
Draft

Work Plan for Soil Screening Assessment, Swann Park, Baltimore, Maryland

Prepared for

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SECTION 1

Introduction

This work plan describes the tasks and objectives to be performed by Honeywell International Inc. to evaluate the soil conditions within the area of Swann Park (Figure 1). This work plan also presents the sampling and analytical procedures that will be implemented. Swann Park is a park owned by the City of Baltimore that has been parkland since at least 1914 and is currently used for recreational activities for team sports (e.g., softball, football). Swann Park is rectangular and covers approximately 11 acres.

SECTION 2

Offsite Assessment Approach

The overall approach for conducting the assessment at Swann Park is to investigate the presence or absence of potential contaminants of concern (PCOCs) in surface and subsurface soil. "Surface soil" is defined as the top 6 inches of soil for the purposes of this work plan. "Subsurface" soil is defined as the interval from 6 inches to 18 inches below grade.

The PCOCs include agricultural and other chemicals that may have historically been manufactured or disposed at nearby industrial sites or historically utilized as a soil amendment or for turf maintenance at Swann Park. For the purposes of this work plan, two lists of PCOCs have been defined for the soil:

- Primary PCOCs - Arsenic, copper, hexavalent chromium, lead, and Kepone
- Secondary PCOCs - Consists of the following analysis groups as discussed in more detail within Section 3.3:
 - Semivolatile Organic Compounds
 - Chlorinated Pesticides
 - Organophosphorus Pesticides
 - Herbicides
 - Metals

The investigation approach is based on obtaining surface and subsurface soil samples from a grid pattern across the site to provide a baseline of existing conditions. The sample locations, protocols, and analytical methods are presented in Section 3.

Assessment of Surface Soil Quality

3.1 Approach

Soil quality will be assessed by obtaining two soil samples within the top 18 inches of soil consisting of a surface soil sample from 0 to 6 inches below grade and a subsurface soil sample from 6 to 18 inches below grade. The assessment activities proposed in this work plan are for screening purposes. Results from the activities will be used to evaluate the need for additional sampling and analysis.

The proposed sampling grid is presented in Figure 1 and consists of a staggered 200 feet (east-west) by 200 feet (north-south) grid with the northernmost east-west transect approximately 20 feet south of the northern fence line. A total of 23 sample locations will be completed. Each sample location will be surveyed using a global positioning system (GPS) unit for horizontal coordinates with coordinates in Maryland State Plane, units of feet.

3.2 Soil Sampling

Soil samples will be obtained using a stainless steel hand auger, disposable trowel, or equivalent at each location to a depth of 18 inches below grade; any grass or other surface vegetative material will be removed and excluded from soil sample collection. The surface soil sample will be collected from 0 to 6 inches below grade and the subsurface soil sample will be collected from 6 to 18 inches below grade at each sample location with a total of 46 samples collected for analytical laboratory analysis. Each sample will be observed visually, described according to the Unified Soil Classification System (USCS), and then properly handled and labeled for laboratory analysis.

3.3 Soil Analysis

Soil samples collected for laboratory analysis will be placed into laboratory-provided containers with necessary preservatives, stored in coolers containing ice, and shipped to a certified analytical laboratory under chain-of-custody procedures via Federal Express.

Soil samples will be collected at all sample locations for the Primary set of PCOCs. In addition, sample collection will be performed for the Secondary Set of PCOCs at select sample locations as presented in Figure 1. Additional information regarding the analytical methodology for PCOCs analysis is presented below:

- Primary PCOCs – Arsenic (Method SW846 6010B ¹), Copper (Method SW846 6010B), Hexavalent Chromium (Method SW846 7196), Lead (Method SW846 6010B), and Kepone (Method SW846 8270C).

¹ SW846 refers to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Third Edition, EPA/SW-846, September 1986 and Updates.

- Secondary PCOCs – Consists of the following analysis groups as discussed in more detail within Section 3.3 (Note the Secondary PCOCs list of constituents includes the five constituents within the Primary PCOCs list):
 - Semivolatile Organic Compounds (Method SW846 8270C).
 - Chlorinated Pesticides (Method SW846 8081A).
 - Organophosphorus Pesticides (Method SW846 8141A).
 - Herbicides (Method SW846 8151A).
 - Metals (Methods SW846 6010B, 7470A/7471A, and 7196).

Therefore, the Primary PCOCs will be analyzed at 23 sample locations (a total of 46 samples) while the Secondary PCOCs will be analyzed at eight sample locations (a total of 16 samples) as presented in Figure 1.

As part of the quality assurance/quality control (QA/QC) program, 10 percent of the investigative soil samples will be collected as duplicates, 5 percent will be collected as matrix spike/matrix spike duplicates, and one sample per day will be collected as an equipment blank for any decontaminated equipment.

SECTION 4

Data Evaluation and Reporting

Data obtained from the soil sampling will be validated on an expedited basis. Validation is the process by which specific criteria are applied to samples and laboratory measurements by a third-party data validator to determine if the data are unqualified, qualified, or rejected. Data will also be reviewed to check for errors and that all data meet a qualitative standard of reasonableness. Following its validation, analytical data will be tabulated using electronic spreadsheets.

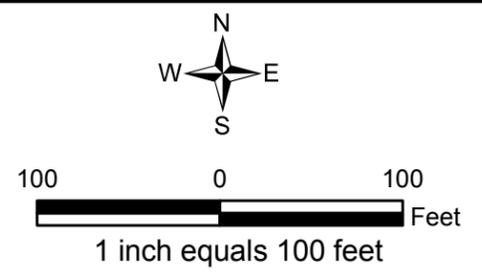
A data report of the soil sampling analytical results will be developed for regulatory submittal upon receipt of validated results.

Figures



- Legend**
- Concrete Column
 - Concrete Footer
 - Fence/Approximate Property Boundary
 - - - Approximate Limits of I-95
 - Edge of Pavement
 - Storm Manhole
 - Below Ground Stormwater Conveyance System

- ⊗ Swann Park Soil Sample Locations - Primary PCOCs
- ⊗ Swann Park Soil Sample Locations - Secondary PCOCs



Swann Park Proposed Sampling Locations

Race Street Site
Baltimore, MD

