

EXECUTIVE SUMMARY

Evans Environmental & Geosciences, LLC (EE&G) was retained by the City of Fort Lauderdale (CFL) to prepare this Site Assessment Report Addendum II (SARA II) and Site Rehabilitation Plan (SRP) for CFL's Former Trash Transfer Station property, located at 1901 NW 6th Street (the northwest corner of Sistrunk Boulevard and NW 19th Avenue), in Fort Lauderdale, Broward County, Florida (hereafter referred to as the *Property*). The objective of this report was to provide a response to the October 18, 2007 correspondence issued by the Florida Department of Environmental Protection (FDEP), provide a summary of the expanded site assessment activities in surrounding residential neighborhoods to the north and east, and to reiterate the previously proposed Site Rehabilitation Plan for the *Property* and surrounding area.

Soil Assessment

During this expanded site assessment event, EE&G advanced a total of 49 additional soil borings in November 2007 and February 2008. Soil cores were inspected for signs of debris or staining, and samples collected from the 0 to 0.5-foot, 0.5 to 2.0-foot, 2 to 4-foot and 4 to 6-foot below land surface (BLS) intervals of each boring. Representative samples were selected and analyzed for the presence of arsenic, barium, lead, dioxins/furans, and polynuclear aromatic hydrocarbons (PAHs), which were determined to be the primary constituents of concern (COCs) during the initial Site Assessment Report (SAR). The following is a brief summary of the expanded groundwater assessment findings:

- Based on the expanded site assessment findings, EE&G identified the presence of the tested COCs in soil samples, several of which were detected at concentrations above Soil Cleanup Target Levels (SCTLs) for *residential-use direct exposure*. However, a majority of the elevated constituents were concentrated near the city-owned vacant/fenced lot (located on the northeastern corner of NW 7th Street and NW 20th Avenue, and along Right-of-Way (ROW) areas located immediately adjoining the *Property*, and decreased with distance to the north and east.
- Occasional anomalous elevated readings of individual COCs also were detected to the north (i.e., lead in SB-ROW-47) and east (i.e., dioxin/furans in SB-ROW-56); however, based on subsequent verification testing, these levels were not confirmed.
- Isolated and residual evidence of glass shards and asphalt fragments were observed in a few soil samples; however, no direct evidence of incineration-related debris (similar to the material observed on the *Property*) was observed during the expanded assessment in the northern and eastern residential neighborhoods.

Groundwater Assessment

Additionally, groundwater samples were collected from a total of 14 monitoring wells located on and around the *Property*. These groundwater samples were analyzed for the presence of heavy metals, including aluminum, antimony, arsenic, iron, lead and manganese, which were determined to be the primary COCs in groundwater during the initial SAR. The following is a brief summary of the expanded groundwater assessment findings:

- The three Primary Drinking Water Standard constituents tested (antimony, arsenic and lead) were detected above applicable GCTLs only in samples collected from monitoring wells located on the *Property* (arsenic and lead) and the eastern-adjointing city-owned Lincoln Park (antimony). No groundwater samples collected off-site contained Primary Drinking Water standard constituents above GCTLs (with the exception of the aforementioned Lincoln Park well that contained antimony).
- The three Secondary Drinking Water Standard constituents tested (aluminum, iron and manganese) were detected above the applicable GCTLs in both on-site and off-site wells, but are considered to pose minimal health concerns to the public, as these are regulated only for aesthetic concerns (taste and appearance) in drinking water supplies. Considering that this area is outside the influence of public or private drinking water wells, the presence of these constituents does not appear to pose a significant health risk.

Site Rehabilitation Plan

EE&G developed a Site Rehabilitation Plan (SRP) based upon the initial findings of the SAR, which were further supported by the expanded assessment findings presented in the SARA and this SARA II. The proposed SRP utilizes the following three options to address the soil and groundwater impacts identified during the site assessment:

- EE&G recommended Source Removal of affected surficial soils on ROW areas adjoining the *Property* to the north and east. This plan was originally presented in the SAR, and FDEP comments addressed in the August 2007 SARA. Funding has been allocated by CFL to implement the Source Removal Plan, which consists of excavation of surficial soils containing elevated COCs along NW 19th Avenue, NW 7th Street, and in the northern-adjointing city-owned vacant/fenced lot. The excavated areas will be backfilled with clean sand/rock to form an Engineering Control, which will minimize potential direct-exposure concerns from contact with surficial soils in these public, open access areas. Based on statistical analyses, EE&G has shown in Section 3.2.3 that remaining post-Source Removal soils (outside the *Property* boundary) will be below SCTLs for target compounds (Arsenic and Dioxins/Furans) using the 95% UCL evaluation method. The ROW Source Removal Plan will be implemented in early-April 2008, and completed within 30 days.
- EE&G recommended a Natural Attenuation Monitoring Plan (NAMP) to assess groundwater quality over time. The rationale for this approach was due to the presence of only Secondary Drinking Water Standard constituents in groundwater samples collected beyond city-owned properties, as the Primary Drinking Water constituents tested (arsenic, lead and antimony) were limited to within city-owned properties. The objective of the NAMP will be to collect a sufficient amount of data, from which a technical evaluation can be made to assess the behavior of the affected groundwater over time. Furthermore, the NAMP will provide confirmation data concerning the boundary groundwater quality. The NAMP is proposed for a period of up to 5 years, with quarterly groundwater sampling for the first year, followed by semi-annual sampling thereafter.

- EE&G recommends that the *Property* be closed with a temporary No Further Action with Conditions (NFAC) status, using Engineering and Institutional Controls, until a final decision is made with respect to the highest and best re-use options for redevelopment. Please note that future redevelopment strategies will require that, at a minimum, a more permanent Engineering Control, and property handling/disposal of any affected soils disturbed and not re-used under such Engineering Control. Until that redevelopment plan is determined, the *Property* will remain fenced and access restricted. City employees will be educated on the presence of COCs and soil management guidelines. An interim Restrictive Covenant will be recorded that will require the Engineering Control to be maintained, restrict the use of groundwater, and provide guidelines for handling soils if disturbed during maintenance or redevelopment activities.