

Soil and Rubble Reuse Intergovernmental Agreement

Department of Environment (DOE) is seeking City Council's approval to enter into an intergovernmental agreement (IGA) with the Illinois Environmental Protection Agency (IEPA) regarding the reuse of soil and rubble, generated by the City during City construction projects and reused in the city. When soil and rubble are appropriate for reuse, the City wants to reuse this soil and rubble versus dispose of it in a landfill or quarry.

The IGA establishes *responsible* reuse requirements and standards based on the existing cleanup standards established in IEPA's Tiered Approach to Corrective Action Objectives¹. TACO standards are remediation standards used for residential and industrial/commercial brownfield redevelopments through the IEPA's voluntary cleanup program. In the last decade, the City has applied these standards to evaluate residential, open space, and industrial/commercial brownfield sites to achieve a No Further Remediation status from IEPA for over 1,000 acres of property.

Responsible reuse of soil and rubble based on existing standards through the IGA has several benefits, including:

Cost Benefits

- Reduced disposal costs for infrastructure projects. If soil and rubble are responsibly reused, the City will not have to pay the tipping fees for soil and rubble disposal.
- Reduced costs associated with procuring virgin material. If the City responsibly reuses more soil and rubble, it will need to purchase less virgin fill materials.

Environmental Benefits

- Conservation of virgin soil and rubble. Illinois farmland supplies much of the virgin soil currently used in Chicago construction projects.
- Reduced transportation costs and greenhouse gas emissions. If more soil and rubble are responsibly reused, vehicles do not have to travel long distances transporting virgin soil into Chicago and transporting construction soil and rubble out of the city for disposal.
- Preservation of landfill capacity. If soil and rubble are responsibly reused, less will need to be disposed, preserving capacity for materials that require landfill disposal.

Double handling of soil and rubble is generally inefficient and cost prohibitive. Successful reuse of soil and rubble pursuant to this IGA is dependent upon construction schedules, project requirements and efficiencies gained through moving material from the excavation directly to the reuse site.

¹ 35 Ill. Adm. Code Part 742

**Cost Benefits of Soil and Rubble Reuse
Intergovernmental Agreement with the Illinois Environmental Protection Agency**

Implementing Projects under the City's Soil and Rubble Reuse Intergovernmental Agreement (IGA) with the Illinois Environmental Protection Agency (IEPA) will save the City money:

- Project disposal costs will decrease. If soil and rubble that meet the terms of the IGA are reused, the City will not have to pay the tipping fees for soil and rubble disposal.
- Material procurement project costs will decrease. If the City reuses soil and rubble, according to the terms of the IGA, it will need to purchase less virgin fill materials.

The total cost savings will depend on many factors including: a particular project's timing; the number of units of local governments with a Soil and Rubble IGA with IEPA; and project specifications.

The Department of Water Management's (DWM) water pipe replacement program for 2009 provides an illustrative example for cost savings for one budget item in a particular City Department.

Assuming that 25 percent of the soil that DWM creates through its currently budgeted 2009 water main replacements can be successfully reused, DWM could save approximately \$1,375,000 this year in its water main replacement program alone.

This figure assumes that:

- None of rubble was reused (to be conservative);
- Reuse amount (here assumed 25% of material generated) depends on project needs and specifications, quantity and quality of material, and project timing;
- Remaining material disposed of at landfill or quarry;
- Reused material would have been disposed of at quarry, rather than a landfill (which has higher tipping fees) for a conservative cost savings assumption; and
- The reused soil was not double handled.

There is precedent for the City saving funds by reusing soil and rubble. In 2007, the Department of Environment (DOE) facilitated the reuse of 3,210 cubic yards of clay from Chicago Transit Authority and Department of Water Management projects and 12 loads of concrete rubble from Chicago Department of Transportation at the Stearns Quarry landfill site *in accordance with the landfill's post-closure construction plans approved by the Illinois Environmental Protection Agency.*

Through the reuse of these materials, DOE estimates that the City saved approximately \$12,150 in disposal costs, while the Chicago Transit Authority and Chicago Park District saved approximately \$37,500 and \$65,700, respectively. The total savings to the City and sister agencies was approximately \$115,350.

SUBSTITUTE ORDINANCE AS AMENDED

WHEREAS, the City of Chicago (the "City") is a home rule municipality as described in Section 6 (a), Article VII of the 1970 Constitution of the State of Illinois (the "Illinois Constitution"), and as such may exercise any power and perform any function pertaining to its government and affairs; and

WHEREAS, the City, through its Department of the Environment, desires to enter into an intergovernmental agreement (the "Agreement") with the State of Illinois Environmental Protection Agency ("IEPA") concerning reuse of soil and rubble within the City; and

WHEREAS, the City is seeking to facilitate the reuse of soil and rubble excavated at one site within the City and reused at a different site within the City or as otherwise provided in the Agreement, in order to prevent unnecessary atmospheric emissions, reuse certain soil and rubble, preserve limited landfill capacity, and lessen the impact and costs associated with the transportation and disposal of certain soil and rubble; now therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHICAGO:

Section 1. Recitals. The above recitals are incorporated by reference as if fully set forth herein.

Section 2. Authority to Enter Into the Agreement. Subject to the approval of the Corporation Counsel, the City's Commissioner of the Department of the Environment (the "Commissioner") or a designee of the Commissioner are each hereby authorized to execute and deliver the Agreement in substantially the form attached hereto as Exhibit A, with such changes, deletions and insertions thereto as the Commissioner or the designee of the Commissioner shall approve (execution of the Agreement by the Commissioner or the designee of the Commissioner constituting conclusive evidence of such approval), and to take such other actions as necessary to effectuate the Agreement.

Section 3. Authority for City Departments. Authority is hereby granted for transfers of soil and rubble from one City department to another City department, in all cases subject to the requirements stated in the Agreement. For the purposes of this Ordinance, City departments shall include, but are not limited to, the Department of Transportation, Department of Water Management, Department of Streets and Sanitation and Department of the Environment.

Section 4. Authority to Enter Into Transfer Agreements With Units of Local Government for the Transfer of Soil and Rubble.

- A. Definition of Unit of Local Government. For the purposes of this Ordinance, a "Unit of Local Government" shall have the definition stated in Section 1 of Article VII of the Illinois Constitution, but shall also include school districts, provided, however, that such Unit of Local Government must be located in whole or in part within the City of Chicago. This definition shall include Units of

Local Government in existence as of the effective date of this Ordinance or Units of Local Government to be formed at any time after the effective date of this Ordinance. This definition includes, without limitation, the following entities: the Chicago Park District, the Chicago Transit Authority, the Metropolitan Pier and Exposition Authority, the Chicago Public Schools, the Chicago Housing Authority, Cook County, Illinois, the Metropolitan Water Reclamation District of Greater Chicago, Chicago Community College District 508, the Cook County Forest Preserve District, and the Public Building Commission.

- B. **Transfer Agreements Between the City and a Unit of Local Government.** In the performance of the Agreement, the head of any City department desiring to convey soil and rubble generated by such department's operations, or desiring to acquire soil and rubble generated by a Unit of Local Government may enter into transfer agreements with one or more Units of Local Government for the conveyance by the City or the acquisition by the City of such soil and rubble. The City may transfer soil and rubble with one or more Units of Local Government only if each such Unit of Local Government has an agreement with the IEPA permitting the use of such transferred soil and rubble, and any such agreement with the IEPA has terms and conditions substantially similar in scope to those stated in the Agreement. The consideration to be received by the City (if the City is the transferring party) or to be paid by the City (if the City is the receiving party) shall be determined by the head of a City department which is the party to the transfer agreement, and such consideration shall be commercially reasonable in the circumstances. Any transfer agreement within the scope of this section shall be in a form approved by the Corporation Counsel. If any transfer agreement within the scope of this section involves expenditure of funds by the City, such transfer agreement shall also be approved by the City Comptroller and shall be subject to the appropriation of funds. All transfer agreements within the scope of this section shall provide that all transfers of soil and rubble shall only occur within the City.

Section 5. Interaction with Municipal Code. To the extent any provision of chapters 11-4, Environmental Protection and Control, or 7-28, Health Nuisances, of the Municipal Code of Chicago would otherwise prohibit the activity contemplated in the Agreement as constituting open dumping or improper disposal of construction and demolition debris, the use of soil and rubble in accordance with the Agreement shall constitute an exception to such prohibitions. The definitions stated in the Agreement are only applicable to the activities contemplated in the Agreement, but within that context, supersede any conflicting definitions contained in chapters 11-4 or 7-28 of the Municipal Code of Chicago.

Section 6. Notification; Recordkeeping; Verification.

- A. **Aldermanic Notification.** The head of any City department desiring to acquire soil and rubble generated by a Unit of Local Government, shall, at the earliest available opportunity, notify in writing the alderman of the ward in which such soil and rubble may be received. Further, once the transfer is confirmed, a written notification shall be sent to the Alderman of the receiving ward.

- B. **Public Nuisance.** It shall be a public nuisance under this section , which may be abated or enjoined in accordance with applicable law, for any party governed by the Agreement to convey or transfer soil and rubble in violation of the Agreement.
- C. **Recordkeeping.** City departments receiving or generating soil and rubble within the scope of the Agreement shall maintain records required by Agreement Section 7.
- D. **Verification.** City departments receiving or generating soil and rubble within the scope of the Agreement, shall verify their records to the Office of Compliance on an annual basis.

Section 7. Cancellation of the Agreement. The Agreement may be cancelled at any time for good cause upon written notification by the Director of the IEPA or the Commissioner of the City's Department of the Environment as stated in Agreement Section 9.

Section 8. Invalidity of Any Section. If any provision of this ordinance shall be held to be invalid or unenforceable for any reason, then the invalidity or unenforceability of such provision will not affect any of the remaining provisions of this ordinance.

Section 9. Superseder. All ordinances, resolutions, motions or orders in conflict with this ordinance are hereby repealed to the extent of such conflict.

Section 10. Effective Date. This ordinance shall be in full force and effect immediately upon its passage and publication.

Attachments:

Exhibit A: Intergovernmental Agreement for Reuse of Soil and Rubble within the City of Chicago

Basic Soil & Rubble Terms

(IEPA) Illinois Environmental Protection Agency – State agency that oversees environmental regulations. Selected the soil reuse standards identified in the proposed IGA.

Pollution Control Board – Independent public agency created by the Environmental Protection Act that is responsible for adopting Illinois' environmental regulations. The PCB oversees a public process for all amendments to environmental regulations.

Rubble – concrete and concrete products, reclaimed asphalt pavement, bricks, rock, gravel, stone.

(TACO) Tiered Approach to Corrective Action Objectives – IEPA's cleanup standards for brownfield sites that are reviewed and approved by the Pollution Control Board as part of a public process. TACO standards are dependent upon site use and exposure pathways.

Brownfield – property where perceived or actual contamination hinders redevelopment. The City has remediated over 1,000 acres of brownfield sites returning them to productive use using the TACO standards. The cleanup standards are consistent with the intended use of the site such as residential, open space, or industrial/commercial.

(SRP) Site Remediation Program – IEPA's voluntary cleanup program under which public and private brownfield sites are cleaned up for a No Further Remediation status based on the intended property use.

(NFR) No Further Remediation – IEPA determination recognizing that the site is cleaned up and protective of human health based on intended use.

(PNAs) Polynuclear Aromatic Hydrocarbons – Organic compounds generated from combustion sources such as vehicle emissions.

Background Analysis – Evaluation of contaminant concentrations that found throughout the city or state. Background standards have been established in TACO for metals and PNAs.

Exposure Pathway – the pathway by which a contaminant can reach a receptor. Pathways include, but are not limited to, ingestion and inhalation.

Groundwater Restriction – Prohibition on the use of groundwater for drinking water.

Engineered Barrier – cap that prevents exposure to underlying material - can include soil, concrete or asphalt.

Environmental Criteria – Field screening and laboratory sampling for contaminants that is conducted to classify material for reuse or disposal.

Level 1 Standard – Soil reuse level based on residential cleanup standards.

Level 2 Standard – Soil reuse level based on industrial/commercial cleanup standards.

Material Exchange Website – City website to facilitate the reuse of soil and rubble between construction sites. www.chicagomaterialexchange.com

Rubble – concrete and concrete products, reclaimed asphalt pavement, bricks, rocks, gravel, and stone, whether mixed together or separated, generated as a result of the construction, maintenance, repair, or destruction of structures, roadways, sidewalks, or utilities.