

APPENDIX A

FDEP CORRESPONDENCE – APRIL 30, 2008



# Florida Department of Environmental Protection

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APR 30 2008

Edward A. Udvardy (via Email: [eudvardy@fortlauderdale.gov](mailto:eudvardy@fortlauderdale.gov))  
Assistant Public Works Director  
Public Works Department, City of Fort Lauderdale  
100 N. Andrews Avenue  
Fort Lauderdale, FL 33301

Re: City of Fort Lauderdale Trash Transfer Station and Lincoln Park  
1901 NW 6<sup>th</sup> Avenue and NW 19<sup>th</sup> Avenue, Fort Lauderdale, Broward County, Florida  
Review of Engineering Control & No Further Action with Conditions Report and Site  
Assessment Report Addendum II & Site Rehabilitation Plan

Dear Mr. Udvardy:

The Department of Environmental Protection (Department) has reviewed the Engineering Control & No Further Action with Conditions Report dated February 20, 2008 (received February 10, 2008) for the Lincoln Park and Site Assessment Report Addendum II & Site Rehabilitation Plan dated March 17, 2008 (received March 19, 2008) for the Former Trash Transfer station/ Incinerator site prepared by the Evans Environmental & Geosciences, LLC. (EE&G) for the above referenced projects. The latter document responds to the Department comments of October 18, 2007, includes additional soil and groundwater data, and presents a Source Removal Plan and a Natural Attenuation Monitoring Plan. Review comments are provided below for both properties (the former Trash Transfer Station/Incinerator and Lincoln Park) together as they are contiguous and the incinerator is the presumed contaminant source. Please take note that the Department is considering additional assessments in the residential area. This additional sampling may address some of the comments in this review letter.

1. Background water quality has not been established for Lincoln Park and the data for the former Trash Transfer Station is questionable as to whether it represents natural conditions as required by Chapter 62-780, Florida Administrative Code (F.A.C.). Considering that these two sites are contiguous and surrounded by extensive development, including I-95, the groundwater monitoring plans should be consolidated into one for concurrent sampling events, groundwater elevation data collection and reporting. Multiple background wells beyond the lateral extent of impacted soils should be installed to the north, east and south (of Sistrunk Boulevard but west of NW 21<sup>st</sup> Avenue to avoid being down gradient of the properties). Existing background wells are located in soil impacted areas north of the former Trash Transfer Station/Incinerator and thus will not help for potential background Aluminum (Al), Iron (Fe), and Manganese (Mn). In addition to water quality, these additional background wells may help establish the dominant groundwater transport direction for the former Trash Transfer Station. Leachable waste left in contact with the water table raises the

- burden of proof necessary for the requested No Further Action with Conditions even if this waste has been in place for decades.
2. Groundwater quality is prematurely compared to the Natural Attenuation Default Criteria (NADC); these criteria do not apply as waste (demonstrated to leach via Synthetic Precipitation Leaching Procedure (SPLP) testing) has been left in place below the water table.
  3. It is stated in the Engineering Control report that the geo-net liner was impermeable. It is the Department's recollection that this was not impermeable. Please clarify. With regard to the Lincoln Park irrigation system installation that required breaching the geo-net liner; the two procedures followed are not appropriate to maintain an impermeable liner. They would be ok if the liner was intended to allow rainfall percolation through it. These procedures were: covering the gap with additional geo-net and "if the gap was substantial in size it was sealed using a concrete mix". Breaches in an impermeable liner should be repaired by sealing the edges of a geo-net patch to the original geo-net liner using heat or glue.
  4. The sampling events should be comprehensive utilizing all of the existing wells at least for groundwater elevation data collection and preparation of the groundwater flow map. This is especially important for the former Trash Transfer Station property as the current network indicates a very flat gradient and no well defined flow direction (This comment would add MW-3, 4, and 6 to the groundwater elevation network.). The proposed initial water quality network for quarterly monitoring of the former Trash Transfer Station property network (MW-1R, 2R, 5, 7, 8, 9, 11, 12, 13, MW-UST-W, and LPCGW-15) is fine if MW-10 is added. The Lincoln Park property water quality network should include GW-11, 12, 13, 14, 15, 16, 18, 19, and 20. Initial analytes need to include Aluminum (Al), Antimony (Sb), Arsenic (As), Iron (Fe), Lead (Pb), and Manganese (Mn) until the range of variations for site water and background is understood. The proposal to re-evaluate analytes and network after one year of quarterly monitoring is acceptable. The proposal to drop analytes after meeting the GCTLs for two consecutive quarters is too short of a period of time for a site leaving leachable waste in place below the water table. The flat groundwater flow gradient on the former Trash Transfer Station/Incinerator measured in February 2007 and March 2008 is also critical to closure decisions. Is this flat gradient a routine condition (good to minimize plume migration) or an exceptional one related to lower rainfall conditions? The objective of this monitoring is to demonstrate that the plumes are delineated, stable and/or shrinking.
  5. Soil delineation for the former Trash Transfer Station property remains incomplete and should be completed before installing additional background wells. The limits west of SB-5, 6, 7, and 8 on property need to be established. This may include samples from the strip of land west but east of the I-95 pavement. Samples are needed north of SB-28 but west of SB-ROW-35. Samples need to be collected on the south side of Sistrunk Boulevard/N.W. 6<sup>th</sup> Street. Likewise additional soil samples are needed to complete delineation in the residential areas (yards) to the east (east of NW 18<sup>th</sup> Avenue across from the Lincoln Park property) and north of the site. As examples: north, west and south of SB-ROW-12, west and across N.W.19<sup>th</sup> Avenue of SB-ROW-17, and northwest, north and across 19<sup>th</sup> Terrace of SB-ROW-31.

6. Please forward a set of maps including all data collected by EE&G and the Site Investigation Section data to get an overview of historical and current data.
7. Contrary to statements made in the latter document, we consider Polycyclic Aromatic Hydrocarbons (PAHs) to be part of the soil impacts left from the former incinerator operations as concentrations are high onsite (up to 5.12 mg/kg) and decrease with increasing distance from the site. None of the data suggest I-95 as a PAH source.

#### Source Removal Plan

8. Removal of the top two feet of impacted soil within the City right-of-way (and City owned properties), with installation of a visible geotextile at the excavation base, and clean backfill is proposed as an Engineering Control (EC) for the City right-of ways. The limits of these areas will need to be surveyed, but since these areas are adjacent to public streets, how can access be limited to maintain the control?
9. This proposal does not include subsurface confirmation samples "as the SAR and SARA II data have confirmed that affected soils will be left in place... along the ROW areas." The assessment results in the proposed excavation areas do not include 2-4' depth samples in 11 of 19 sample locations. Only one 2-4 depth sample was collected for the entire length of the north and east ROW edge of the former incinerator property. This means that the concentrations to be left under the engineering control need to be determined by collecting **excavation base** confirmation samples before installing the geotextile. This provides the data without breaching the geotextile at a later date and is the best use of resources. During the March 24, 2008 teleconference, it was agreed that 0-0.5' and 0.5-2' confirmation samples would be collected from the excavation edge next to the private property.
10. The Department has provided verbal commitment to use Target Brownfields Assessment (TBA) funding to sample the residential yards and perhaps for their remediation, but not for City transportation and disposal costs of impacted soil excavated from the right-of-ways (page 22).
11. (Pages 22 and 24) the Department does not recognize fencing for this site as a temporary engineering controls, even if applied until the final redevelopment plan is implemented. We prefer and agree with the City that the remediation plan consider future development to use financial resources wisely. What time frame does the City need to determine the highest and best redevelopment use? Events involving current fencing have demonstrated that fencing does not restrict access and eliminate potential exposure for this area.

#### Specific Comments

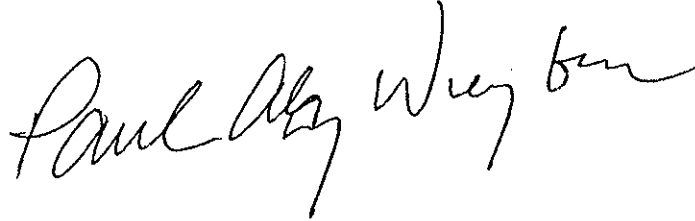
12. The locations of the SB-ROW-34 and SB-ROW-37 labels are misleading as to the actual sampling location. Sheet 8 shows SB-ROW-37 to be the SB-ROW-34 location per other figures. Please move the labels as needed to be clear and correct these figures as needed.

13. The soil results do not support the page 10 statement that arsenic throughout the north residential neighborhood is related to other potential sources. On property arsenic ranged up to 53.8 mg/kg.
14. (Page 11) The lead detections of 431, 407, and 480 mg/kg at SB-ROW-47, 50, and 29, respectively, should not be considered anomalies without further investigation as dioxin concentrations of concern have been documented nearby. This comment also applies to the pages 13 and 14 discussion of dioxin "anomalies" and page 15 discussion of PAH anomalies. In fact one "PAH anomaly" at 0.8 mg/kg TEQ also contained dioxin at 7.79 ng/kg. The intermittent detection of incinerator related contaminants is common for air contaminant transport due to varying chemical properties, wind speed, and vertical obstructions (trees, buildings, etc.) over the operation timeframe.
15. The 95% UCL calculations using data for all samples on City owned property, excluding the areas proposed for excavation and the former incinerator property have no value for residential exposures. Any 95% UCL calculations need to represent the applicable exposure units as required. These road right-of-way samples border residential properties but are not adequate to characterize exposure within any of the residential exposure units.
16. Page 17 states that MW-11 was retrofitted to repair damage in December 2007, but the figures show MW-9 to be in the described location. Which well was retrofitted?
17. Sheet 11 needs to separate the data of two sampling events for MW-11.
18. The figures summarizing soil and groundwater results need to be legible in the 11" by 17" size. The sample IDs also need to be legible. For example: Sheets 11 and 12 results are legible except those results that exceed the GCTLs.
19. Summary tables and figures should show the actual detection limit instead of "ND".
20. The page 18 discussion of arsenic exceedances neglected to mention MW-7 with 0.013 mg/l.
21. With regard to the human health-based values for Al, Fe, and Mn; see Table 7 of the Chapter 62-777, Technical Report. It should be noted that the iron value of 4.2 mg/l was exceeded onsite at 7.8 mg/l (MW-5).
22. There is a discrepancy between the text and Sheet 12 regarding the manganese concentration detected at MW-5 (0.16 mg/l and 0.116 mg/l, respectively).
23. Appendix D needs to include legible well completion reports for MW-1R, MW-9R (or MW-11 as questioned above), MW-12, and MW-13. The one sheet provided may cover all of these wells, but is too poor of a copy to be read.

Please respond in writing to these comments no later than May 30, 2008. If you have any questions please contact Ms. Amala Senarath at (561) 681 - 6675.

Thank you for your cooperation in this matter.

Sincerely,



Paul Alan Wierzbicki, P.G.  
Waste Cleanup Supervisor

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