

ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES

**7132 West Bradley Road
March 3, 2006**

1.0 INTRODUCTION

The Redevelopment Authority of the City of Milwaukee (RACM) was awarded \$800,000 under Cooperative Agreement BF-96582901-0 finalized on September 29, 2005. This Cooperative Agreement provides \$200,000 of hazardous cleanup funds for 502-504 West Cherry Street, \$200,000 of hazardous cleanup funds for 7132 West Bradley Road, \$200,000 of hazardous cleanup funds for 701 East Vienna Avenue, and \$200,000 of hazardous cleanup funds for 821-833 East Locust Street. A 20% match is required for each of the grants.

This Analysis of Brownfields Cleanup Alternatives (ABCA) is intended as a screening tool to ensure and document that the appropriate type of cleanup is selected to address the environmental contamination issues at the 7132 West Bradley Road property. The preferred remedial action considers the site characteristics, surrounding environment, land-use restrictions, potential future uses, and cleanup goals.

2.0 REMEDIAL ALTERNATIVES CONSIDERED

This section identifies various remediation alternatives that may be used to address the environmental contamination issues at the 7132 West Bradley Road property. The “No Action Alternative” is used as the baseline against which all other alternatives are analyzed. All of the alternatives will be evaluated with respect to WDNR Chapter NR 720.

The following broad categories of evaluation criteria were considered in assembling remediation alternatives at the 7132 West Bradley Road property:

- Overall protectiveness to public health and welfare of the environment
- Feasibility in achieving site redevelopment
- Impacts to the proposed future use of the property
- Impacts to the surrounding environment

4.1 No Action Alternative

The “No Action Alternative” would leave contaminated soil and groundwater in-place. The impacts could potentially migrate off-site through numerous subsurface utilities and have a negative effect on adjacent properties, and possibly human health (given prolonged exposure). This property would remain an environmental hazard and a blighting influence on the neighborhood.

4.2 Soil Excavation Alternative

The “Soil Excavation Alternative” would remove identified areas of soil contamination across the site and excavate them to a depth of 4 feet below ground surface (bgs).

The “Soil Excavation Alternative” would be effective in the short-term by allowing the immediate removal of highly impacted soil. In the long-term, this option would enhance the overall remedial strategy by reducing the mass of residual soil impacts. The excavation of impacted soils would further reduce the potential for migration of contaminants from soil to groundwater, further improving the effectiveness of groundwater-focused remedial action options such as natural attenuation.

Typically, the excavation and off-site disposal remedial option may be more expensive than the capping of contaminated soil in-situ option in the short term, but it does limit long-term risks and future costs.

4.5 Engineered Barriers and Institutional Controls Alternative

The in-situ capping of contaminated soil is considered a soil performance remedy under WDNR Chapter NR 720.19. In general, a soil performance standard, i.e. capping, is considered an engineered control that is kept in-place, operated and maintained, until the lowest concentration that is practicable is achieved so that the residual contaminants left in the soil do not pose a threat to public health, safety and welfare or the environment. An engineered controls may include the following types of “caps”; soil covers, pavement covers, and building/structural covers.

The use of engineered barriers and institutional controls are common elements of many site remedies. For example, institutional controls are a critical part of State of Wisconsin Flexible Closure regulations, since they allow closure of sites with exceedances of State standards, provided groundwater use restrictions are adopted to prevent exposure. These remedial action options provide short-term control of exposure while longer-term processes such as natural attenuation reduce constituent concentrations to below the regulatory limits. Together, the long-term and short-term elements protect human health and the environment.

While the “Engineered Barriers and Institutional Controls Alternative” may be less expensive in the short term, it does not limit long-term risks and future costs.

4.4 Natural Attenuation Alternative

Natural attenuation is a viable remedial alternative recognized by the WDNR, and can be as effective as engineered remedial systems at achieving remedial goals. Based on groundwater samples collected at the site, biodegradation of impacts in the groundwater is slowly occurring at the site. This remedial technique is a long-term technique for addressing groundwater contaminants. Reductions in soil and groundwater contaminants would be minor in the short term, if this option were used alone.

5.0 PREFERRED REMEDIAL ALTERNATIVE

The Remedial Alternatives were evaluated based on effectiveness, implementability, the cost of each alternative, the potential future uses of the property and the proposed redevelopment plan.

All of the alternatives are considered technically feasible and capable of protecting human health and the environment with the exception of the “No Action Alternative”.

RACM has chosen a combination of the Soil Excavation Alternative, Engineered Barriers and Institutional Controls Alternative, and the Natural Attenuation Alternative as its remedial strategy for the 7132 West Bradley Road property. The combination of these alternatives is the most time efficient and cost efficient remedial action approach to achieve case closure and will also support the potential future use of the property.