

EXECUTIVE SUMMARY
Site Assessment Report Addendum III
Former CFL Trash Transfer Station Site

Evans Environmental & Geosciences, LLC (EE&G) was retained by the City of Fort Lauderdale (CFL) to prepare this Site Assessment Report Addendum III (SARA III) for the 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 April 30, 2008 correspondence issued by the Florida Department of Environmental Protection (FDEP), to provide a summary of the Source Removal activities completed in adjoining Right-of-Way (ROW) areas, to provide post-Source Removal soil and groundwater assessment findings, and to reiterate the previously proposed Site Rehabilitation Plan for the *Property* and surrounding area.

Source Removal Event Summary

EE&G implemented a Source Removal Plan to address affected soils along the public ROW areas that adjoin the CFL Former Trash Transfer Station property. The specific ROW areas addressed during the Source Removal included the western side of NW 19th Avenue, between NW 6th and 7th Streets, and the northern and southern sides of NW 7th Street, between NW 19th and 20th Avenues. The Source Removal Plan was presented in Site Assessment Reports prepared by EE&G, reviewed by the FDEP, and modified to incorporate FDEP comments. The objective of the Source Removal Plan was to address surficial soils (minimum of 0 to 2-feet BLS) containing elevated constituents of concern (COCs) that were identified along the northern and eastern adjoining ROW areas, due north and east of the *Property*, and was considered to be proactive with respect to minimizing potential direct-exposure concerns from contact with surficial soils in public areas that had no access restrictions.

Excavation activities commenced on May 27, 2008, and were completed on June 19, 2008. A total of 2,713 tons of affected soils were excavated and transported to the Waste Management Central Landfill facility in Pompano Beach, Florida. The excavated areas were covered with a bright-colored geotextile filter fabric (to designate the limits of the excavation area), backfilled with native sand, imported from the CEMEX quarry in Miami, Florida, and topped off with new sod, which collectively provided an Engineering Control barrier. The objective of the Engineering Control barrier was to minimize direct exposure with the underlying soils that may potentially contain residual constituents of concern above applicable Soil Cleanup Target Levels (SCTLs). Prior to backfilling excavation areas, EE&G collected confirmation soil samples to assess post-excavation soil quality.

EE&G documented that all visible incineration-related debris, not under an Engineering Control or within the control of City-owned property, was properly removed except for the following area:

- The presence of debris was observed in the northern excavation wall that abutted the private residence, located at 701 NW 19th Terrace. The debris appeared to be relatively shallow beginning at the southwestern corner of this property, from depths of approximately 0.25-feet to 2-feet below land surface (BLS), and thinned-out as removal moved eastward toward NW 19th Terrace.

Based on the extent of visible debris in the western-adjointing CFL-owned property and eastern-adjointing ROW area, EE&G estimated that the debris layer may extend approximately 5 to 15 feet north into the northern-adjointing residential property (701 NW 19th Terrace), encompassing approximately 100 cubic yards. However, no actual tests were conducted on this private property, and therefore, EE&G could not conclusively verify the actual extent of remaining debris in this area without further investigation. CFL and EE&G were concerned about the presence of incineration-related debris identified on this private property (701 NW 19th Terrace), and therefore, notified FDEP with the request that action be taken to address the area.

Groundwater Assessment

EE&G installed eight permanent monitoring wells in June 2008 to further assess regional and site-specific groundwater quality. Based on depth-to-water measurements, groundwater appeared to flow to the east-southeast across this region. A full round of groundwater samples were collected in June 2008, which encompassed a total of 30 monitoring wells. Samples were analyzed for key constituents that were previously detected, including Secondary Drinking Water Standard constituents (aluminum, iron and manganese) and Primary Drinking Water Standard constituents (antimony, arsenic and lead). Based on interpretation of these results, EE&G concluded the following:

- 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 City-owned property tested during this assessment contained the three Primary Drinking Water standard constituents above Groundwater Cleanup Target Levels (GCTLs).
- 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 were considered to pose minimal health concerns to the public, as these are regulated only for aesthetic concerns (taste and appearance) in drinking water supplies. Several of the wells located away from the *Property* contained relatively high concentrations of aluminum and iron, which were indicative of a regional, naturally-occurring source. 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.

Soil Assessment

During this expanded site assessment event, EE&G collected an additional 20 surficial soil samples in July 2008, which were analyzed for specific constituents requested by the FDEP to verify or further delineate affected soils located to the north, south, east and west of the *Property*. No additional incineration-related debris was observed in these additional 20 soil samples. While low concentrations of arsenic, polynuclear aromatic hydrocarbons (PAHs), and/or dioxins/furans were intermittently detected in some of the soil samples, the concentrations were relatively consistent with previously-reported values. EE&G recommended no further assessment of soils in the surrounding area around the *Property*. Furthermore, EE&G made the argument to remove PAHs from

future enforcement related to the historic incineration activities, as no conclusive correlation was documented between the presence of incineration-related debris or other key constituents (i.e., arsenic, barium, lead and/or dioxins/furans) and the location and distribution of PAHs in soils.

Recommendations

Based on the observations and findings of the Source Removal event, followed by the findings of the post-Source Removal expanded soil and groundwater sampling events, EE&G recommended the following action items for this project:

- Due to the presence of elevated dioxins/furans in the post-Source Removal confirmation soil sample SS-2 and the expanded SARA III soil borings SB-ROW-69 and SB-ROW-70, EE&G recommended further surficial soil sampling in the City-owned lot located on the northeastern corner of NW 20th Avenue and NW 7th Street. EE&G will recommend appropriate action following interpretation of this expanded soil assessment data. However, in the mean time, this City-owned lot remains fenced to restrict unauthorized access.
- CFL and EE&G were concerned about the presence of incineration-related debris visible in the northern excavation wall that abutted the private residence, located at 701 NW 19 Terrace. CFL and EE&G notified FDEP of this concern in correspondence dated June 24, 2008 and requested that action be taken to address the area. CFL and EE&G recommended that the FDEP use Targeted Brownfields Assessment (TBA) grant funds to conduct a limited-scope Source Removal along the southern boundary of the identified residential property.
- EE&G recommended a Natural Attenuation Monitoring (NAM) Plan 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 (which appeared to be naturally-occurring in the region), as the three Primary Drinking Water constituents (arsenic, lead and antimony) were detected above GCTLs only on City-owned properties during this assessment. The objective of the NAM Plan 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.
- EE&G recommended that the *Property* and the northern-adjointing City-owned property (located at the northeastern corner of NW 20th Avenue and 7th Street) 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, these properties should remain fenced and unauthorized access restricted. 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.