel needs to be added to the approximate 81' by 30' area shown in Figure 1. Prior to the placement of gravel, the soil will be systematically sampled to assure that the soil is free from impact. The yellow dots on Figure 1 indicate the approximate locations and minimum number of soil samples to be taken. Intermodals in this area will also be surveyed with direct-read radiological instruments at the front and rear doors, and additional sampling at biased locations will be performed if radiological surveys indicate the presence of uranium impact.

Soil sampling will follow guidance provided in the EPA Region 4 Science and Ecosystem Support Division (SESD) Operating Procedure SESDPROC-300-R3, *Soil Sampling*. Soil samples will be collected from 0-1 foot bss.

Soil samples will be analyzed by a state certified laboratory, and a chain of custody will be maintained throughout the process to ensure sample integrity. Based upon the analytical results of the initial soil samples, Westinghouse and DHEC personnel will discuss whether additional soil sampling is warranted. More targeted sampling may be needed if U impact above the free releasable limit is discovered. Additional sampling may include vertical delineation of soil impact by extending borings deeper into the subsurface in the assessment area.

Analyses will be performed on the samples according to the Contaminants of Potential Concern (CPOC) that could be present in the soil from materials stored in the intermodal containers. This includes isotopic uranium, Tc-99, and pH. In addition, ammonia, nitrate and fluoride will be analyzed. Analytical methods used for these CPOC are documented in the Remedial Investigation Work Plan (AECOM, 2019).

Phase 1 sampling is proposed to start the week of June 17, with receipt of results and any necessary additional sampling to follow the week of June 24. Following DHEC review and approval of Phase 1 results, gravel will be installed in this area.

Crane operations have been scheduled to remove intermodal C-40 on June 28, 2019.

Phase 2: Sampling Underneath C-40 Footprint

Following C-40 intermodal container removal, Westinghouse will begin systematic sampling within the footprint of the 40' x 8' space formerly occupied by the degraded intermodal container, with additional bias sampling based on the as-found condition and direct-read radiological surveys. These sampling locations are indicated in Figure 2. Soil samples will be advanced using a hand auger and collected in a sample container dedicated to each sample. Soil sampling will commence from the front of the intermodal and progress toward the back.

Soil sampling and analysis will be performed as described in Phase 1. Following DHEC review and approval of Phase 2 results, the schedule and scope for Phase 3 implementation will be determined.

Phase 3: Southern Storage Area Operable Unit Investigation

Phase 3 investigation of the Southern Storage Area OU will encompass sampling the remaining area of the OU, with input from AECOM geologists. The data collected from the Remedial Investigation Work Plan will be used to update the Conceptual Site Model.

Assessment Report

Westinghouse will prepare a report describing the work completed, documentation of the soil analytical results and proposed next actions following each phase of sampling. An electronic copy (PDF) of the report will be submitted to DHEC by email and a hard copy will be mailed within four weeks of receipt of laboratory analytical data.

Sincerely,

Nancy Blair Parr for

Cynthia Logsdon
Principal Environmental Engineer
Westinghouse Electric Company LLC
803.312.4171 (m)

Plan reviewed by:

Jeremy Grant

Jeremy Grant, P.G.
Senior Project Manager

Attachments:
Figure 1 – Phase 1 Sampling
Figure 2 – Phase 2 - Proposed C-40 Soil Sampling Locations

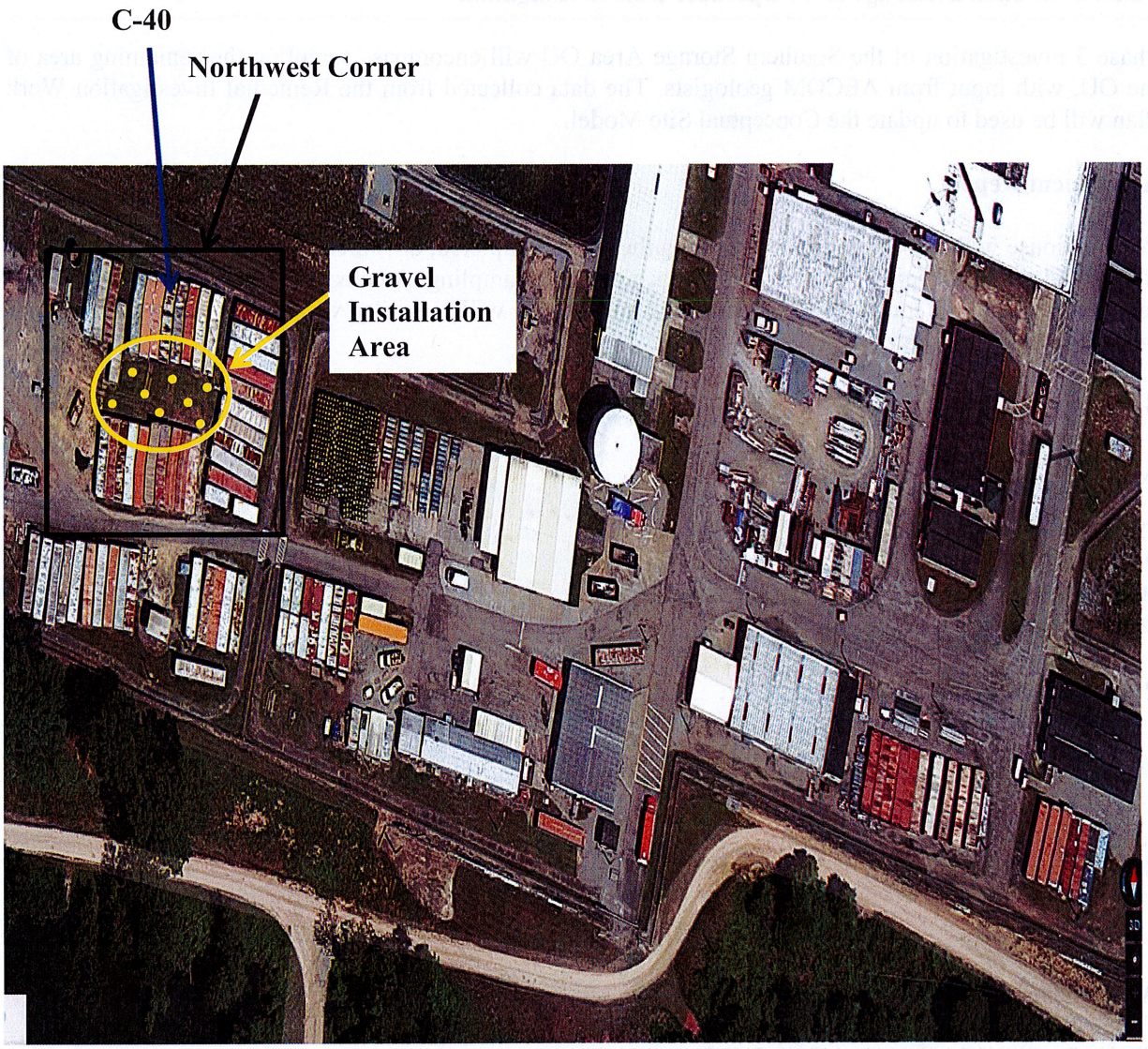

Figure 1: Phase 1 Sampling

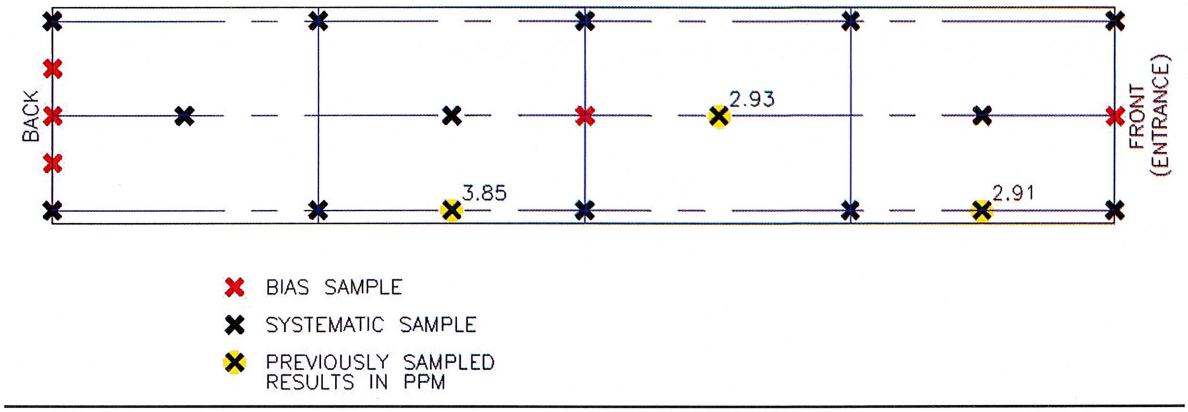

Figure 2: Phase 2 - Proposed C-40 Soil Sampling Locations
(Intermodal Dimensions are 40 feet x 8 feet)