



OSPREY ENVIRONMENTAL ENGINEERING, LLC.

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Mr. Scott Bartlett, Superintendent, Director of Public Works Operations
Fairfield Department of Public Works
725 Old Post Road
Fairfield, CT 06824

07 June 2018

Re: Soils Sampling and Materials Reuse Criteria
Aggregate Recycling Yard Berm Project, Fairfield, CT

Per your request, the following is a summary of remediation criteria that was set forth at the beginning of the Aggregate Yard soil relocation project and has been adhered to during the project. The site was known to have certain constituents present due to the nature of the materials identified in the Phase I Environmental Site Assessment and subsequent discussions with Town staff. These included petroleum products associated with asphalt pavement/millings, lead and arsenic, and PCBs. Mercury was later identified as a potential Constituent of Concern (COC) based on verbal input from a Town staff member. These COCs have been tested in soil samples collected prior to the disturbance of materials through earth relocation site activities. Two rounds of air samples have also been conducted to determine whether COCs are present in air/dust and whether additional engineering or other controls are necessary to provide safe working conditions.

Results of the laboratory analyses have been compared to CT Department of Environmental Protection (DEEP) Remediation Standards Regulations (RSRs) Direct Exposure Criteria (DEC) values (long term exposure thresholds) for soil relocation assessment and applicable OSHA/NIOSH Recommended Exposure Limits (RELs) or Permissible Exposure Limits (PELs), both of which are based on acceptable 8-hour daily exposure levels for workers.

The table below summarizes the chemical hazards anticipated at the site and respective safety limits.

MATERIALS	EXPOSURE ROUTES	RSR DIRECT EXPOSURE CRITERIA LIMITS (DECS) – mg/kg	NIOSH RECOMMENDED EXPOSURE LIMITS (RELs) ppm
Petroleum hydrocarbons (ETPH)	Inhalation, Skin Absorption, Skin and/or Eye Contact, Ingestion	Residential – 500 Industrial – 2,500	Not available
Polychlorinated biphenyls (PCBs)	Inhalation, Skin Absorption, Skin and/or Eye Contact, Ingestion	Residential – 1 Industrial – 10	0.001 mg/m ³
Lead	Inhalation, Ingestion, Skin and/or Eye Contact	Residential – 400, Industrial – 1,000	0.05 mg/m ³
Arsenic		Residential – 10, Industrial – 10	0.01 mg/m ³
Mercury		Residential – 20, Industrial – 610	0.1 mg/m ³

Once soil areas are characterized with respect to chemical constituents, the decision criteria are as follows:

1. If soils meet Residential DEC – Use as topsoil
2. If soils are above Residential DEC but below Industrial/Commercial DEC – Acceptable to remain on-site in the Aggregate Yard area where access is restricted to municipal workers (meets the Industrial/Commercial use criteria) or mix to bring COCs below Residential DEC if they are to remain at the surface in areas accessible to the public in the future.
3. If soils are above the Industrial/Commercial DEC – Remove from site if they are PCBs. Bury in berm to avoid exposure or mix to bring COCs below Residential DEC if they are to remain at the surface in areas accessible to the public.

It should be noted that the above criteria are based on long term exposure of soils to workers and to the public, and on short term dust exposures to workers during site disturbance activities. These criteria are different than that used for the

initial cleanup of the regulated waste remediation project performed by CTR Services last year (see "*REMEDIATION ACTION REPORT, PCB-Contaminated Fill Pile, Town Reclamation Yard, 183 Richard White Way, Fairfield, Connecticut*" prepared by LES and dated 05 December 2017. The remediation criteria used in that project were different than this project as the materials being removed were potentially subject to Federal TSCA regulations which are quite different than the above environmental/health & safety based criteria applicable to the berm project.

Should you have any questions regarding the above, please contact me.

Sincerely,

Osprey Environmental Engineering, LLC.



Robert Grabarek, P.E., L.S., LEP
President