

6/10/20

City of Chicago
Anadarko/Tronox Streeterville Removal Response
Cooperative Agreement Workplan

Anadarko and Tronox Settlements for Work in the Streeterville Thorium Investigation Area

Cooperative Agreement
1/1/2019 – 8/31/2025

The Cooperative Agreement (“Cooperative Agreement”) recipient, the City of Chicago (“City”), will undertake tasks, as defined in this Cooperative Agreement Workplan (“CA Workplan”) and the resulting Cooperative Agreement and project-specific workplans, to investigate and address the presence of known or suspected thorium contamination in subsurface materials in City rights-of-way and City-owned property adjacent to the rights-of-way, or in property owned by sister governmental agencies which is adjacent to City rights-of-way or which is related to City construction projects in the Streeterville Thorium Investigation Area (Appendix A) of Chicago, Illinois. The City and the United States Environmental Protection Agency (“USEPA”) may from time to time modify the Streeterville Thorium Investigation Area¹.

The thorium isotope of primary concern is thorium-232, with a radioactive half-life of 14 billion years, and its decay products that include radioisotopes of radium and polonium. Thorium-contaminated material does not present a significant threat to human health or the environment when adequately shielded, as when it is covered by a sufficient layer of asphalt, uncontaminated soil or concrete. However, when thorium-contaminated material is exposed, typically during construction and excavation activities or utility maintenance and repair activities, there is a potential for release of thorium-contaminated material which could threaten human health and the environment. The City will address this potential for release with the funds accessed through the Cooperative Agreement.

The budget contained in this Cooperative Agreement reflects the estimated amount of Anadarko Fraud Settlement funds (described in more detail below), in the amount of \$45,314,301.

The Cooperative Agreement period is seven years. The City and USEPA anticipate potential extensions to the Cooperative Agreement period, due to the nature of work and the lack of available information regarding the location of thorium in the Streeterville area.

¹ Due to the difficulty of identifying buried thorium, thorium’s long half-life and the limitations on the length of time a cooperative agreement can be in effect, the USEPA and the City expect to enter into successive cooperative agreements. Cooperative Agreement, #V-00E01070-2, dated October 23, 2012 was the first such award. Cooperative Agreement, #V-00E01070-2 also included a workplan that provided direction on work to be conducted utilizing the Cooperative Agreement funds. This CA Workplan is for the second such Cooperative Agreement award. Because many of the projects to investigate and address thorium contamination are implemented over the long term and cannot be completed within a single cooperative agreement period, projects started under one cooperative agreement can continue under successive cooperative agreement(s).

Outputs/Outcomes:

The expected outcome of the Cooperative Agreement is to provide funding for the City from the proceeds of the City's and USEPA's settlement of their overlapping bankruptcy and fraudulent conveyance claims against Tronox Incorporated ("Tronox"), Kerr-McGee Chemical Corporation ("Kerr McGee") and Anadarko Petroleum Corporation ("Anadarko") and those corporations' respective related entities (more fully discussed below at page 4). As provided by the bankruptcy settlement, USEPA holds those settlement proceeds in a special account, to be "retained and used to conduct or finance response actions at or in connection with the Streeterville rights-of-way." Such response actions include services related to addressing thorium contamination which exceeds the USEPA Streeterville Removal Action Level (defined below at pages 4-5), found in City rights-of-way and in City-owned property adjacent to the rights-of-way, or found in property owned by sister governmental agencies adjacent to City rights-of-way or which is related to City projects in the Streeterville Thorium Investigation Area. This outcome will help identify the location, volume and concentration and assist in the removal of thorium-contaminated materials.

The thorium-related services may include, but are not limited to, investigation, monitoring, oversight, engineering, planning, excavation, packaging, materials removal, transportation and disposal involving thorium-contaminated materials and asbestos-contaminated material mixed with thorium-contaminated material in and from the Streeterville Thorium Investigation Area, and information collection and dissemination concerning the presence and remediation of thorium-contaminated materials in the Streeterville Thorium Investigation Area. The thorium-related services will be limited to services required in connection with work that may expose or disturb subsurface soil by or on behalf of the City or by its sister governmental agencies performing work relating to City projects in the Streeterville Thorium Investigation Area. The thorium-related services do not include the installation, construction, maintenance or improvement of City infrastructure, or costs relating to the replacement or repair of infrastructure which is disturbed in connection with pursuing thorium remediation beyond planned project boundaries, except where USEPA has specifically agreed in writing (email or other writing acceptable) that those infrastructure costs are allowable prior to the City incurring them, or the fueling or maintenance of any vehicles used for thorium-related services. All Cooperative Agreement funding will be related to tasks that require the expenditure of funds and/or resources by the City or, at the City's discretion and with the approval of USEPA, by its sister governmental agencies or for projects performed by third parties on behalf of, supported by, or pursuant to agreement with the City.

The principal expected outputs provided to USEPA pursuant to the Cooperative Agreement include project-specific workplans and thorium monitoring survey reports, as well as documentation relating to the removal of thorium-contaminated materials. A map of the Streeterville Thorium Investigation Area depicting where the City has removed or detected thorium contamination will also be reviewed and updated as needed. Each of the outputs/outcomes will aid in the identification and implementation of response activities required for potential thorium contamination in Streeterville rights-of-way and City-owned property adjacent to the rights-of-way, or in property owned by sister governmental agencies which is adjacent to City rights-of-way or which is related to City projects in the Streeterville Thorium Investigation Area.

Revisions to the Cooperative Agreement may be necessary due to the size of the Streeterville Thorium Investigation Area and unknown extent of thorium within the Streeterville Thorium Investigation Area. Also, investigations may show that the boundaries need to be adjusted, either

enlarged or contracted. The City will submit any modification requests to USEPA for review/approval of subsequent changes.

The City will not implement work for which it is seeking reimbursement through the Cooperative Agreement on any of the site-specific workplans prior to USEPA approval except for emergency work as set forth in Task 2 below.

Except for the Emergency City Projects described in Task 2 below, the City will notify USEPA's Technical Contacts for this Cooperative Agreement (Verneta Simon, Daniel Haag, and Eugene Jablonowski) at least seven (7) calendar days prior to beginning any work for which the City plans to seek reimbursement so that USEPA will have the opportunity to oversee such work in progress. Notification shall be made via electronic mail to jablonowski.eugene@epa.gov, simon.verneta@epa.gov and haag.daniel@epa.gov. For Emergency City Projects, the City will provide USEPA's Technical Contacts for this Cooperative Agreement notification as soon as possible, but no later than while the emergency work is ongoing. Emergency notification shall be made via electronic mail to jablonowski.eugene@epa.gov, simon.verneta@epa.gov and haag.daniel@epa.gov and by calling the 24-hour emergency number 1-800-424-8802.

Whenever the City replaces its Grant Manager, the City shall provide written notification of the replacement's name and contact information to USEPA's Technical Contacts within five (5) business days of replacement.

BACKGROUND:

The thorium contamination that has been identified at several Streeterville and Lakeshore East locations is attributed to Lindsay Light Company thorium manufacturing activities from 1904 to approximately 1936. At several locations in the Streeterville neighborhood of Chicago, Lindsay Light manufactured gas lights and gas mantles for residential and commercial use beginning in approximately 1904. The manufacturing process also used asbestos containing material to tie the gas light mantles in place. Lantern mantle strings containing asbestos have also been found mixed with thorium-contaminated material in Streeterville. The historic records are uncertain regarding the volume of Lindsay's thorium production in Streeterville. According to a U.S. Tariff Commission document on the Incandescent Gas-Mantle Industry published in 1920, in 1914 Lindsay Light expanded its thorium manufacturing capacity in Chicago to meet the increased domestic and foreign demand caused by the outbreak of war in Europe. The production of thorium for the gas light mantles resulted in a sandy waste known as mill tailings that was often used as fill material; the thorium nitrate product was likely spilled in the vicinity of the Lindsay Light operations as well. The November 1935, Lindsay Board of Directors' Meeting minutes discussed plans to move Lindsay's Streeterville operations to the City of West Chicago by September 1936. The West Chicago facility became known as the Rare Earths Facility or "REF." In West Chicago, Lindsay Light and its successors continued to produce thorium as well as other radioactive materials for commercial and defense-related purposes. As a result of Lindsay's Rare Earths Facility thorium manufacturing and disposal activities, four West Chicago areas were listed on the National Priorities List of Superfund Sites.

In the West Chicago area, USEPA, with the assistance of the Illinois Emergency Management Agency, Division of Nuclear Safety ("IEMA/DNS"), formerly known as the Illinois Department of Nuclear Safety, has overseen the remediation of over 680 properties in residential areas, a 100-

acre public park, a sewage treatment plant, and the remediation of over six miles of creek and river in DuPage County. The widespread dispersal and use of the thorium material as fill in West Chicago likely reflects a similar widespread dispersal of the Lindsay Light thorium material in the vicinity of Lindsay Light's historic operations in Chicago. Unlike the relatively open areas in the City of West Chicago, where the extensive nature of the thorium contamination has been relatively easy to identify, most of the Lindsay Light thorium in the City of Chicago is not readily detectable due to shielding by asphalt, sidewalks, streets, and buildings. Consequently, appropriate monitoring and response actions are necessary to assure construction workers, as well as the public, that the excavation and construction activities involving the disturbance of subsurface materials will not result in the uncontrolled exposure to or release of thorium contamination or improper disposal of the thorium-contaminated materials at or from the Streeterville Thorium Investigation Area.

Under Section 107 of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601 *et seq.*, ("CERCLA" or "Superfund") Lindsay Light was the owner and operator of a facility that disposed of a hazardous substance. The corporate successor to Lindsay Light was Kerr-McGee. After discovery of contamination at 316 E. Illinois, USEPA entered into a CERCLA Administrative Order on Consent in 1994 with the property owners to investigate the extent of thorium contamination. In 1996, USEPA issued a CERCLA Section 106 unilateral administrative order to Kerr-McGee requiring Kerr-McGee to, among other things, identify and remove thorium contamination in Streeterville. In 2000, at USEPA's request, the City began to implement a computerized thorium monitoring permit system in the vicinity of the former Lindsay Light operations. From 1996 to 2005, Kerr-McGee reportedly paid property owners and developers for transportation and disposal of thorium waste from Lindsay Light sites in Streeterville.

At the time of the October 2005 Tronox spinoff, Kerr-McGee did not provide Tronox with sufficient resources to fund the environmental liabilities for which Kerr-McGee was responsible. Once Kerr-McGee had spun off its environmental liabilities, Anadarko purchased Kerr-McGee. Then in 2009, overburdened by environmental liabilities, Tronox filed for bankruptcy. As mentioned on pages 1 and 2 above, in 2011, the City and USEPA settled their overlapping bankruptcy claims against Tronox ("Tronox Bankruptcy Settlement Agreement"). Then Tronox and the U.S. Department of Justice on behalf of the City and USEPA and other federal agencies, states, cities, and private parties successfully pursued fraudulent conveyance claims against Kerr-McGee and Anadarko. In 2015, following judicial approval, the fraudulent conveyance settlement with Kerr-McGee and Anadarko (Anadarko Fraud Settlement), went into effect and, in accordance with the terms of the Tronox Bankruptcy Settlement Agreement, resulted in the additional funding of the Streeterville Rights-of-Way Special Account in the amount of \$45,314,301. Any interest accruing to the account shall be available for reimbursement pursuant to this Cooperative Agreement.

Future City projects in the Streeterville Thorium Investigation Area will involve intruding into potentially contaminated materials that may require removal. The USEPA Streeterville Removal Action Level is 7.1 picoCuries per gram of combined radium-228 and radium-226 (the total concentration of radium-228 and radium-226 of 5 pCi/g, plus an established Streeterville background concentration of 2.1 pCi/g) ("Removal Action Level"). Prior to removing contaminated material, the City must notify USEPA where it will be disposing of the material. Contaminated material must be transported and disposed of at a RCRA/CERCLA approved

licensed/permitted disposal facility in accordance with the USEPA CERCLA off-site rule. If the City and USEPA agree that removal of thorium-contaminated materials encountered in City subsurface activities is not possible, institutional controls will be implemented to prevent exposure to or dispersal of contaminated material.

The City of Chicago Department of Assets, Information & Services (“AIS”) coordinates with other City of Chicago Departments, such as the Department of Water Management (“DWM”) and the Department of Transportation (“CDOT”), and the Department of Public Health (“CDPH”) to develop and implement requirements including radiation monitoring, safety measures to be implemented, and material handling in the Streeterville Thorium Investigation Area when projects have the potential to encounter radioactive materials. For other subsurface work in the Streeterville Thorium Investigation Area, AIS is working with the appropriate City Departments to alert entities completing work in the Streeterville Thorium Investigation Area of the necessary notification, monitoring and material handling requirements under USEPA’s jurisdiction. Cooperative Agreement funds are not to be used for monitoring, material handling or other thorium-related costs incurred by non-public entities engaging in work on private property, within the public rights of way, or on City-owned property or property owned by other public entities, except by agreement of the City, at the City’s discretion and with the approval of USEPA.

As of January 1, 2020, the Chicago Department of Fleet and Facility Management was renamed Department of Assets, Information & Services.

The City of Chicago’s Radiation Monitoring Ordinance (Section 11-4-1100), dated March 13, 2019 requires radiation monitoring prior to intruding into or disturbing soils in the Streeterville Moratorium Area.

PROJECT SPECIFIC OBJECTIVES:

During the project period of the Cooperative Agreement, the City will utilize the Cooperative Agreement monies on ten (10) different tasks listed below.

- Task 1 - Quality Assurance Project Plan (“QAPP”) Update
- Task 2 - Sampling and City-Wide Projects
- Task 3 – Hiring of City Position
- Task 4 - Department of Water Management Projects
- Task 5 - Chicago Department of Transportation Projects
- Task 6 - Department of Public Health Hansen/Portal
- Task 7 - Department of Information Technology Hansen Upgrades
- Task 8 – Generic HASP Plan
- Task 9 – Hiring of City Positions for Permit Review and Oversight
- Task 10 – Sister Agency Projects

A more detailed description of each of the above tasks is described under the “Management and Coordination” section of this document.

In some cases, Cooperative Agreement funding will supplement City project funding for subsurface activities.

The goals of the Cooperative Agreement are to:

- Provide radiation monitoring services for City projects that occur in rights-of-way and on City-owned property adjacent to City rights-of-way within the Streeterville Thorium Investigation Area. This may include outreach, radiation surveying, removal action planning, and cost evaluation as part of proposed projects. Some time may be spent by City of Chicago staff coordinating with the radiation contractors and other City Departments. City of Chicago staff that could be involved includes AIS, Department of Water Management, Department of Law, Department of Public Health, Department of Transportation and other Departments and other City of Chicago sister governmental agencies.
- Package, transport and dispose of thorium-contaminated material that is removed as a result of City projects. Whether the scope and nature of work will include the investigation, removal and disposal of newly identified or existing thorium-contaminated material encountered beyond the City Project work location and limits proposed will be determined by the City and USEPA on a case-by-case basis, depending on factors including but not limited to potential human exposure, cost and availability of funding, level of radioactivity, disruption of existing infrastructure, likelihood that the area of contamination will be accessed or disturbed in the future, and construction scheduling.
- Train City of Chicago personnel, including an overview to City personnel on the history of Streeterville and the requirements when performing subsurface activities in the Streeterville Thorium Investigation Area. Training may include such topics as exposure risks and education on the process to obtain permits. In some instances, City staff may be trained to perform radiation monitoring. The City will coordinate with USEPA and provide updates as needed.
- Investigate and potentially create a master inventory database which is accessible to public and private utilities to document areas in Streeterville where radiation monitoring and removal has already occurred to supplement USEPA's website and repository.
- Maintain existing radiation monitoring equipment, such as survey meters and sodium iodide (NaI) detectors, and purchase additional equipment as necessary.
- Provide for reimbursement of thorium-related costs incurred after the date of this CA Workplan, and pursuant to USEPA-approved site-specific workplan(s), on City rights-of-way and City-owned property adjacent to City rights-of-way in the Navy Pier Headlands Sub Area and GSA Parcel (also sometimes referred to as "Polk Brothers Park").
- At the discretion of the City and with the approval of USEPA, provide for reimbursement of some or all of the thorium-related costs incurred by sister governmental agencies in City rights-of-way, on City owned property adjacent to the rights-of-way, or on property owned by sister governmental agencies which is adjacent to City rights-of-way or which is related to City projects within the Streeterville Thorium Investigation Area.
- Ensure all Cooperative Agreement funding will be related to tasks that require the expenditure of funds and/or resources by the City or, at the City's discretion and with the approval of USEPA, by its sister governmental agencies or for projects performed by third parties on behalf of, supported by, or pursuant to agreement with the City. Otherwise, Cooperative Agreement funds are not to be used for monitoring, material handling or other thorium-related costs incurred by non-City entities engaging in work on their own behalf or on behalf of a non-City entity(ies) on private property or within the public rights of way

or on City-owned property adjacent to City rights-of-way or property owned by other public entities.

MANAGEMENT AND COORDINATION:

AIS staff will work with other City of Chicago Departments and Agencies to determine what projects are appropriate for Cooperative Agreement funding. AIS and the City's Office of Budget Management ("OBM") will manage Cooperative Agreement funding and reporting. Eamon Reilly or his successor will serve as the City's Grant Manager for purposes of Cooperative Agreement administration, preparing quarterly reports, financial reports, progress of the workplan, and the final summary report. In some instances, other City Project Managers will also be responsible for coordinating selection of a consultant to perform thorium-related work. Eamon Reilly or his successor will also act as liaison between the USEPA and other stakeholders that may be involved in projects carried out under the Cooperative Agreement and this CA Workplan. As necessary, consulting firms are selected following competitive bids from a City list of prequalified environmental professionals. Note that the City of Chicago will provide more detail on each of the projects as they progress. Below is a brief description of the tasks. Note that the Streeterville Thorium Investigation Area is a single area but will include multiple City project work locations. It is also important to recognize that investigation and remediation work will be implemented through multiple projects at different Streeterville locations in addition to the specific projects set forth in this CA Workplan; the work may extend for many years due to the difficulty of identifying thorium contamination before it is exposed or excavated; and, there may be situations in which the City recommends leaving the contamination in place with USEPA-approved institutional controls and environmental covenants. For projects that expend Cooperative Agreement funds, the City shall review all invoices and proposed drawdown requests prior to submittal to USEPA to ensure there is no double-billing on projects. Subsequently, all invoices (or proposed drawdown requests) will be submitted to and reviewed by USEPA for approval with appropriate supporting documentation.

This Cooperative Agreement shall also include other costs associated with thorium-related activities which USEPA has approved prior to the City incurring such costs. Examples of such costs include, but are not limited to; site security above what is normally required; special signage or traffic procedures; the placement of plates where they would not have been employed but for the presence or potential presence of thorium, as well as investigation, monitoring, oversight, engineering, planning, excavation, packaging, materials removal, temporary staging, transportation, and disposal involving thorium-contaminated materials. This includes materials needed specifically for addressing thorium.

The City shall coordinate with USEPA on any required reallocation of estimated funding set forth below to reflect a better understanding of actual or potential costs. The costs of the specific tasks set forth below are estimates due to the uncertainty of the location and quantities of thorium that may be encountered in the City projects with which they are associated, and the estimates may, therefore, substantially understate or overstate the thorium-related costs the City could incur. The City will keep USEPA informed as to costs as the various tasks are implemented.

The City shall coordinate with USEPA to make appropriate modifications to this Cooperative Agreement in the event new information or circumstances arise necessitating different tasks (for example an entirely new and unanticipated construction program). Prior to implementation of any

such modifications, the City shall follow the applicable assistance agreement regulations regarding modifications of the CA Workplan. Also, the City shall provide such modifications, in writing, to USEPA's Technical Contacts for review and approval. The specific tasks set forth below represent the City's current understanding of work required in the Streeterville Thorium Investigation Area.

TASK 1 – Quality Assurance Project Plan (“QAPP”) Update: \$25,000 (Estimate)

This task includes funding for procuring a consultant to update the necessary documentation for the overall project QAPP (which was funded under the previous Cooperative Agreement, #V-00E01070-2) for work funded under the Cooperative Agreement. The intent of this document is to describe the personnel, procedures, and methods for insuring the quality, accuracy, and precision of data associated with this Cooperative Agreement. This document is intended to be referenced for all subsequent work contemplated in the Cooperative Agreement. The City will adhere to its standard procurement policies in seeking a consultant for preparation of the document. USEPA approved a QAPP under the previous Cooperative Agreement, so this task will update the existing QAPP. It has been determined that a dry weight corrected value will be used for verification sampling purposes in Streeterville. The document will be prepared in accordance with EPA QA/R-5, EPA Requirements for Quality Assurance Project Plans, (March 2001, reissued May 2006) and will be submitted to USEPA on an annual basis for review.

Site-specific workplans will be submitted to USEPA for review and approval. Although a schedule has not yet been completed the City anticipates that it will submit the QAPP to USEPA in the 1st Quarter of 2019.

The QAPP Update Preparation cost estimate assumes \$5,000 for personnel and \$20,000 for contractors to assist with QAPP Preparation.

TASK 2 – Assessment Sampling and Emergency City Projects: \$7,589,301 (Estimate)

This task includes funding for City of Chicago Projects in the Streeterville rights-of-way and on City-owned property adjacent to the rights-of-way that are not planned, but are required to maintain essential City services. Some City of Chicago Departments, such as DWM, conduct subsurface work (e.g., pipe repair) in the rights-of-way or in City-owned property adjacent to the rights-of-way. Typically, this work is unplanned and occurs when a repair to an underground utility is required. City crews or subcontractors are required to mobilize and repair the issue within a quick turnaround time. A radiation contractor is required to be onsite for the subsurface activities to monitor radiation levels, assess anomalies and ensure the workers and general public are not exposed to elevated radiation levels. This task also involves the development of a site-specific workplan. If thorium is detected, then a site-specific workplan shall be submitted to USEPA for review and approval as soon as possible but no later than 7 days after the beginning of the emergency work. Some of these projects are emergency in nature and require immediate repair of essential utilities that may necessitate work within 24 hours. The site-specific workplan will include a health and safety plan and reference the QAPP. The City intends to rely upon the efforts of the USEPA (*i.e.*, USEPA website) for the community involvement plan. The City of Chicago will provide USEPA access to the sites during all times when work is contemplated or ongoing.

The City, or its contractor, will submit a copy of the site-specific monitoring report within 45 days of completion of projects under this task that utilize Cooperative Agreement funding. The City

understands that reports will be posted on the USEPA Lindsay Light website within 45 days of USEPA receiving a copy of the report.

The City will submit quarterly update reports to USEPA for all projects under this task for which it intends to utilize Cooperative Agreement funding.

The Emergency City Projects cost estimate assumes \$586,650 for personnel (see also bottom of this section), \$130,250 for equipment, and \$521,000 for supplies including containers for disposal (e.g., bulk bags and bulk sacks). Another \$5,851,401 is estimated for contractors such as those who will provide radiation monitoring and reporting, and excavation, transportation and disposal of material, among other thorium-related services.

Note that although specific equipment is not known at this time, it is anticipated to be needed during various stages of this task. Equipment may include but is not limited to personal protective equipment, radiation monitoring equipment (Ludlum 2221 Scaler/Ratemeter with a Ludlum 44-10 NaI detector for thorium surveys; Ludlum 2241 with a Ludlum 44-9 Geiger-Mueller (“GM”) “pancake” detector for personnel and equipment contamination monitoring and its calibration and maintenance); personal protective equipment (“PPE”) to protect against thorium contamination (disposable coveralls, boot covers, gloves, etc.); personnel dosimetry; and equipment to support soil sample collection; waste liners and waste containers.

If excavated material encountered at a project exceeds the USEPA Streeterville Removal Action Level, then, in accordance with the CERCLA off-site rule, the excavated material will be disposed of at a disposal facility licensed or permitted to accept such contaminated material.

Note for this task the City will not be able to determine the percentage of project completion since the City is responding to site-specific emergencies in the Streeterville Thorium Investigation Area.

All Cooperative Agreement funding will be related to tasks that require the expenditure of funds and/or resources by the City or, at the City’s discretion and with the approval of USEPA, by its sister governmental agencies or for projects performed by third parties on behalf of, supported by, or pursuant to agreement with the City. Otherwise, the Cooperative Agreement does not include funding for private or third party entities who conduct subsurface activities in the rights-of-way, on City-owned property adjacent to the rights-of-way, or on private property on their own behalf. However, in certain instances, the City may need to perform thorium-related activities in conjunction with work by a private entity. If work is performed on behalf of the City by a non-City entity or by agreement between the City and a non-City entity, and the City desires that work to be funded by the Cooperative Agreement, the City may, at its discretion, request funding from the Cooperative Agreement, and the costs of that work will be eligible for reimbursement upon approval by USEPA. Costs incurred by the City in managing such work by a non-City entity will also be eligible for reimbursement upon approval by USEPA.

The City also intends to begin an assessment program of soil screening and sampling in rights-of-way and on City-owned property adjacent to the rights-of-way throughout the Streeterville Thorium Investigation Area. This program would be designed to identify potential areas of concern and assist with planning for future City projects. Selected areas would be screened and sampled using direct-push sampling techniques and down-hole thorium monitoring techniques. Allocating \$450,000 for this sampling program would allow for approximately 60 areas to be

sampled. On an annual basis, the City will provide a map to USEPA depicting the areas sampled including addresses. (estimating approximately \$7,500 per sampling area for environmental consultants, sampling equipment, and radiation monitoring, plus approximately \$50,000 in personnel time).

Mapping software, ESRI's ArcGIS Pro, will be used to analyze radiation monitoring data and identify potential areas where soil screening and sampling should take place within/around the Streeterville Thorium Investigation Area. Of the allocated funds for this task, \$1,700 will be used to purchase a computer for the hired City employee, detailed in Task 3, that meets the requirements of the selected mapping software. The selected computer is typically used by City employees who use demanding software programs, like ArcGIS Pro. Additionally, \$2,500 of the allocated funds for this task will be used to purchase computer software (Microsoft Visio, Microsoft Projects, etc.) that will aid in project organization and delineation. A total of \$4,200 of the allocated fund for this task will be used to purchase a computer and software.

TASK 3 – Hiring of City Position: \$1,000,000 (Estimate)

The City intends to hire one full-time employee (“FTE”) to manage the Emergency City Projects, the assessment program, and the management of the Cooperative Agreement. Depending upon City collective bargaining agreements, this FTE would be a project coordinator or environmental engineer, with appropriate experience in Geology, Engineering, or Environmental Sciences. This position would be responsible for coordinating City Departments performing emergency services with the radiation contractor, the USEPA, and other affected parties. This position would manage and report the findings of the soil assessment program and would also coordinate drawdown requests, manage the funds, contractor payments, and other reporting associated with the Cooperative Agreement. The estimated cost of this FTE throughout the expected 7-year duration of the Cooperative Agreement is \$1,000,000.

TASK 4 – Department of Water Management (“DWM”) – Various Projects: \$12,500,000 (Estimate)

The DWM has forecasted various Capital Improvement Plan (“CIP”) Projects including water main replacement projects within the USEPA Lindsay Light Streeterville Thorium Investigation Area. Projects will include spoil disposal. DWM separated the projects into a 5-year forecast (*i.e.*, 2016 through 2020) and a 20-year forecast (*i.e.*, 2021 through 2036). Forecasted CIP projects beyond 2020 are based on replacement of pre-1930 water mains.

Note that this information is for the Water CIP only and does not include any potential DWM maintenance, repairs or emergency work within this area which may be necessary which are covered under Task 2, above. Other planned projects are also anticipated and would be included in this Task.

The projects will involve subsurface activities and a radiation contractor will be selected to provide radiation monitoring. A site-specific workplan will be submitted to USEPA for review and approval at a minimum of 30 days prior to work commencing on this project. The site-specific workplan will include a health and safety plan and reference the QAPP. The City intends to rely upon the efforts of the USEPA (*i.e.*, USEPA website) for the community involvement plan.

The City, or its contractor, will submit a copy of the site-specific monitoring report within 45 days of completion of this project. The City understands that this report will be posted on the USEPA Lindsay Light website within 45 days of USEPA receiving a copy of the report.

This task assumes \$600,000 for personnel, \$150,000 for equipment, and \$150,000 for supplies including bulk bags and bulk sacks. Another \$11,600,000 is estimated for contractors who will provide radiation monitoring and reporting, and excavation, transportation and disposal of material, among other thorium-related services, including training.

Note that although specific radiation monitoring, sampling and personal protective equipment is not known at this time, it is anticipated to be needed during various stages of projects. Equipment may include but is not limited to radiation monitoring equipment (Ludlum 2221 Scaler/Ratemeter with a Ludlum 44-10 (NaI detector for thorium surveys; Ludlum 2241 with a Ludlum 44-9 (GM “pancake” detector for personnel and equipment contamination monitoring and its maintenance); PPE to protect against thorium contamination (disposable coveralls, boot covers, gloves, etc.); personnel dosimetry; and equipment to support soil sample collection; waste liners and waste containers.

Excavated material encountered for the project that exceeds the Removal Action Level will be disposed at a licensed/permitted disposal facility in accordance with the CERCLA off-site rule.

In addition, DWM projects may also involve property in the Streeterville Thorium Investigation Area which is owned by sister governmental agencies. Consequently, at the discretion of the City and with the approval of USEPA, this task includes disbursement/reimbursement of some or all of the eligible thorium-related costs incurred by sister governmental agencies on City rights-of-way, on City owned property adjacent to the rights-of-way, or on property owned by sister governmental agencies which is adjacent to City rights-of-way or which is related to City construction projects within the Streeterville Thorium Investigation Area.

To raise awareness of the thorium contamination in Streeterville, \$25,000 of the allocated funds for this task designated for personnel will be used to hire a consultant to prepare training material and conduct training sessions. The training will include a history of Streeterville and the requirements when performing subsurface activities in the Streeterville Thorium Investigation Area. Training may include such topics as exposure risks and education on the process to obtain permits.

TASK 5 - Chicago Department of Transportation (“CDOT”) – Various Projects: \$9,600,000 (Estimate)

CDOT anticipates a variety of planned projects in the future. Details on some of those projects are not developed at this time; those are simply listed below. Details for the CDOT flyover are as follows:

CDOT Flyover Project: Other CDOT Projects include the continuation of the pedestrian and bicycle path “flyover” project along Lake Shore Drive. CDOT intends to widen the east side of the Lake Shore Drive (“LSD”) movable bridge to 16 feet; the northbound side of the new path will tunnel through the existing bridge houses in order to achieve this additional width. The proposed

trail will then continue on to a new pedestrian bridge, east of LSD and run north parallel to and level with lower-level LSD through DuSable Park. After crossing over Ogden Slip, there will be an off-ramp connection to Navy Pier. The main path will then rise over Illinois Street and run behind Lake Point Tower, partially located on upper level LSD. As it descends back down to grade, it will pass over Grand Avenue, Jane Addams Park and the Ohio Street underpass, connecting to the existing path at the north end of Jane Addams Park. The City of Chicago will provide USEPA access to the sites during all times when work is contemplated or ongoing.

Other Anticipated Projects: Other planned projects are also anticipated. Although not comprehensive since all projects are not known at this time, examples of such projects are:

- Construction of Americans with Disabilities Act (“ADA”) curb-replacement ramps for City ROW sidewalk and street access
- Streeterville traffic signal interconnections;
- Various improvements to N. Michigan Avenue (curb repair, new lighting, etc.);
- Bus Rapid Transit project that links to downtown; and
- Navy Pier Wayfinding (which involves a better ADA route to get to Lake Michigan).

These projects will involve subsurface activities and a radiation contractor will be selected to provide radiation monitoring. This task also involves the development of a site-specific workplan. The site-specific workplan will be submitted to USEPA for review and approval at a minimum of 30 days prior to work commencing on this project. The site-specific workplan will include a health and safety plan and reference the QAPP. The City intends to rely upon the efforts of the USEPA (*i.e.*, USEPA website) for the community involvement plan.

The City, or its contractor, will submit a copy of the site-specific monitoring report within 45 days of completion of this project. The City understands that this report will be posted on the USEPA Lindsay Light website within 45 days of USEPA receiving a copy of the report.

The CDOT projects cost estimates assume \$200,000 for personnel, \$50,000 for equipment, and \$50,000 for supplies including bulk bags and bulk sacks. Another \$9,300,000 is estimated for contractors such as those who will provide radiation monitoring and reporting, and excavation, transportation and disposal of material, among other thorium-related services, including training.

Note that although specific equipment is not known at this time it is anticipated to be needed during various stages of the CDOT Projects. Equipment may include but is not limited to radiation monitoring equipment (Ludlum 2221 Scaler/Ratemeter with a Ludlum 44-10 NaI) detector for thorium surveys; Ludlum 2241 with a Ludlum 44-9 GM “pancake” detector for personnel and equipment contamination monitoring and its maintenance); PPE to protect against thorium contamination (disposable coveralls, boot covers, gloves, etc.); personnel dosimetry; and equipment to support soil sample collection; waste liners and waste containers.

Excavated material encountered for the project that exceeds the 7.1 pCi/g USEPA Streeterville Removal Action Level will be disposed of in accordance with the CERCLA off-site rule at a disposal facility licensed or permitted to accept such material.

In addition, CDOT projects may also involve property in the Streeterville Thorium Investigation Area which is owned by sister governmental agencies. Consequently, at the discretion of the City and with the approval of USEPA, this task includes reimbursement of some or all of the eligible

thorium-related costs incurred by sister governmental agencies on City rights-of-way, on City owned property adjacent to the rights-of-way, or on property owned by sister governmental agencies which is adjacent to City rights-of-way or which is related to City construction projects within the Streeterville Thorium Investigation Area.

To raise awareness of the thorium contamination in Streeterville, \$25,000 of the allocated funds for this task designated for personnel use will be used to hire a consultant to prepare training material and conduct training sessions. The training will include a history of Streeterville and the requirements when performing subsurface activities in the Streeterville Thorium Investigation Area. Training may include such topics as exposure risks and education on the process to obtain permits.

TASK 6 – Chicago Department of Public Health (“CDPH”) – Hansen Portal: \$1,500,000 (Estimate)

Background

The City of Chicago plans to upgrade its electronic permitting system and incorporate Geographical Information Systems (“GIS”) data management to prevent improper excavations and uncontrolled exposure to thorium within the Streeterville Thorium Investigation Area.

The CDPH uses the Hansen electronic permitting system to track CDOT permits related to permitted construction activities. Permit applications are automatically flagged with a “hold” for CDPH in order to ensure that work within the Streeterville Thorium Investigation Area will be performed safely and properly prior to allowing a permit to be issued. The City of Chicago recently began allowing contractors or property owners to apply online for CDOT permits related to construction activities, such as work in the public way, notification to utilities regarding underground work (“DIGGER”), and other permits required by City code. DIGGER notifications (the service network system established to prevent contractors and private citizens from hitting any existing utility line(s) when digging, and notifies all utilities of impending excavations, pursuant to 220 ILCS 50/10) can be accessed by dialing 811. The DIGGER notifications are flagged and forwarded to CDPH staff for notification of work in the Streeterville Thorium Investigation Area. Although many of the DIGGER notifications may also require a City permit, DIGGER provides notification of work on private properties with or without City permits.

The Streeterville Thorium Investigation Area has been spatially identified within the permit system. When a permit is requested within this area, a “hold” is placed on the permit. City staff must determine if the permit involves digging or other intrusion into or exposure to subsurface soil and if the contractor is aware of the thorium monitoring requirements. The geospatial data identification method will be a significant improvement over the use of addresses in capturing permits for work in the Streeterville Thorium Investigation Area, since GIS identifies the geographic (x,y) location instead of address which helps to capture and prevent bad addresses that may be submitted by a contractor. The permit “hold” does not allow City departments to issue a permit unless the contractor has confirmed that a radiation contractor will be on site during the work activity and that the monitoring information will be made available to the City and the USEPA. The electronic permitting system the City uses is called Hansen and the recent upgrades improve review of permit holds by allowing City staff to access such reviews electronically, although radiation contractor information is still provided as a hardcopy. Additionally, radiation survey results are provided as a hardcopy and require further processing to notify USEPA of the work completed and transfer of results.

Workplan – Phase I

USEPA hosts a web-based repository of radiation testing reports and other technical documents for the benefit of those conducting work within the Streeterville Thorium Investigation Area. These reports allow persons performing such work to easily check to see if an area has already been tested and determined to be clear of contamination, or if the area has never been investigated and still needs to be tested. Currently these are being entered under an address. The City will incorporate a GPS plan and map to get more accurate locations of where the work was actually performed. The following tasks will better catalog existing contamination and monitoring data in the Streeterville Thorium Investigation Area and create an electronic platform to manage future radiation monitoring results. This will help prevent projects from taking place in the Area without the necessary oversight and radiation monitoring. Likewise, it will help prevent duplicative oversight and monitoring in areas previously remediated.

1. Gather and evaluate all radiation monitoring data for geocoding
 - a. Evaluate site map detail provided by general contractors and radiation contractors to determine accuracy of information.
 - b. Make recommendations for how future data results should be reported to USEPA for management using GIS.
 - c. Evaluate and make recommendations to geocode existing information.
2. Expand Hansen to integrate GIS into Hansen permit hold reviews.
 - a. Develop requirements to map permit information into Hansen and make accessible to GIS mapping and evaluation.
 - b. Geocode and import existing radiation monitoring data into Hansen.
 - c. Develop mapping tool in Hansen to display existing monitoring data and future monitoring data.
 - d. Develop requirements for general contractors and radiation monitoring contractors to enter information into Hansen.
 - e. Test, evaluate and trouble shoot Hansen for City and contractors.

The total cost for these tasks is uncertain at this time. The work will be completed by the City's information technology contractor, which the City will procure through a competitive process. Prior to initiating any work, the City will work with USEPA and the selected contractor to develop a more detailed scope of work, based on factors including existing Hansen capabilities, to determine actual expected costs.

Workplan –Phase 2

The City's Hansen system is used to manage a variety of CDOT permits and notifications required prior to a contractor commencing work. Such permits include openings in rights-of-way and DIGGER service utility notification for impending surface or excavation work. Several improvements to the system can be made to manage information in an electronic format and provide notifications for thorium related activities. The following improvements to specific portions of the Hansen can be made to improve oversight of potential subsurface work in the Streeterville Thorium Investigation Area.

1. Expand the public portal for general contractors to submit radiation contractor contact information and related CDOT permit information.
 - a. Subsurface work located based on GIS, allowing the general contractor to provide more exact detail of actual work (similar to Google Earth).

- b. Email notification to be provided to the radiation contractor provided by the general contractor.
 - c. Radiation contractor will access the portal and confirm monitoring activities have been procured.
- 2. Expand the Hansen system to provide permit hold review notification to USEPA and City staff when a permit hold is released or denied.
- 3. Expand the public portal for radiation contractors to submit monitoring reports and waste management activities in order to improve the tracking of delinquent reports.
 - a. Reports will be supplied and maintained electronically.
 - b. Evaluate reporting requirements to USEPA and determine feasibility to geocode in Hansen as part of data management and future permit hold review.
 - c. Aerial extent of monitoring will be located based on GIS.
 - d. Email notification to be provided to USEPA and City contacts.

The total cost for tasks are estimated at \$1,500,000, based on similar projects completed by the City's information technology contractor Infor. It is assumed the amount will be split between personnel and equipment, supplies and contracts. Prior to initiating any work, the City will coordinate with USEPA and Infor to develop a more detailed scope of work, based on factors including existing Hansen capabilities, to determine actual expected costs. Infor will develop Hansen requirements to accept and manage the data. After expanding Hansen, Infor will test, evaluate and trouble shoot the final system with City, USEPA and contractors.

To assist with CDPH's permit process, \$2,500 of the allocated funds for this task will be used to purchase software (Adobe Acrobat Pro, etc.) to improve review, processing and response time.

TASK 7 – Chicago Department of Innovation and Technology (“DoIT”) – Hansen Upgrades: \$1,000,000 (Estimate)

As explained in Task 6 above, the CDPH uses the Hansen electronic permitting system to track CDOT permits related to construction activities, such as work in the public way, notification to DIGGER, and other permits required by City code. Permit applications for work within the Streeterville Thorium Investigation Area are placed on hold and evaluated to make sure the work is done safely and properly.

AIS also uses the Hansen system to track larger projects within the Streeterville Thorium Investigation Area. AIS's Hansen system will require upgrades similar to those listed above to improve the performance of the system, integrate it with GIS-based mapping features, and ensure the accuracy of tracking. CPDH will also coordinate with The Office of Underground Coordination (OUC) which is the distribution agency within the Chicago Department of Transportation, Division of Infrastructure Management, for all requests regarding existing utility information (Information Retrieval Process - "IR") and the review/approval of construction work in or adjacent to the Public Way (Existing Facility Protection - "EFP"). This also includes large projects with deep excavations and penetrations, such as foundations (piles, caisson, etc.), earth retention systems or major piping installations.

The cost for the City's Department of Innovation and Technology (“DoIT”) to upgrade and maintain the Hansen system throughout the duration of the CA Workplan is estimated to be approximately \$1,000,000, divided evenly between internal personnel costs and the City's selected

information technology contractor. This estimate was determined based on prior cost estimates for smaller, one-time only revisions to Hansen that cost in excess of \$200,000.

TASK 8 – Generic Health and Safety Plan: \$100,000 (Estimate)

CDPH reviews internal holds placed on City permits for work in the Streeterville Thorium Investigation Area. The Hansen electronic permitting system places a hold on CDOT Right of Way Permits, DWM permits and certain Department of Building (“DOB”) permits when the permit address indicates the proposed work is in the Streeterville Thorium Investigation Area and notifies CDPH to review the application prior to allowing a department to release the permit. If CDPH or if CDPH in consultation with USEPA determines the proposed work location will expose thorium impacted material, the permittee is required to ensure appropriate radiation monitoring, documentation and reporting will be completed before the hold is removed and the permit issued. To ensure compliance and provide guidance to contractors, the former City of Chicago’s Department of Environment developed a generic Health and Safety Plan (“HASP”) in 2008. Under this task, a consultant will be procured to update a new generic HASP for review by the City and USEPA. The City will use a competitive procurement process involving its pre-approved professional services contracts to ensure the revised HASP is prepared by a qualified consultant with appropriate expertise in health physics and radiation monitoring.

TASK 9 – Hiring of City Positions for Permit Review and Oversight: \$2,000,000 (Estimate)

As stated in Tasks 6, 7 and 8, CDPH reviews internal holds placed on City permits for work in the Streeterville Thorium Investigation Area. The City intends to hire two full-time employees (“FTEs”) to review permit holds and conduct limited field oversight to ensure radiation monitoring compliance. Depending upon City collective bargaining agreements, one FTE would be the equivalent of a Project Coordinator, with appropriate experience in Geology, Engineering, or Environmental Sciences. This position would be responsible for in office review of all City permit holds related to the Streeterville Thorium Investigation Area and DIGGER notifications (the service network system established to prevent contractors and private citizens from hitting any existing utility line(s) when digging, and notifies all utilities of impending excavations, pursuant to 220 ILCS 50/10 can be accessed by dialing 811). The DIGGER notifications are flagged and forwarded to CDPH staff for notification of work in the Streeterville Thorium Investigation Area. Although many of the DIGGER notifications may also require a City permit, DIGGER provides notification of work on private properties with or without City permits. The second FTE will assist in office review and conduct limited oversight to ensure radiation monitoring compliance and appropriate handling radiation impacted material. Depending on City collective bargaining agreements, a senior environmental inspector or environmental engineer with appropriate experience in Geology, Engineering or environmental sciences would be hired for the positions. The estimated cost of this FTE throughout the duration of the Cooperative Agreement is \$2,000,000.

TASK 10 – Sister Agency Projects: \$10,000,000 (Estimate)

Background

In some instances, projects that involve subsurface work in the Streeterville Thorium Investigation Area may be performed by Sister Agencies.

Project 1: Metropolitan Pier and Exposition Authority/Navy Pier Inc./Polk Bros Park/Navy Pier Headlands and GSA Parcel:

Located immediately west of Navy Pier in Chicago, Illinois, is an approximately 17-acre area known as Navy Pier Headlands Sub Area (the “Headlands”). Adjacent to the Headlands is a smaller parcel known as the GSA Parcel. The Headlands and the GSA Parcel are owned by the City and leased to the Metropolitan Pier and Exposition Authority (“MPEA”). The MPEA is a political subdivision and unit of local government existing under the laws of the State of Illinois that is charged with improving, managing and operating, or cause improvement, management and operation of Navy Pier, Chicago, Illinois. Navy Pier, Inc. (“NPI”) is an Illinois not-for-profit corporation created by MPEA for the achievement of the MPEA's governmental purposes, including the development and operation of Navy Pier. From and after July 1, 2011, NPI has improved, maintained, managed and operated the Headlands and GSA Parcel.

Beginning in September, 2013, NPI has been engaged in certain construction projects known as the Centennial Vision Project to renovate Navy Pier, the Headlands and GSA Parcel (the “Centennial Vision Project”). NPI has begun to implement the Centennial Vision Project with portions of the Centennial Vision Project complete, other portions under constructions and other portions to be constructed.

The Headlands and GSA Parcel lie within the Lindsay Light II, Operable Unit 21, 600 East Grand Avenue, Superfund Site, which contains subsurface contamination of thorium-232 and related contaminated materials, which is a radionuclide that is a hazardous substance under Section 101(14) of CERCLA, 42 U.S.C. section 9601(14).

The construction of the Centennial Vision Project and the associated excavations, has and will continue to result in the disturbance of soil within the Headlands and GSA Parcel. As a result, gamma screening for the potential presence of thorium-related contaminated materials has been conducted as required in conjunction with the excavation. In addition, NPI has been required to remove and remediate thorium-related contaminated materials within these areas. The MPEA is required to indemnify NPI for the cost of this monitoring, removal and remediation to the extent the MPEA is responsible for such costs under the NPI Sub-Lease. The City intends to use funds from this Cooperative Agreement to reimburse MPEA and NPI for thorium-related monitoring and remediation costs for construction activities associated with the Centennial Vision Project that occur and have occurred on City rights-of-way and City-owned property adjacent to City rights-of-way in the Headlands and the GSA Parcel.

Due to the uncertainty regarding the extent of thorium contamination in the Navy Pier Centennial Vision Project area and related costs, the City intends to allocate funds from the Cooperative Agreement for the Navy Pier Centennial Vision Project within City rights-of-way and adjacent City-owned lands.

These projects will involve subsurface activities and a radiation contractor will be selected to provide radiation monitoring. This task also involves the development of a site-specific workplan. The site-specific workplan will be submitted to USEPA for review and approval at a minimum of 30 days prior to work commencing on this project. The site-specific workplan will include a health and safety plan and reference the QAPP. The City intends to rely upon the efforts of the USEPA (*i.e.*, USEPA website) for the community involvement plan.

The City, or its contractor, will submit a copy of the site-specific monitoring report within 45 days of completion of this project. The City anticipates that this report will be posted on the USEPA Lindsay Light website within 45 days of USEPA receiving a copy of the report.

Excavated material encountered for the project that exceeds the 7.1 pCi/g USEPA Streeterville Removal Action Level will be disposed of in accordance with the CERCLA off-site rule at a disposal facility licensed or permitted to accept such materials.

Project 2: CTA Electric Bus Chargers at Navy Pier Bus Turnaround Area:

The Chicago Transit Authority (CTA) will be installing an electric bus charging system at the Navy Pier Bus Turnaround Area, located South of Jardine Drive, North of Grand Avenue, West of Lake Michigan and East of Streeter (the “Navy Pier Bus Turnaround Area”). The system includes multiple charging masts, a power distribution station, and associated infrastructure, to charge electric buses with a high powered overhead charging interface fastened to the charging masts. The buses will charge for short intervals during their layover period at the Navy Pier Bus Turnaround Area.

The Navy Pier Bus Turnaround Area lies within the Lindsay Light II, Operable Unit 21, 600 East Grand Avenue, Superfund Site, which contains subsurface contamination of thorium-232 and related contaminated materials, which is a radionuclide that is a hazardous substance under Section 101(14) of CERCLA, 42 U.S.C. section 9601(14).

The project includes the construction of a power distribution building and up to 8 overhead charging masts and associated duct banks, foundations and infrastructure. The required outdoor infrastructure will require excavation including underground conduit / duct banks, transformers, switch gear, fencing, charging mast foundations, energy storage system foundations, future solar roofed bus shelter foundations, side walk construction / demolition, partial roadway demolition for trenching and foundation work / new curbing / new pavement. The area of construction will also include the bus shelter areas located on the island located on Park Drive in the Navy Pier Bus Turnaround Area. Currently completed additions to the project, depending upon funding, include an energy storage system and new solar roof bus shelters.

Due to the uncertainty regarding the extent of thorium contamination in the CTA Navy Pier Electric Bus Charging Bus Turnaround Area and related costs, the City intends to allocate funds from the Cooperative Agreement for the CTA Navy Pier Electric Bus Charging Bus Turnaround Area within City rights-of-way and adjacent City-owned lands.

This project involves subsurface activities and a radiation contractor will be selected to provide radiation monitoring. This task also involves the development of a site-specific workplan. The site-specific workplan will be submitted to USEPA for review and approval at a minimum of 30 days prior to work commencing on this project. The site-specific workplan will include a health and safety plan and reference the QAPP. The City intends to rely upon the efforts of the USEPA (*i.e.*, USEPA website) for the community involvement plan.

The City, or its contractor, will submit a copy of the site-specific monitoring report within 45 days of completion of this project. The City anticipates that this report will be posted on the USEPA Lindsay Light website within 45 days of USEPA receiving a copy of the report.

Excavated material encountered for the project that exceeds the 7.1 pCi/g USEPA Streeterville Removal Action Level will be disposed of in accordance with the CERCLA off-site rule at a disposal facility licensed or permitted to accept such materials.

This task will be performed by the CTA, and the City and CTA will enter into an inter-governmental agreement with respect to their respective obligations.

Other Projects: Other Sister Agency projects that are not known at this time may also occur within the Streeterville Thorium Investigation Area. These projects will involve subsurface activities and a radiation contractor will be selected to provide radiation monitoring. All projects will include the development of a site-specific workplan that will be submitted to USEPA for review and approval at a minimum of 30 days prior to work commencing on this project. The site-specific workplan will include a health and safety plan and reference the QAPP. City will coordinate with USEPA regarding the community involvement plan.

The City, or its contractor, will submit a copy of the site-specific monitoring report within 45 days of completion of this project. The City anticipates that this report will be posted on the USEPA Lindsay Light website within 45 days of USEPA receiving a copy of the report.

Excavated material encountered for the project that exceeds the 7.1 pCi/g USEPA Streeterville Removal Action Level will be disposed of in accordance with the CERCLA off-site rule at a disposal facility licensed or permitted to accept such materials.

These tasks will be performed by the Sister Agencies.

The total cost estimate for all Sister Agency Projects within this task is \$10,000,000.

Clarifications / Variances from 40 CFR Part 35 Subpart O

§ 35.6105(a)(2)(ii). Site specific workplans will discuss signage at sites. Note that the City will utilize the USEPA website for most projects.

BUDGET

Budget Categories	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10
	QAPP Update	Assessment Sampling and Emergency City Projects	Hiring of City Position	Scheduled DWM Projects	Scheduled CDOT Projects	Hansen Portal	Do IT – Hansen Upgrades	Generic HASP	Hiring City Positions for Permits	Sister Agency Projects
Personnel*	\$3,544	\$451,257.52	\$708,800	\$425,280	\$141,760	\$531,600	\$354,400	N/A	\$1,417,600	N/A
Fringe Benefits	\$1,456	\$185,392.48	\$291,200	\$174,720	\$58,240	\$218,400	\$145,600	N/A	\$582,400	N/A
Travel (none anticipated at this time)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Equipment	N/A	\$130,250	N/A	\$150,000	\$50,000	\$50,000	N/A	N/A	N/A	N/A
Supplies	N/A	\$521,000	N/A	\$150,000	\$50,000	\$50,000	N/A	N/A	N/A	N/A
Contractual	\$20,000	\$5,851,401	N/A	\$11,600,000	\$9,300,000	\$650,000	\$500,000	\$100,000	N/A	\$10,000,000
Sampling	N/A	\$450,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Task Totals	\$25,000	\$7,589,301	\$1,000,000	\$12,500,000	\$9,600,000	\$1,500,000	\$1,000,000	\$100,000	\$2,000,000	\$10,000,000

Budget Total - \$45,314,301**

* Personnel information will be provided in the site-specific plans for projects in which the City of Chicago will seek cost for personnel reimbursement.

** This budget amount will be updated periodically to reflect interest accumulation.