

Carnotite Reduction Company Site Remediation

Virtual Community Meeting

June 1, 2021

City of Chicago Department of Assets, Information and Services
4th Ward Alderman Sophia King

For questions and comments contact both
Department of Assets, Information and Services
312.744.0500 | [AIS EHS Notifications@cityofchicago.org](mailto:AIS_EHS_Notifications@cityofchicago.org)
and
Alderman King's Office
773.536.8103 | ward04@cityofchicago.org

www.chicago.gov/carnotite



Virtual Meeting Agenda

Introduction to the Speakers

- Alderman Sophia King
- Kimberly Worthington, AIS
- Ram Ramasamy, AIS
- Kris Schnoes, Tetra Tech
- Abby Mazza, AIS

Remediation Project Overview

Remediation Project Update

- Community Concerns and Responses – Update from February Public Meeting
- Contractor Team
- Remediation Oversight
- Local Hiring and Job Fairs
- Remediation Site Preparation
- Remediation Plan
- Site and Public Safety
- Remediation Monitoring
- Site Restoration
- Project Timeline

Questions?

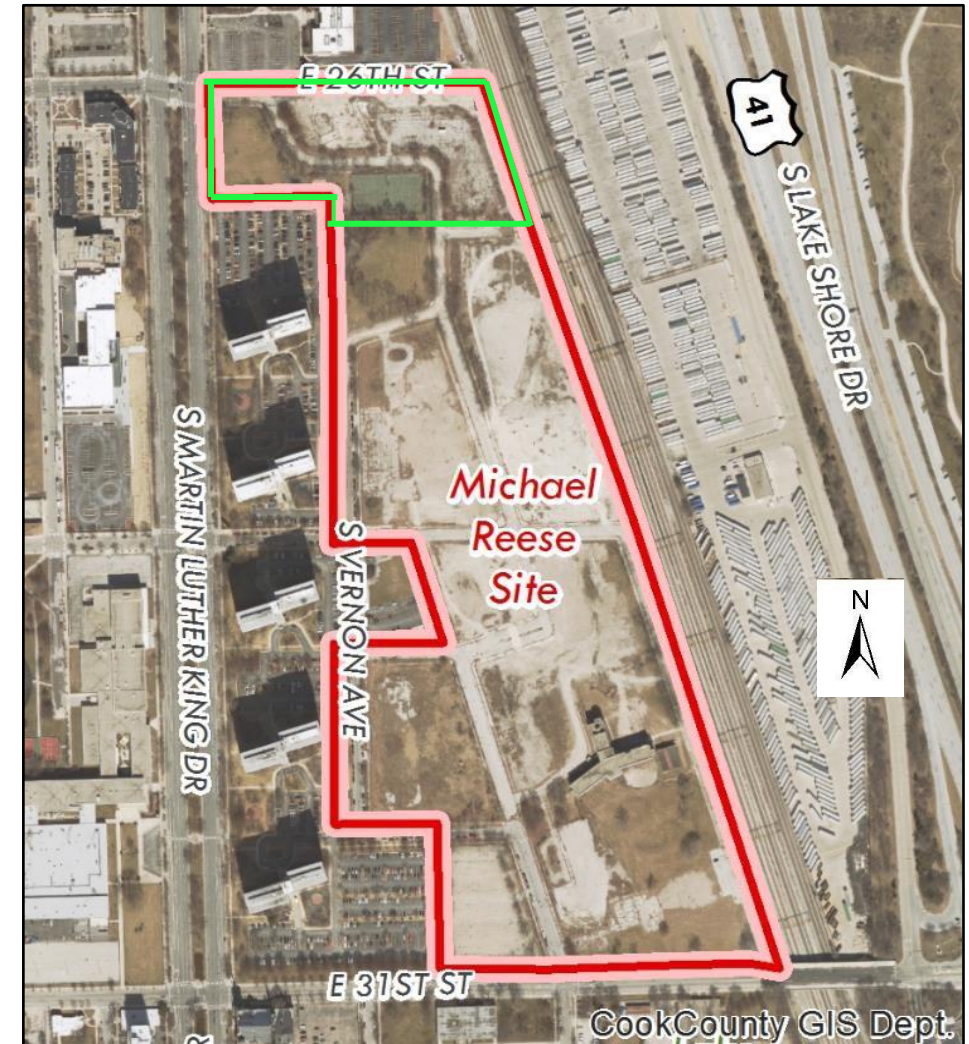


Remediation Project Overview

Project Goals: Protect human health and the environment, fulfill regulatory requirements, and eliminate a primary barrier to redevelopment of the site.

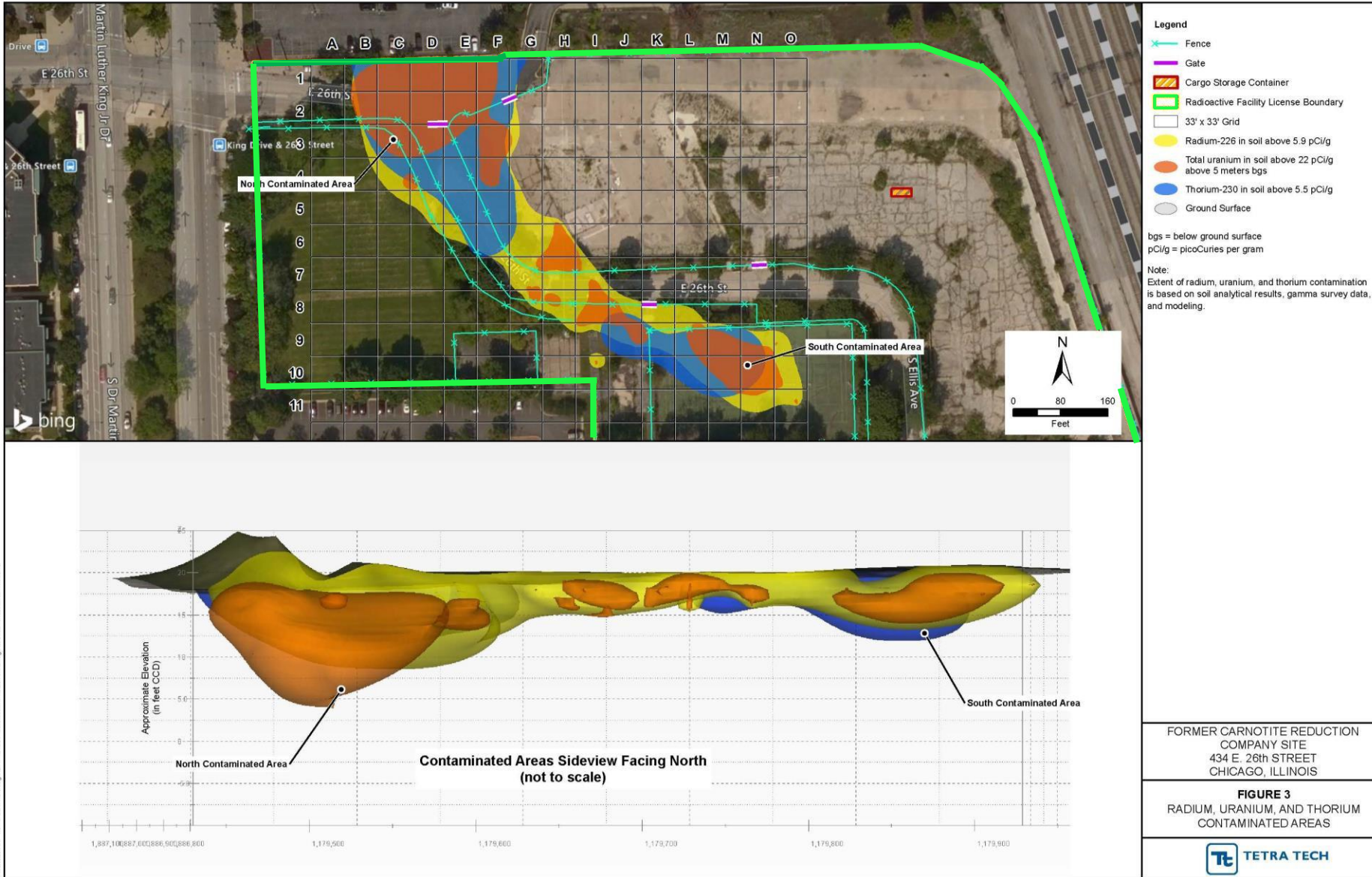
Scope of Work: Excavate radiologically contaminated soil from the site for off-site disposal and backfill with clean fill.

Cost Estimate: \$31,000,000 (GO bond and TIF; includes construction, oversight and contingency)



 Former Carnotite Reduction Company Site

Extent of Contamination



Contamination Depth
~6 ft (south area) to 14 ft (north area) deep

Total Excavation
~17,400 cubic yards

Clean-up Criteria*

- Radium-226 - 5.9 pCi/g
- Total uranium – 22 pCi/g to 5 meters and 52 pCi/g below 5 meters
- Thorium-230 – 5.5 pCi/g

*Factors in the presence of background concentrations of these naturally occurring elements

Remediation Contractor Team

- Remediation contractor team chosen through the City's procurement process and construction bid contract
- **FH Paschen – General Contractor**
 - Project Management
 - Site Health and Safety
 - Corporate resources for QA/QC, Compliance, Contract Administration, etc.
- Arcadis Team – Environmental Consultant
 - Senior Health Physicist and Radiation Safety Officer
- Tecnica Team – Earthwork & Environmental Subcontractor
- Griffin – Dewatering and treatment

Remediation Oversight – Contractual

- **Remediation oversight consultant – Tetra Tech, Inc.:** Experienced radiation remediation staff that have designed and implemented large US EPA cleanups at complicated radiation contamination sites (radium, thorium and uranium).
- **Radiation Safety Officer (RSO) – SAHCI, Inc.:** Licensed and highly skilled health and radiological physicist with over 27 years experience in radiation safety consulting.
- SAHCI and Tetra Tech will be onsite during all excavation and loading activities to monitor for compliance with IEMA-approved plans and procedures and ensure any remediation issues that arise are resolved.
- The City, Tetra Tech, and SACHI have the authority to stop work at any time if deemed necessary.

Remediation Oversight - Regulatory

Illinois Emergency Management Agency (IEMA) and Chicago Department of Public Health (CDPH)

- Prior to beginning remediation, IEMA must review and approve construction plans and procedures.
- IEMA will have inspectors onsite throughout the project to ensure approved construction plans and procedures are being followed.
- IEMA will issue notices of violations and fines and can stop work if deemed necessary.
- CDPH will also be involved and conduct site inspections for compliance.

Local Hiring and Job Fairs

Minority and Local Resident Participation Goals:

Contract	Goals
Construction	MBE – 14.5% WBE – 3.4% Local Resident - 10%
Professional Services	MBE - 16% WBE - 4.5%

*Construction goals are lower to account for significant proportion of costs associated with the treatment, transportation and disposal of radiological/special waste, which have limited or no MBE/WBE opportunities.

F.H. PASCHEN

INVEST YOURSELF IN HIRING EVENT

HIRING UNION CARPENTERS, LABORERS, APPRENTICES

DATE & TIME:

WEDNESDAY, JULY 28, 2021
11:00 AM - 12:30 PM

WHERE:

VIA MICROSOFT TEAMS
A LINK WILL BE SENT UPON
RSVPING FOR THE EVENT

A BUD TALK WILL BE HELD BY
VP, CHARLES JOHNSON



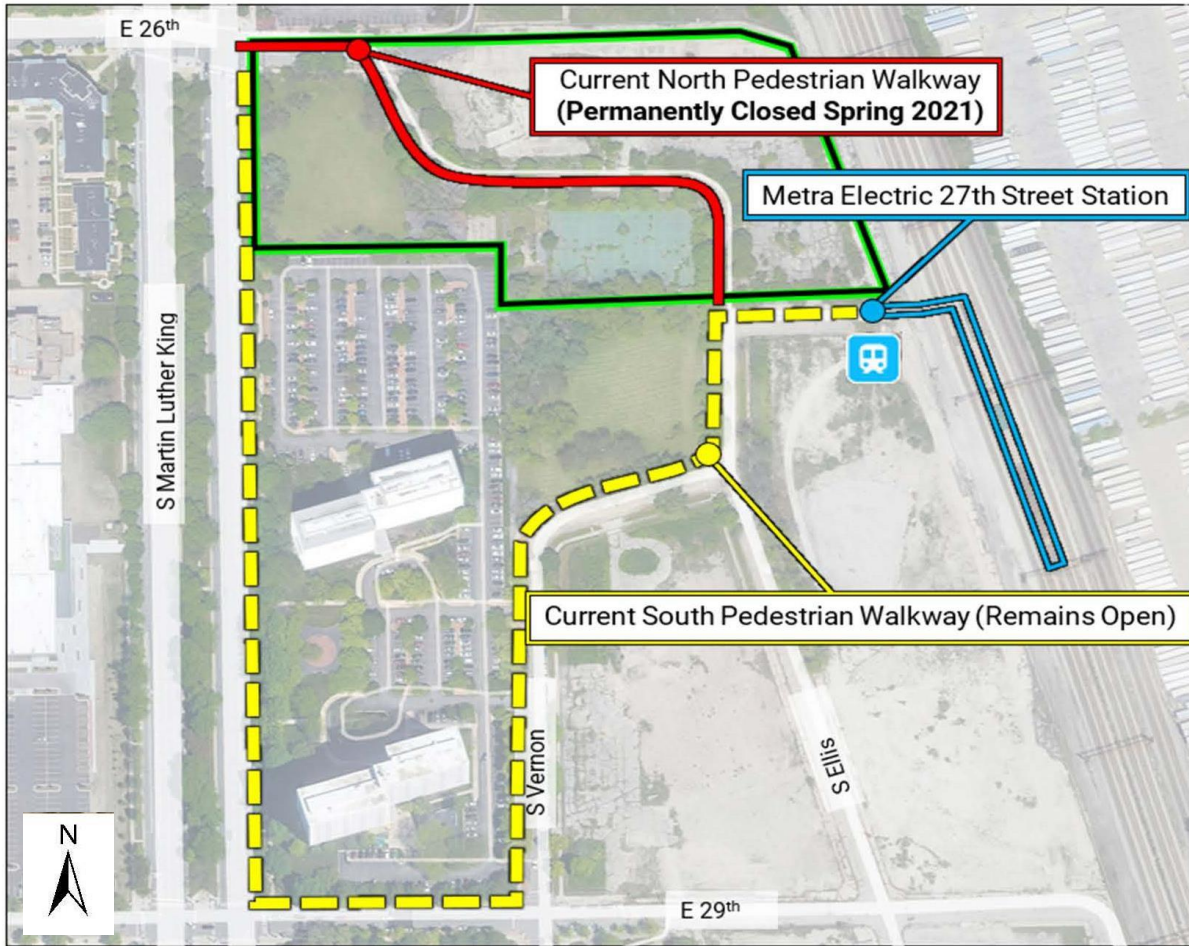
PLEASE RSVP TO KCUZA@FHPASCHEN.COM BY MONDAY, JULY 26

FHP
F.H. PASCHEN

Remediation Site Preparation

- 26th Street will be closed and traffic to the 27th Street Metra Station will be re-routed.
- Air monitoring will begin monitoring 30 days prior to intrusive site work.
- Trailers for the crews working at the site will be installed.
- Fencing with wind screen will be increased to 8' on the north, south, east and west sides of the site.
- Electrical support, the truck scale and the wheel wash will be installed.
- The dewatering treatment system will be installed and tested.

Metra Station Impacts



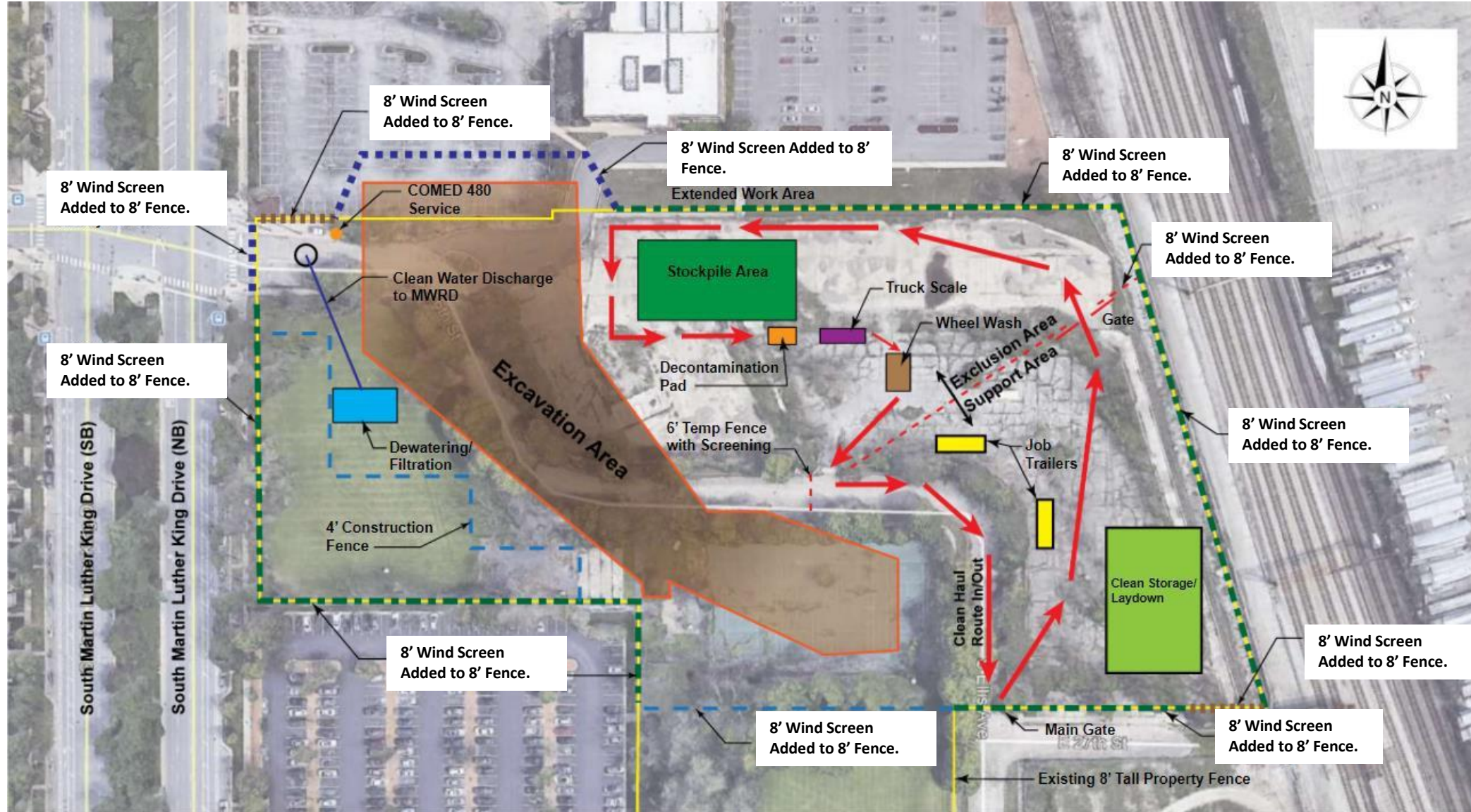
Legend
— Former Carnotite Reduction Company Site Boundary

- North access via 26th Street to be closed during and after remediation
- South entrance via Vernon Avenue will remain open during and after remediation
- Wayfinding signs to be installed prior to 26th Street closure

Sign Location Photo Elevations and Messages



Remediation Plan – Proposed Site Layout



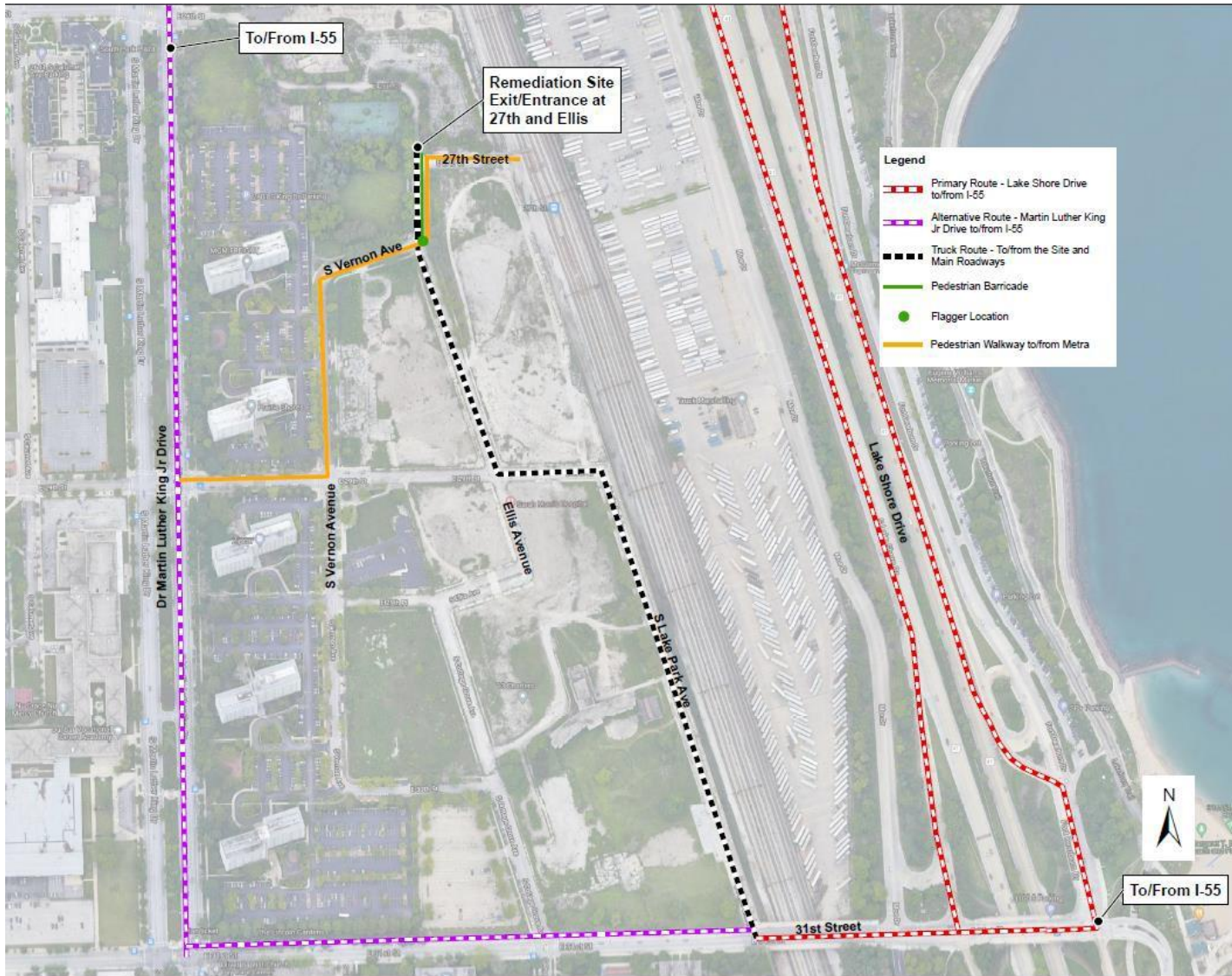
Proposed Remediation Plan

- Prioritize work at north end of site
- Leave pavement in place as feasible for staging and hauling
- Excavate North to South
- Backfill North to South behind excavation, following testing and confirmation of contamination removal
- Majority of material loaded into sealed bags and then transported via truck and railcar located at an off-site intermodal yard to Waste Control Specialists (WCS) in Texas
- Minimal blending and staging
- Dedicated excavation and backfill crews for continuity and adherence to site procedures

Site and Public Safety

- Comprehensive Health and Safety Plan and Radiation Protection Plan approved by IEMA will be followed
- Briefings
 - Daily tailgate meetings
 - Additional meetings to address safety concerns
- Security staff will be present during non-work hours
- Access to the site is controlled through the main gate on 27th Street
- Site will be locked during non-work hours
- An on-site camera will be used with a live video feed on the Carnotite website

Temporary Truck Traffic



- **Expected Primary Route:** enter/exit at 27th Street, through the former Michael Reese Hospital site to 31st Street and to I-55 via Lake Shore Drive frontage roads/ramps.
- Flaggers and safety barriers will be provided for pedestrians accessing the Metra Station from the south.
- Although not expected, if the 31st Street bridge construction is not able to accommodate trucks, an alternate route will be used.

★ Air Monitoring During Remediation

- Particulate matter (dust) monitored at the edge of the excavation and along the perimeter of the site.
- Perimeter Monitoring Action Levels are based on National Air Quality Standards.
- Air monitoring equipment alarms notify oversight staff of Action Level exceedances.
- If Action Levels are exceeded, work will stop to determine the source or cause of the exceedance and implement additional dust suppression measures accordingly.
- Air monitoring results will be posted on the City's website in an easy-to-understand format.



Air monitoring station at Carnotite

Dust Protection

- Majority of excavated material will be transported in sealed bags to Texas which requires minimal on-site blending and reduces dust generation.
- Dust control measures will be reviewed and approved by IEMA and the City prior to starting work.
- Controls can include:
 - Water misting
 - Crusting
 - Wind screen on perimeter fencing (increased to 8')
 - Tarping/covering of stockpiles and trucks
 - Reducing vehicle and truck speed
 - Wheel washer
- Dust-generating activities (concrete/asphalt removal, soil excavation, blending and loading) will cease during periods of adverse weather.

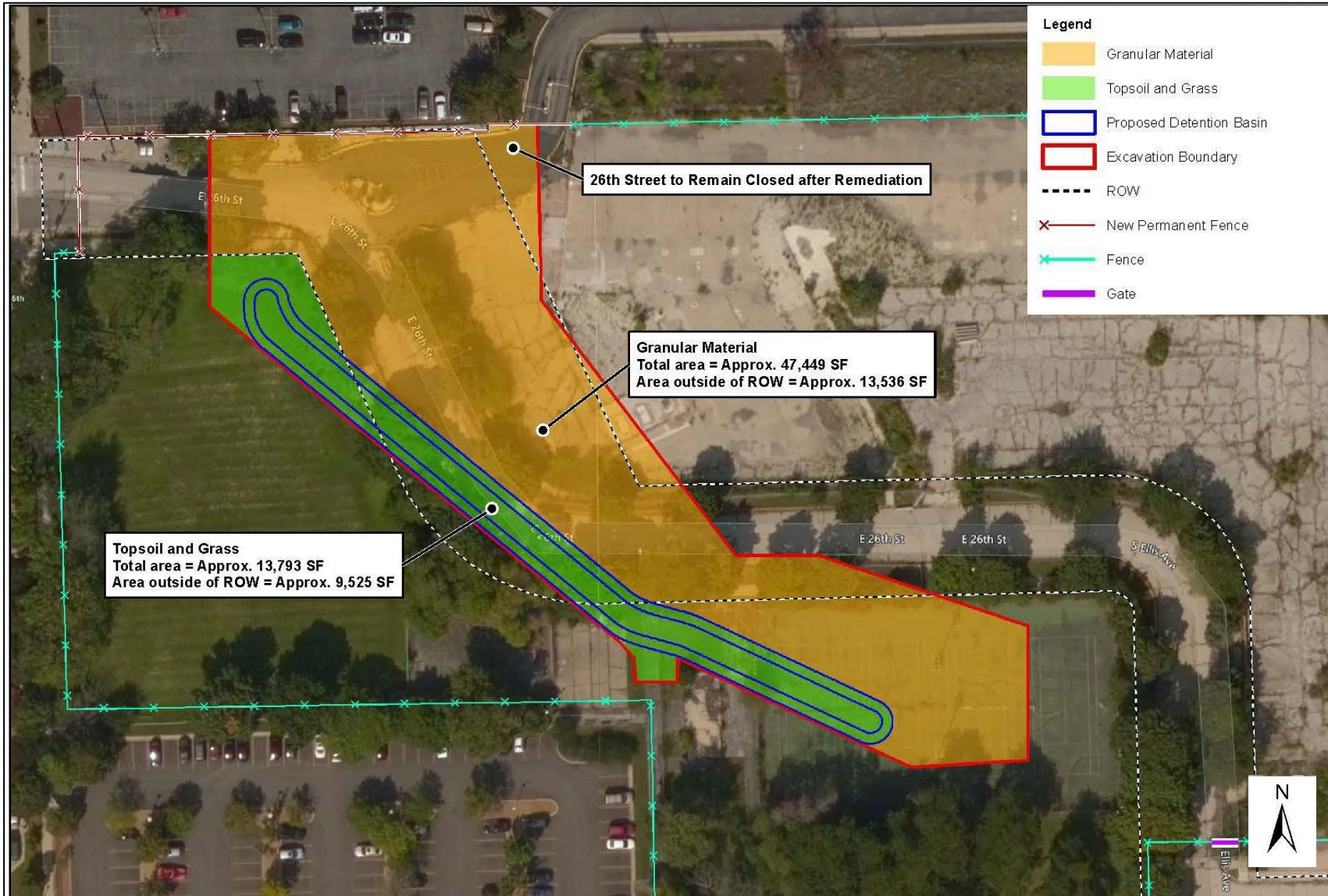


Sealed bag for transport example



Tarped truck example shown at Ottawa Radiation Site, Illinois

Site Restoration



- Majority of excavation area will be backfilled with stone to existing grade
- A stormwater detention basin will be constructed for stormwater management
- 26th Street will remain closed after remediation is complete until redevelopment

Project Timeline

Fall/Winter 2020

- Issue bid
- Select remediation contractor to perform the construction work



Spring 2021

- Pre-remediation utility work
- Prepare submittals
- Request permits
- Virtual public meeting



Summer 2021- Summer 2022

- Site activities projected to start July 2021.
- Earthwork projected to start August 2021.



Fall 2022

- Complete surveys
- Submit reports and receive site closure from IEMA

Status: Completed

Status: In Progress

Status: Scheduled

Status: Scheduled



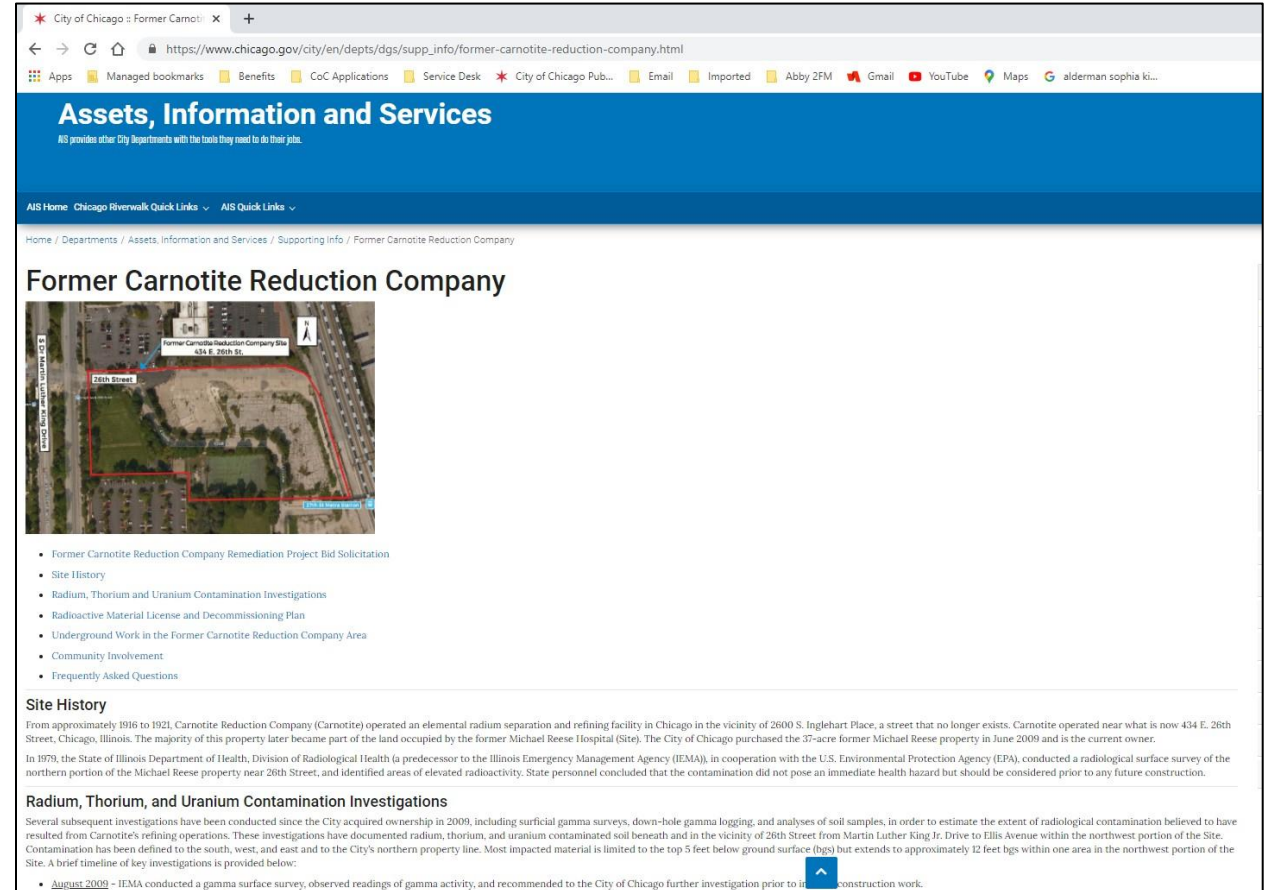
Community Concerns and Responses – Update from February Public Meeting

Drinking water safety	Water lines are under pressure and not located in the contamination area.
Safety of transporting radioactive soil	Will carefully evaluate contractor transportation plans when submitted to AIS
Circus tent (sprung structure) for dust control	Not planned
Live video feed of site activities	One camera planned for excavation area. The request for additional locations is being evaluated.
Local hiring plans	In progress. Job Fair planned for July 28.

For additional information from the February Meeting, please see the Carnotite Remediation FAQs on the project website

Community Outreach – Ongoing Activities

- City's website: www.chicago.gov/carnotite
- During remediation, the website will include:
 - Live video feed from the site
 - Weekly remediation progress map
 - Daily dust monitoring data
 - Quarterly radon and gamma sampling analysis data
- Air Monitoring Fact Sheet being developed.
- Additional community meeting planned.
- FAQs will continue to be updated to address community concerns and questions.



City of Chicago : Former Carnotite


Assets, Information and Services

AIS provides other City Departments with the tools they need to do their jobs.

AIS Home Chicago Riverwalk Quick Links AIS Quick Links

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Former Carnotite Reduction Company



- Former Carnotite Reduction Company Remediation Project Bid Solicitation
- Site History
- Radium, Thorium and Uranium Contamination Investigations
- Radioactive Material License and Decommissioning Plan
- Underground Work in the Former Carnotite Reduction Company Area
- Community Involvement
- Frequently Asked Questions

Site History

From approximately 1916 to 1921, Carnotite Reduction Company (Carnotite) operated an elemental radium separation and refining facility in Chicago in the vicinity of 2600 S. Inglehart Place, a street that no longer exists. Carnotite operated near what is now 434 E. 26th Street, Chicago, Illinois. The majority of this property later became part of the land occupied by the former Michael Reese Hospital (Site). The City of Chicago purchased the 37-acre former Michael Reese property in June 2009 and is the current owner.

In 1979, the State of Illinois Department of Health, Division of Radiological Health (a predecessor to the Illinois Emergency Management Agency (IEMA)), in cooperation with the U.S. Environmental Protection Agency (EPA), conducted a radiological surface survey of the northern portion of the Michael Reese property near 26th Street, and identified areas of elevated radioactivity. State personnel concluded that the contamination did not pose an immediate health hazard but should be considered prior to any future construction.

Radium, Thorium, and Uranium Contamination Investigations

Several subsequent investigations have been conducted since the City acquired ownership in 2009, including surficial gamma surveys, down-hole gamma logging, and analyses of soil samples, in order to estimate the extent of radiological contamination believed to have resulted from Carnotite's refining operations. These investigations have documented radium, thorium, and uranium contaminated soil beneath and in the vicinity of 26th Street from Martin Luther King Jr. Drive to Ellis Avenue within the northwest portion of the Site. Contamination has been defined to the south, west, and east and to the City's northern property line. Most impacted material is limited to the top 5 feet below ground surface (bgs) but extends to approximately 12 feet bgs within one area in the northwest portion of the Site. A brief timeline of key investigations is provided below:

- August 2009 – IEMA conducted a gamma surface survey, observed readings of gamma activity, and recommended to the City of Chicago further investigation prior to construction work.

THANK YOU FOR ATTENDING

Please check our website for continued updates on the project.

www.chicago.gov/carnotite

Please email any comments to

Department of Assets, Information and Services: AIS_EHS_Notifications@cityofchicago.org
and Alderman King's Office: ward04@cityofchicago.org

