May 29, 2025
Analysis of Brownfield Cleanup Alternatives for
Bronzeville Arts and Tech Hub

Introduction and Background

The Redevelopment Authority of the City of Milwaukee (RACM) was selected to administer a United States Environmental Protection Agency (USEPA) Brownfields Cleanup Revolving Loan Fund (BCRLF). The first Cooperative Agreement was received in 2002, which provided $1,000,000 in federal assistance over a five-year period. Additional Cooperative Agreements were received in 2003, 2004 (amended the 2003 agreement), 2005, 2006, 2007, 2008 (amended the 2007 agreement), 2009, 2011 (amended the 2009 agreement), 2012 (amended the 2009 agreement), 2013 (amended the 2009 agreement), 2014, 2023, and 2024 respectively for a total of $16,700,000.

On June 12, 2025, a resolution will be introduced that will allow for RACM to provide up to a $500,000 loan to Bronzeville Arts and Tech Hub, LLC, or an agreed-upon affiliated entity, for a mixed-income, mixed-use development project from the RACM BCRLF Program to support environmental remediation at the property located at 606 and 616 West North Avenue, Milwaukee, Wisconsin.

The property is a condominium ownership structure (Bronzeville Arts and Tech Condominium) with 616 West North Avenue as Unit 1 owned by Bronzeville Apartments, LLC and 606 West North Avenue as Unit 2 owned by Bronzeville Arts and Tech Hub, LLC. The project is currently under construction and will include a 60-unit mixed use residential/commercial development including 48 affordable units, 12 market-rate units, an arts/tech incubator space, and a community service facility, once completed.

The site was historically occupied with various uses including a refrigerator repair shop, a car wash, a gasoline filling station, a service station, a printing shop, a furniture repair site, a locksmith shop, a laundry facility, general manufacturing, a grocery store, and residential. The site was most recently a vacant grassy lot with one remaining vacant building, until construction began in 2024.

The subject sites became contaminated as a result of their past industrial and commercial uses. Phase II environmental site investigation to date has identified the presence of volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and lead in both soil and groundwater.

An AAI Phase I Environmental Site Assessment was completed in May 2023 for FIT Investment Group, LLC, to ensure the future owner is considered a bona fide prospective purchaser.

Phase II site investigations were conducted on a portion of the development site (2307 North 6th Street) by Giles Engineering in 2007 – 2010 on behalf of the City of Milwaukee. As part of this work, two 2,000-gallon gasoline underground storage tanks (USTs), four 1,000-gallon waste oil USTs, and a hydraulic lift were removed from the site. The Phase II activities identified the presence of VOC, PAH, and lead impacts to soil and groundwater, and the potential for soil vapor concerns. Based on the contaminant concentrations identified, the Wisconsin Department of Natural Resources (WDNR) was notified and a Leaking Underground Storage Tank (LUST) Site (BRRTS #03-41-551687) activity was

opened. Sigma Environmental is currently conducting additional site investigation work at the larger development site on behalf of Fit Investment Group.

Applicable Regulations and Cleanup Standards

Notification of a release and assignment of BRRTS numbers by the Southeast Region of the Wisconsin Department of Natural Resources (WDNR) is complete, and therefore the site is subject to the requirements of Section 292.11 (3) Wisconsin Statutes (hazardous substances spill law) and Wisconsin Administrative Code chapters NR 700 through NR 749 (which establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure). The borrowers, in coordination with qualified consultants, will complete a Site Investigation and Remedial Action Plan for the site in accordance with all applicable state statutes and WAC chapters. The Remedial Action Plan will be submitted to WDNR for comment and approval prior to cleanup and will form the basis for the cleanup activities.

Cleanup at the site will continue to be monitored by staff at the WDNR. Cleanup will be targeted to meet relevant industrial standards set forth in Wisconsin Administrative Code (WAC) chapter NR 720 (Soil Cleanup Standards) and WAC chapter NR 746 (Risk screening and closure criteria for petroleum product contaminated sites, and agency roles and responsibilities).

Evaluation of Cleanup Alternatives

This section identifies various remediation alternatives that could be used to address the environmental contamination issues at the Bronzeville Apartments site. The "No Action Alternative" is used as the baseline against which the other alternatives are analyzed. It should be noted that environmental assessment work is still underway and remediation alternatives are discussed below in general terms.

The following broad categories of evaluation criteria were considered in assembling remediation alternatives at the site: effectiveness, implementability, cost, and sustainability (climate change impacts and greener cleanups).

Alternative One – No Action / Monitored Natural Attenuation

The no-action response involves no remediation of residual impacted soil at the site. This response typically serves as a baseline against which the other remedial options and technologies can be compared. The no-action response may be used as the sole remedial action only in the event the prevailing site conditions lead to the determination that the site poses no significant risk to human health or the environment with no controls in place. In that event, implementation of other types of action becomes unnecessary.

1. Effectiveness – The no-action alternative would eventually reduce the magnitude of the existing risk for soil with residual VOC concentrations by natural attenuation processes but does not address the PAH or metals impacted soil. This alternative would not take action to protect public health, safety, and welfare and the environment.
2. Implementability – This alternative is implementable.

3. Cost – This alternative was considered the lowest in terms of present worth cost and disruption to the site. It has no associated capital costs or operation and maintenance costs, although indirect costs of the no action alternative will include a continued blighting influence on surrounding properties which would be manifested in lower property values and a decreased tax base.
4. Sustainability – The United States Global Change Research Program finds that the Midwest region will likely see future climate changes that include an overall increase in winter and summer temperatures, increasing numbers of hot days, and an increasing numbers of wet days. Climate change impacts to the No Action Alternative are expected to be minimal as the site is not near a coastline or in a floodplain. This alternative would not be expected to directly impact climate change. While this alternative leaves soil in place and does not lead to trucking emissions or an increase in area landfill volume, the site remains a brownfield with limited redevelopment opportunity, and so would not be considered a "greener cleanup".

Alternative Two – Excavation and Off-Site Landfill Disposal

Additional excavation and off-site disposal of soil in the areas with residual impacts was evaluated as a possible remedial alternative. Under this alternative, all impacted soils would be excavated and disposed of at an area licensed landfill, followed by backfilling of the excavation to the planned grade with unimpacted soil or subbase aggregate. Under this alternative, neither capping nor registration on the WDNR's GIS database would be required.

1. Effectiveness – This alternative would be effective. However, the site contaminants would be simply moved to an off-site landfill, and the excavation and transportation of the impacted soil may present health and risks that may be greater than the risks posed by leaving the soil in place. In the short term, excavation and off-site transport of impacted soil would temporarily increase hazards to site workers and the public due to the necessary handling and transportation of these soils. In the long term, excavation and off-site disposal may somewhat reduce the magnitude of existing risk at the site by contaminant mass removal compared to no action.
2. Implementability – The implementability of this remedial alternative is low given the cost it would take to excavate, and then backfill, all impacted soils. The site also would experience extreme disruption.
3. Cost – The estimated capital costs are anticipated to be very high.
4. Sustainability – The United States Global Change Research Program finds that the Midwest region will likely see future climate changes that include an overall increase in winter and summer temperatures, increasing numbers of hot days, and an increasing numbers of wet days. Climate change impacts to the Excavation and Off-Site Landfill Disposal Alternative are expected to be minimal as the site is not near a coastline or in a floodplain. This alternative would generate excessive greenhouse gases due to the large number of truck trips it would take to transport all impacted soils to an area landfill. These soils would also use an excessive amount of volume in the landfill, and therefore would not be considered a "greener cleanup".

Alternative Three – Limited Soil Excavation and Off-Site Disposal with Engineering and Institutional Controls

This alternative best fits the planned redevelopment of the site, which does require some soil excavation, but also includes site infrastructure that could be used as an environmental cap. Hot spot areas and areas

where foundations would be installed would be excavated and disposed of in a licensed landfill, and backfilled to accommodate the new development footprint. Parking areas, building floorslabs, and sidewalks would all function as site caps, while landscaped areas would serve as barriers to any residual contamination below. The site would be listed on the WDNR database to notify the public of residual soil and groundwater impacts.

1. Effectiveness – This alternative would be effective at reducing the magnitude of the existing risk, while maintaining protection from direct contact exposures to site workers and the public.
2. Implementability – The implementability of this alternative is high. The use of engineered barriers and institutional controls in conjunction with the WDNR database for soil contamination is an existing proven mechanism, with no fewer disruptions to the Site and less unnecessary soil handling.
3. Cost – Compared to the complete excavation and offsite landfill disposal of impacted soil remediation alternative, the associated capital costs for this option are much lower than Alternative 2.
4. Sustainability – The United States Global Change Research Program finds that the Midwest region will likely see future climate changes that include an overall increase in winter and summer temperatures, increasing numbers of hot days, and an increasing numbers of wet days. Climate change impacts to this alternative are expected to be minimal as the site is not near a coastline or in a floodplain. This alternative would generate some greenhouse gases due to the need to transport some impacted soils to an area landfill, but would be less than Alternative 2. These soils would also use some amount of volume in the landfill, however it would be less than Alternative 2 and would therefore be considered a "greener cleanup" of the various options considered.

Recommendation

The Remedial Alternatives were evaluated based on their effectiveness, their feasibility of implementation, the costs of each alternative, and their level of sustainability. Based on the above evaluation, the selected final remedy is Alternative Three which uses limited excavation and off-site landfill disposal with institutional and engineering controls to address VOC, PAHs, and metals concentrations in soil and groundwater. As a whole, this alternative provides both the most efficient cleanup strategy and the best protection for human health and the environment.