

September 2, 2022

Project No. 123-93309-06

**Kevin O'Hara**

Ohio Environmental Protection Agency  
Division of Environmental Response and Revitalization  
Southeast District Office  
2195 Front Street  
Logan, OH 43138

**WORKPLAN FOR COMPLETING MILL BUILDING FLOOR AND BUSTR DELINEATION SAMPLING  
SATRALLOY SITE (JEFFERSON COUNTY, OHIO)**

Dear Mr. O'Hara:

On behalf of Cyprus Amax Minerals Company (CAMC), Golder is submitting this workplan to conduct soil sampling in the central bay areas of the former North and South Mill Buildings (NMB and SMB) and installing soil boring(s) to complete the delineation of petroleum impacts from underground storage tanks that were removed prior to CAMC's acquisition of the site. Both tasks were proposed in the 2013 RI/FS Work Plan approved by OEPA. Completion of both tasks had been postponed until demolition is completed, which is expected in September 2022.

## **1.0 SCOPE OF WORK**

### **1.1 Mill Floor Sampling**

Soil samples will be collected from the floors in the central bays (un-paved floors) of each former mill building. Surface (0-6") and near-surface (6-24") soils will be targeted.

The central bay of each building will be divided into ~5,000 sq ft grids; eight grids in the NMB and four grids in the SMB (see sample plan figures A and B). Random sample locations will be selected in each grid.

Soil samples will be collected from 0-24" below the ground surface using a Sonic Drilling rig. Sampling depths will be extended, where practical, if field observations indicate possible impacts. Samples will be collected and submitted for laboratory analysis as follows:

- One sample every six inches to be analyzed for COPC metals.
- One composite sample (0-24") to be analyzed for semi volatile organic compounds (SVOC) and polychlorinated biphenyls (PCB).

## 1.2 BUSTR Tier Delineation

Exploratory excavations in the former tank cavities in 2014 confirmed that all UST System components had been removed, and a Tier I Investigation was initiated during the RI. As described in section 4.11 of the Draft RI Report, benzo(a)pyrene was detected above Ohio Bureau of Underground Storage Tank Regulations (BUSTR) Delineation and Action Levels in soil boring TB-01, located between the former UST cavity and the NMB. Though CAMC is not the Responsible Person for the UST release, BUSTR can issue a No Further Action status to a volunteer if they complete all evaluation requirements.

To complete the next phase, which requires defining the extent of soil impacts to below the BUSTR Delineation Levels, a minimum of one and maximum of three soil borings will be drilled inside the former building footprint immediately west of the former UST system. Borings will be drilled and sampled following BUSTR protocols, which requires sampling to the first water table. Samples will be field screened using a PID. Two soil samples will be submitted from each boring for laboratory analysis as follows:

- Benzene, ethylbenzene, toluene, total xylenes, 1,2,4-trimethylbenzene, MTBE, 1,2-dichloroethane, and 1,2-dibromoethane
- Eight BUSTR-specific polynuclear aromatics (PAH)
- Gasoline range total petroleum hydrocarbons (TPH-GRO)
- Diesel range TPH (TPH-DRO)

Delineation will begin with the installation of one soil boring approximately 20 feet northwest of previous boring TB-01 where a soil exceedance was detected. Based on observations and/or PID values, additional “step-out” borings may be drilled with the goal of completing delineation during this mobilization.

## 1.3 Report

Two brief letter-type reports documenting boring logs, sampling locations, analytical results, and findings of each investigation will be prepared as follows:

- A Technical Memorandum for the Mill Floor Investigation, intended to be a follow-up addendum to the RI Report.
- A BUSTR Tier 1 Investigation Report if delineation objectives are achieved. Because there is already a known action level exceedance (soil and groundwater PAH), a Tier 2 Evaluation will ultimately be required if CAMC desires to receive a formal NFA from BUSTR.

## 2.0 CLOSING

We request your expedited review of this workplan in order to ensure the timely initiation of sampling activities following complete building decommissioning scheduled in September 2022. If you have any questions, please contact Barbara Nielsen at (480) 313-2895.

Sincerely yours,

**Golder Associates Inc.**



Lee K. Holder, PE  
*Associate Engineer*

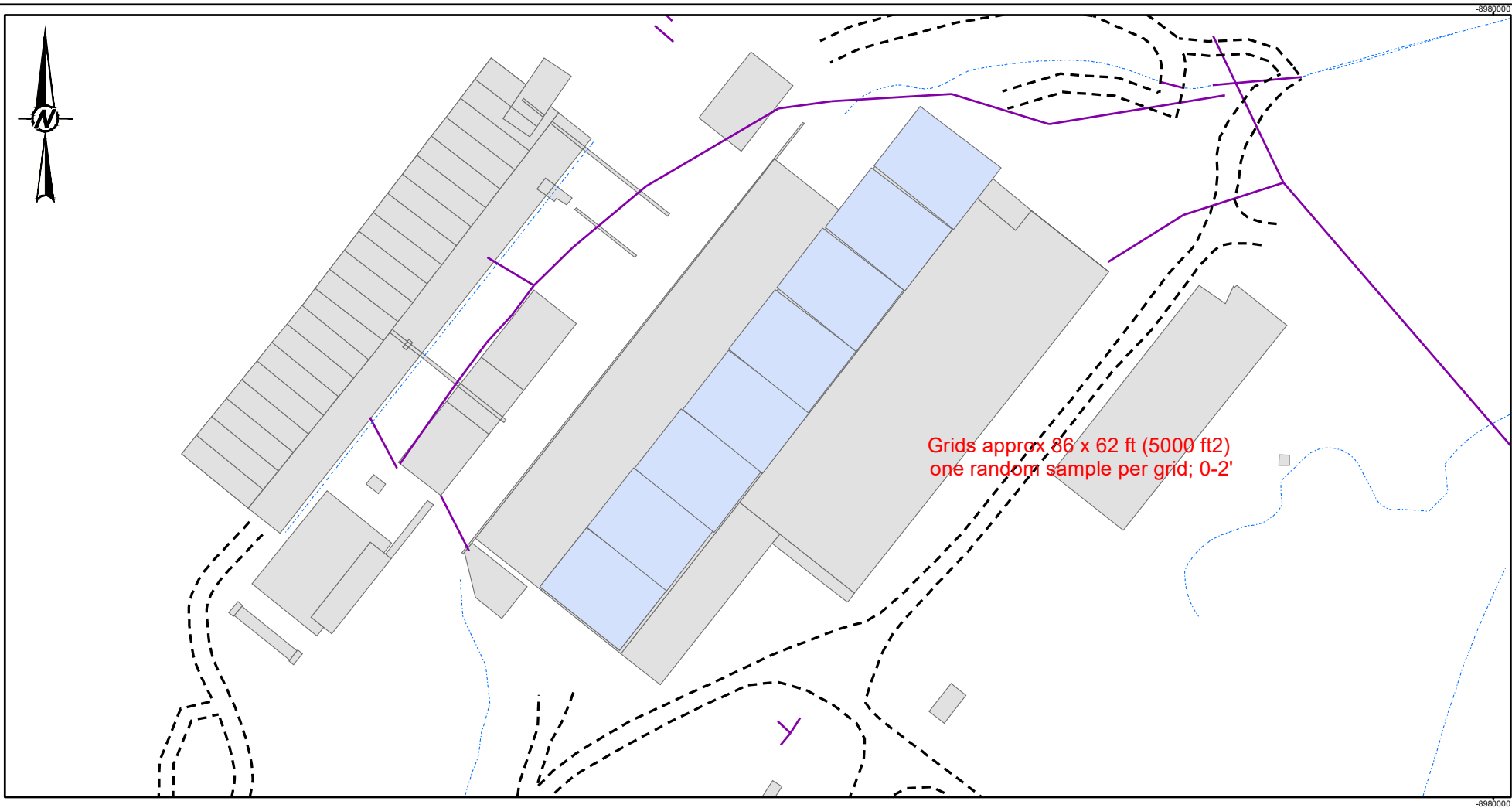
JW/DRI

**Attachments:** Figures A and B

cc: Barbara Nielsen, Cyprus Amax Minerals Company

**ATTACHMENT**

## Sample Plan Figures



Legend

 NMB Mill Floor Sample Grids.

REFERENCE(S)  
1. COORDINATE SYSTEM: WGS 1984 WORLD MERCATOR

CLIENT  
CYPRUS AMAX MINERALS COMPANY

PROJECT  
SATRALLOY MILL FLOOR SAMPLING

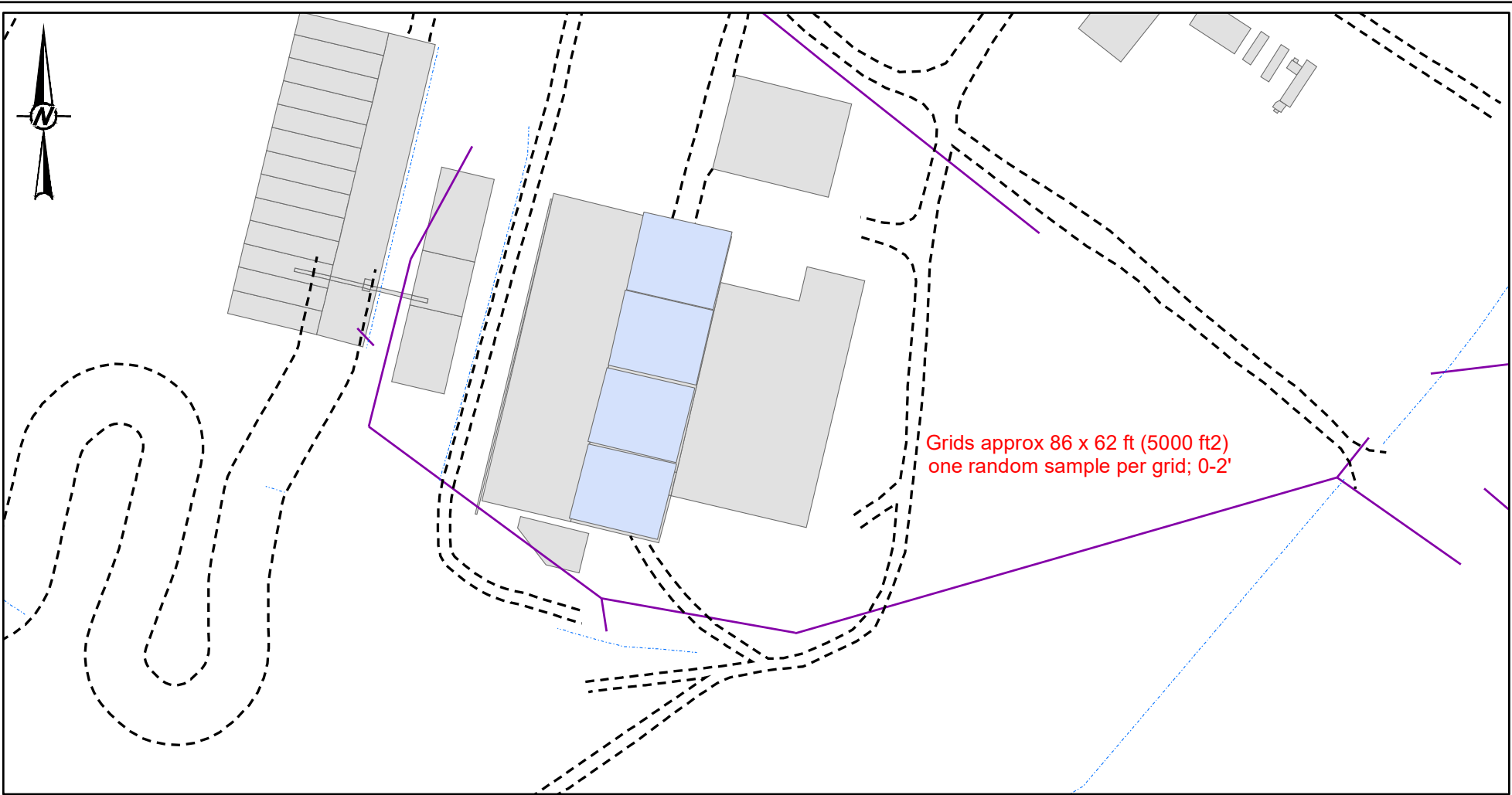
CONSULTANT  
  
YYYY-MM-DD 2022-09-02  
DESIGNED TD  
PREPARED TD  
REVIEWED BI  
APPROVED #####

TITLE  
NORTH MILL BUILDING GRIDS

PROJECT NO. 123-93309-06 CONTROL 600 REV. A FIGURE A

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANS/A

25mm



Legend

 SMB Mill Floor Sample Grids.

REFERENCE(S)  
1. COORDINATE SYSTEM: WGS 1984 WORLD MERCATOR

CLIENT  
CYPRUS AMAX MINERALS COMPANY

PROJECT  
SATRALLOY MILL FLOOR SAMPLING

CONSULTANT	YYYY-MM-DD	2022-09-02
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	PREPARED	TD
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TITLE  
**NORTH MILL BUILDING GRIDS**

PROJECT NO.	CONTROL	REV.
123-93309-06	600	A

FIGURE  
**B**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANS/A

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