City of Muskegon
Brownfield Redevelopment Authority

Amendment to Brownfield Plan Amendment for the Adelaide Pointe Project at 1204 West Western Avenue Muskegon, Michigan

Initial Brownfield Plan Amendment Approved by the City of Muskegon Brownfield Redevelopment Authority	**October 12, 2021**
Initial Brownfield Plan Amendment Approved by the City of Muskegon Board of Commissioners	**October 26, 2021**
Amendment to Brownfield Plan Amendment Approved by the City of Muskegon Brownfield Redevelopment Authority	
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1.0 Introduction

The City of Muskegon Brownfield Redevelopment Authority (the "Authority" or MBRA) was established by the City of Muskegon pursuant to the Brownfield Redevelopment Financing Act, Michigan Public Act 381 of 1996, as amended ("Act 381"). The primary purpose of Act 381 is to encourage the redevelopment of eligible property by providing economic development incentives through tax increment financing for certain eligible properties.

On October 26, 2021, the City of Muskegon (the "City") approved a Brownfield Plan Amendment (BPA) to incorporate 1148 and 1204 West Western Avenue ("Eligible Property", "Site", or "Property") into the City's existing Brownfield Plan. The BPA detailed redevelopment plans for a five-phase redevelopment at the Eligible Property, including eligible activity costs and related reimbursement through local-only tax increment financing.

This amendment to the BPA has been prepared to add state school tax capture for reimbursement of costs related to Michigan Strategic Fund (MSF) eligible activities during the first three immediate phases of redevelopment. Future amendments to this amended BPA may be pursued for phases four and five of the development. See Attachment A for copies of amended BPA resolutions.

1.1 Proposed Redevelopment and Future Use for the Eligible Property

The Developer, Adelaide Pointe QOZB, LLC, is proposing to redevelop a former industrial site located at 1204 West Western Avenue (1148 & 1204 West Western Avenue are now combined), Muskegon, Michigan. Figures 1 and 2 depict the Eligible Property location and layout.

Redevelopment consists of five phases that are anticipated to be completed by 2030. Phases one through three are the focus of this amended BPA. Development phasing is described below:

Development Phase	Anticipated/Actual Start Date	Desired/Actual Completion Date
Phase I – Revitalize existing buildings for boat storage	Spring/Summer 2021	Spring 2022
Phase II – Construction of marina, mixed-use building, boater services building*	Spring 2023	Fall/Winter 2024
Phase III – Construction of 55-unit residential condo building*	Spring 2023	Fall/Winter 2024
Phase IV – Construction of hotel and 50 boat storage units and warehouse	Spring 2024	Fall 2027
Phase V – Construction of residential condos	Spring 2025	Fall 2030

Phases one through three include revitalizing the existing site structures for boat storage, business offices, and lease space (approx. 218,000 sf); creation of a new 280 slip marina and construction of a new three-story, mixed-use building with ground level retail and office space (approximately 14,700 gross sf), a second-floor restaurant (approximately 3,700 sf), and third floor deck area (approx. 3,700 sf) (the "Project"). The Project will create a walkable community that incorporates public access to waterfront activities (e.g., swimming, fishing, boating), inviting greenspace areas, and transient docking. Sustainable development techniques are proposed throughout

the Project, including mass timber construction, solar boardwalks and roof systems, electric vehicle charging stations, low-impact development stormwater management, and integrated parking. Total private investment in Phases one through three, not including property acquisition, is approximately $125,000,000. The mixed-use waterfront development will create approximately 100 new jobs (retail, office, restaurant, marina) and provide contractor work for hundreds of temporary construction workers.

In addition to environmental activities, this amendment to the BPA includes non-environmental eligible activities necessary to complete the Project. Non-environmental activities will include demolition, lead/asbestos abatement, site preparation and public infrastructure improvements. Public infrastructure improvements will include upgrades to the public utilities (water main, sanitary sewer, and storm sewer), public roadways, marina and solar docks. Site preparation activities will include specialized foundations, clearing and grubbing, dredging, compaction and sub-base preparation, cut and fill, excavation for unstable material, geotechnical engineering, grading/land balancing, relocation of utilities, temporary erosion controls, temporary site control, surveying and staking, architectural and engineering costs and mass grading.

1.2 Eligible Property Information

The 35-acre Property is located at the west end of West Western Avenue on the south shore of Muskegon Lake. Since the late 1800s, the Property has been utilized for industrial purposes, primarily a lumberyard followed by foundry operations. Based on a recent Phase II Environmental Site Assessment (ESA), completed in December 2020, these past industrial uses have resulted in widespread contamination across the Property. Known contaminants in the soil with concentrations exceeding Michigan Department of Environment, Great Lakes, and Energy (EGLE) Part 201 Generic Residential Cleanup Criteria (GRCC) include tetrachloroethylene (PCE), arsenic, cadmium, chromium (total), copper, mercury, selenium, silver and zinc. Groundwater contaminants with concentrations identified above Part 201 GRCC consist of benzene, 2-methylnaphthalene, naphthalene, cadmium, chromium (total), copper, lead, mercury, and zinc.

The Developer is not a liable party and completed a Baseline Environmental Assessment (BEA) in accordance with Part 201 of the Natural Resources and Environmental Protect Act, 1995 PA 451, as amended (NREPA).

Given the known contamination, the Property is a “facility” pursuant to Part 201 of NREPA. As such, it is considered an “eligible property” as defined by the Michigan Redevelopment Financing Act, Act 381 of 1996.

The location and layout of the Property are depicted in Figures 1 and 2. Environmental data tables and an exceedance map are provided in Attachment C.

2.0 Information Required by Section 13(2) of the Statute

2.1 Description of Costs to Be Paid for With Tax Increment Revenues

Tax increment revenues will be used to reimburse the Developer and City, as applicable, for the following eligible activities.

- Pre-approved BEA, documentation of due care, asbestos/lead paint survey, and additional due care assessment
- Due care activities
- Asbestos, lead paint, and mold abatement
- Select building and site demolition
- Site preparation
- Infrastructure improvements (public)
- 15% contingency

- Brownfield Plan Amendment
- Brownfield Plan Amendment Implementation
- Interest

The table below provides an eligible activity cost summary for the Project.

EGLE Eligible Activities	**Estimated Cost**
Department Specific Activities	
Pre-Approved Sub-Total	**$350,000**
BEA activities	$52,000
Documentation of due care	$33,000
Hazardous materials survey (e.g., asbestos, lead paint, etc.)	$20,000
Due care assessment	$245,000
EGLE Eligible Activities Total Costs	**$350,000**
Interest (5%)	$15,354
EGLE Eligible Costs Sub-Total	**$365,354**

Summary of Eligible Activity Costs - Developer MSF				
MSF Eligible Activities	Total Cost	Developer Cost	Estimated Completion Schedule	Redevelopment Phase Related to Activity
Public Infrastructure Improvements Sub-Total	$8,100,000	$8,100,000		
Public Parks (Linear Park, East Peninsula Park, Commuter Bike Path)	$2,000,000	$2,000,000	2023-2024	Phase II & III
Public Shopper Dock and Public Transient Dock	$1,300,000	$1,300,000	2023-2024	Phase II
Marina Basin- (breakwater system/public access path)	$4,300,000	$4,300,000	2023-2024	Phase II
Solar Powered Docks	$500,000	$500,000	2023-2024	Phase II
Site Preparation Sub-Total	$6,750,000	$6,750,000		
Specialized Foundations	$905,000	$905,000	2023-2024	Phase II-V
Clearing and Grubbing	$300,000	$300,000	2023-2024	Phase II & III

Dredging	$800,000	$800,000	2023-2024	Phase II & III
Compaction and Sub-Base Preparation	$350,000	$350,000	2023-2024	Phase II & III
Cut and Fill	$300,000	$300,000	2023-2024	Phase II
Excavation for Unstable Material	$70,000	$70,000	2023-2024	Phase II & III
Fill	$850,000	$850,000	2023-2024	Phase II & III
Geotechnical Engineering	$180,000	$180,000	2023-2024	Phase I, II & III
Grading/Land Balancing	$1,550,000	$1,550,000	2023-2024	Phase II & III
Relocation of Active Utilities	$350,000	$350,000	2023-2024	Phase II & III
Temporary Erosion Controls	$110,000	$110,000	2023-2024	Phase II & III
Temporary Facility	$165,000	$165,000	2023-2024	Phase II & III
Temporary Site Control	$195,000	$195,000	2023-2024	Phase II & III
Surveying and Staking	$125,000	$125,000	2023-2024	Phase II & III
Architectural/Engineering Costs Related to Eligible Activities	$500,000	$500,000	2023-2024	Phase II & III
MSF Eligible Activities Sub-Total	$14,850,000	$14,850,000		
Contingency (15 %)	$2,227,500	$2,227,500		Phase II-V
Interest (5 %)*	$7,281,564	$7281,564		Phase I-V
Brownfield Plan and Work Plan Preparation	$10,000	$10,000		Phase I
Brownfield Plan and Work Plan Implementation	$10,000	$10,000		Phase I
MSF Eligible Activities Total Costs	$24,379,064	$24,379,064		

*Interest collected at a 5% rate and capped at less than $8,000,000

ELIGIBLE ACTIVITIES COST SUMMARY- City of Muskegon Activities

MSF Eligible Non-Environmental Activities	Total Cost	City of Muskegon Cost	Estimated Completion Schedule	Redevelopment Phase Related Activity
Public Infrastructure (sub-total)	**$6,743,620**	**$6,743,620**		
Public Roadways	$4,000,000	$4,000,000	2023-2024	Phase II
West Western Avenue Reconfiguration-Roadway	$1,023,620	$1,023,620	2023-2024	Phase II
Water Main	$850,000	$850,000	2023-2024	Phase II
Sanitary Sewer	$600,000	$600,000	2023-2024	Phase II
Storm Sewer	$270,000	$270,000	2023-2024	Phase II
Local Only Non-Environmental Activities Total Costs	**$6,743,620**	**$6,743,620**		
Interest (5%)	$1,357,768	$1,357,768		
Total City of Muskegon Bond Eligible Costs	**$8,101,388**	**$8,101,388**		

LOCAL ONLY ELIGIBLE ACTIVITIES COST SUMMARY (Developer)	
Local Only Eligible Activities	Estimated Cost
Department Specific Activities	
Due Care Sub-Total	$3,250,000
Vapor intrusion mitigation	$500,000
Soil capping	$1,500,000
Dewatering	$250,000
Contaminated Soil/Dredge Materials Removal and Disposal	$1,000,000
Local Only Department Specific Activities Total Costs	$3,250,000
Non-Environmental Activities	
Asbestos, Lead based Paint and Mold Abatement	$250,000

Demolition	**$500,000**
Site Preparation (Sub-total)	**$3,160,000**
Specialized Foundations	$1,250,000
Clearing and Grubbing	$150,000
Compaction and Sub-Base Preparation	$10,000
Geotechnical Engineering	$50,000
Relocation of Active Utilities	$100,000
Surveying & Staking	$100,000
Architectural/Engineering Costs Related to Eligible Activities	$1,500,000
Public Infrastructure (Sub-total)	**$1,900,000**
Solar Powered Docks (public)	$500,000
Community Building/Clubhouse and Pool (Public)	$1,400,000
Non-Environmental Local Only Eligible Costs	**$5,810,000**
Contingency (15%)	$871,500
Brownfield Plan/Act 381 Workplan Preparation	$10,000
Interest (5%)*	$2,462,900
Total EGLE and Non-Environmental Local Only Eligible Costs	**$12,404,400**

*5% Interest capture begins after MSF Non-Environmental Costs are reimbursed

2.2 Summary of Eligible Activities

Eligible activities as defined by Act 381 and included in this amended BPA consist of the following:

Pre-Approved Activities: These activities are permitted to occur prior to amended BPA approval. Preparation of a Phase I ESA, BEA and Documentation of Due Care Compliance were necessary to protect the new Property owner/Developer from liability for environmental contamination. A Hazardous Materials Investigation was conducted to evaluate potential asbestos, lead paint, and other hazardous materials, as required by regulatory agencies prior to select building demolition activities. Due care assessment will be conducted to verify compliance with applicable due care obligations. Pre-approved activities can be reimbursed from state school and local tax increment revenues.

Due Care Activities: Due care activities will include implementation of vapor intrusion mitigation systems, as applicable, to prevent unacceptable exposures to potential indoor air inhalation concerns. Soil capping will be completed to protect against direct contact concerns related to known contamination. Contaminated

soils/dredge materials which cannot be utilized on the Property will be hauled to an appropriate Type 2 landfill for disposal. During construction activities, dewatering may be necessary. Contaminated groundwater will be properly managed to comply with due care. Due care costs will include environmental oversight and management.

Asbestos, Lead Paint, and Mold Abatement: Prior to select building demolition activities, asbestos, lead paint, and mold were abated, as applicable, in accordance with applicable regulatory guidelines.

Demolition: Select building and Site demolition will be necessary to facilitate safe redevelopment and reuse of the Property.

Site Preparation: Site preparation is expected to include specialized foundations due to unsuitable urban fill material across the Site, clearing and grubbing in preparation for redevelopment, dredging, compaction and sub-base preparation, cut and fill, excavation for unstable material, fill, geotechnical engineering, grading, land balancing, relocation of active utilities, temporary erosion control, temporary facility, temporary site control, surveying, staking, and appropriate associated professional engineering/architectural fees related to the eligible activities. All the site preparation activities are necessary to support the redevelopment.

Public Infrastructure Improvements: Public Infrastructure improvements will be made by both the Developer and City of Muskegon in the public right-of-way and publicly accessible land as outlined in the signed Cooperative Use Agreement between the City of Muskegon and AP dated September 13, 2022. Public infrastructure activities, including public parks (Linear Park, East Peninsula Park and the commuter bike path), public roadways (Adelaide Avenue), West Western Avenue reconstruction, public/transient shopper and dockage and dock slips, new and upgraded water main, sanitary sewer and storm sewer utilities, solar power infrastructure for the public shopper and transient dockage and marina upgrades including the breakwater with public access path.

Amended BPA Preparation: This amended BPA was required for authorization of reimbursement to the Developer and City, as applicable, from tax increment revenues under Public Act 381 of 1996, as amended.

Amended BPA Implementation: Tracking, submittal, review of invoices for reimbursement, plan compliance, and data reporting will be conducted.

Contingency: A 15% contingency is included for those activities not already completed.

Interest: A 5% interest on unreimbursed eligible activities is included.

2.3 Estimate of Captured Taxable Value and Tax Increment Revenues

The base year of this amended BPA is 2021, as established in the approved BPA. The 2021 taxable value of the eligible property was $903,810. After completion of the development (Phases one, two and three), the taxable value is estimated at $42,875,000. This amended BPA assumes a 1.0% annual increase in the taxable value of the Eligible Property. Initial capture is anticipated to begin in 2023.

The estimated captured taxable value for the redevelopment by year and in aggregate for each taxing jurisdiction is depicted in tabular form (Table 1: Tax Increment Revenue Capture). Actual taxable values and tax increment revenues may vary year to year based on economic and market conditions, tax incentives, building additions, and property improvements, among other factors.

A summary of the estimated reimbursement schedule by year and in aggregate is presented as Table 2: Tax Increment Revenue Reimbursement Allocation.

Method of Financing and Description of Advances Made by the Municipality

The cost of the eligible activities included in this amended BPA will be paid for by the Developer and the City. The Developer and City will seek reimbursement for eligible activity costs through capture of available local and state

(as applicable) school tax increment revenues as permitted by Act 381. Additionally, as necessary personal property taxes may be utilized as well for reimbursement. Refer to Attachment D for a copy of the Reimbursement Agreement.

2.4 Maximum Amount of Note or Bonded Indebtedness

The City of Muskegon may finance eligible public infrastructure improvements and other eligible activities, as applicable, via municipal bonds with tax increment financing as the pay back mechanism subject to the terms outlined in the Reimbursement/Development Agreement (Attachment D). The estimated total bond amount will not exceed $10,500,000 with interest added at 5 %.

2.5 Duration of Brownfield Plan

Capture of tax increment revenues for the City reimbursement is anticipated to commence in 2023 and end in 2031. Developer reimbursement will follow with an estimated start date of 2023. The anticipated end date for Developer reimbursement is 2046. It is projected that the amended BPA will extend 29 years, which assumes five years of additional capture of tax increment revenues for deposit into a Local Brownfield Revolving Fund, if available.

2.6 Estimated Impact of Tax Increment Financing on Revenues of Taxing Jurisdiction

The estimated amount of tax increment revenues to be captured for this redevelopment from each taxing jurisdiction by year and in aggregate is presented in Tables 1 and 2.

2.7 Legal Description, Property Map, Statement of Qualifying Characteristics and Personal Property

- The legal description is as follows:

  <u>1204 W. Western Avenue</u>

  CITY OF MUSKEGON PART OF SECTION 25 T10N R17W PRT OF BLKS 578-580 DESC AS FOLS COM AT SE COR LOT 4 BLK 577 TH S 88D 15M W ALG SLY LN SD BLK 577 EXTND (ALSO BEING NLY LN WESTERN AVE) 847.15 FT FOR POB TH N 01D 56M 50S W 256.10 FT TH N 31D 37M 35S E 47 FT TH N 55D 15M 15S E 89.20 FT TH N 35D 54M 50S W 127.65 FT TH N 02D 52M 10S W 553 FT TH S 55D 13 M W 243 FT TH N 34D 47M W 330 FT M/L TO SHORE OF MUSKEGON LAKE REFERRED TO AS PT B TH RECOM AT POB TH S 88D 15M W ALG NLY LN WESTERN AVE 18.65 FT TH SWLY ALG SD NLY LN WESTERN AVE ALG ARC OF A 430.61 FT RAD CURVE TO LT 158.33 FT (LC SD CURVE BEARS S 77D 43M 00S W 157.44 FT & CENTRAL ANG SD CURVE IS 21D 04M 00) TO WLY LN NELY 200 FT OF SD BLK 580 TH N 35D 2M 10S W ALG SD WLY LN SD NELY 200 FT DIST 850 FT M/L TO SHORE OF MUSKEGON LAKE REFERRED TO AS PT C TH NWLY SELY & NELY ALG SHORE OF MUSKEGON LAKE 1300 FT M/L FROM SD PT C TO SD PT B EXC THAT PRT OF ABOVE DESC PARCEL THAT LIES WITHIN THE CHESAPEAKE & OHIO RR ROW EXC THAT PART TAKEN BY THE CITY OF MUSKEGON FOR THE LAKESHORE TRAIL BIKE PATH DESC AS THAT PART OF BLKS 578 & 580 DESC AS COM @ SE COR LOT 4 BLK 577 TH S 88D 40M 42S W ALG N ROW LN WESTERN AVE 847.60 FT TH N 01D 31M 57S W 256.10 FT TH N 32D 02M 28S E 47 FT TH N 55D 40M 08S E 89.20 FT TH N 35D 29M 57S W 127.65 FT TH N 02D 27M 17S W 553 FT TH S 55D 37M 53S W 243 FT TH N 34D 22M 07S W 235.92 FT TO POB TH S 50D 44M 04S W 329.75 FT TH S 20D 19M 09S W 96.30 FT TH S 23D 53M 54S E 405.55 FT TH N 34D 34M 00S W ALG NE LN LAKESHORE YACHT HARBOUR 86.43 FT TH N 23D 53M 54S W 327.11

FT TH N 20D 19M 09S E 107.14 FT TH N 50D 44M 04S E 335.70 FT TH S 33D 32M 57S E 16.08 FT TO POB TAKEN FOR LAKESHORE TRAIL BIKE PATH ACROSS SD PROPERTY AND COM AT SE COR LOT 4 BLK 577 FOR POB TH N 1 DEG 41 MIN W 158.40 FT TH N 76 DEG 43 MIN W 103.55 FT TH NWLY ON THE ARC OF A 492.47 FT RAD CURVE TO THE RT 110.31 FT (LONG CORD BEARS N 70D 18M W 110.07 FT CENTRAL ANGLE IS 12D 50M 00S) TH N 63 DEG 53 MIN W 67 FT TH N 2 DEG 4 MIN W 33.8 FT TO RR R/W TH CON'T N 2 DEG 4 MIN W 367.7 FT TH N 37 DEG W 730 FT TH N 48 DEG W 600 FT M/L TO MUSKEGON LAKE TO A PT A RECOM AT POB TH S 88 DEG 15 MIN W 847.15 FT TH N 1 DEG 56 MIN 50 SEC W 256.1 FT TH N 31 DEG 37 MIN 35 SEC E 47 FT TH N 55 DEG 15 MIN 15 SEC E 89.2 FT TH N 35 DEG 54 MIN 50 SEC W 127.65 FT TH N 2 DEG 52 MIN 10 SEC W 553 FT TH S 55 DEG 13 MIN W 243 FT TH N 34 DEG 47 MIN W 330 FT M/L TO THE SHORE OF MUSKEGON LAKE TO A PT REFERRED TO AS PT B TH WLY ALG SHORE LN 1500 FT M/L TO SD PT A EXC THAT PART LYING WITHIN C&O RR R/W RECORDED IN L 702 P 134 ALSO EXC COM AT SW COR LOT 4 BLK 574 FOR POB TH WLY ALG WESTERN AVE 20.5 FT TO SE COR LOT 5 TH NLY TO SLY LN C&O RR R/W TH SELY ALG SLY LN OF SD R/W TO NW COR LOT 3 BLK 577 TH S ALG W LN LOT 3 TO NE COR LOT 4 TH WLY ALG NLY LN LOT 4 40 FT TO NW COR SD LOT TH SLY ALG W LN TO POB EXC THAT PART OF BLK 578 DESCRIBED AS COM AT THE SE COR OF LOT 4 BLK 577 TH S 88D 40M 42S W ALG N R-O-W LINE OF WESTERN AVE 847.60 FT TH N 01D 31M 57S W 256.10 FT TH N 32 D 02M 28S E 47 FT TH N 55D 40M 08S E 89.20 FT TH N 35D 29M 57S W 127.65 FT TH N 02D 27M 17S W 553 FT TH S 55D 37M 53S W 243 FT TH N 34D 22M 07S W 235.92 FT TO POB TH N 33D 32M 57S W 16.08FT TH N 62D 10M 01S E 211.19 FT TH S 87D 42M 46S E 126.81 FT TH N 71D 39M 34S E 169.45 FT TH S 53D 57M 29S E 104.89 FT TH S 36D 27M 44S E 604.13 FT TH S 01D 31M 44S E 16 FT TH S 38D 27M 16S W 8.34 FT TH N 36D 27M 44S W 610.01FT TH N 53D 57M 29S W 94.21 FT TH S 71D 39M 34S W 164.14 FT TH N 87D 42M 46S W 125.42 FT TH S 62D 10M 01S W 205.29 FT TO POB

- The Property layout is depicted on Figure 2.
- The Property is considered an "eligible property" as defined by Act 381 because the Property is a facility pursuant to Part 201. Facility verification is included in Attachment C.
- New personal property added to the Property is included as part of the Eligible Property to the extent it is taxable.

2.8 Estimates of Residents and Displacement of Individuals/Families

No residents or families will be displaced because of the Project.

2.9 Plan for Relocation of Displaced Persons

Not applicable.

2.10 Provisions for Relocation Costs

Not applicable.

2.11 Strategy for Compliance with Michigan's Relocation Assistance Law

Not applicable.

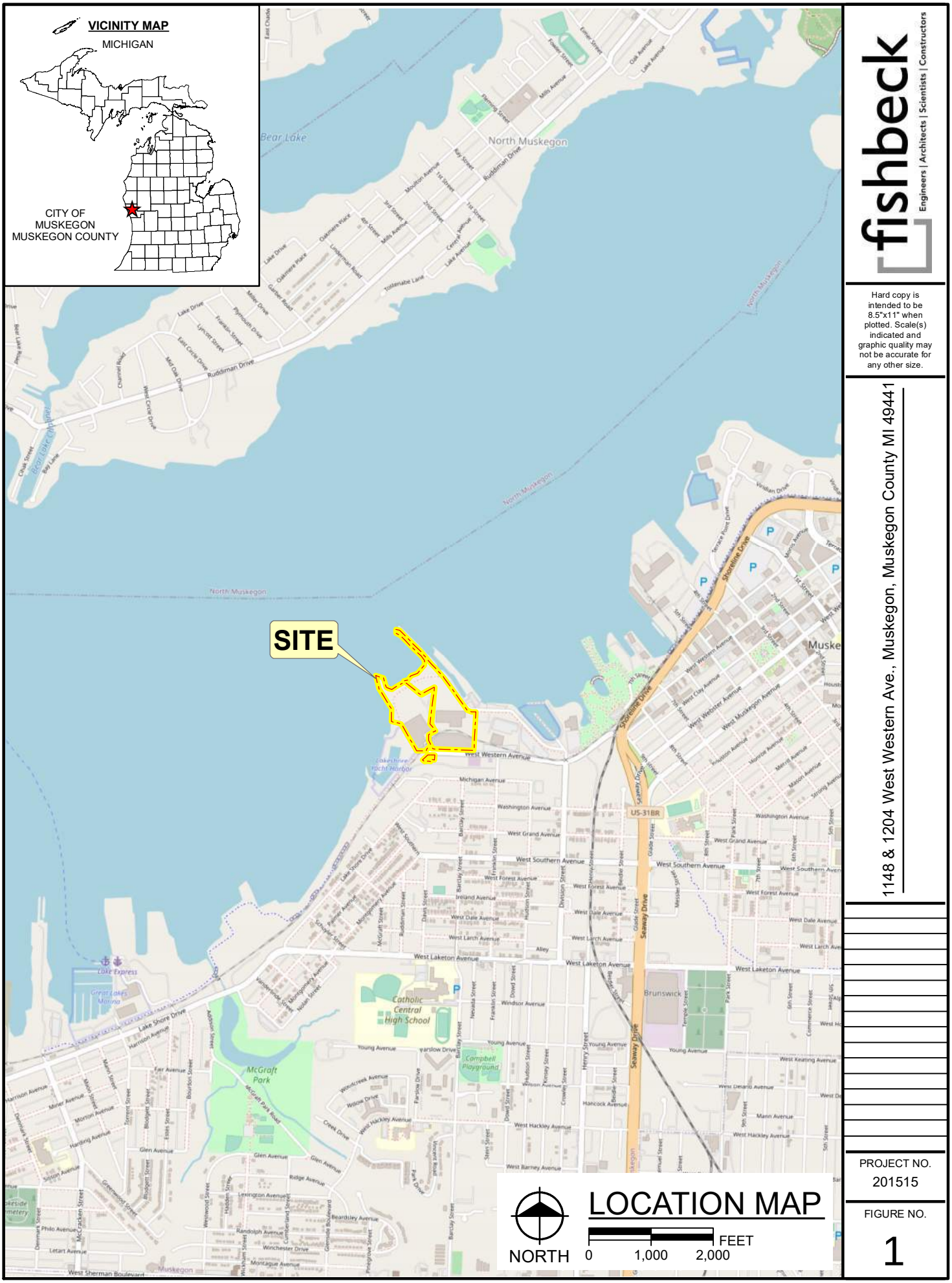
2.12 Other Material that the Authority or Governing Body Considers Pertinent

The Project will significantly improve the Muskegon Lake shoreline through revitalization of Property once used for industrial purposes. Existing structures will be revitalized, and environmental exposure risks mitigated. A new marina with transient boat slips will provide local citizens and tourists with opportunities to access the vibrant Muskegon downtown and other nearby recreational activities. Construction of new boat storage and residential

condominiums will expand Muskegon Lake access and increase long-term tax revenues for the City of Muskegon and the State of Michigan. The Development will also create numerous job opportunities for the community.

Figure 1

Location Map



LOCATION MAP

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Hard copy is intended to be 8.5"x11" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

1148 & 1204 West Western Ave., Muskegon, Muskegon County MI 49441

PROJECT NO.
201515

FIGURE NO.
1

PLOT INFO: Z:\2020\201515\CAD\GIS\mapdoc\FIG01_LocationMap.mxd Date: 5/25/2021 11:59:36 PM User: bahannah

Figure 2

Site Layout Map

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1148 & 1204 West Western Ave., Muskegon, Muskegon County MI 49441

PROJECT NO.
201515

FIGURE NO.
2

PLOT INFO: Z:\2020\201515\CAD\GIS\mapdoc\FIG03_SiteMap.mxd Date: 5/25/2021 2:03:18 PM User: bahannah

Table 1

Tax Increment Revenue Capture

Table 1 - Estimate of Total Incremental Taxes Available for Capture

1148 and 1204 West Western Avenue, Muskegon, Muskegon County, Michigan

Estimated Taxable Value (TV) Increase Rate: 1%

Plan Year	0	1	2	3	4	5	6	7	8	9	10
Calendar Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base Taxable Value	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810
Estimated New TV	$ -	$ 1,750,000	$14,875,000	$42,875,000	$43,303,750	$43,736,788	$44,174,155	$44,615,897	$ 45,062,056	$ 45,512,676	$ 45,967,803
Incremental Difference (New TV - Base TV)[1]	**$ -**	**$ 846,190**	**$ 13,971,190**	**$ 41,971,190**	**$ 42,399,940**	**$ 42,832,978**	**$ 43,270,345**	**$ 43,712,087**	**$ 44,158,246**	**$ 44,608,866**	**$ 45,063,993**
School Capture Millage Rate											
State Education Tax (SET) 6.00000	$ -	$ 5,077	$ 83,827	$ 251,827	$ 254,400	$ 256,998	$ 259,622	$ 262,273	$ 264,949	$ 267,653	$ 270,384
School Operating Tax 17.98380	$ -	$ 15,218	$ 251,255	$ 754,801	$ 762,512	$ 770,300	$ 778,165	$ 786,109	$ 794,133	$ 802,237	$ 810,422
School Total 23.9838	**$ -**	**$ 20,295**	**$ 335,082**	**$ 1,006,629**	**$ 1,016,912**	**$ 1,027,298**	**$ 1,037,787**	**$ 1,048,382**	**$ 1,059,083**	**$ 1,069,890**	**$ 1,080,806**
Local Capture Millage Rate											
County Museum 0.32200	$ -	$ 272	$ 4,499	$ 13,515	$ 13,653	$ 13,792	$ 13,933	$ 14,075	$ 14,219	$ 14,364	$ 14,511
County Veterans 0.07150	$ -	$ 61	$ 999	$ 3,001	$ 3,032	$ 3,063	$ 3,094	$ 3,125	$ 3,157	$ 3,190	$ 3,222
Senior Citzens Services 0.49990	$ -	$ 423	$ 6,984	$ 20,981	$ 21,196	$ 21,412	$ 21,631	$ 21,852	$ 22,075	$ 22,300	$ 22,527
Central Dispatch 0.29999	$ -	$ 254	$ 4,191	$ 12,591	$ 12,720	$ 12,849	$ 12,981	$ 13,113	$ 13,247	$ 13,382	$ 13,519
Community College 2.20340	$ -	$ 1,864	$ 30,784	$ 92,479	$ 93,424	$ 94,378	$ 95,342	$ 96,315	$ 97,298	$ 98,291	$ 99,294
M.A.I.S.D 4.75410	$ -	$ 4,023	$ 66,420	$ 199,535	$ 201,574	$ 203,632	$ 205,712	$ 207,812	$ 209,933	$ 212,075	$ 214,239
City Operating 10.07540	$ -	$ 8,526	$ 140,765	$ 422,877	$ 427,196	$ 431,559	$ 435,966	$ 440,417	$ 444,912	$ 449,452	$ 454,038
City Sanitation 2.99790	$ -	$ 2,537	$ 41,884	$ 125,825	$ 127,111	$ 128,409	$ 129,720	$ 131,044	$ 132,382	$ 133,733	$ 135,097
Hackley Library 2.39970	$ -	$ 2,031	$ 33,527	$ 100,718	$ 101,747	$ 102,786	$ 103,836	$ 104,896	$ 105,967	$ 107,048	$ 108,140
MPS Sinking 0.99810	$ -	$ 845	$ 13,945	$ 41,891	$ 42,319	$ 42,752	$ 43,188	$ 43,629	$ 44,074	$ 44,524	$ 44,978
County Operating 5.69780	$ -	$ 4,821	$ 79,605	$ 239,143	$ 241,586	$ 244,054	$ 246,546	$ 249,063	$ 251,605	$ 254,172	$ 256,766
Local Total 30.3198	**$ -**	**$ 25,656**	**$ 423,604**	**$ 1,272,558**	**$ 1,285,557**	**$ 1,298,687**	**$ 1,311,948**	**$ 1,325,341**	**$ 1,338,869**	**$ 1,352,531**	**$ 1,366,331**
Non-Capturable Millages Millage Rate											
Community College Debt 0.34000	$ -	$ 288	$ 4,750	$ 14,270	$ 14,416	$ 14,563	$ 14,712	$ 14,862	$ 15,014	$ 15,167	$ 15,322
Hackley Debt 0.45320	$ -	$ 383	$ 6,332	$ 19,021	$ 19,216	$ 19,412	$ 19,610	$ 19,810	$ 20,013	$ 20,217	$ 20,423
MPS Debt - 1995 3.86000	$ -	$ 3,266	$ 53,929	$ 162,009	$ 163,664	$ 165,335	$ 167,024	$ 168,729	$ 170,451	$ 172,190	$ 173,947
MPS Debt - 2009 3.50000	$ -	$ 2,962	$ 48,899	$ 146,899	$ 148,400	$ 149,915	$ 151,446	$ 152,992	$ 154,554	$ 156,131	$ 157,724
Total Non-Capturable Taxes 8.1532	**$ -**	**$ 6,899**	**$ 113,910**	**$ 342,200**	**$ 345,695**	**$ 349,226**	**$ 352,792**	**$ 356,393**	**$ 360,031**	**$ 363,705**	**$ 367,416**
Total Tax Increment Revenue (TIR) Available for Capture	$ -	$ 45,951	$ 758,686	$ 2,279,186	$ 2,302,469	$ 2,325,984	$ 2,349,735	$ 2,373,723	$ 2,397,951	$ 2,422,422	$ 2,447,137

[1]Assumes 1% annual increase for inflation

Notes-

Table 2 assumes incremental annual investment with project completion in 2025.

For the purpose of Table 2 the new taxable value is estimated based on 35% of a total overall investment of $125,000,000

Table 1 - Estimate of Total Incremental Taxes Available for Capture

1148 and 1204 West Western Avenue, Muskegon, Muskegon County, Michigan

Estimated Taxable Value (TV) Increase Rate:

Plan Year	11	12	13	14	15	16	17	18	19	20	21	22
Calendar Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Base Taxable Value	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810
Estimated New TV	$ 46,427,481	$ 46,891,756	$ 47,360,674	$ 47,834,280	$ 48,312,623	$ 48,795,749	$ 49,283,707	$ 49,776,544	$ 50,274,309	$ 50,777,052	$ 51,284,823	$ 51,797,671
Incremental Difference (New TV - Base TV)[1]	**$ 45,523,671**	**$ 45,987,946**	**$ 46,456,864**	**$ 46,930,470**	**$ 47,408,813**	**$ 47,891,939**	**$ 48,379,897**	**$ 48,872,734**	**$ 49,370,499**	**$ 49,873,242**	**$ 50,381,013**	**$ 50,893,861**
School Capture	Millage Rate											
State Education Tax (SET)	6.00000	$ 273,142	$ 275,928	$ 278,741	$ 281,583	$ 284,453	$ 287,352	$ 290,279	$ 293,236	$ 296,223	$ 299,239	$ 302,286	$ 305,363
School Operating Tax	17.98380	$ 818,689	$ 827,038	$ 835,471	$ 843,988	$ 852,591	$ 861,279	$ 870,054	$ 878,917	$ 887,869	$ 896,910	$ 906,042	$ 915,265
School Total	**23.9838**	**$ 1,091,831**	**$ 1,102,966**	**$ 1,114,212**	**$ 1,125,571**	**$ 1,137,043**	**$ 1,148,631**	**$ 1,160,334**	**$ 1,172,154**	**$ 1,184,092**	**$ 1,196,150**	**$ 1,208,328**	**$ 1,220,628**
Local Capture	Millage Rate											
County Museum	0.32200	$ 14,659	$ 14,808	$ 14,959	$ 15,112	$ 15,266	$ 15,421	$ 15,578	$ 15,737	$ 15,897	$ 16,059	$ 16,223	$ 16,388
County Veterans	0.07150	$ 3,255	$ 3,288	$ 3,322	$ 3,356	$ 3,390	$ 3,424	$ 3,459	$ 3,494	$ 3,530	$ 3,566	$ 3,602	$ 3,639
Senior Citzens Services	0.49990	$ 22,757	$ 22,989	$ 23,224	$ 23,461	$ 23,700	$ 23,941	$ 24,185	$ 24,431	$ 24,680	$ 24,932	$ 25,185	$ 25,442
Central Dispatch	0.29999	$ 13,657	$ 13,796	$ 13,937	$ 14,079	$ 14,222	$ 14,367	$ 14,513	$ 14,661	$ 14,811	$ 14,961	$ 15,114	$ 15,268
Community College	2.20340	$ 100,307	$ 101,330	$ 102,363	$ 103,407	$ 104,461	$ 105,525	$ 106,600	$ 107,686	$ 108,783	$ 109,891	$ 111,010	$ 112,140
M.A.I.S.D	4.75410	$ 216,424	$ 218,631	$ 220,861	$ 223,112	$ 225,386	$ 227,683	$ 230,003	$ 232,346	$ 234,712	$ 237,102	$ 239,516	$ 241,955
City Operating	10.07540	$ 458,669	$ 463,347	$ 468,071	$ 472,843	$ 477,663	$ 482,530	$ 487,447	$ 492,412	$ 497,428	$ 502,493	$ 507,609	$ 512,776
City Sanitation	2.99790	$ 136,475	$ 137,867	$ 139,273	$ 140,693	$ 142,127	$ 143,575	$ 145,038	$ 146,516	$ 148,008	$ 149,515	$ 151,037	$ 152,575
Hackley Library	2.39970	$ 109,243	$ 110,357	$ 111,483	$ 112,619	$ 113,767	$ 114,926	$ 116,097	$ 117,280	$ 118,474	$ 119,681	$ 120,899	$ 122,130
MPS Sinking	0.99810	$ 45,437	$ 45,901	$ 46,369	$ 46,841	$ 47,319	$ 47,801	$ 48,288	$ 48,780	$ 49,277	$ 49,778	$ 50,285	$ 50,797
County Operating	5.69780	$ 259,385	$ 262,030	$ 264,702	$ 267,400	$ 270,126	$ 272,879	$ 275,659	$ 278,467	$ 281,303	$ 284,168	$ 287,061	$ 289,983
Local Total	**30.3198**	**$ 1,380,268**	**$ 1,394,345**	**$ 1,408,562**	**$ 1,422,922**	**$ 1,437,425**	**$ 1,452,074**	**$ 1,466,868**	**$ 1,481,811**	**$ 1,496,903**	**$ 1,512,146**	**$ 1,527,542**	**$ 1,543,091**
Non-Capturable Millages	Millage Rate											
Community College Debt	0.34000	$ 15,478	$ 15,636	$ 15,795	$ 15,956	$ 16,119	$ 16,283	$ 16,449	$ 16,617	$ 16,786	$ 16,957	$ 17,130	$ 17,304
Hackley Debt	0.45320	$ 20,631	$ 20,842	$ 21,054	$ 21,269	$ 21,486	$ 21,705	$ 21,926	$ 22,149	$ 22,375	$ 22,603	$ 22,833	$ 23,065
MPS Debt - 1995	3.86000	$ 175,721	$ 177,513	$ 179,323	$ 181,152	$ 182,998	$ 184,863	$ 186,746	$ 188,649	$ 190,570	$ 192,511	$ 194,471	$ 196,450
MPS Debt - 2009	3.50000	$ 159,333	$ 160,958	$ 162,599	$ 164,257	$ 165,931	$ 167,622	$ 169,330	$ 171,055	$ 172,797	$ 174,556	$ 176,334	$ 178,129
Total Non-Capturable Taxes	**8.1532**	**$ 371,164**	**$ 374,949**	**$ 378,772**	**$ 382,634**	**$ 386,534**	**$ 390,473**	**$ 394,451**	**$ 398,469**	**$ 402,528**	**$ 406,627**	**$ 410,766**	**$ 414,948**

[1]Assumes 1% annual increase for inflation

Total Tax Increment Revenue (TIR) Available for Capture	$ 2,472,099	$ 2,497,311	$ 2,522,774	$ 2,548,493	$ 2,574,469	$ 2,600,704	$ 2,627,202	$ 2,653,965	$ 2,680,995	$ 2,708,296	$ 2,735,870	$ 2,763,719

Notes-

Table 2 assumes incremental annual investment with project completion in 2025.

For the purpose of Table 2 the new taxable value is estimated based on 35% of a total overall investment of $125,000,000

Table 1 - Estimate of Total Incremental Taxes Available for Capture

1148 and 1204 West Western Avenue, Muskegon, Muskegon County, Michigan

Estimated Taxable Value (TV) Increase Rate:

Plan Year	23	24	25	26	27	28	29	30	TOTAL
Calendar Year	2044	2045	2046	2047	2048	2049	2050	2051	
Base Taxable Value	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ -
Estimated New TV	$ 52,315,648	$ 52,838,804	$ 53,367,192	$ 53,900,864	$ 54,439,873	$ 54,984,272	$ 55,534,115	$ 56,089,456	$ -
Incremental Difference (New TV - Base TV)[1]	**$ 51,411,838**	**$ 51,934,994**	**$ 52,463,382**	**$ 52,997,054**	**$ 53,536,063**	**$ 54,080,462**	**$ 54,630,305**	**$ 55,185,646**	**$ -**
School Capture Millage Rate									
State Education Tax (SET) 6.00000	$ 308,471	$ 311,610	$ 314,780	$ 317,982	$ 321,216	$ 324,483	$ 327,782	$ 331,114	$ 4,441,724
School Operating Tax 17.98380	$ 924,580	$ 933,989	$ 943,491	$ 953,088	$ 962,782	$ 972,572	$ 982,460	$ 992,448	$ 13,313,180
School Total 23.9838	**$ 1,233,051**	**$ 1,245,599**	**$ 1,258,271**	**$ 1,271,071**	**$ 1,283,998**	**$ 1,297,055**	**$ 1,310,242**	**$ 1,323,561**	**$ 17,754,904**
Local Capture Millage Rate									
County Museum 0.32200	$ 16,555	$ 16,723	$ 16,893	$ 17,065	$ 17,239	$ 17,414	$ 17,591	$ 17,770	$ 238,373
County Veterans 0.07150	$ 3,676	$ 3,713	$ 3,751	$ 3,789	$ 3,828	$ 3,867	$ 3,906	$ 3,946	$ 52,931
Senior Citzens Services 0.49990	$ 25,701	$ 25,962	$ 26,226	$ 26,493	$ 26,763	$ 27,035	$ 27,310	$ 27,587	$ 370,070
Central Dispatch 0.29999	$ 15,423	$ 15,580	$ 15,738	$ 15,899	$ 16,060	$ 16,224	$ 16,389	$ 16,555	$ 222,079
Community College 2.20340	$ 113,281	$ 114,434	$ 115,598	$ 116,774	$ 117,961	$ 119,161	$ 120,372	$ 121,596	$ 1,631,149
M.A.I.S.D 4.75410	$ 244,417	$ 246,904	$ 249,416	$ 251,953	$ 254,516	$ 257,104	$ 259,718	$ 262,358	$ 3,519,400
City Operating 10.07540	$ 517,995	$ 523,266	$ 528,590	$ 533,967	$ 539,397	$ 544,882	$ 550,422	$ 556,017	$ 7,458,691
City Sanitation 2.99790	$ 154,128	$ 155,696	$ 157,280	$ 158,880	$ 160,496	$ 162,128	$ 163,776	$ 165,441	$ 2,219,307
Hackley Library 2.39970	$ 123,373	$ 124,628	$ 125,896	$ 127,177	$ 128,470	$ 129,777	$ 131,096	$ 132,429	$ 1,776,468
MPS Sinking 0.99810	$ 51,314	$ 51,836	$ 52,364	$ 52,896	$ 53,434	$ 53,978	$ 54,527	$ 55,081	$ 738,881
County Operating 5.69780	$ 292,934	$ 295,915	$ 298,926	$ 301,967	$ 305,038	$ 308,140	$ 311,273	$ 314,437	$ 4,218,009
Local Total 30.3198	**$ 1,558,796**	**$ 1,574,658**	**$ 1,590,679**	**$ 1,606,860**	**$ 1,623,202**	**$ 1,639,708**	**$ 1,656,379**	**$ 1,673,217**	**$ 22,445,357**
Non-Capturable Millages Millage Rate									
Community College Debt 0.34000	$ 17,480	$ 17,658	$ 17,838	$ 18,019	$ 18,202	$ 18,387	$ 18,574	$ 18,763	$ 251,698
Hackley Debt 0.45320	$ 23,300	$ 23,537	$ 23,776	$ 24,018	$ 24,263	$ 24,509	$ 24,758	$ 25,010	$ 335,498
MPS Debt - 1995 3.86000	$ 198,450	$ 200,469	$ 202,509	$ 204,569	$ 206,649	$ 208,751	$ 210,873	$ 213,017	$ 2,857,509
MPS Debt - 2009 3.50000	$ 179,941	$ 181,772	$ 183,622	$ 185,490	$ 187,376	$ 189,282	$ 191,206	$ 193,150	$ 2,591,006
Total Non-Capturable Taxes 8.1532	**$ 419,171**	**$ 423,436**	**$ 427,744**	**$ 432,096**	**$ 436,490**	**$ 440,929**	**$ 445,412**	**$ 449,940**	**$ 6,035,711**
[1]Assumes 1% annual increase for inflation									
Total Tax Increment Revenue (TIR) Available for Capture	$ 2,791,847	$ 2,820,257	$ 2,848,950	$ 2,877,930	$ 2,907,200	$ 2,936,763	$ 2,966,622	$ 2,996,779	**$ 40,200,261**

Notes-

Table 2 assumes incremental annual investment with project completion in 2025.

For the purpose of Table 2 the new taxable value is estimated based on 35% of a total overall investment of $125,000,000

Table 2

Tax Increment Revenue Reimbursement Allocation

Table 2 - Estimate of Total Incremental Taxes Available for Reimbursement
1148 1204 West Western Avenue, Muskegon, Muskegon County, Michigan

Proportionality	Developer Maximum Reimbursement	School & Local Taxes
44.1%	State	$13,499,629
55.9%	Local	$1,750,577
	TOTAL	$45,250,206
	EGLE	$ 365,354
	MSF	$32,480,452
	Local Only	$12,404,400

Estimated Years of Capture: 29 years

Estimated Developer Capture	$ 35,914,206
Estimated City of Muskegon Capture	$ 8,101,388
BRA Administrative Fee	$ 170,500
State Brownfield Redevelopment Fund	$ 2,220,862
Local Brownfield Revolving Fund	$ -

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	TOTAL
Total State Incremental Revenue	$ -	$ 20,295	$ 335,082	$ 1,006,629	$ 1,016,912	$ 1,027,298	$ 1,037,787	$ 1,048,382	$ 1,059,083	$ 1,069,890	$ 1,080,806	$ 1,091,831	$ 1,102,966	$ 1,114,212	$ 1,125,571	$ 1,137,043	$ 1,148,631	$ 1,160,334	$ 1,172,154	$ 1,184,092	$ 1,196,150	$ 1,208,328	$ 1,220,628	$ 1,233,051	$ 1,245,599	$ 1,258,271	$ 1,271,071	$ 1,283,998	$ 1,297,055	$ 1,310,242	$ 1,323,561	$ 17,754,904
State Brownfield Redevelopment Fund (50% of SET)	$ -	$ 2,539	$ 41,914	$ 125,914	$ 127,200	$ 128,499	$ 129,811	$ 131,136	$ 132,475	$ 133,827	$ 135,192	$ 136,571	$ 137,964	$ 139,371	$ 140,791	$ 142,226	$ 143,676	$ 145,140	$ 146,618	$ 148,111	$ 149,620	$ 151,143	$ 152,682	$ 154,236	$ 155,805	$ 157,390	$ 158,991	$ 160,608	$ 162,241	$ 163,891	$ 165,557	$ 2,220,862
State TIR Available for Reimbursement	$ -	$ 17,756	$ 293,169	$ 880,715	$ 889,712	$ 898,799	$ 907,976	$ 917,246	$ 926,608	$ 936,064	$ 945,614	$ 955,260	$ 965,002	$ 974,842	$ 984,780	$ 994,817	$ 1,004,955	$ 1,015,194	$ 1,025,536	$ 1,035,981	$ 1,046,530	$ 1,057,185	$ 1,067,947	$ 1,078,816	$ 1,089,794	$ 1,100,881	$ 1,112,080	$ 1,123,390	$ 1,134,814	$ 1,146,351	$ 1,158,005	$ 15,534,042
Total local incremental Revenue	$ -	$ 25,656	$ 423,604	$ 1,272,558	$ 1,285,557	$ 1,298,687	$ 1,311,948	$ 1,325,341	$ 1,338,869	$ 1,352,531	$ 1,366,331	$ 1,380,268	$ 1,394,345	$ 1,408,562	$ 1,422,922	$ 1,437,425	$ 1,452,074	$ 1,466,868	$ 1,481,811	$ 1,496,903	$ 1,512,146	$ 1,527,542	$ 1,543,091	$ 1,558,796	$ 1,574,658	$ 1,590,679	$ 1,606,860	$ 1,623,202	$ 1,639,708	$ 1,656,379	$ 1,673,217	$ 22,445,357
BRA Administrative Fee	$ -	$ 500	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 170,500
Local TIR Available for Reimbursement	$ -	$ 25,156	$ 413,604	$ 1,262,558	$ 1,275,557	$ 1,288,687	$ 1,301,948	$ 1,315,341	$ 1,328,869	$ 1,342,531	$ 1,356,331	$ 1,370,268	$ 1,384,345	$ 1,398,562	$ 1,412,922	$ 1,427,425	$ 1,442,074	$ 1,456,868	$ 1,471,811	$ 1,486,903	$ 1,502,146	$ 1,517,542	$ 1,533,091	$ 1,548,796	$ 1,564,658	$ 1,580,679	$ 1,596,860	$ 1,613,202	$ 1,629,708	$ 1,646,379	$ 1,663,217	$ 22,274,857
Total State & Local TIR Available	$ -	$ 42,913	$ 706,772	$ 2,143,273	$ 2,165,269	$ 2,187,486	$ 2,209,924	$ 2,232,587	$ 2,255,477	$ 2,278,595	$ 2,301,945	$ 2,325,528	$ 2,349,347	$ 2,373,404	$ 2,397,702	$ 2,422,242	$ 2,447,028	$ 2,472,062	$ 2,497,347	$ 2,522,884	$ 2,548,676	$ 2,574,727	$ 2,601,038	$ 2,627,612	$ 2,654,452	$ 2,681,560	$ 2,708,939	$ 2,736,592	$ 2,764,522	$ 2,792,731	$ 2,821,222	$ 37,808,899

DEVELOPER

	Beginning Balance																															
Developer Reimbursement Balance	$ -	$ -	$ 2,702,221	$ 14,582,773	$ 22,669,703	$ 23,615,841	$ 24,239,723	$ 26,925,997	$ 26,602,113	$ 26,252,049	$ 25,872,335	$ 24,263,067	$ 21,937,539	$ 19,586,192	$ 17,214,788	$ 14,817,087	$ 12,394,844	$ 10,446,891	$ 9,427,424	$ 8,363,894	$ 7,220,840	$ 6,004,629	$ 4,711,441	$ 3,337,268	$ 1,877,896	$ 328,900	$ -	$ -	$ -	$ -	$ -	$ -	
Pre-Approved Environmental Costs	$ 350,000	$ -	$ 350,000	$ 322,441	$ -																											$ -
State Tax Reimbursement	$ 164,341	$ -	$ 17,756	$ 146,584	$ -																											$ 164,341
Local Tax Reimbursement	$ 201,013	$ -	$ 25,156	$ 175,857	$ -																											$ 201,013
Interest (5%)	$ 15,354	$ -	$ 15,354	$ -	$ -																											$ 15,354
Total EGLE Reimbursement Balance		$ -	$ 322,441	$ -	$ -																											$ -
Non Environmental Costs	$ 17,097,500	$ -	$ 6,839,000	$ 12,310,200	$ 18,022,468	$ 17,798,374	$ 17,551,526	$ 17,280,673	$ 16,984,497	$ 16,661,613	$ 16,310,569	$ 15,929,835	$ 14,321,567	$ 11,996,039	$ 9,646,692	$ 7,273,288	$ 4,875,587	$ 2,453,344	$ 6,316														
State Tax Reimbursement	$ 9,938,447			$ -	$ 440,358	$ 444,856	$ 449,399	$ 452,988	$ 456,623	$ 463,304	$ 466,032	$ 331,927	$ 955,260	$ 965,032	$ 974,842	$ 984,780	$ 994,817	$ 1,004,955	$ 6,316															$ 9,938,447
Local Tax Reimbursement	$ 14,380,617	$ -		$ 30,585	$ 631,279	$ 637,779	$ 644,341	$ 650,974	$ 657,671	$ 664,434	$ 671,266	$ 1,356,331	$ 1,370,268	$ 1,384,345	$ 1,398,562	$ 1,412,922	$ 1,427,425	$ 1,442,074																$ 14,380,617
Interest (5%)**	$ 7,281,564	$ -	$ 341,950	$ 811,963	$ 847,542	$ 835,787	$ 822,889	$ 808,788	$ 793,410	$ 776,694	$ 758,564	$ 681,979																				$ 7,281,564
Total Non Environmental Reimbursement Balance		$ -	$ 7,180,950	$ 12,803,218	$ 17,798,374	$ 17,551,526	$ 17,280,673	$ 16,984,497	$ 16,661,613	$ 16,310,569	$ 15,929,835	$ 14,321,567	$ 11,996,039	$ 9,646,692	$ 7,273,288	$ 4,875,587	$ 2,453,344	$ 6,316	$ -														$ -
Local Only Costs	$ 9,941,500	$ -	$ 198,830	$ 1,690,055	$ 4,871,325	$ 6,064,315	$ 6,959,050	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 10,438,575	$ 9,437,424	$ 8,363,894	$ 7,220,840	$ 6,004,629	$ 4,711,441	$ 3,337,268	$ 1,877,896	$ 328,900						
Local Tax Reimbursement	$ 12,404,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,450,553	$ 1,471,811	$ 1,486,903	$ 1,502,146	$ 1,517,542	$ 1,533,091	$ 1,548,796	$ 1,564,658	$ 328,900							$ 12,404,400
Interest (5%)	$ 2,462,900	$ -																$ 497,075	$ 449,401	$ 398,281	$ 343,850	$ 285,935	$ 224,354	$ 158,918	$ 89,424	$ 15,662	$ -						$ 2,462,900
Total Non Environmental Reimbursement Balance		$ -	$ 198,830	$ 1,690,055	$ 4,871,325	$ 6,064,315	$ 6,959,050	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 9,941,500	$ 10,438,575	$ 9,437,424	$ 8,363,894	$ 7,220,840	$ 6,004,629	$ 4,711,441	$ 3,337,268	$ 1,877,896	$ 328,900	$ -						$ -
Total Annual Developer Reimbursement		$ -	$ 42,913	$ 353,386	$ 631,279	$ 637,779	$ 644,343	$ 1,104,962	$ 1,116,293	$ 1,127,738	$ 1,139,297	$ 2,290,248	$ 2,325,528	$ 2,349,347	$ 2,373,404	$ 2,397,702	$ 2,422,242	$ 2,447,028	$ 2,472,062	$ 2,497,347	$ 2,522,884	$ 2,548,676	$ 2,574,727	$ 2,601,038	$ 2,627,612	$ 2,654,452	$ 2,681,560	$ 2,708,939	$ 2,736,592	$ 2,764,522	$ 2,792,731	$ 2,821,222	$ 35,914,206

CITY OF MUSKEGON BONDED ACTIVITIES

	Beginning Balance																															
City of Muskegon Bond Reimbursement Balance	$ -	$ -	$ 6,743,620	$ 6,703,746	$ 5,920,015	$ 5,075,249	$ 4,184,782	$ 3,233,811	$ 2,223,393	$ 1,150,437	$ 11,697	$ -	$ -	$ -	$ -																		
Non Environmental Costs	$ 6,743,620	$ -	$ 6,743,620	$ 6,743,620	$ 6,709,746	$ 5,920,015	$ 5,075,249	$ 4,184,782	$ 3,233,811	$ 2,223,393	$ 1,150,437	$ 11,697																				
State Tax Reimbursement	$ 3,336,841		$ -	$ -	$ 146,584	$ 440,358	$ 444,856	$ 449,399	$ 452,988	$ 458,623	$ 463,304	$ 466,032	$ 11,697																			$ 3,336,841
Local Tax Reimbursement	$ 4,764,547	$ -	$ -	$ -	$ 356,810	$ 631,279	$ 637,779	$ 644,343	$ 650,974	$ 657,671	$ 664,434	$ 671,266	$ -																			$ 4,764,547
Interest (5%)	$ 1,357,768			$ -	$ 319,512	$ 281,905	$ 241,869	$ 199,275	$ 153,991	$ 105,876	$ 54,783	$ 557																					$ 1,357,768
Total Non-Environmental Reimbursement Balance		$ -	$ 6,743,620	$ 6,703,746	$ 5,920,015	$ 5,075,249	$ 4,184,782	$ 3,233,811	$ 2,223,393	$ 1,150,437	$ 11,697	$ -																					$ -
Total Annual City of Muskegon Reimbursement		$ -	$ -	$ 353,386	$ 1,071,636	$ 1,082,635	$ 1,091,743	$ 1,104,962	$ 1,116,293	$ 1,127,738	$ 1,139,297	$ 11,697	$ -	$ -	$ -																		$ 8,101,388

* Up to five years of capture for LBRF Deposits after eligible activities are reimbursed. May be taken from Local TIR only.

Attachment A

Brownfield Plan Resolution(s)

City of Muskegon
Brownfield Redevelopment Authority
County of Muskegon, State of Michigan

RESOLUTION APPROVING REVISED BROWNFIELD PLAN AMENDMENT

Adelaide Pointe Project - amended

Minutes of a regular meeting of the Board of the City of Muskegon Brownfield Redevelopment Authority, County of Muskegon, State of Michigan, held on the 12th day of October 2021 at 10:30 a.m., prevailing Eastern Time.

PRESENT: Members - M. Bottomley, J. Riegler, M. Johnson Sr., J. Moore, F. Peterson, F. DePung, D. Pollock.

ABSENT: Members - B. Hastings, M. Kleaveland, H. Systema, J. Wallace Jr., S. Black, D. Kalisz.

The following preamble and resolution were offered by Member J. Riegler and supported by Member F. Peterson:

WHEREAS, a Brownfield Plan has been adopted pursuant to Act 381, Public Acts of Michigan, 1996, as amended ("Act 381"), a copy of which is on file with the Secretary of the City of Muskegon Brownfield Redevelopment Authority (the "Authority"); and

WHEREAS, the Authority is authorized to approve amendments to the Brownfield Plan and recommends the Amendment to add eligible properties within the Adelaide Pointe Project for approval to the City of Muskegon, County of Muskegon, State of Michigan (the "City").

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

1. Approval of Brownfield Plan. The Board hereby adopts and approves the Brownfield Plan Amendment for the Adelaide Pointe Project and recommends the approval of the Brownfield Plan Amendments by the Muskegon City Commission.

2. Public Hearing. The Board hereby requests city personnel to provide a notice of

Public Hearing on the proposed Brownfield Plan Amendments, and further requests that such hearing notice be provided to all taxing jurisdictions. Notice of the time and place of the hearing shall be given pursuant to Act 267, Public Acts of Michigan, 1976, as amended ("Open Meetings Act").

3. Deliver Resolution and Brownfield Plan to City. The Chair of the Authority is directed to deliver a certified copy of this resolution and the Brownfield Plan Amendments to the City Clerk.

4. Disclaimer. By adoption of this resolution and approval of the Brownfield Plan Amendments, the Authority assumes no obligation or liability to the owner, developer or lessor of the Eligible Property for any loss or damage that may result to such persons from the adoption of this resolution and Brownfield Plan Amendments.

5. Work Plan Transmittal. The Chair of the Authority shall be authorized to transmit to the Michigan Strategic Fund, the Michigan Economic Development Corporation and/or the Michigan Department of Environmental Quality, on behalf of the Authority, a final Act 381 Work Plan that has been reviewed and approved by the Authority.

6. Repealer. All resolutions and parts of resolution in conflict with the provisions of this resolution are hereby repealed or amended to the extent of such conflict.

AYES: 7 (M. Bottomley, J. Riegler, M. Johnson Sr., J. Moore, F. Peterson, F. DePung, D. Pollock.

NAYS: 0

RESOLUTION DECLARED ADOPTED.

Martha Bottomley

Martha Bottomley, Chair
City of Muskegon Brownfield Redevelopment Authority

I hereby certify that the foregoing is a true and complete copy of a resolution adopted by the Board of the City of Muskegon Brownfield Redevelopment Authority, County of Muskegon, State of Michigan, at a regular meeting held on October 12, 2021, and that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.

Martha Bottomley, Chair
City of Muskegon Brownfield Redevelopment Authority

City of Muskegon
Brownfield Redevelopment Authority

Brownfield Plan Amendment for the Adelaide Pointe Project at 1148 & 1204 West Western Avenue Muskegon, Michigan

Approved by the City of Muskegon Brownfield Redevelopment Authority _____

Approved by the City of Muskegon Board of Commissioners _____

Prepared with the assistance of:
Fishbeck
1515 Arboretum Drive SE
Grand Rapids, Michigan 49546
616-464-3876

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1.0 Introduction

The City of Muskegon Brownfield Redevelopment Authority (the "Authority" or MBRA) was established by the City of Muskegon pursuant to the Brownfield Redevelopment Financing Act, Michigan Public Act 381 of 1996, as amended ("Act 381"). The primary purpose of Act 381 is to encourage the redevelopment of eligible property by providing economic development incentives through tax increment financing for certain eligible properties.

This Brownfield Plan Amendment ("Plan Amendment") serves as an amendment to the City of Muskegon's existing Brownfield Plan, allowing inclusion of the eligible property described in Sections 1.1 and 1.2 below. Incorporation of eligible property into the City's Brownfield Plan permits the use of tax increment financing to reimburse Adelaide Pointe QOZB, LLC ("Developer") for the cost of eligible activities required to redevelop the eligible property. See Attachment A for copies of Plan Amendment resolutions.

1.1 Proposed Redevelopment and Future Use for the Eligible Property

The Developer is proposing to redevelop a former industrial site located at 1148 and 1204 West Western Avenue, Muskegon, Michigan (the "Property"). Proposed redevelopment activities include: revitalizing existing site structures for boat storage, busines offices, and lease space (approx. 218,000 sf); creation of a new 280 slip marina and construction of a three-story, mixed-use building with ground level retail and office space, a second-floor restaurant, and third floor deck area (approx. 7,500 sf); 50 boat condos (totaling approx. 250,000 gross sf); and 250 - 300 residential condo units (averaging approx. 1,500 sf each) within a six building footprint (the "Project"). The Project will create a walkable community that incorporates public access to waterfront activities (e.g., swimming, fishing, boating), inviting greenspace areas, and transient docking. Sustainable development techniques are proposed throughout the Project, including solar boardwalks and roof systems, electric vehicle charging stations, low-impact development stormwater management, and integrated parking. Total private investment, not including property acquisition, is approximately $250,000,000. The mixed-use waterfront development will create approximately 100 new jobs (retail, office, restaurant, marina) and provide contractor work for hundreds of temporary construction workers. Conceptual renderings are provided in Attachment B.

The structured five-phase development is summarized in the table below.

Development Phase	Anticipated Start Date	Desired Completion Date
Phase I – Revitalize existing buildings for boat storage	Spring/Summer 2021	Summer/Fall 2021
Phase II – Creation of forklift in/out service	Spring 2022	Spring/Summer 2022
Phase III – Construction of marina, mixed-use building	Spring 2022	Fall 2022
Phase IV – Construction of 50 boat storage and warehouse	Spring 2024	Fall 2027
Phase V – Construction of residential condos	Spring 2025	Fall 2030

1.2 Eligible Property Information

The 35-acre Property is located at the west end of West Western Avenue on the south shore of Muskegon Lake. Since the late 1800s, the Property has been utilized for industrial purposes, primarily a lumberyard followed by foundry operations. Based on a recent Phase II Environmental Site Assessment (ESA) completed in December

2020, these past industrial uses have resulted in widespread contamination across the Property. Known contaminants in the soil with concentrations exceeding Michigan Department of Environment, Great Lakes, and Energy (EGLE) Part 201 Generic Residential Cleanup Criteria (GRCC) include tetrachloroethylene (PCE), arsenic, cadmium, chromium (total), copper, and selenium. Groundwater contaminants with concentrations identified above Part 201 GRCC consist of benzene, cadmium, chromium (total), copper, lead, mercury, and zinc.

The Developer is not a liable party and completed a Baseline Environmental Assessment (BEA) in accordance with Part 201 of the Natural Resources and Environmental Protect Act, 1995 PA 451, as amended (NREPA).

Given the known contamination, the Property is a "facility" pursuant to Part 201 of NREPA. As such, it is considered an "eligible property" as defined by the Michigan Redevelopment Financing Act, Act 381 of 1996.

Maps depicting the location and layout of the Property are attached as Figures 1 and 2. Environmental data tables and map are provided in Attachment C.

2.0 Information Required by Section 13(2) of the Statute

2.1 Description of Costs to Be Paid for With Tax Increment Revenues

Act 381 provides pre-approval for certain activities that have been conducted at the Property. Additional activities require BRA approval for reimbursement from local, school operating, and state education taxes. Tax increment revenues will be used to reimburse the Developer and the City of Muskegon for the following eligible activities.

- Pre-approved BEA, documentation of due care, asbestos/lead paint survey, and additional due care assessment
- Due care activities
- Asbestos, lead paint, and mold abatement
- Select building and site demolition
- Site preparation
- Infrastructure improvements (public)- Developer & City
- 15% contingency
- Brownfield Plan Amendment
- Brownfield Plan Amendment Implementation
- Interest

The table below provides an eligible activity cost summary for the Project.

ELIGIBLE ACTIVITIES COST SUMMARY	
EGLE Eligible Activities	**Estimated Cost**
Department Specific Activities	
1. Pre-Approved Sub-Total	**$350,000**
a. BEA activities	$52,000
b. Documentation of due care	$33,000
c. Hazardous materials survey (e.g., asbestos, lead paint, etc.)	$20,000
d. Due care assessment	$245,000
EGLE Eligible Activities Total Costs	**$350,000**
Interest (5%)	$15,354
EGLE Eligible Costs Sub-Total	**$365,354**
Local Only Eligible Activities	**Estimated Cost**
Department Specific Activities	
2. Due Care Sub-Total	**$3,250,000**
a. Vapor intrusion mitigation	$500,000
b. Soil capping	$1,500,000
c. Dewatering	$250,000
d. Contaminated Soil/Dredge Materials Removal and Disposal	$1,000,000
Local Only Department Specific Activities Total Costs	**$3,250,000**
Non-Environmental Activities	
3. Asbestos, lead paint, and mold abatement Sub-Total	**$1,250,000**
4. Demolition (select interior and site grounds) Sub-Total	**$1,500,000**

5. Site preparation Sub-Total	**$5,545,000**
a. Clearing and grubbing	$300,000
b. Dredging	$800,000
c. Compaction and sub-base preparation	$350,000
d. Cut and fill	$300,000
e. Excavation for unstable material	$70,000
f. Fill	$850,000
g. Geotechnical engineering	$180,000
h. Grading/land balancing	$1,250,000
i. Relocation of active utilities	$350,000
j. Temporary erosion control	$110,000
k. Temporary facility	$165,000
l. Temporary site control	$195,000
m. Surveying and staking	$125,000
n. Architectural/engineering costs related to eligible activities	$500,000
6. Infrastructure improvements (Public)	**$13,000,000**
a. Marina basin (breakwater system/gangway/dockage)	$10,000,000
b. Parks (Linear Park, East Peninsula Park, Commuter Bike Path)	$2,000,000
c. East Basin Launch Well	$1,000,000
Local Only Non-Environmental Activities Total Costs	**$21,295,000**
EGLE and Local Only Eligible Costs Sub-Total	**$24,910,354**
Contingency (15%)*	$3,681,750
Brownfield Plan Amendment Preparation	$10,000
Brownfield Plan Amendment Implementation	$10,000
Interest (5%)	$25,554,653
Total EGLE and Local Only Eligible Costs	**$54,166,757**

*Not applied to previously completed Department Specific Activities

ELIGIBLE ACTIVITIES COST SUMMARY- City of Muskegon Bond	
Local Only Activities Total Costs	
1. Public Infrastructure (sub-total)	**$10,000,000**
a. Roadways (Adelaide Point Ave, East Circle Drive, West	$6,840,000

Circle Drive, Adelaide Point Drive, South Circle Drive)	
b. West Western Reconfiguration	$1,035,000
c. East Basin Launch Well	$1,615,000
2. Site Preparation (sub-total)	
a. Mass Grade Site	$510,000
Local Only Non-Environmental Activities Total Costs	**$10,000,000**
Interest (5%)	$2,608,621
Total City of Muskegon Bond Eligible Costs	**$12,608,621**

2.2 Summary of Eligible Activities

Eligible activities as defined by Act 381 and included in this Plan Amendment consist of the following:

Pre-Approved Activities: These activities are permitted to occur prior to Plan Amendment approval. Preparation of a Phase I ESA, BEA and Documentation of Due Care Compliance are necessary to protect the new Property owner/Developer from liability for environmental contamination. A Hazardous Materials Investigation was conducted to evaluate potential asbestos, lead paint, and other materials, as required by regulatory agencies prior to select building demolition activities. Due care assessment will be conducted to verify compliance with applicable due care obligations. Pre-approved activities can be reimbursed from state school and local tax increment revenues.

Due Care Activities: Due care activities will include implementation of vapor intrusion mitigation systems, as applicable, to prevent unacceptable exposures to potential indoor air inhalation concerns. Soil capping will be completed to protect against direct contact concerns related to known contamination. Contaminated soils/dredge materials which cannot be utilized on the Site will be hauled to an appropriate Type 2 landfill for disposal. During construction activities, dewatering may be necessary. Contaminated groundwater will be properly managed to comply with due care. Due care costs will include environmental oversight and management.

Asbestos, Lead Paint, and Mold Abatement: As applicable, and prior to select building demolition activities, asbestos, lead paint, and mold must be abated in accordance with applicable regulatory guidelines.

Demolition: Select building and Site demolition will be necessary to facilitate safe redevelopment and reuse of the Property.

Site Preparation: Site preparation is expected to include clearing and grubbing, dredging, compaction and sub-base preparation, cut and fill, excavation for unstable material, fill, geotechnical engineering, grading, land balancing, relocation of active utilities, temporary erosion control, temporary facility, temporary site control, surveying, staking and associated professional fees.

Public Infrastructure Improvements: Infrastructure improvements will include marina launch and basin enhancements, sidewalks, bike paths, boardwalks, fishing docks, roadways, curb and gutter, lighting, landscaping, irrigation, low-impact design stormwater management, utilities, and other streetscape improvements. Costs will include oversight, management, and associated professional fees.

Plan Amendment Preparation: This Plan Amendment was required for authorization of reimbursement to the Developer from tax increment revenues under Public Act 381 of 1996, as amended.

Plan Amendment Implementation: Tracking, submittal, review of invoices for reimbursement, plan compliance, and data reporting will be conducted.

Contingency: A 15% contingency is included for those activities not already completed.

2.3 Estimate of Captured Taxable Value and Tax Increment Revenues

For the purposes of this Plan Amendment, the taxable value base year is 2021. The 2021 taxable value of the eligible property is $903,810. After completion of the development, the taxable value is estimated at $87,500,000. This Plan Amendment assumes a 1.0% annual increase in the taxable value of the eligible property. Initial capture is anticipated to begin in 2022.

The estimated captured taxable value for the redevelopment by year and in aggregate for each taxing jurisdiction is depicted in tabular form (Table 1: Tax Increment Revenue Capture). Actual taxable values and tax increment revenues may vary year to year based on economic and market conditions, tax incentives, building additions, and property improvements, among other factors.

A summary of the estimated reimbursement schedule by year and in aggregate is presented as Table 2: Tax Increment Revenue Reimbursement Allocation.

Method of Financing and Description of Advances Made by the Municipality

The cost of the eligible activities included in this Plan Amendment will be paid for by the Developer and the City of Muskegon. The Developer and City of Muskegon will seek reimbursement for eligible activity costs through capture of available local and state (as applicable) tax increment revenues as permitted by Act 381. Additionally, as necessary personal property taxes may be utilized as well for reimbursement. Refer to Attachment D for a copy of the Reimbursement Agreement.

2.4 Maximum Amount of Note or Bonded Indebtedness

The City of Muskegon plans to utilize bond proceeds to pay for certain eligible site preparation and public infrastructure costs incurred by the City, which will be repaid via tax increment revenues generated by redevelopment of the Site, and subject to the Reimbursement/Development Agreement. Refer to the table in Section 2.1 for additional information relative to the costs and breakdown of costs associated with the bond. Refer to Table 2 for the reimbursement schedule.

2.5 Duration of Brownfield Plan

Capture of tax increment revenues for City reimbursement is anticipated to commence in 2023 and end in 2029. Developer reimbursement will follow with an estimated start date of 2029. The anticipated end date for Developer reimbursement is 2048. It is projected that the Plan Amendment will extend 30 years, which assumes four years of additional capture of tax increment revenues for deposit into a Local Brownfield Revolving Fund, if available.

2.6 Estimated Impact of Tax Increment Financing on Revenues of Taxing Jurisdiction

The estimated amount of tax increment revenues to be captured for this redevelopment from each taxing jurisdiction by year and in aggregate is presented in Tables 1 and 2.

2.7 Legal Description, Property Map, Statement of Qualifying Characteristics and Personal Property

- The legal description is as follows:

  1148 W. Western Avenue

  COM AT SE COR LOT 4 BLK 577 FOR POB TH N 1 DEG 41 MIN W 158.40 FT TH N 76 DEG 43 MIN W 103.55 FT TH NWLY ON THE ARC OF A 492.47 FT RAD CURVE TO THE RT 110.31 FT (LONG CORD BEARS N 70D 18M W 110.07 FT CENTRAL ANGLE IS 12D 50M 00S) TH N 63 DEG 53 MIN W 67 FT TH N 2 DEG 4 MIN W 33.8 FT TO RR R/W TH CON'T N 2 DEG 4 MIN W 367.7 FT TH N 37 DEG W 730 FT

  1204 W. Western Avenue

  PART OF SECTION 25 T10N R17W PRT OF BLKS 578-580DESC AS FOLS COM AT SE COR LOT 4 BLK 577 TH S 88D 15M W ALG SLY LN SD BLK 577 EXTND (ALSO BEING NLY LN WESTERN AVE) 847.15 FT FOR POB TH N 01D 56M 50S W 256.10 FT TH N 31D 37M 35S E 47 FT TH N 55D 15M 15S E 89.20 FT TH N 35D 54M 50S W 127.65 FT TH N 02D 52M 10S W 553 FT TH S 55D 13 M W 243 FTCOM 375 FT N OF SW COR OF SW ¼ OF NW ¼, TH N TO A POINT745 FT S OF NW COR, TH E 225 FT, TH S TO A POINT DUE E OF POB; TH W 225 FT TO POB. SEC 16, T10N RSW. 1.03 AC M/L.

- The Property layout is depicted on Figure 2.
- The Property is considered an "eligible property" as defined by Act 381 because the Property is a facility pursuant to Part 201. Facility verification is included in Attachment C.
- New personal property added to the Property is included as part of the Eligible Property to the extent it is taxable.

2.8 Estimates of Residents and Displacement of Individuals/Families

No residents or families will be displaced because of the Project.

2.9 Plan for Relocation of Displaced Persons

Not applicable.

2.10 Provisions for Relocation Costs

Not applicable.

2.11 Strategy for Compliance with Michigan's Relocation Assistance Law

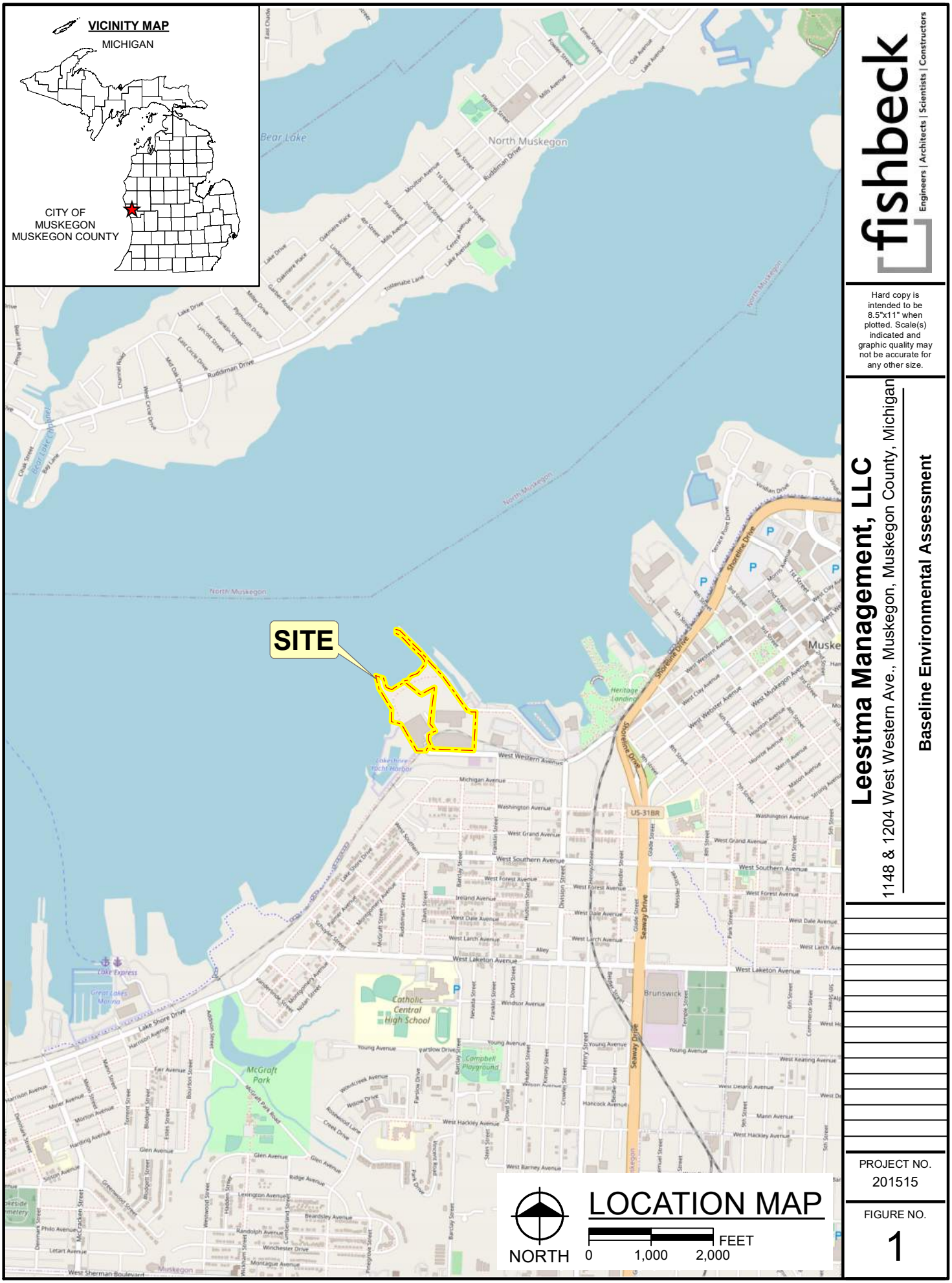
Not applicable.

2.12 Other Material that the Authority or Governing Body Considers Pertinent

The Project will significantly improve the Muskegon Lake shoreline through revitalization of Property once used for industrial purposes. Existing structures will be revitalized, and environmental exposure risks mitigated. A new marina with transient boat slips will provide boaters with opportunities to access the vibrant Muskegon downtown and other nearby recreational activities. Construction of new boat storage and residential condominiums will expand Muskegon Lake access and increase long-term tax revenues for the City of Muskegon and the State of Michigan. The Development will also create numerous job opportunities for the community.

Figure 1

Location Map



LOCATION MAP

fishbeck
Engineers | Architects | Scientists | Constructors

Hard copy is intended to be 8.5"x11" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

Leestma Management, LLC

1148 & 1204 West Western Ave., Muskegon, Muskegon County, Michigan

Baseline Environmental Assessment

PROJECT NO.
201515

FIGURE NO.
1

PLOT INFO: Z:\2020\201515\CAD\GIS\mapdoc\FIG01_LocationMap.mxd Date: 12/11/2020 4:33:47 PM User: bahannah

Figure 2

Site Layout Map

fishbeck
Engineers | Architects | Scientists | Constructors

Hard copy is intended to be 8.5"x11" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

Leesta Management, LLC

1148 & 1204 West Western Ave., Muskegon, Muskegon County, MI

Baseline Environmental Assessment

PROJECT NO.
201515

FIGURE NO.
2

PLOT INFO: Z:\2020\201515\CAD\GIS\mapdoc\FIG03_SiteMap.mxd Date: 12/11/2020 4:43:23 PM User: bahannah

Table 1

Tax Increment Revenue Capture

Table 1 - Estimate of Total Incremental Taxes Available for Capture

1148 and 1204 West Western Avenue, Muskegon, Muskegon County, Michigan

Estimated Taxable Value (TV) Increase Rate: 1%

Plan Year	0	1	2	3	4	5	6	7	8	9	10
Calendar Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base Taxable Value	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810
Estimated New TV	$ -	$ 1,750,000	$ 14,875,000	$ 42,875,000	$ 53,375,000	$ 61,250,000	$ 87,500,000	$ 88,375,000	$ 89,258,750	$ 90,151,338	$ 91,052,851
Incremental Difference (New TV - Base TV)[1]	**$ -**	**$ 846,190**	**$ 13,971,190**	**$ 41,971,190**	**$ 52,471,190**	**$ 60,346,190**	**$ 86,596,190**	**$ 87,471,190**	**$ 88,354,940**	**$ 89,247,528**	**$ 90,149,041**
School Capture Millage Rate											
State Education Tax (SET) 6.00000	$ -	$ 5,077	$ 83,827	$ 251,827	$ 314,827	$ 362,077	$ 519,577	$ 524,827	$ 530,130	$ 535,485	$ 540,894
School Operating Tax 17.98380	$ -	$ 15,218	$ 251,255	$ 754,801	$ 943,631	$ 1,085,254	$ 1,557,329	$ 1,573,064	$ 1,588,958	$ 1,605,010	$ 1,621,222
School Total 23.9838	**$ -**	**$ 20,295**	**$ 335,082**	**$ 1,006,629**	**$ 1,258,459**	**$ 1,447,331**	**$ 2,076,906**	**$ 2,097,892**	**$ 2,119,087**	**$ 2,140,495**	**$ 2,162,117**
Local Capture Millage Rate											
County Museum 0.32200	$ -	$ 272	$ 4,499	$ 13,515	$ 16,896	$ 19,431	$ 27,884	$ 28,166	$ 28,450	$ 28,738	$ 29,028
County Veterans 0.07150	$ -	$ 61	$ 999	$ 3,001	$ 3,752	$ 4,315	$ 6,192	$ 6,254	$ 6,317	$ 6,381	$ 6,446
Senior Citzens Services 0.49990	$ -	$ 423	$ 6,984	$ 20,981	$ 26,230	$ 30,167	$ 43,289	$ 43,727	$ 44,169	$ 44,615	$ 45,066
Central Dispatch 0.29999	$ -	$ 254	$ 4,191	$ 12,591	$ 15,741	$ 18,103	$ 25,978	$ 26,240	$ 26,506	$ 26,773	$ 27,044
Community College 2.20340	$ -	$ 1,864	$ 30,784	$ 92,479	$ 115,615	$ 132,967	$ 190,806	$ 192,734	$ 194,681	$ 196,648	$ 198,634
M.A.I.S.D 4.75410	$ -	$ 4,023	$ 66,420	$ 199,535	$ 249,453	$ 286,892	$ 411,687	$ 415,847	$ 420,048	$ 424,292	$ 428,578
City Operating 10.07540	$ -	$ 8,526	$ 140,765	$ 422,877	$ 528,668	$ 608,012	$ 872,491	$ 881,307	$ 890,211	$ 899,205	$ 908,288
City Sanitation 2.99790	$ -	$ 2,537	$ 41,884	$ 125,825	$ 157,303	$ 180,912	$ 259,607	$ 262,230	$ 264,879	$ 267,555	$ 270,258
Hackley Library 2.39970	$ -	$ 2,031	$ 33,527	$ 100,718	$ 125,915	$ 144,813	$ 207,805	$ 209,905	$ 212,025	$ 214,167	$ 216,331
MPS Sinking 0.99810	$ -	$ 845	$ 13,945	$ 41,891	$ 52,371	$ 60,232	$ 86,432	$ 87,305	$ 88,187	$ 89,078	$ 89,978
County Operating 5.69780	$ -	$ 4,821	$ 79,605	$ 239,143	$ 298,970	$ 343,841	$ 493,408	$ 498,393	$ 503,429	$ 508,515	$ 513,651
Local Total 30.3198	**$ -**	**$ 25,656**	**$ 423,604**	**$ 1,272,558**	**$ 1,590,915**	**$ 1,829,684**	**$ 2,625,578**	**$ 2,652,108**	**$ 2,678,903**	**$ 2,705,966**	**$ 2,733,300**
Non-Capturable Millages Millage Rate											
Community College Debt 0.34000	$ -	$ 288	$ 4,750	$ 14,270	$ 17,840	$ 20,518	$ 29,443	$ 29,740	$ 30,041	$ 30,344	$ 30,651
Hackley Debt 0.45320	$ -	$ 383	$ 6,332	$ 19,021	$ 23,780	$ 27,349	$ 39,245	$ 39,642	$ 40,042	$ 40,447	$ 40,856
MPS Debt - 1995 3.86000	$ -	$ 3,266	$ 53,929	$ 162,009	$ 202,539	$ 232,936	$ 334,261	$ 337,639	$ 341,050	$ 344,495	$ 347,975
MPS Debt - 2009 3.50000	$ -	$ 2,962	$ 48,899	$ 146,899	$ 183,649	$ 211,212	$ 303,087	$ 306,149	$ 309,242	$ 312,366	$ 315,522
Total Non-Capturable Taxes 8.1532	**$ -**	**$ 6,899**	**$ 113,910**	**$ 342,200**	**$ 427,808**	**$ 492,015**	**$ 706,036**	**$ 713,170**	**$ 720,375**	**$ 727,653**	**$ 735,003**
Total Tax Increment Revenue (TIR) Available for Capture	$ -	$ 45,951	$ 758,686	$ 2,279,186	$ 2,849,374	$ 3,277,015	$ 4,702,484	$ 4,750,000	$ 4,797,990	$ 4,846,461	$ 4,895,417

[1]Assumes 1% annual increase for inflation

Notes-

Table 2 assumes incremental annual investment with project completion in 2030.

For the purpose of Table 2 the new taxable value is estimated based on 35% of a total overal investment of $250,000,000

Table 1 - Estimate of Total Incremental Taxes Available for Capture

1148 and 1204 West Western Avenue, Muskegon, Muskegon County, Michigan

Estimated Taxable Value (TV) Increase Rate:

Plan Year	11	12	13	14	15	16	17	18	19	20	21	22
Calendar Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Base Taxable Value	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810
Estimated New TV	$ 91,963,379	$ 92,883,013	$ 93,811,843	$ 94,749,962	$ 95,697,461	$ 96,654,436	$ 97,620,980	$ 98,597,190	$ 99,583,162	$ 100,578,994	$ 101,584,784	$ 102,600,631
Incremental Difference (New TV - Base TV)[1]	**$ 91,059,569**	**$ 91,979,203**	**$ 92,908,033**	**$ 93,846,152**	**$ 94,793,651**	**$ 95,750,626**	**$ 96,717,170**	**$ 97,693,380**	**$ 98,679,352**	**$ 99,675,184**	**$ 100,680,974**	**$ 101,696,821**
School Capture	Millage Rate											
State Education Tax (SET)	6.00000	$ 546,357	$ 551,875	$ 557,448	$ 563,077	$ 568,762	$ 574,504	$ 580,303	$ 586,160	$ 592,076	$ 598,051	$ 604,086	$ 610,181
School Operating Tax	17.98380	$ 1,637,597	$ 1,654,136	$ 1,670,839	$ 1,687,710	$ 1,704,750	$ 1,721,960	$ 1,739,342	$ 1,756,898	$ 1,774,630	$ 1,792,539	$ 1,810,626	$ 1,828,895
School Total	**23.9838**	**$ 2,183,955**	**$ 2,206,011**	**$ 2,228,288**	**$ 2,250,787**	**$ 2,273,512**	**$ 2,296,464**	**$ 2,319,645**	**$ 2,343,058**	**$ 2,366,706**	**$ 2,390,590**	**$ 2,414,712**	**$ 2,439,076**
Local Capture	Millage Rate											
County Museum	0.32200	$ 29,321	$ 29,617	$ 29,916	$ 30,218	$ 30,524	$ 30,832	$ 31,143	$ 31,457	$ 31,775	$ 32,095	$ 32,419	$ 32,746
County Veterans	0.07150	$ 6,511	$ 6,577	$ 6,643	$ 6,710	$ 6,778	$ 6,846	$ 6,915	$ 6,985	$ 7,056	$ 7,127	$ 7,199	$ 7,271
Senior Citzens Services	0.49990	$ 45,521	$ 45,980	$ 46,445	$ 46,914	$ 47,387	$ 47,866	$ 48,349	$ 48,837	$ 49,330	$ 49,828	$ 50,330	$ 50,838
Central Dispatch	0.29999	$ 27,317	$ 27,593	$ 27,871	$ 28,153	$ 28,437	$ 28,724	$ 29,014	$ 29,307	$ 29,603	$ 29,902	$ 30,203	$ 30,508
Community College	2.20340	$ 200,641	$ 202,667	$ 204,714	$ 206,781	$ 208,868	$ 210,977	$ 213,107	$ 215,258	$ 217,430	$ 219,624	$ 221,840	$ 224,079
M.A.I.S.D	4.75410	$ 432,906	$ 437,278	$ 441,694	$ 446,154	$ 450,658	$ 455,208	$ 459,803	$ 464,444	$ 469,132	$ 473,866	$ 478,647	$ 483,477
City Operating	10.07540	$ 917,462	$ 926,727	$ 936,086	$ 945,538	$ 955,084	$ 964,726	$ 974,464	$ 984,300	$ 994,234	$ 1,004,267	$ 1,014,401	$ 1,024,636
City Sanitation	2.99790	$ 272,987	$ 275,744	$ 278,529	$ 281,341	$ 284,182	$ 287,051	$ 289,948	$ 292,875	$ 295,831	$ 298,816	$ 301,831	$ 304,877
Hackley Library	2.39970	$ 218,516	$ 220,722	$ 222,951	$ 225,203	$ 227,476	$ 229,773	$ 232,092	$ 234,435	$ 236,801	$ 239,191	$ 241,604	$ 244,042
MPS Sinking	0.99810	$ 90,887	$ 91,804	$ 92,732	$ 93,668	$ 94,614	$ 95,569	$ 96,533	$ 97,508	$ 98,492	$ 99,486	$ 100,490	$ 101,504
County Operating	5.69780	$ 518,839	$ 524,079	$ 529,371	$ 534,717	$ 540,115	$ 545,568	$ 551,075	$ 556,637	$ 562,255	$ 567,929	$ 573,660	$ 579,448
Local Total	**30.3198**	**$ 2,760,907**	**$ 2,788,790**	**$ 2,816,952**	**$ 2,845,396**	**$ 2,874,124**	**$ 2,903,139**	**$ 2,932,444**	**$ 2,962,043**	**$ 2,991,937**	**$ 3,022,131**	**$ 3,052,626**	**$ 3,083,426**
Non-Capturable Millages	Millage Rate											
Community College Debt	0.34000	$ 30,960	$ 31,273	$ 31,589	$ 31,908	$ 32,230	$ 32,555	$ 32,884	$ 33,216	$ 33,551	$ 33,890	$ 34,232	$ 34,577
Hackley Debt	0.45320	$ 41,268	$ 41,685	$ 42,106	$ 42,531	$ 42,960	$ 43,394	$ 43,832	$ 44,275	$ 44,721	$ 45,173	$ 45,629	$ 46,089
MPS Debt - 1995	3.86000	$ 351,490	$ 355,040	$ 358,625	$ 362,246	$ 365,903	$ 369,597	$ 373,328	$ 377,096	$ 380,902	$ 384,746	$ 388,629	$ 392,550
MPS Debt - 2009	3.50000	$ 318,708	$ 321,927	$ 325,178	$ 328,462	$ 331,778	$ 335,127	$ 338,510	$ 341,927	$ 345,378	$ 348,863	$ 352,383	$ 355,939
Total Non-Capturable Taxes	**8.1532**	**$ 742,427**	**$ 749,925**	**$ 757,498**	**$ 765,146**	**$ 772,872**	**$ 780,674**	**$ 788,554**	**$ 796,514**	**$ 804,552**	**$ 812,672**	**$ 820,872**	**$ 829,155**

[1]Assumes 1% annual increase for inflation

Total Tax Increment Revenue (TIR) Available for Capture	$ 4,944,862	$ 4,994,801	$ 5,045,240	$ 5,096,183	$ 5,147,636	$ 5,199,603	$ 5,252,090	$ 5,305,101	$ 5,358,643	$ 5,412,720	$ 5,467,338	$ 5,522,502

Notes-

Table 2 assumes incremental annual investment with project completion in 2030.

For the purpose of Table 2 the new taxable value is estimated based on 35% of a total overal investment of $250,000,000

Table 1 - Estimate of Total Incremental Taxes Available for Capture

1148 and 1204 West Western Avenue, Muskegon, Muskegon County, Michigan

Estimated Taxable Value (TV) Increase Rate:

Plan Year	23	24	25	26	27	28	29	30	TOTAL
Calendar Year	2044	2045	2046	2047	2048	2049	2050	2051	
Base Taxable Value	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ 903,810	$ -
Estimated New TV	$ 103,626,638	$ 104,662,904	$ 105,709,533	$ 106,766,628	$ 107,834,295	$ 108,912,638	$ 110,001,764	$ 111,101,782	$ -
Incremental Difference (New TV - Base TV)[1]	**$ 102,722,828**	**$ 103,759,094**	**$ 104,805,723**	**$ 105,862,818**	**$ 106,930,485**	**$ 108,008,828**	**$ 109,097,954**	**$ 110,197,972**	**$ -**
School Capture Millage Rate									
State Education Tax (SET) 6.00000	$ 616,337	$ 622,555	$ 628,834	$ 635,177	$ 641,583	$ 648,053	$ 654,588	$ 661,188	$ 15,709,744
School Operating Tax 17.98380	$ 1,847,347	$ 1,865,983	$ 1,884,805	$ 1,903,816	$ 1,923,016	$ 1,942,409	$ 1,961,996	$ 1,981,778	$ 47,086,816
School Total 23.9838	**$ 2,463,684**	**$ 2,488,537**	**$ 2,513,640**	**$ 2,538,993**	**$ 2,564,599**	**$ 2,590,462**	**$ 2,616,584**	**$ 2,642,966**	**$ 62,796,559**
Local Capture Millage Rate									
County Museum 0.32200	$ 33,077	$ 33,410	$ 33,747	$ 34,088	$ 34,432	$ 34,779	$ 35,130	$ 35,484	$ 843,090
County Veterans 0.07150	$ 7,345	$ 7,419	$ 7,494	$ 7,569	$ 7,646	$ 7,723	$ 7,801	$ 7,879	$ 187,208
Senior Citzens Services 0.49990	$ 51,351	$ 51,869	$ 52,392	$ 52,921	$ 53,455	$ 53,994	$ 54,538	$ 55,088	$ 1,308,883
Central Dispatch 0.29999	$ 30,816	$ 31,127	$ 31,441	$ 31,758	$ 32,078	$ 32,402	$ 32,728	$ 33,058	$ 785,461
Community College 2.20340	$ 226,339	$ 228,623	$ 230,929	$ 233,258	$ 235,611	$ 237,987	$ 240,386	$ 242,810	$ 5,769,142
M.A.I.S.D 4.75410	$ 488,355	$ 493,281	$ 498,257	$ 503,282	$ 508,358	$ 513,485	$ 518,663	$ 523,892	$ 12,447,616
City Operating 10.07540	$ 1,034,974	$ 1,045,414	$ 1,055,960	$ 1,066,610	$ 1,077,367	$ 1,088,232	$ 1,099,206	$ 1,110,289	$ 26,380,326
City Sanitation 2.99790	$ 307,953	$ 311,059	$ 314,197	$ 317,366	$ 320,567	$ 323,800	$ 327,065	$ 330,362	$ 7,849,374
Hackley Library 2.39970	$ 246,504	$ 248,991	$ 251,502	$ 254,039	$ 256,601	$ 259,189	$ 261,802	$ 264,442	$ 6,283,112
MPS Sinking 0.99810	$ 102,528	$ 103,562	$ 104,607	$ 105,662	$ 106,727	$ 107,804	$ 108,891	$ 109,989	$ 2,613,316
County Operating 5.69780	$ 585,294	$ 591,199	$ 597,162	$ 603,185	$ 609,269	$ 615,413	$ 621,618	$ 627,886	$ 14,918,497
Local Total 30.3198	**$ 3,114,535**	**$ 3,145,954**	**$ 3,177,688**	**$ 3,209,738**	**$ 3,242,110**	**$ 3,274,805**	**$ 3,307,827**	**$ 3,341,179**	**$ 79,386,023**
Non-Capturable Millages Millage Rate									
Community College Debt 0.34000	$ 34,926	$ 35,278	$ 35,634	$ 35,993	$ 36,356	$ 36,723	$ 37,093	$ 37,467	$ 890,219
Hackley Debt 0.45320	$ 46,554	$ 47,024	$ 47,498	$ 47,977	$ 48,461	$ 48,950	$ 49,443	$ 49,942	$ 1,186,609
MPS Debt - 1995 3.86000	$ 396,510	$ 400,510	$ 404,550	$ 408,630	$ 412,752	$ 416,914	$ 421,118	$ 425,364	$ 10,106,602
MPS Debt - 2009 3.50000	$ 359,530	$ 363,157	$ 366,820	$ 370,520	$ 374,257	$ 378,031	$ 381,843	$ 385,693	$ 9,164,017
Total Non-Capturable Taxes 8.1532	**$ 837,520**	**$ 845,969**	**$ 854,502**	**$ 863,121**	**$ 871,826**	**$ 880,618**	**$ 889,497**	**$ 898,466**	**$ 21,347,447**
Total Tax Increment Revenue (TIR) Available for Capture	$ 5,578,218	$ 5,634,491	$ 5,691,327	$ 5,748,731	$ 5,806,709	$ 5,865,267	$ 5,924,411	$ 5,984,145	##########

[1]Assumes 1% annual increase for inflation

Notes-

Table 2 assumes incremental annual investment with project completion in 2030.

For the purpose of Table 2 the new taxable value is estimated based on 35% of a total overal investment of $250,000,000

Table 2

Tax Increment Revenue Reimbursement Allocation

Table 2 - Estimate of Total Incremental Taxes Available for Reimbursement
1148 1204 West Western Avenue, Muskegon, Muskegon County, Michigan

Developer Maximum Reimbursement	School & Local Taxes
State	$ 178,977
Local	66,596,401
TOTAL	$66,775,378
EGLE	N/A
MSF	N/A

Estimated Years of Capture: 30 years (including 5 years for LBF capture)

		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Total State Incremental Revenue		$ -	$ 20,295	$ 335,082	$ 1,006,629	$ 1,258,459	$ 1,447,331	$ 2,076,906	$ 2,097,892	$ 2,119,087	$ 2,140,495	$ 2,162,117	$ 2,183,955	$ 2,206,011	$ 2,228,288	$ 2,250,787	$ 2,273,512	$ 2,296,464	$ 2,319,645	$ 2,343,058	$ 2,366,706	$ 2,390,590	$ 2,414,712
State Brownfield Redevelopment Fund (50% of SET)		$ -	$ 2,539	$ 41,914																			
State TIR Available for Reimbursement		**$ -**	**$ 17,756**	**$ 293,169**	**$ 1,006,629**	**$ 1,258,459**	**$ 1,447,331**	**$ 2,076,906**	**$ 2,097,892**	**$ 2,119,087**	**$ 2,140,495**	**$ 2,162,117**	**$ 2,183,955**	**$ 2,206,011**	**$ 2,228,288**	**$ 2,250,787**	**$ 2,273,512**	**$ 2,296,464**	**$ 2,319,645**	**$ 2,343,058**	**$ 2,366,706**	**$ 2,390,590**	**$ 2,414,712**
Total Local Incremental Revenue		$ -	$ 25,656	$ 423,604	$ 1,272,558	$ 1,590,915	$ 1,829,684	$ 2,625,578	$ 2,652,108	$ 2,678,903	$ 2,705,966	$ 2,733,300	$ 2,760,907	$ 2,788,790	$ 2,816,952	$ 2,845,396	$ 2,874,124	$ 2,903,139	$ 2,932,444	$ 2,962,043	$ 2,991,937	$ 3,022,131	$ 3,052,626
BRA Administrative Fee		$ -	$ 500	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000
Local TIR Available for Reimbursement		**$ -**	**$ 25,156**	**$ 413,604**	**$ 1,262,558**	**$ 1,580,915**	**$ 1,819,684**	**$ 2,615,578**	**$ 2,642,108**	**$ 2,668,903**	**$ 2,695,966**	**$ 2,723,300**	**$ 2,750,907**	**$ 2,778,790**	**$ 2,806,952**	**$ 2,835,396**	**$ 2,864,124**	**$ 2,893,139**	**$ 2,922,444**	**$ 2,952,043**	**$ 2,981,937**	**$ 3,012,131**	**$ 3,042,626**
Total State & Local TIR Available		**$ -**	**$ 42,913**	**$ 706,772**	**$ 2,269,186**	**$ 2,839,374**	**$ 3,267,015**	**$ 4,692,484**	**$ 4,740,000**	**$ 4,787,990**	**$ 4,836,461**	**$ 4,885,417**	**$ 4,934,862**	**$ 4,984,801**	**$ 5,035,240**	**$ 5,086,183**	**$ 5,137,636**	**$ 5,189,603**	**$ 5,242,090**	**$ 5,295,101**	**$ 5,348,643**	**$ 5,402,720**	**$ 5,457,338**
DEVELOPER	Beginning Balance																						
Developer Reimbursement Balance	*$ -*		*$ -*	*$ 915,624*	*$ 5,071,705*	*$ 14,816,198*	*$ 19,116,098*	*$ 22,741,220*	*$ 32,776,007*	*$ 34,414,807*	*$ 35,890,364*	*$ 34,854,118*	*$ 33,737,359*	*$ 32,535,775*	*$ 31,244,833*	*$ 29,859,775*	*$ 28,375,599*	*$ 26,787,049*	*$ 25,088,606*	*$ 23,274,470*	*$ 21,338,548*	*$ 19,274,442*	*$ 17,075,427*	*$ 14,734,441*
Pre-Approved Environmental Costs	*$ 350,000*		*$ -*	*$ 350,000*	*$ 322,442*	*$ -*																	
State Tax Reimbursement	$ 178,977		$ -	$ 17,756	$ 161,221	$ -																	
Local Tax Reimbursement	$ 186,377		$ -	$ 25,156	$ 161,221	$ -																	
Interest (5%)	$ 15,354		$ -	$ 15,354		$ -																	
Total EGLE Reimbursement Balance			*$ -*	*$ 322,442*	*$ -*	*$ -*																	
Local Only Costs	$ 28,246,750		*$ -*	*$ 564,935*	*$ 4,830,195*	*$ 14,110,665*	*$ 18,205,808*	*$ 21,658,305*	*$ 31,215,245*	*$ 32,776,007*	*$ 34,414,807*	*$ 35,890,364*	*$ 34,854,118*	*$ 33,737,359*	*$ 32,535,775*	*$ 31,244,833*	*$ 29,859,775*	*$ 28,375,599*	*$ 26,787,049*	*$ 25,088,606*	*$ 23,274,470*	*$ 21,338,548*	*$ 19,274,442*	*$ 17,075,427*
Local Tax Reimbursement	$ 53,801,403		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 233,508	$ 2,695,966	$ 2,723,300	$ 2,750,907	$ 2,778,790	$ 2,806,952	$ 2,835,396	$ 2,864,124	$ 2,893,139	$ 2,922,444	$ 2,952,043	$ 2,981,937	$ 3,012,131	$ 3,042,626
Interest (5%)	$ 25,554,653		$ -	$ 28,247	$ 241,510	$ 705,533	$ 910,290	$ 1,082,915	$ 1,560,762	$ 1,638,800	$ 1,709,065	$ 1,659,720	$ 1,606,541	$ 1,549,323	$ 1,487,849	$ 1,421,894	$ 1,351,219	$ 1,275,574	$ 1,194,696	$ 1,108,308	$ 1,016,121	$ 917,831	$ 813,116	$ 701,640
Total Local Only Reimbursement Balance			*$ -*	*$ 593,182*	*$ 5,071,705*	*$ 14,816,198*	*$ 19,116,098*	*$ 22,741,220*	*$ 32,776,007*	*$ 34,414,807*	*$ 35,890,364*	*$ 34,854,118*	*$ 33,737,359*	*$ 32,535,775*	*$ 31,244,833*	*$ 29,859,775*	*$ 28,375,599*	*$ 26,787,049*	*$ 25,088,606*	*$ 23,274,470*	*$ 21,338,548*	*$ 19,274,442*	*$ 17,075,427*	*$ 14,734,441*
Total Annual Developer Reimbursement			*$ -*	*$ 42,912*	*$ 322,442*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 233,508*	*$ 2,695,966*	*$ 2,723,300*	*$ 2,750,907*	*$ 2,778,790*	*$ 2,806,952*	*$ 2,835,396*	*$ 2,864,124*	*$ 2,893,139*	*$ 2,922,444*	*$ 2,952,043*	*$ 2,981,937*	*$ 3,012,131*	*$ 3,042,626*
CITY OF MUSKEGON BONDED ACTIVITIES	Beginning Balance																						
City of Muskegon Bond Reimbursement Balance	*$ -*		*$ -*	*$ 10,500,000*	*$ 10,759,998*	*$ 9,972,313*	*$ 8,810,967*	*$ 7,340,848*	*$ 4,961,532*	*$ 2,435,395*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
Local Only Costs	$ 10,000,000		*$ -*	*$ 10,000,000*	*$ 10,500,000*	*$ 10,759,998*	*$ 9,972,313*	*$ 8,810,967*	*$ 7,340,848*	*$ 4,961,532*	*$ 2,435,395*	*$ -*												
Local Tax Reimbursement	$ 12,608,621		$ -	$ -	$ 252,383	$ 1,262,558	$ 1,580,915	$ 1,819,684	$ 2,615,578	$ 2,642,108	$ 2,435,395													
Interest (5%)	$ 2,608,621			$ 500,000	$ 512,381	$ 474,872	$ 419,570	$ 349,564	$ 236,263	$ 115,971	$ -													
Total Local Only Reimbursement Balance	$ 10,000,000		*$ -*	*$ 10,500,000*	*$ 10,759,998*	*$ 9,972,313*	*$ 8,810,967*	*$ 7,340,848*	*$ 4,961,532*	*$ 2,435,395*	*$ -*	*$ -*												
Total Annual City of Muskegon Reimbursement			*$ -*	*$ -*	*$ 252,383*	*$ 1,262,558*	*$ 1,580,915*	*$ 1,819,684*	*$ 2,615,578*	*$ 2,642,108*	*$ 2,435,395*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
LOCAL BROWNFIELD REVOLVING FUND																							
LBRF Deposits *																							
State Tax Capture	*$ 178,977*																						
Local Tax Capture	*$ 12,499,122*																						
Total LBRF Capture	*$ 12,678,099*																						

* Up to five years of capture for LBRF Deposits after eligible activities are reimbursed. May be taken from Local TIR only.

Table 2 - Estimate of Total Incremental Taxes Available for Reimbursement
1148 1204 West Western Avenue, Muskegon, Muskegon County, Michigan

Estimated Developer Capture	$ 54,166,757
Estimated City of Muskegon Capture	$ 12,608,621
BRA Administrative Fee	$ 290,500
State Brownfield Redevelopment Fund	$ 365,244
Local Brownfield Revolving Fund	$ 12,678,099

	2043	2044	2045	2046	2047	2048	2049	2050	2051	TOTAL
Total State Incremental Revenue	$ 2,439,076	$ 2,463,684	$ 2,488,537	$ 2,513,640	$ 2,538,993	$ 2,564,599	$ 2,590,462	$ 2,616,584	$ 2,642,966	$ 62,796,559
State Brownfield Redevelopment Fund (50% of SET)						$ 320,791				$ 365,244
State TIR Available for Reimbursement	**$ 2,439,076**	**$ 2,463,684**	**$ 2,488,537**	**$ 2,513,640**	**$ 2,538,993**	**$ 2,243,808**	**$ 2,590,462**	**$ 2,616,584**	**$ 2,642,966**	**$ 39,893,567**
Total Local Incremental Revenue	$ 3,083,426	$ 3,114,535	$ 3,145,954	$ 3,177,688	$ 3,209,738	$ 3,242,110	$ 3,274,805	$ 3,307,827	$ 3,341,179	$ 79,386,023
BRA Administrative Fee	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 290,500
Local TIR Available for Reimbursement	**$ 3,073,426**	**$ 3,104,535**	**$ 3,135,954**	**$ 3,167,688**	**$ 3,199,738**	**$ 3,232,110**	**$ 3,264,805**	**$ 3,297,827**	**$ 3,331,179**	$ 79,095,523
Total State & Local TIR Available	**$ 5,512,502**	**$ 5,568,218**	**$ 5,624,491**	**$ 5,681,327**	**$ 5,738,731**	**$ 5,475,918**	**$ 5,855,267**	**$ 5,914,411**	**$ 5,974,145**	**$ 141,526,839**
DEVELOPER										
Developer Reimbursement Balance	***$ 12,244,066***	***$ 9,596,509***	***$ 6,783,583***	***$ 3,796,690***	***$ 626,800***	***$ -***	***$ -***	***$ -***	***$ -***	
Pre-Approved Environmental Costs										
State Tax Reimbursement										$ 178,977
Local Tax Reimbursement										$ 186,377
Interest (5%)										$ 15,354
Total EGLE Reimbursement Balance										$ -
Local Only Costs	*$ 14,734,441*	*$ 12,244,066*	*$ 9,596,509*	*$ 6,783,583*	*$ 3,796,690*	*$ 626,800*				
Local Tax Reimbursement	$ 3,073,426	$ 3,104,535	$ 3,135,954	$ 3,167,688	$ 3,199,738	$ 626,800				*$ 53,801,403*
Interest (5%)	$ 583,051	$ 456,977	$ 323,028	$ 180,795	$ 29,848	$ -				*$ 25,554,653*
Total Local Only Reimbursement Balance	*$ 12,244,066*	*$ 9,596,509*	*$ 6,783,583*	*$ 3,796,690*	*$ 626,800*	$ -		$ -		$ -
Total Annual Developer Reimbursement	*$ 3,073,426*	*$ 3,104,535*	*$ 3,135,954*	*$ 3,167,688*	*$ 3,199,738*	*$ 626,800*	*$ -*	*$ -*	*$ -*	*$ 54,166,757*
CITY OF MUSKEGON BONDED ACTIVITIES										
City of Muskegon Bond Reimbursement Balance	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	
Local Only Costs										
Local Tax Reimbursement										*$ 12,608,621*
Interest (5%)										*$ 2,608,621*
Total Local Only Reimbursement Balance										$ -
Total Annual City of Muskegon Reimbursement	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 12,608,621*
LOCAL BROWNFIELD REVOLVING FUND										
LBRF Deposits *										
State Tax Capture						*$ 178,977*				$ 178,977
Local Tax Capture						*$ 2,605,310*	*$ 3,264,805*	*$ 3,297,827*	*$ 3,331,179*	$ 12,499,122
Total LBRF Capture										$ 12,678,099

* Up to five years of capture for LBRF Deposits after eligible activities are reimbursed. May be taken from Local TIR only.

Attachment A

Conceptual Renderings

SHEET NOTES:

- C COMMERCIAL BUILDINGS
  - C1 ADELAIDE POINTE OFFICES
  - C2 LIGHT INDUSTRY
  - C3 WAREHOUSING / BOAT STORAGE
  - C4 WAREHOUSING / BOAT STORAGE
  - C5 MIXED USE/WATER-BASED SERVICES
  - C6 MIXED USE/WATER-BASED SERVICES
  - C7 WAREHOUSING / BOAT STORAGE
  - C8 WAREHOUSING / BOAT STORAGE
  - C9 WAREHOUSING / BOAT STORAGE
- R RESIDENTIAL BUILDINGS
  - R1 CONDOMINIUM BUILDING
  - R2 CONDOMINIUM / COMMERCIAL
  - R3 CONDOMINIUM / COMMERCIAL
  - R4 CONDOMINIUM BUILDING
  - R5 CONDOMINIUM BUILDING
  - R6 APARTMENT BUILDING
- B MIXED USE BUILDING / AMENITIES
  - B1 SALES / RETAIL / RESTAURANT
  - B2 BAR / GRILL
  - B3 BOATER SERVICES
  - B4 RESTROOMS / PAVILION
  - B5 POOL
- M MARINA / MARINA SERVICES
  - M1 WET SLIP MARINA
  - M2 TRANSIENT SLIPS
  - M3 SLIP ACCESS POINT
  - M4 ROCK GROINS
  - M5 SLIP WELL / RAMPS
  - M6 FUEL DOCKS
- A PUBLIC AMENITIES
  - A1 BIKE & PEDESTRIAN TRAILS
  - A2 WEST POINT PARK
  - A3 LINEAR PARKS
  - A4 EAST BASIN PARK
  - A5 FISHING PIER
  - A6 BIKE RACKS
  - A7 PAVILIONS
  - A8 EVENT LAWN
  - A9 ON STREET PARKING
  - A10 OFF STREET PARKING
  - A11 RESTROOMS
  - A12 PARKING GARAGE ACCESS

Project :

ADELAIDE POINTE
1204 WEST WESTERN AVENUE
MUSKEGON, MI 49441
P: (855) MKG-LAKE
https://www.adelaidepointe.com

Consultants:

Edgewater resources
518 BROAD STREET
SAINT JOSEPH, MI 49085
P: (269) 932.4502
www.edgewaterresources.com

architektura PLC
1609 PINERIDGE DR
GRAND HAVEN, MI 49417
P: (616) 843-1002
www.architekturaplc.com/

KA KORB + ASSOCIATES ARCHITECTS
648 N. PLANKINTON AVE.
SUITE 240
MILWAUKEE, WI 53203
P: (414) 273-8230
www.kaa-arch.com

SITE LOCATION:

Date:	9/22/2021
Project No:	21-004

NORTH

Scale: 1"=100'-0" @ 24x36

0 100' 200'

Seal:

Project Phase: PUD SUBMITTAL

Sheet Title: ILLUSTRATIVE MP

Sheet Number: V-2.00

P:\2021\21-004 AP\CAD\SHEETS\PUD\V-SHEETS\V-2.00 ILLUSTRATIVE MASTER PLAN.DWG

Attachment B

Environmental Data Tables and Map

SAMPLE EXCEEDANCE MAP

fishbeck
Engineers | Architects | Scientists | Constructors

Hard copy is intended to be 8.5"x11" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

Leestma Management, LLC
1148 & 1204 West Western Ave., Muskegon, Muskegon County MI 49441

Baseline Environmental Assessment

PROJECT NO.
201515

FIGURE NO.
4

PLOT INFO: Z:\2020\201515\CAD\GIS\mapdoc\BEA\FIG05_ExceedanceMap.mxd Date: 1/18/2021 12:29:56 PM User: bahannah

Table 1 - Soil Data Summary
Baseline Environmental Assessment
Leestma Management, LLC, 1148 & 1204 West Western Ave., Muskegon, Muskegon County, MI
December 2020

Sample Location:		SB-01	SB-01	SB-02	SB-03	SB-04	SB-05	SB-06	SB-07	FB-01	*Statewide Default Background Levels* [1]	*Drinking Water Protection Criteria* [1]	*GSIP Criteria* [1]	*Soil Volatilization to Indoor Air Inhalation Criteria* [1]	*Infinite Source VSIC* [1]	*Finite VSIC for 5 Meter Source Thickness* [1]	*Finite VSIC for 2 Meter Source Thickness* [1]	*Particulate Soil Inhalation Criteria* [1]	*Direct Contact Criteria* [1]	*Soil Saturation Concentration SL* [1]
Depth Interval (ft):		(4-5)	(4-5)	(4-5)	(3-4)	(4-5)	(2-3)	(1-2)	(2-3)											
Investigative/Field Duplicate/QC:		Investigative	Duplicate	Investigative	Investigative	Investigative	Investigative	Investigative	Investigative	QC										
Laboratory ID:		20L0979-01	20L0979-02	20L0979-03	20L0979-04	20L0979-05	20L0979-06	20L0979-07	20L0979-08	20L0979-09										
Collection Date:		12/30/20	12/30/20	12/30/20	12/30/20	12/30/20	12/30/20	12/30/20	12/30/20	12/30/20										
Volatile Organic Compounds	***CAS Number***																			
Tetrachloroethene	127-18-4	**170**	**150**	58 U	57 U	50 U	50 U	61 U	50 U	50 U	*NA*	***100***	*1,200 (X)*	*11,000*	*1.70E+05*	*4.80E+05*	*1.10E+06*	*2.70E+09*	*2.00E+05 (C)*	*88,000*
Polynuclear Aromatic Compounds	***CAS Number***																			
Benzo(a)pyrene	50-32-8	330 U	330 U	350	330 UJ	330 U	330 U	330 UJ	430	--	*NA*	*NLL*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*1.50E+06*	*2,000*	*NA*
Benzo(b)fluoranthene	205-99-2	330 U	400	550	330 UJ	330 U	330 U	330 UJ	520	--	*NA*	*NLL*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*20,000*	*NA*
Metals, Total	***CAS Number***																			
Arsenic (B)	7440-38-2	4,000 J	3,600	**5,900**	2,000 U	3,500	*4,900*	2,000 U	**19,000**	--	*5,800*	***4,600***	***4,600***	*NLV*	*NLV*	*NLV*	*NLV*	*7.20E+05*	***7,600***	*NA*
Barium (B)	7440-39-3	15,000	18,000	10,000	15,000	23,000	16,000	11,000	100,000	--	*75,000*	*1.30E+06*	*4.40E+05 (G)*	*NLV*	*NLV*	*NLV*	*NLV*	*3.30E+08*	*3.70E+07*	*NA*
Cadmium (B)	7440-43-9	1,700	1,600	**8,100**	2,400	3,600	**4,900**	720	**13,000**	--	*1,200*	***6,000***	***3,600 (G,X)***	*NLV*	*NLV*	*NLV*	*NLV*	*1.70E+06*	*5.50E+05*	*NA*
Chromium, Total (B, H)	7440-47-3	***6,700***	***5,900***	**24,000**	**27,000**	**30,000**	**49,000**	***14,000***	**190,000**	--	*18,000 (total)*	***30,000***	***3,300***	*NLV*	*NLV*	*NLV*	*NLV*	*2.60E+05*	*2.50E+06*	*NA*
Copper (B)	7440-50-8	38,000 J	20,000	34,000	34,000	53,000	**76,000**	12,000	**430,000**	--	*32,000*	*5.80E+06*	***75,000 (G)***	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.00E+07*	*NA*
Lead (B)	7439-92-1	22,000	20,000	34,000	27,000	19,000	20,000	12,000	66,000	--	*21,000*	*7.00E+05*	*5.10E+06 (G,X)*	*NLV*	*NLV*	*NLV*	*NLV*	*1.00E+08*	*4.00E+05*	*NA*
Mercury (Total) (B)	7439-97-6	50 U	50 U	50 U	*57*	50 U	*64*	50 U	50 U	--	*130*	*1,700*	*50 (M); 1.2*	*48,000*	*52,000*	*52,000*	*52,000*	*2.00E+07*	*1.60E+05*	*NA*
Selenium (B)	7782-49-2	**1,400**	**1,400**	**1,000**	**1,100**	**600**	**770**	**960**	**560**	--	*410*	*4,000*	***400***	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.60E+06*	*NA*
Silver (B)	7440-22-4	490 U	470 U	490 U	490 U	490 U	460 U	470 U	430 U	--	*1,000*	*4,500*	*100 (M); 27*	*NLV*	*NLV*	*NLV*	*NLV*	*6.70E+06*	*2.50E+06*	*NA*
Zinc (B)	7440-66-6	15,000	14,000	23,000	47,000	40,000	62,000	33,000	74,000	--	*47,000*	*2.40E+06*	*1.70E+05 (G)*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*1.70E+08*	*NA*
Solids, Total (%)	--	*90*	*91*	*88*	*89*	*89*	*90*	*87*	*92*	--	--	--	--	--	--	--	--	--	--	--

Results expressed in µg/Kg dry weight (except for FB-01, which is µg/Kg wet weight).
Bolded values exceed Statewide Default Background Level and an applicable criterion or screening level.
Italicized values are below Statewide Default Background Level but exceed an applicable criterion or screening level.
Underlined parameters are classified as Polynuclear Aromatic Compounds.

Data Qualifiers:
J Estimated value
U Not detected

Footnotes/Abbreviations:
[1] Part 201 Residential Soil Generic Cleanup Criteria and Screening Levels/Part 213 Risk-based Screening Levels, December 30, 2013 (GSI Criteria Updated June 25, 2018).
[2] EGLE Volatilization to Indoor Air Pathway Screening Levels, September 4, 2020.
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated criterion.
(C) Value is screening level based on the chemical-specific generic soil saturation concentration (Csat).
(G) Criterion dependent on receiving surface water (SW) hardness; calculated criteria based on water hardness of 150 mg/L.
(H) Data provided for total chromium only; evaluated against hexavalent chromium criteria.
(J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations must be added together for comparison to criteria.
(JT) Hazardous substance may be present in several isomer forms. The VIAP SL may be used for the individual isomer provided that it is the sole isomer detected; however, when multiple isomers are detected in a medium, the isomer-specific concentrations must be added together and compared to the most restrictive VIAP SL of the detected isomers.
(M) Calculated criterion is below the target detection limit (TDL); first number is the criterion (TDL), the second is the risk-based value.
(M*) The VIAP SL may be below TDL. In accordance with Sec. 20120a(10) when the TDL for a hazardous substance is greater than the developed VIAP SL, the TDL is used to evaluate the risk posed from the pathway.
(W) Concentrations of trihalomethanes must be added together to determine compliance with criterion.
(X) Criterion is not protective for SW used as a drinking water (DW) source.
(DD) Hazardous substance causes developmental effects. Residential VIAP SLs are protective of both prenatal exposure using a pregnant female receptor and postnatal exposure using a child receptor. Prenatal developmental effects may occur after an acute (i.e. short- term) or full-term exposure.
(EE) The acceptable air concentration (AAC) for the volatile hazardous substances is not derived using standard equations. The hazardous substance may cause adverse human health effects for less than chronic exposures (i.e. short-term or acute). The AAC for these hazardous substances is the acute or intermediate minimum risk level (MRL) developed by the Agency for Toxic Substances and Disease Registry (ATSDR), a USEPA Integrated Risk Information System (IRIS) acute reference concentration, or an acute initial threshold screening level (ITSL) by the EGLE's Air Quality Division.
(MM) Hazardous substance is a carcinogen with a mutagenic mode of action. The cancer potency values used in calculating VIAP SLs are modified using age-dependent adjustment factors for those carcinogenic chemicals identified as mutagenic.
DATA Insufficient physical chemical parameters to calculate a VIAP SL for specified media. If detections are present in specified media, health-based soil vapor value should be used to evaluate risk.
GSIP groundwater surface water interface protection
ID Insufficient data to develop criterion.
NA not available
NLL Not likely to leach under most soil conditions.
NLV Not likely to volatilize under most conditions.
SL screening level
VIAP volatilization to indoor air pathway
VSIC volatile soil inhalation criteria

Table 2 - Groundwater Data Summary
Baseline Environmental Assessment
Leestma Management, LLC, 1148 & 1204 West Western Ave., Muskegon, Muskegon County, MI
December 2020

Monitoring Location:		TW-01	TW-02	TW-03	TW-03 Duplicate	TB-01	*Residential DWC [(1)]*	*GSI Criteria [(1)]*	*Residential Groundwater VIAIC [(1)]*	*Water Solubility [(1)]*	*Flammability and Explosivity SL [(1)]*
Field Duplicate:											
Laboratory ID:		20L0979-10	20L0979-11	20L0979-12	20L0979-14	20L0979-15					
Collection Date:		12/30/20	12/30/20	12/30/20	12/30/20	12/30/20					
Volatile Organic Compounds	***CAS Number***										
Benzene	71-43-2	1 U	1 U	**9.7**	**9.9**	1 U	***5.0***	*200 (X)*	*5,600*	*1.75E+06*	*68,000*
Polychlorinated Biphenyls	***CAS Number***										
Total PCBs (J)	1336-36-3	0.2 U	0.2 U	0.2 UJ	0.2 UJ	--	*0.50*	*0.20 (M); 2.60E-05*	*45 (S)*	*44.7*	*ID*
Metals, Total	***CAS Number***										
Arsenic (B)	7440-38-2	5 U	5 U	7.7	7.9	--	*10*	*10*	*NLV*	*NA*	*ID*
Barium (B)	7440-39-3	100 U	100 U	220	240	--	*2,000*	*670 (G)*	*NLV*	*NA*	*ID*
Cadmium (B)	7440-43-9	1 U	1 U	**7.2**	**7.3**	--	***5.0***	***3.0 (G,X)***	*NLV*	*NA*	*ID*
Chromium, Total (B, H)	7440-47-3	10 U	10 U	**33**	**34**	--	*100*	***11***	*NLV*	*NA*	*ID*
Copper (B)	7440-50-8	5 U	5 U	**150**	**150**	--	*1,000 (E)*	***13 (G)***	*NLV*	*NA*	*ID*
Lead (B)	7439-92-1	3 U	3 U	**180**	**180**	--	***4.0 (L)***	***34 (G,X)***	*NLV*	*NA*	*ID*
Mercury (B)	7439-97-6	0.2 U	0.2 U	**0.65**	**0.61**	--	*2.0*	***0.0013***	*56 (S)*	*56*	*ID*
Selenium (B)	7782-49-2	5 U	5 U	5 U	5 U	--	*50*	*5.0*	*NLV*	*NA*	*ID*
Silver (B)	7440-22-4	1 U	1 U	1 U	1 U	--	*34*	*0.20 (M); 0.060*	*NLV*	*NA*	*ID*
Zinc (B)	7440-66-6	50 U	50 U	**190**	**190**	--	*2,400*	***170 (G)***	*NLV*	*NA*	*ID*

Results expressed in µg/L.
Bolded values exceed an applicable criterion and/or screening level.
Underlined compounds classified as polynuclear aromatic compounds.

Data Qualifiers:
J Estimated value
U Not detected above the given limit

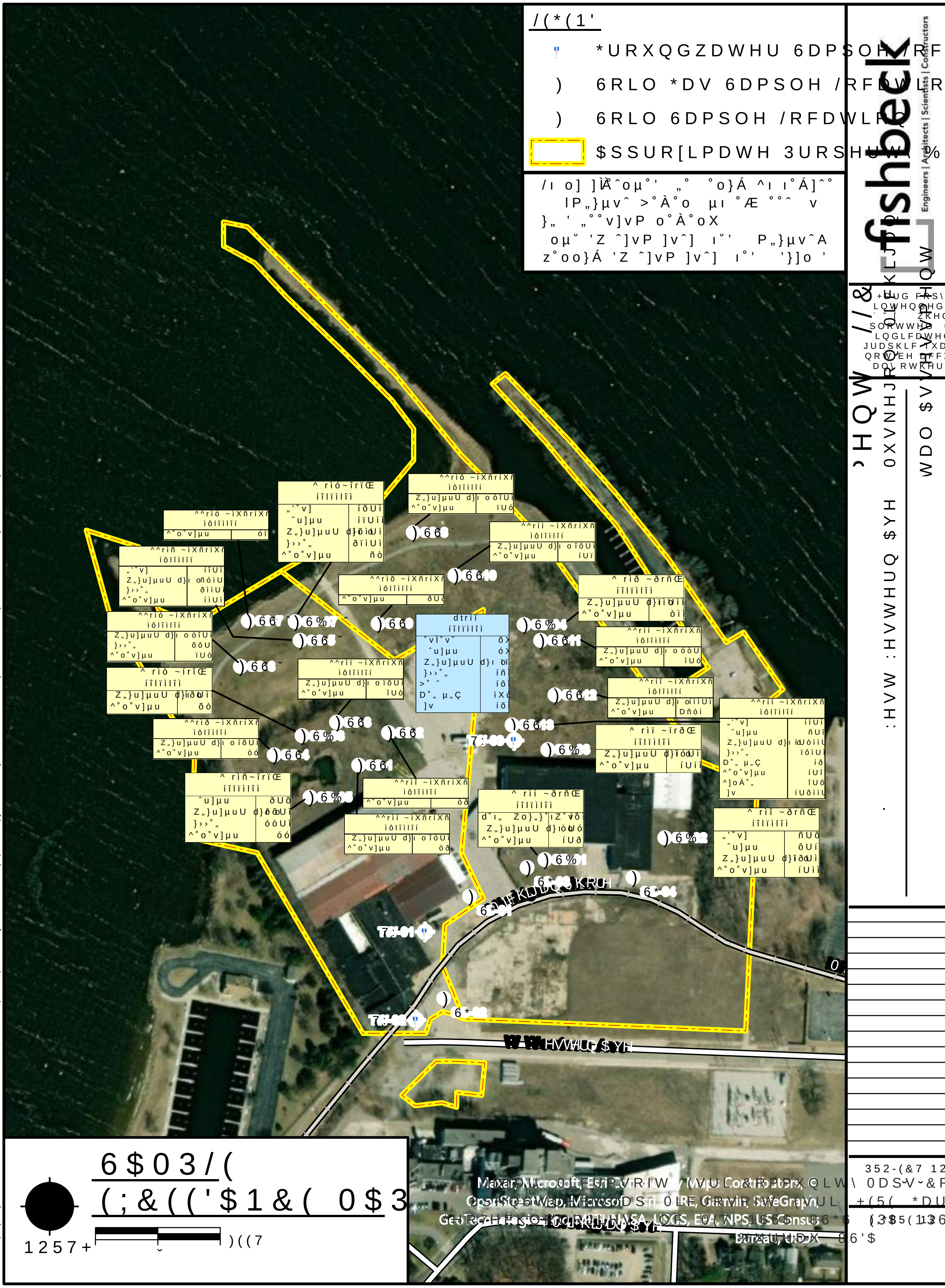
Footnotes/Abbreviations:
[(1)] Part 201 Groundwater Generic Cleanup Criteria/Part 213 Tier 1 Risk-based Screening Levels, January 10, 2018 (GSI Criteria Updated June 25, 2018).
[(2)] EGLE Volatilization to Indoor Air Pathway Screening Levels, September 4, 2020.
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated criterion.
(E) Aesthetic drinking water (DW) value. Notice of aesthetic impact may be employed as an institutional control if concentration exceeds the aesthetic DWC but not the health-based DW value.
(G) Criterion dependent on receiving surface water (SW) hardness; calculated criteria based on water hardness of 150 mg/L.
(H) Data provided for total Chromium only; compare to hexavalent Chromium criteria.
(J) Substance present in several isomer forms; isomer concentrations must be added together for comparison to criteria.
(JT) Substance present in several isomer forms. The VIAP SL may be used for the individual isomer provided that it is sole isomer detected; however, when multiple isomers are detected in a medium,
(L) Concentrations up to the State action level of 15 µg/L may still allow for DW use if soil concentrations are below 400 mg/Kg.
(M) Calculated criterion is below the target detection limit (TDL); first number is the criterion (TDL), the second is the risk-based value.
(M*) The VIAP SL may be below target detection limits (TDL). In accordance with Sec. 20120a(10) when the TDL for a hazardous substance is greater than the developed VIAP SL, the TDL is used to
(S) Criterion defaults to the hazardous substance-specific water solubility limit.
(W) Concentrations of trihalomethanes must be added together to determine compliance with the DWC.
(X) Criterion is not protective for SW used as a DW source.
(AA) Use 10,000 µg/L where GW enters a structure through the use of a water well, sump or other device. Use 28,000 µg/L for all other uses.
(CC) Insufficient chemical-physical input parameters have been identified to allow the development of a VIAP SL using standard equations. The VIAP SL for GW is developed based solely on the approach that the department uses for shallow GW. If GW detections are present, soil vapor may be the most appropriate media to evaluate risk.
(DD) Hazardous substance causes developmental effects. Residential VIAP SLs are protective of both prenatal exposure using a pregnant female receptor and postnatal exposure using a child receptor. Prenatal developmental effects may occur after an acute (i.e. short- term) or full-term exposure.
(EE*) The acceptable air concentration (AAC) for the volatile hazardous substance is not derived using standard equations. The hazardous substance may cause adverse human health effects for less than chronic exposures (i.e. short-term or acute). The AAC for this hazardous substance is the acute or intermediate minimum risk level (MRL) developed by the Agency for Toxic Substances and Disease Registry (ATSDR), a USEPA Integrated Risk Information System (IRIS) acute reference concentration, or an acute initial
(FF*) The AAC for the volatile hazardous substances are based on toxicity values that have been identified to have the potential to cause adverse human health effects for less than chronic exposures (i.e. short-term or acute). The short-term exposure for shallow groundwater VIAP SLs are based on modification of the standard equations by the department to develop applicable shallow groundwater VIAP SLs.
(MM) Hazardous substance is a carcinogen with a mutagenic mode of action. The cancer potency values used in calculating VIAP SLs are modified using age-dependent adjustment factors for those carcinogenic chemicals identified as mutagenic.
DWC drinking water criterion
GSI groundwater surface water interface
ID Insufficient data to develop criterion.
NA not available
NLV Not likely to volatilize under most conditions.
SL screening level
TX The Remediation and Redevelopment Division Toxicology Unit has not identified an inhalation toxicity value for the hazardous substance at the date of publication of these values.
VIAIC volatilization to indoor air inhalation criteria
VIAP volatilization to indoor air pathway

Attachment B

Conceptual Renderings

Attachment C

Environmental Data Tables and Map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Maxar, Microsoft, Esri Community Maps Contributors, OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA
fishbeck
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Soil Data Summary
Baseline Environmental Assessment
Leestma Management, LLC, 1148 & 1204 West Western Ave., Muskegon, Muskegon County, MI
December 2020

Sample Location:		SB-01	SB-01	SB-02	SB-03	SB-04	SB-05	SB-06	SB-07	FB-01	*Statewide Default Background Levels* [1]	*Drinking Water Protection Criteria* [1]	*GSIP Criteria* [1]	*Soil Volatilization to Indoor Air Inhalation Criteria* [1]	*Infinite Source VSIC* [1]	*Finite VSIC for 5 Meter Source Thickness* [1]	*Finite VSIC for 2 Meter Source Thickness* [1]	*Particulate Soil Inhalation Criteria* [1]	*Direct Contact Criteria* [1]	*Soil Saturation Concentration SL* [1]
Depth Interval (ft):		(4-5)	(4-5)	(4-5)	(3-4)	(4-5)	(2-3)	(1-2)	(2-3)											
Investigative/Field Duplicate/QC:		Investigative	Duplicate	Investigative	Investigative	Investigative	Investigative	Investigative	Investigative	QC										
Laboratory ID:		20L0979-01	20L0979-02	20L0979-03	20L0979-04	20L0979-05	20L0979-06	20L0979-07	20L0979-08	20L0979-09										
Collection Date:		12/30/20	12/30/20	12/30/20	12/30/20	12/30/20	12/30/20	12/30/20	12/30/20	12/30/20										
Volatile Organic Compounds	***CAS Number***																			
Tetrachloroethene	127-18-4	**170**	**150**	58 U	57 U	50 U	50 U	61 U	50 U	50 U	*NA*	***100***	*1,200 (X)*	*11,000*	*1.70E+05*	*4.80E+05*	*1.10E+06*	*2.70E+09*	*2.00E+05 (C)*	*88,000*
Polynuclear Aromatic Compounds	***CAS Number***																			
Benzo(a)pyrene	50-32-8	330 U	330 U	350	330 UJ	330 U	330 U	330 UJ	430	--	*NA*	*NLL*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*1.50E+06*	*2,000*	*NA*
Benzo(b)fluoranthene	205-99-2	330 U	400	550	330 UJ	330 U	330 U	330 UJ	520	--	*NA*	*NLL*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*20,000*	*NA*
Metals, Total	***CAS Number***																			
Arsenic (B)	7440-38-2	4,000 J	3,600	**5,900**	2,000 U	3,500	*4,900*	2,000 U	**19,000**	--	*5,800*	***4,600***	***4,600***	*NLV*	*NLV*	*NLV*	*NLV*	*7.20E+05*	***7,600***	*NA*
Barium (B)	7440-39-3	15,000	18,000	10,000	15,000	23,000	16,000	11,000	100,000	--	*75,000*	*1.30E+06*	*4.40E+05 (G)*	*NLV*	*NLV*	*NLV*	*NLV*	*3.30E+08*	*3.70E+07*	*NA*
Cadmium (B)	7440-43-9	1,700	1,600	**8,100**	2,400	3,600	**4,900**	720	**13,000**	--	*1,200*	***6,000***	***3,600 (G,X)***	*NLV*	*NLV*	*NLV*	*NLV*	*1.70E+06*	*5.50E+05*	*NA*
Chromium, Total (B, H)	7440-47-3	***6,700***	***5,900***	**24,000**	**27,000**	**30,000**	**49,000**	***14,000***	**190,000**	--	*18,000 (total)*	***30,000***	***3,300***	*NLV*	*NLV*	*NLV*	*NLV*	*2.60E+05*	*2.50E+06*	*NA*
Copper (B)	7440-50-8	38,000 J	20,000	34,000	34,000	53,000	**76,000**	12,000	**430,000**	--	*32,000*	*5.80E+06*	***75,000 (G)***	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.00E+07*	*NA*
Lead (B)	7439-92-1	22,000	20,000	34,000	27,000	19,000	20,000	12,000	66,000	--	*21,000*	*7.00E+05*	*5.10E+06 (G,X)*	*NLV*	*NLV*	*NLV*	*NLV*	*1.00E+08*	*4.00E+05*	*NA*
Mercury (Total) (B)	7439-97-6	50 U	50 U	50 U	*57*	50 U	*64*	50 U	50 U	--	*130*	*1,700*	*50 (M); 1.2*	*48,000*	*52,000*	*52,000*	*52,000*	*2.00E+07*	*1.60E+05*	*NA*
Selenium (B)	7782-49-2	**1,400**	**1,400**	**1,000**	**1,100**	**600**	**770**	**960**	**560**	--	*410*	*4,000*	***400***	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.60E+06*	*NA*
Silver (B)	7440-22-4	490 U	470 U	490 U	490 U	490 U	460 U	470 U	430 U	--	*1,000*	*4,500*	*100 (M); 27*	*NLV*	*NLV*	*NLV*	*NLV*	*6.70E+06*	*2.50E+06*	*NA*
Zinc (B)	7440-66-6	15,000	14,000	23,000	47,000	40,000	62,000	33,000	74,000	--	*47,000*	*2.40E+06*	*1.70E+05 (G)*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*1.70E+08*	*NA*
Solids, Total (%)	--	*90*	*91*	*88*	*89*	*89*	*90*	*87*	*92*	--	--	--	--	--	--	--	--	--	--	--

Results expressed in µg/Kg dry weight (except for FB-01, which is µg/Kg wet weight).
Bolded values exceed Statewide Default Background Level and an applicable criterion or screening level.
Italicized values are below Statewide Default Background Level but exceed an applicable criterion or screening level.
Underlined parameters are classified as Polynuclear Aromatic Compounds.

Data Qualifiers:
J Estimated value
U Not detected

Footnotes/Abbreviations:
[1] *Part 201 Residential Soil Generic Cleanup Criteria and Screening Levels/Part 213 Risk-based Screening Levels, December 30, 2013 (GSI Criteria Updated June 25, 2018).*
[2] *EGLE Volatilization to Indoor Air Pathway Screening Levels, September 4, 2020.*
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated criterion.
(C) Value is screening level based on the chemical-specific generic soil saturation concentration (Csat).
(G) Criterion dependent on receiving surface water (SW) hardness; calculated criteria based on water hardness of 150 mg/L.
(H) Data provided for total chromium only; evaluated against hexavalent chromium criteria.
(J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations must be added together for comparison to criteria.
(JT) Hazardous substance may be present in several isomer forms. The VIAP SL may be used for the individual isomer provided that it is the sole isomer detected; however, when multiple isomers are detected in a medium, the isomer-specific concentrations must be added together and compared to the most restrictive VIAP SL of the detected isomers.
(M) Calculated criterion is below the target detection limit (TDL); first number is the criterion (TDL), the second is the risk-based value.
(M*) The VIAP SL may be below TDL. In accordance with Sec. 20120a(10) when the TDL for a hazardous substance is greater than the developed VIAP SL, the TDL is used to evaluate the risk posed from the pathway.
(W) Concentrations of trihalomethanes must be added together to determine compliance with criterion.
(X) Criterion is not protective for SW used as a drinking water (DW) source.
(DD) Hazardous substance causes developmental effects. Residential VIAP SLs are protective of both prenatal exposure using a pregnant female receptor and postnatal exposure using a child receptor. Prenatal developmental effects may occur after an acute (i.e. short- term) or full-term exposure.
(EE) The acceptable air concentration (AAC) for the volatile hazardous substances is not derived using standard equations. The hazardous substance may cause adverse human health effects for less than chronic exposures (i.e. short-term or acute). The AAC for these hazardous substances is the acute or intermediate minimum risk level (MRL) developed by the Agency for Toxic Substances and Disease Registry (ATSDR), a USEPA Integrated Risk Information System (IRIS) acute reference concentration, or an acute initial threshold screening level (ITSL) by the EGLE's Air Quality Division.
(MM) Hazardous substance is a carcinogen with a mutagenic mode of action. The cancer potency values used in calculating VIAP SLs are modified using age-dependent adjustment factors for those carcinogenic chemicals identified as mutagenic.
DATA Insufficient physical chemical parameters to calculate a VIAP SL for specified media. If detections are present in specified media, health-based soil vapor value should be used to evaluate risk.
GSIP groundwater surface water interface protection
ID Insufficient data to develop criterion.
NA not available
NLL Not likely to leach under most soil conditions.
NLV Not likely to volatilize under most conditions.
SL screening level
VIAP volatilization to indoor air pathway
VSIC volatile soil inhalation criteria

Groundwater Data Summary
Baseline Environmental Assessment
Leestma Management, LLC, 1148 & 1204 West Western Ave., Muskegon, Muskegon County, MI
December 2020

Monitoring Location:		TW-01	TW-02	TW-03	TW-03 Duplicate	TB-01	***Residential DWC*** [(1)]	***GSI Criteria*** [(1)]	***Residential Groundwater VIAIC*** [(1)]	***Water Solubility*** [(1)]	***Flammability and Explosivity SL*** [(1)]
Field Duplicate:											
Laboratory ID:		20L0979-10	20L0979-11	20L0979-12	20L0979-14	20L0979-15					
Collection Date:		12/30/20	12/30/20	12/30/20	12/30/20	12/30/20					
Volatile Organic Compounds	***CAS Number***										
Benzene	71-43-2	1 U	1 U	**9.7**	**9.9**	1 U	***5.0***	*200 (X)*	*5,600*	*1.75E+06*	*68,000*
Polychlorinated Biphenyls	***CAS Number***										
Total PCBs (J)	1336-36-3	0.2 U	0.2 U	0.2 UJ	0.2 UJ	--	*0.50*	*0.20 (M); 2.60E-05*	*45 (S)*	*44.7*	*ID*
Metals, Total	***CAS Number***										
Arsenic (B)	7440-38-2	5 U	5 U	7.7	7.9	--	*10*	*10*	*NLV*	*NA*	*ID*
Barium (B)	7440-39-3	100 U	100 U	220	240	--	*2,000*	*670 (G)*	*NLV*	*NA*	*ID*
Cadmium (B)	7440-43-9	1 U	1 U	**7.2**	**7.3**	--	***5.0***	***3.0 (G,X)***	*NLV*	*NA*	*ID*
Chromium, Total (B, H)	7440-47-3	10 U	10 U	**33**	**34**	--	*100*	***11***	*NLV*	*NA*	*ID*
Copper (B)	7440-50-8	5 U	5 U	**150**	**150**	--	*1,000 (E)*	***13 (G)***	*NLV*	*NA*	*ID*
Lead (B)	7439-92-1	3 U	3 U	**180**	**180**	--	***4.0 (L)***	***34 (G,X)***	*NLV*	*NA*	*ID*
Mercury (B)	7439-97-6	0.2 U	0.2 U	**0.65**	**0.61**	--	*2.0*	***0.0013***	*56 (S)*	*56*	*ID*
Selenium (B)	7782-49-2	5 U	5 U	5 U	5 U	--	*50*	*5.0*	*NLV*	*NA*	*ID*
Silver (B)	7440-22-4	1 U	1 U	1 U	1 U	--	*34*	*0.20 (M); 0.060*	*NLV*	*NA*	*ID*
Zinc (B)	7440-66-6	50 U	50 U	**190**	**190**	--	*2,400*	***170 (G)***	*NLV*	*NA*	*ID*

Results expressed in µg/L.
Bolded values exceed an applicable criterion and/or screening level.
Underlined compounds classified as polynuclear aromatic compounds.

Data Qualifiers:
J Estimated value
U Not detected above the given limit

Footnotes/Abbreviations:
[(1)] Part 201 Groundwater Generic Cleanup Criteria/Part 213 Tier 1 Risk-based Screening Levels, January 10, 2018 (GSI Criteria Updated June 25, 2018).
[(2)] EGLE Volatilization to Indoor Air Pathway Screening Levels, September 4, 2020.
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated criterion.
(E) Aesthetic drinking water (DW) value. Notice of aesthetic impact may be employed as an institutional control if concentration exceeds the aesthetic DWC but not the health-based DW value.
(G) Criterion dependent on receiving surface water (SW) hardness; calculated criteria based on water hardness of 150 mg/L.
(H) Data provided for total Chromium only; compare to hexavalent Chromium criteria.
(J) Substance present in several isomer forms; isomer concentrations must be added together for comparison to criteria.
(JT) Substance present in several isomer forms. The VIAP SL may be used for the individual isomer provided that it is sole isomer detected; however, when multiple isomers are detected in a medium,
(L) Concentrations up to the State action level of 15 µg/L may still allow for DW use if soil concentrations are below 400 mg/Kg.
(M) Calculated criterion is below the target detection limit (TDL); first number is the criterion (TDL), the second is the risk-based value.
(M*) The VIAP SL may be below target detection limits (TDL). In accordance with Sec. 20120a(10) when the TDL for a hazardous substance is greater than the developed VIAP SL, the TDL is used to
(S) Criterion defaults to the hazardous substance-specific water solubility limit.
(W) Concentrations of trihalomethanes must be added together to determine compliance with the DWC.
(X) Criterion is not protective for SW used as a DW source.
(AA) Use 10,000 µg/L where GW enters a structure through the use of a water well, sump or other device. Use 28,000 µg/L for all other uses.
(CC) Insufficient chemical-physical input parameters have been identified to allow the development of a VIAP SL using standard equations. The VIAP SL for GW is developed based solely on the approach that the department uses for shallow GW. If GW detections are present, soil vapor may be the most appropriate media to evaluate risk.
(DD) Hazardous substance causes developmental effects. Residential VIAP SLs are protective of both prenatal exposure using a pregnant female receptor and postnatal exposure using a child receptor. Prenatal developmental effects may occur after an acute (i.e. short- term) or full-term exposure.
(EE*) The acceptable air concentration (AAC) for the volatile hazardous substance is not derived using standard equations. The hazardous substance may cause adverse human health effects for less than chronic exposures (i.e. short-term or acute). The AAC for this hazardous substance is the acute or intermediate minimum risk level (MRL) developed by the Agency for Toxic Substances and Disease Registry (ATSDR), a USEPA Integrated Risk Information System (IRIS) acute reference concentration, or an acute initial
(FF*) The AAC for the volatile hazardous substances are based on toxicity values that have been identified to have the potential to cause adverse human health effects for less than chronic exposures (i.e. short-term or acute). The short-term exposure for shallow groundwater VIAP SLs are based on modification of the standard equations by the department to develop applicable shallow groundwater VIAP SLs.
(MM) Hazardous substance is a carcinogen with a mutagenic mode of action. The cancer potency values used in calculating VIAP SLs are modified using age-dependent adjustment factors for those carcinogenic chemicals identified as mutagenic.
DWC drinking water criterion
GSI groundwater surface water interface
ID Insufficient data to develop criterion.
NA not available
NLV Not likely to volatilize under most conditions.
SL screening level
TX The Remediation and Redevelopment Division Toxicology Unit has not identified an inhalation toxicity value for the hazardous substance at the date of publication of these values.
VIAIC volatilization to indoor air inhalation criteria
VIAP volatilization to indoor air pathway

Soil Data Summary
Direct Contact Evaluation
1148 & 1204 West Western Ave., Muskegon, Muskegon County, Michigan
August 2021

Sample Location:					*Residential*								*Nonresidential*								AP-SS-1	AP-SS-2	AP-SS-3	AP-SS-4	AP-SS-5	AP-SS-6	AP-SS-7
Laboratory ID:		*SDBL* [1]	*GSIP Criteria* [1]	*Soil Csat SL* [1]	*DWP Criteria* [1]	*SVIAI Criteria* [1]	*Inf. Source VSIC* [1]	*Finite VSIC - 5 MST* [1]	*Finite VSIC - 2 MST* [1]	*PSI Criteria* [1]	*DC Criteria* [1]	*Soil VIAP SL* [2]	*DWP Criteria* [1]	*SVIAI Criteria* [1]	*Inf. Source VSIC* [1]	*Finite VSIC - 5 MST* [1]	*Finite VSIC - 2 MST* [1]	*PSI Criteria* [1]	*DC Criteria* [1]	*Soil VIAP SL* [2]	21H0909-01	21H0909-02	21H0909-03	21H0909-04	21H0909-05	21H0909-06	21H0909-07
Collection Date:																					08/20/21	08/20/21	08/20/21	08/20/21	08/20/21	08/20/21	08/20/21
Polynuclear Aromatic Compounds	***CAS Number***																										
2-Methylnaphthalene	91-57-6	*NA*	*4,200*	*NA*	*57,000*	*2.70E+06*	*1.50E+06*	*1.50E+06*	*1.50E+06*	*6.70E+08*	*8.10E+06*	*1,700*	*1.70E+05*	*4.90E+06*	*1.80E+06*	*1.80E+06*	*1.80E+06*	*2.90E+08*	*2.60E+07*	*30,000*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	440 UJ
Acenaphthene	83-32-9	*NA*	*8,700*	*NA*	*3.00E+05*	*1.90E+08*	*8.10E+07*	*8.10E+07*	*8.10E+07*	*1.40E+10*	*4.10E+07*	*2.00E+05*	*8.80E+05*	*3.50E+08*	*9.70E+07*	*9.70E+07*	*9.70E+07*	*6.20E+09*	*1.30E+08*	*3.60E+06*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Acenaphthylene	208-96-8	*NA*	*ID*	*NA*	*5,900*	*1.60E+06*	*2.20E+06*	*2.20E+06*	*2.20E+06*	*2.30E+09*	*1.60E+06*	*DATA*	*17,000*	*3.00E+06*	*2.70E+06*	*2.70E+06*	*2.70E+06*	*1.00E+09*	*5.20E+06*	*DATA*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Anthracene	120-12-7	*NA*	*ID*	*NA*	*41,000*	*1.00E+09*	*1.40E+09*	*1.40E+09*	*1.40E+09*	*6.70E+10*	*2.30E+08*	*1.30E+07*	*41,000*	*1.00E+09*	*1.60E+09*	*1.60E+09*	*1.60E+09*	*2.90E+10*	*7.30E+08*	*2.20E+08*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Benzo(a)anthracene	56-55-3	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*20,000*	*1.60E+05 (MM)*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*80,000*	*1.10E+07*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Benzo(a)pyrene	50-32-8	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*1.50E+06*	*2,000*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*1.90E+06*	*8,000*	*NA*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Benzo(b)fluoranthene	205-99-2	*NA*	*NLL*	*NA*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*20,000*	*NA*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*80,000*	*NA*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Benzo(g,h,i)perylene	191-24-2	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*8.00E+08*	*2.50E+06*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*3.50E+08*	*7.00E+06*	*NA*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Benzo(k)fluoranthene	207-08-9	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*2.00E+05*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*8.00E+05*	*NA*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Chrysene	218-01-9	*NA*	*NLL*	*NA*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*2.00E+06*	*NA*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*8.00E+06*	*NA*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Dibenzo(a,h)anthracene	53-70-3	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*2,000*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*8,000*	*NA*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Fluoranthene	206-44-0	*NA*	*5,500*	*NA*	*7.30E+05*	*1.00E+09*	*7.40E+08*	*7.40E+08*	*7.40E+08*	*9.30E+09*	*4.60E+07*	*NA*	*7.30E+05*	*1.00E+09*	*8.90E+08*	*8.80E+08*	*8.80E+08*	*4.10E+09*	*1.30E+08*	*NA*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Fluorene	86-73-7	*NA*	*5,300*	*NA*	*3.90E+05*	*5.80E+08*	*1.30E+08*	*1.30E+08*	*1.30E+08*	*9.30E+09*	*2.70E+07*	*4.70E+05*	*8.90E+05*	*1.00E+09*	*1.50E+08*	*1.50E+08*	*1.50E+08*	*4.10E+09*	*8.70E+07*	*8.30E+06*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Indeno(1,2,3-cd)pyrene	193-39-5	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*20,000*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*80,000*	*NA*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Naphthalene	91-20-3	*NA*	*730*	*NA*	*35,000*	*2.50E+05*	*3.00E+05*	*3.00E+05*	*3.00E+05*	*2.00E+08*	*1.60E+07*	*67 (M*)*	*1.00E+05*	*4.70E+05*	*3.50E+05*	*3.50E+05*	*3.50E+05*	*8.80E+07*	*5.20E+07*	*1,900*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Phenanthrene	85-01-8	*NA*	*2,100*	*NA*	*56,000*	*2.80E+06*	*1.60E+05*	*1.60E+05*	*1.60E+05*	*6.70E+06*	*1.60E+06*	*1,700*	*1.60E+05*	*5.10E+06*	*1.90E+05*	*1.90E+05*	*1.90E+05*	*2.90E+06*	*5.20E+06*	*29,000*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Pyrene	129-00-0	*NA*	*ID*	*NA*	*4.80E+05*	*1.00E+09*	*6.50E+08*	*6.50E+08*	*6.50E+08*	*6.70E+09*	*2.90E+07*	*2.50E+07*	*4.80E+05*	*1.00E+09*	*7.80E+08*	*7.80E+08*	*7.80E+08*	*2.90E+09*	*8.40E+07*	*4.40E+08*	330 UJ	330 UJ	330 U	330 U	330 U	330 U	330 UJ
Metals, Total	***CAS Number***																										
Arsenic (B)	7440-38-2	*5,800*	*4,600*	*NA*	*4,600*	*NLV*	*NLV*	*NLV*	*NLV*	*7.20E+05*	*7,600*	*NA*	*4,600*	*NLV*	*NLV*	*NLV*	*NLV*	*9.10E+05*	*37,000*	*NA*	*5,500 J*	2,000 U	2,000 U	2,000 U	**12,000**	*5,100*	2,000 U
Barium (B)	7440-39-3	*75,000*	*4.40E+05 (G)*	*NA*	*1.30E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*3.30E+08*	*3.70E+07*	*NA*	*1.30E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*1.50E+08*	*1.30E+08*	*NA*	14,000	15,000	11,000	15,000	16,000	22,000	8,200
Cadmium (B)	7440-43-9	*1,200*	*3,600 (G,X)*	*NA*	*6,000*	*NLV*	*NLV*	*NLV*	*NLV*	*1.70E+06*	*5.50E+05*	*NA*	*6,000*	*NLV*	*NLV*	*NLV*	*NLV*	*2.20E+06*	*2.10E+06*	*NA*	200 U	200 U	470	250	360	1,700	200 U
Chromium, Total (B, H)	7440-47-3	*18,000 (total)*	*3,300*	*NA*	*30,000*	*NLV*	*NLV*	*NLV*	*NLV*	*2.60E+05*	*2.50E+06*	*NA*	*30,000*	*NLV*	*NLV*	*NLV*	*NLV*	*2.40E+05*	*9.20E+06*	*NA*	**27,000**	*6,800*	**39,000**	**19,000**	**570,000**	**62,000**	*13,000*
Copper (B)	7440-50-8	*32,000*	*75,000 (G)*	*NA*	*5.80E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.00E+07*	*NA*	*5.80E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*5.90E+07*	*7.30E+07*	*NA*	56,000 J	10,000	31,000	15,000	**400,000**	**98,000**	15,000
Lead (B)	7439-92-1	*21,000*	*5.10E+06 (G,X)*	*NA*	*7.00E+05*	*NLV*	*NLV*	*NLV*	*NLV*	*1.00E+08*	*4.00E+05*	*NA*	*7.00E+05*	*NLV*	*NLV*	*NLV*	*NLV*	*4.40E+07*	*9.00E+05*	*NA*	10,000	5,700	20,000	14,000	39,000	32,000	12,000
Mercury (Total) (B)	7439-97-6	*130*	*50 (M); 1.2*	*NA*	*1,700*	*48,000*	*52,000*	*52,000*	*52,000*	*2.00E+07*	*1.60E+05*	*22 (M*)*	*1,700*	*89,000*	*62,000*	*62,000*	*62,000*	*8.80E+06*	*5.80E+05*	*390 (M*)*	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Selenium (B)	7782-49-2	*410*	*400*	*NA*	*4,000*	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.60E+06*	*NA*	*4,000*	*NLV*	*NLV*	*NLV*	*NLV*	*5.90E+07*	*9.60E+06*	*NA*	**640**	**630**	**2,600**	**670**	**10,000**	**3,600**	**730**
Silver (B)	7440-22-4	*1,000*	*100 (M); 27*	*NA*	*4,500*	*NLV*	*NLV*	*NLV*	*NLV*	*6.70E+06*	*2.50E+06*	*NA*	*13,000*	*NLV*	*NLV*	*NLV*	*NLV*	*2.90E+06*	*9.00E+06*	*NA*	460 U	460 U	480 U	520 U	390 U	470 U	430 U
Zinc (B)	7440-66-6	*47,000*	*1.70E+05 (G)*	*NA*	*2.40E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*1.70E+08*	*NA*	*5.00E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*6.30E+08*	*NA*	20,000	14,000	99,000	50,000	94,000	140,000	26,000
Solids, Total (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*93*	*91*	*95*	*95*	*97*	*91*	*95*

Results expressed in µg/Kg dry weight.
Bolded values exceed an applicable criterion.
Italicized values are below Statewide Default Background Level but exceed an applicable criterion or screening level.

Data Qualifiers:
J Estimated value
U Not detected

Footnotes/Abbreviations:
[1] *Part 201 Soil Generic Cleanup Criteria and Screening Levels/Part 213 Risk-based Screening Levels, December 30, 2013 (GSI Criteria Updated June 25, 2018).*
[2] *EGLE Volatilization to Indoor Air Pathway Screening Levels, September 4, 2020.*
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated criterion.
(G) Criterion dependent on receiving surface water hardness; calculated criteria based on water hardness of 150 mg/L.
(H) Data provided for total chromium only; evaluated against hexavalent Chromium criteria.
(M) Calculated criterion is below the target detection limit (TDL); first number is the criterion (TDL), the second is the risk-based value.
(M*) The VIAP SL may be below TDL. In accordance with Sec. 20120a(10) when the TDL for a hazardous substance is greater than the developed VIAP SL, the TDL is used to evaluate the risk posed from the pathway.
(X) Criterion is not protective for surface water used as a drinking water source.
(MM) Hazardous substance is a carcinogen with a mutagenic mode of action. The cancer potency values used in calculating VIAP SLs are modified using age-dependent adjustment factors for those carcinogenic chemicals identified as mutagenic.
Csat saturation concentration
DC direct contact
DWP drinking water protection
GSIP groundwater surface water interface protection
ID Insufficient data to develop criterion.
MST meter source thickness
NA not available
NLL Not likely to leach under most soil conditions.
NLV Not likely to volatilize under most conditions.
PSI particulate soil inhalation
SDBL statewide default background levels
SL screening level
SVIAI soil volatilization to indoor air inhalation
VIAP volatilization to indoor air pathway
VSIC volatile soil inhalation criteria

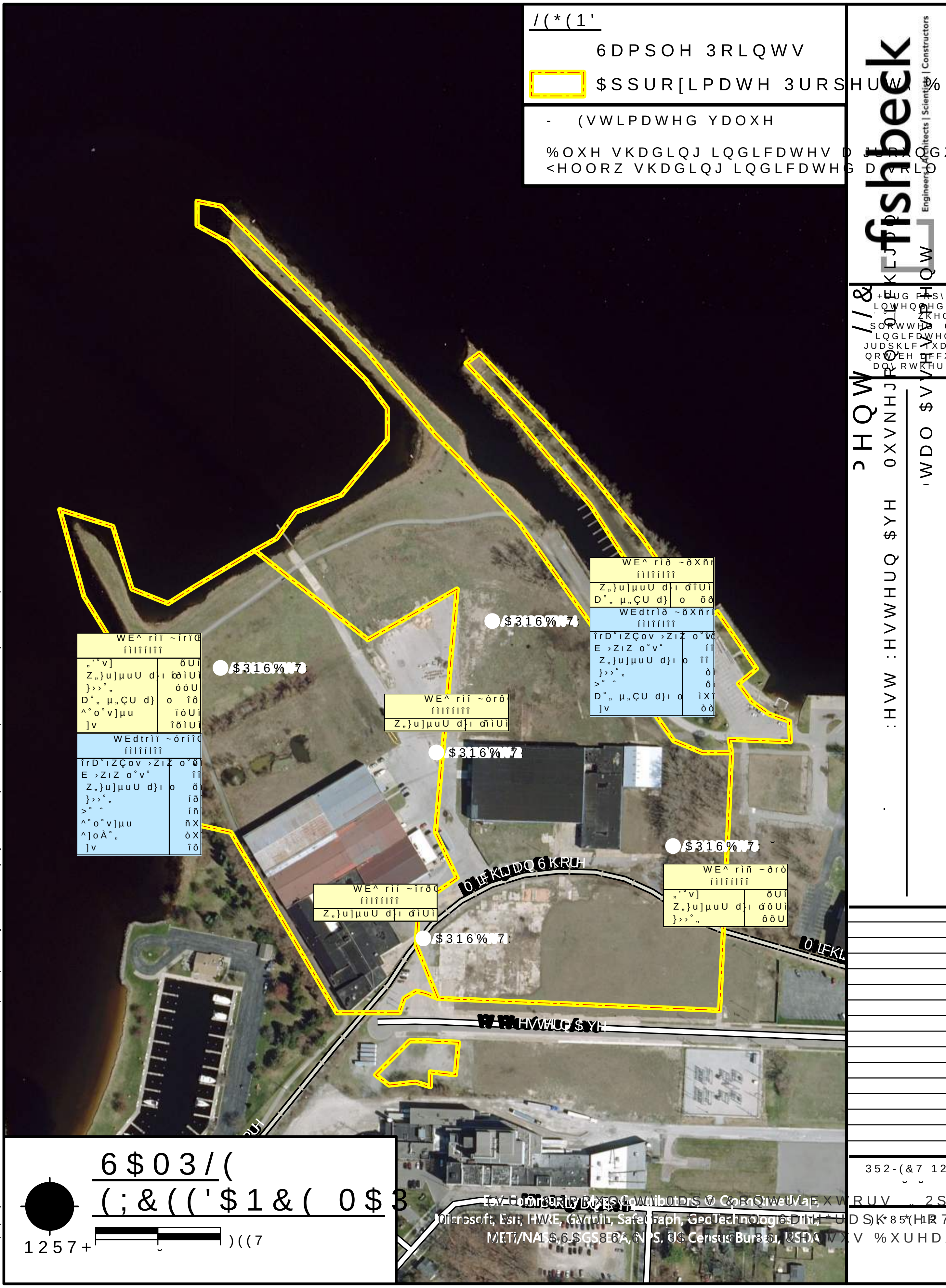
Soil Data Summary
Direct Contact Evaluation
1148 & 1204 West Western Ave., Muskegon, Muskegon County, Michigan
August 2021

Sample Location:					*Residential*								*Nonresidential*								AP-SS-8	AP-SS-9	AP-SS-10	AP-SS-11	AP-SS-12	AP-SS-13
Laboratory ID:																					21H0909-08	21H0909-09	21H0909-10	21H0909-11	21H0909-12	21H0909-13
Collection Date:		*SDBL [1]*	*GSIP Criteria [1]*	*Soil Csat SL [1]*	*DWP Criteria [1]*	*SVIAI Criteria [1]*	*Inf. Source VSIC [1]*	*Finite VSIC - 5 MST [1]*	*Finite VSIC - 2 MST [1]*	*PSI Criteria [1]*	*DC Criteria [1]*	*Soil VIAP SL [2]*	*DWP Criteria [1]*	*SVIAI Criteria [1]*	*Inf. Source VSIC [1]*	*Finite VSIC - 5 MST [1]*	*Finite VSIC - 2 MST [1]*	*PSI Criteria [1]*	*DC Criteria [1]*	*Soil VIAP SL [2]*	08/20/21	08/20/21	08/20/21	08/20/21	08/20/21	08/20/21
Polynuclear Aromatic Compounds	***CAS Number***																									
2-Methylnaphthalene	91-57-6	*NA*	*4,200*	*NA*	*57,000*	*2.70E+06*	*1.50E+06*	*1.50E+06*	*1.50E+06*	*6.70E+08*	*8.10E+06*	*1,700*	*1.70E+05*	*4.90E+06*	*1.80E+06*	*1.80E+06*	*1.80E+06*	*2.90E+08*	*2.60E+07*	*30,000*	430 U	330 U	430 U	430 UJ	330 UJ	330 U
Acenaphthene	83-32-9	*NA*	*8,700*	*NA*	*3.00E+05*	*1.90E+08*	*8.10E+07*	*8.10E+07*	*8.10E+07*	*1.40E+10*	*4.10E+07*	*2.00E+05*	*8.80E+05*	*3.50E+08*	*9.70E+07*	*9.70E+07*	*9.70E+07*	*6.20E+09*	*1.30E+08*	*3.60E+06*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Acenaphthylene	208-96-8	*NA*	*ID*	*NA*	*5,900*	*1.60E+06*	*2.20E+06*	*2.20E+06*	*2.20E+06*	*2.30E+09*	*1.60E+06*	*DATA*	*17,000*	*3.00E+06*	*2.70E+06*	*2.70E+06*	*2.70E+06*	*1.00E+09*	*5.20E+06*	*DATA*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Anthracene	120-12-7	*NA*	*ID*	*NA*	*41,000*	*1.00E+09*	*1.40E+09*	*1.40E+09*	*1.40E+09*	*6.70E+10*	*2.30E+08*	*1.30E+07*	*41,000*	*1.00E+09*	*1.60E+09*	*1.60E+09*	*1.60E+09*	*2.90E+10*	*7.30E+08*	*2.20E+08*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Benzo(a)anthracene	56-55-3	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*20,000*	*1.60E+05 (MM)*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*80,000*	*1.10E+07*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Benzo(a)pyrene	50-32-8	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*1.50E+06*	*2,000*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*1.90E+06*	*8,000*	*NA*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Benzo(b)fluoranthene	205-99-2	*NA*	*NLL*	*NA*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*20,000*	*NA*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*80,000*	*NA*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Benzo(g,h,i)perylene	191-24-2	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*8.00E+08*	*2.50E+06*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*3.50E+08*	*7.00E+06*	*NA*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Benzo(k)fluoranthene	207-08-9	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*2.00E+05*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*8.00E+05*	*NA*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Chrysene	218-01-9	*NA*	*NLL*	*NA*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*2.00E+06*	*NA*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*8.00E+06*	*NA*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Dibenzo(a,h)anthracene	53-70-3	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*2,000*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*8,000*	*NA*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Fluoranthene	206-44-0	*NA*	*5,500*	*NA*	*7.30E+05*	*1.00E+09*	*7.40E+08*	*7.40E+08*	*7.40E+08*	*9.30E+09*	*4.60E+07*	*NA*	*7.30E+05*	*1.00E+09*	*8.90E+08*	*8.80E+08*	*8.80E+08*	*4.10E+09*	*1.30E+08*	*NA*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Fluorene	86-73-7	*NA*	*5,300*	*NA*	*3.90E+05*	*5.80E+08*	*1.30E+08*	*1.30E+08*	*1.30E+08*	*9.30E+09*	*2.70E+07*	*4.70E+05*	*8.90E+05*	*1.00E+09*	*1.50E+08*	*1.50E+08*	*1.50E+08*	*4.10E+09*	*8.70E+07*	*8.30E+06*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Indeno(1,2,3-cd)pyrene	193-39-5	*NA*	*NLL*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*20,000*	*NA*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*80,000*	*NA*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Naphthalene	91-20-3	*NA*	*730*	*NA*	*35,000*	*2.50E+05*	*3.00E+05*	*3.00E+05*	*3.00E+05*	*2.00E+08*	*1.60E+07*	*67 (M*)*	*1.00E+05*	*4.70E+05*	*3.50E+05*	*3.50E+05*	*3.50E+05*	*8.80E+07*	*5.20E+07*	*1,900*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Phenanthrene	85-01-8	*NA*	*2,100*	*NA*	*56,000*	*2.80E+06*	*1.60E+05*	*1.60E+05*	*1.60E+05*	*6.70E+06*	*1.60E+06*	*1,700*	*1.60E+05*	*5.10E+06*	*1.90E+05*	*1.90E+05*	*1.90E+05*	*2.90E+06*	*5.20E+06*	*29,000*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Pyrene	129-00-0	*NA*	*ID*	*NA*	*4.80E+05*	*1.00E+09*	*6.50E+08*	*6.50E+08*	*6.50E+08*	*6.70E+09*	*2.90E+07*	*2.50E+07*	*4.80E+05*	*1.00E+09*	*7.80E+08*	*7.80E+08*	*7.80E+08*	*2.90E+09*	*8.40E+07*	*4.40E+08*	330 U	330 U	330 U	330 UJ	330 UJ	330 U
Metals, Total	***CAS Number***																									
Arsenic (B)	7440-38-2	*5,800*	*4,600*	*NA*	*4,600*	*NLV*	*NLV*	*NLV*	*NLV*	*7.20E+05*	*7,600*	*NA*	*4,600*	*NLV*	*NLV*	*NLV*	*NLV*	*9.10E+05*	*37,000*	*NA*	2,900	2,000 U	2,000 U	2,200	2,400	**13,000**
Barium (B)	7440-39-3	*75,000*	*4.40E+05 (G)*	*NA*	*1.30E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*3.30E+08*	*3.70E+07*	*NA*	*1.30E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*1.50E+08*	*1.30E+08*	*NA*	17,000	4,300	7,500	9,400	10,000	16,000
Cadmium (B)	7440-43-9	*1,200*	*3,600 (G,X)*	*NA*	*6,000*	*NLV*	*NLV*	*NLV*	*NLV*	*1.70E+06*	*5.50E+05*	*NA*	*6,000*	*NLV*	*NLV*	*NLV*	*NLV*	*2.20E+06*	*2.10E+06*	*NA*	400	200 U	200 U	570	240	**5,200**
Chromium, Total (B, H)	7440-47-3	*18,000 (total)*	*3,300*	*NA*	*30,000*	*NLV*	*NLV*	*NLV*	*NLV*	*2.60E+05*	*2.50E+06*	*NA*	*30,000*	*NLV*	*NLV*	*NLV*	*NLV*	*2.40E+05*	*9.20E+06*	*NA*	**62,000**	*11,000*	**28,000**	**76,000**	**100,000**	**1,600,000**
Copper (B)	7440-50-8	*32,000*	*75,000 (G)*	*NA*	*5.80E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.00E+07*	*NA*	*5.80E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*5.90E+07*	*7.30E+07*	*NA*	48,000	12,000	68,000	38,000	59,000	**380,000**
Lead (B)	7439-92-1	*21,000*	*5.10E+06 (G,X)*	*NA*	*7.00E+05*	*NLV*	*NLV*	*NLV*	*NLV*	*1.00E+08*	*4.00E+05*	*NA*	*7.00E+05*	*NLV*	*NLV*	*NLV*	*NLV*	*4.40E+07*	*9.00E+05*	*NA*	25,000	4,200	8,300	16,000	18,000	240,000
Mercury (Total) (B)	7439-97-6	*130*	*50 (M); 1.2*	*NA*	*1,700*	*48,000*	*52,000*	*52,000*	*52,000*	*2.00E+07*	*1.60E+05*	*22 (M*)*	*1,700*	*89,000*	*62,000*	*62,000*	*62,000*	*8.80E+06*	*5.80E+05*	*390 (M*)*	50 U	50 U	50 U	50 U	50 U	**140**
Selenium (B)	7782-49-2	*410*	*400*	*NA*	*4,000*	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.60E+06*	*NA*	*4,000*	*NLV*	*NLV*	*NLV*	*NLV*	*5.90E+07*	*9.60E+06*	*NA*	**3,700**	**4,400**	**1,300**	**2,700**	560 U	**1,200**
Silver (B)	7440-22-4	*1,000*	*100 (M); 27*	*NA*	*4,500*	*NLV*	*NLV*	*NLV*	*NLV*	*6.70E+06*	*2.50E+06*	*NA*	*13,000*	*NLV*	*NLV*	*NLV*	*NLV*	*2.90E+06*	*9.00E+06*	*NA*	520 U	500 U	460 U	520 U	470 U	**2,900**
Zinc (B)	7440-66-6	*47,000*	*1.70E+05 (G)*	*NA*	*2.40E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*1.70E+08*	*NA*	*5.00E+06*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*6.30E+08*	*NA*	74,000	15,000	24,000	66,000	67,000	**1,900,000**
Solids, Total (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*97*	*94*	*97*	*96*	*86*	*88*

Results expressed in µg/Kg dry weight.
Bolded values exceed an applicable criterion.
Italicized values are below Statewide Default Background Level but exceed an applicable criterion or screening level.

Data Qualifiers:
J Estimated value
U Not detected

Footnotes/Abbreviations:
[1] Part 201 Soil Generic Cleanup Criteria and Screening Levels/Part 213 Risk-based Screening Levels, December 30, 2013 (GSI Criteria Updated June 25, 2018).
[2] EGLE Volatilization to Indoor Air Pathway Screening Levels, September 4, 2020.
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated criterion.
(G) Criterion dependent on receiving surface water hardness; calculated criteria based on water hardness of 150 mg/L.
(H) Data provided for total chromium only; evaluated against hexavalent Chromium criteria.
(M) Calculated criterion is below the target detection limit (TDL); first number is the criterion (TDL), the second is the risk-based value.
(M*) The VIAP SL may be below TDL. In accordance with Sec. 20120a(10) when the TDL for a hazardous substance is greater than the developed VIAP SL, the TDL is used to evaluate the risk posed from the pathway.
(X) Criterion is not protective for surface water used as a drinking water source.
(MM) Hazardous substance is a carcinogen with a mutagenic mode of action. The cancer potency values used in calculating VIAP SLs are modified using age-dependent adjustment factors for those carcinogenic chemicals identified as mutagenic.
Csat saturation concentration
DC direct contact
DWP drinking water protection
GSIP groundwater surface water interface protection
ID Insufficient data to develop criterion.
MST meter source thickness
NA not available
NLL Not likely to leach under most soil conditions.
NLV Not likely to volatilize under most conditions.
PSI particulate soil inhalation
SDBL statewide default background levels
SL screening level
SVIAI soil volatilization to indoor air inhalation
VIAP volatilization to indoor air pathway
VSIC volatile soil inhalation criteria



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1257+
fishbeck
Engineers | Architects | Scientists | Constructors

Table 1 - Soil Data Summary
Leestma Management, LLC, 1148 & 1204 West Western Ave., Muskegon, Muskegon County, Michigan
October 2022

Sample Location: *Depth Interval (ft):* *Investigative/Field Duplicate/QC:* *Laboratory ID:* *Collection Date:*		APNSB-01 (2-4) Investigative 22102086-07 10/21/22	APNSB-02 (6-8) Investigative 22102086-08 10/21/22	APNSB-03 (1-3) Investigative 22102086-09 10/21/22	APNSB-04 (4.5-6.5) Investigative 22102086-10 10/21/22	APNSB-05 (4-6) Investigative 22102086-11 10/21/22	Field Blank QC 22102086-12 10/21/22	*Statewide Default Background Levels [1]*	*Drinking Water Protection Criteria [1]*	*GSIP Criteria [1]*	*Soil Volatilization to Indoor Air Inhalation Criteria [1]*	*Infinite Source VSIC [1]*	*Finite VSIC for 5 Meter Source Thickness [1]*	*Finite VSIC for 2 Meter Source Thickness [1]*	*Particulate Soil Inhalation Criteria [1]*	*Direct Contact Criteria [1]*	*Soil Saturation Concentration SL [1]*	*Soil VIAP SL [2]*
Volatile Organic Compounds	***CAS Number***																	
1,1,1,2-Tetrachloroethane	630-20-6	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,500*	*ID*	*6,200*	*36,000*	*54,000*	*1.00E+05*	*4.20E+08*	*4.80E+05 (C)*	*4.40E+05*	*3.2 (M*)*
1,1,1-Trichloroethane	71-55-6	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*4,000*	*1,800*	*2.50E+05*	*3.80E+06*	*1.20E+07*	*2.80E+07*	*6.70E+10*	*5.00E+08 (C)*	*4.60E+05*	*450 (EE)*
1,1,2,2-Tetrachloroethane	79-34-5	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*170*	*1,600 (X)*	*4,300*	*10,000*	*10,000*	*14,000*	*5.40E+07*	*53,000*	*8.70E+05*	*2.7 (M*)*
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*9.00E+06 (C)*	*1,700*	*5.10E+06 (C)*	*1.80E+08*	*8.80E+08*	*2.10E+09*	*5.10E+12*	*1.00E+09 (C,D)*	*5.50E+05*	*860*
1,1,2-Trichloroethane	79-00-5	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*100*	*6,600 (X)*	*4,600*	*17,000*	*21,000*	*44,000*	*1.90E+08*	*1.80E+05*	*9.20E+05*	*0.37 (M*)*
1,1-Dichloroethane	75-34-3	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*18,000*	*15,000*	*2.30E+05*	*2.10E+06*	*5.90E+06*	*1.40E+07*	*3.30E+10*	*2.70E+07 (C)*	*8.90E+05*	*2.6 (M*)*
1,1-Dichloroethene	75-35-4	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*140*	*2,600*	*62*	*1,100*	*5,300*	*13,000*	*6.20E+07*	*2.00E+05*	*5.70E+05*	*12 (M*)*
1,2,3-Trichloropropane	96-18-4	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*840*	*NA*	*4,000*	*9,200*	*9,200*	*11,000*	*2.00E+07*	*1.30E+06 (C)*	*8.30E+05*	*2.6 (M*)*
1,2,4-Trichlorobenzene	120-82-1	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*4,200*	*5,900 (X)*	*9.60E+06 (C)*	*2.80E+07*	*2.80E+07*	*2.80E+07*	*2.50E+10*	*9.90E+05 (DD)*	*1.10E+06*	*53 (M*)*
1,2,4-Trimethylbenzene	95-63-6	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*2,100*	*570*	*4.30E+06 (C)*	*2.10E+07*	*5.00E+08*	*5.00E+08*	*8.20E+10*	*3.20E+07 (C)*	*1.10E+05*	*150 (JT)*
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*10 (M); 4.0*	*ID*	*220*	*260*	*260*	*260*	*5.60E+05*	*4,400 (C)*	*1,200*	*DATA*
1,2-Dibromoethane (EDB)	106-93-4	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*20 (M); 1.0*	*110 (X)*	*670*	*1,700*	*1,700*	*3,300*	*1.40E+07*	*92*	*8.90E+05*	*0.074 (M*)*
1,2-Dichlorobenzene	95-50-1	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*14,000*	*280*	*1.10E+07 (C)*	*3.90E+07*	*3.90E+07*	*5.20E+07*	*1.00E+11*	*1.90E+07 (C)*	*2.10E+05*	*1,500*
1,2-Dichloroethane	107-06-2	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*100*	*7,200 (X)*	*2,100*	*6,200*	*11,000*	*26,000*	*1.20E+08*	*91,000*	*1.20E+06*	*0.82 (M*)*
1,2-Dichloropropane	78-87-5	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*100*	*4,600 (X)*	*4,000*	*25,000*	*50,000*	*1.10E+05*	*2.70E+08*	*1.40E+05*	*5.50E+05*	*2.1 (M*)*
1,3,5-Trimethylbenzene	108-67-8	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*1,800*	*1,100*	*2.60E+06 (C)*	*1.60E+07*	*3.80E+08*	*3.80E+08*	*8.20E+10*	*3.20E+07 (C)*	*94,000*	*100 (JT)*
1,3-Dichlorobenzene	541-73-1	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*170*	*680*	*26,000*	*79,000*	*79,000*	*1.10E+05*	*2.00E+08*	*2.00E+05 (C)*	*1.70E+05*	*10 (M*)*
1,3-Dichloropropene, cis-	10061-01-5	20 U	21 U	23 U	22 U	20 U	30 U	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, trans-	10061-02-6	20 U	21 U	23 U	22 U	20 U	30 U	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene (Total)	542-75-6	40 U	42 U	46 U	44 U	40 U	60 U	*NA*	*170*	*180 (X)*	*1,000*	*18,000*	*68,000*	*1.60E+05*	*7.80E+08*	*10,000*	*6.20E+05*	*3.1 (J,M*)*
1,4-Dichlorobenzene	106-46-7	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,700*	*360*	*19,000*	*77,000*	*77,000*	*1.10E+05*	*4.50E+08*	*4.00E+05*	*NA*	*23 (M*)*
2-Butanone (MEK)	78-93-3	140 U	140 U	150 U	140 U	140 U	200 U	*NA*	*2.60E+05*	*44,000*	*5.40E+07 (C)*	*2.90E+07*	*2.90E+07*	*3.50E+07*	*6.70E+10*	*1.20E+08 (C,DD)*	*2.70E+07*	*31,000 (DD*)*
2-Hexanone	591-78-6	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*20,000*	*ID*	*9.90E+05*	*1.10E+06*	*1.10E+06*	*1.40E+06*	*2.70E+09*	*3.20E+07 (C)*	*2.50E+06*	*210 (M*)*
2-Methylnaphthalene	91-57-6	68 U	70 U	36 J	44 J	68 U	100 U	*NA*	*57,000*	*4,200*	*2.70E+06*	*1.50E+06*	*1.50E+06*	*1.50E+06*	*6.70E+08*	*8.10E+06*	*NA*	*1,700*
4-Methyl-2-pentanone (MIBK)	108-10-1	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*36,000*	*ID*	*3.70E+07 (C)*	*4.50E+07*	*4.50E+07*	*6.70E+07*	*1.40E+11*	*5.60E+07 (C)*	*2.70E+06*	*3,300*
Acetone	67-64-1	140	170	76 U	170	180	340	*NA*	*15,000*	*34,000*	*2.90E+08 (C)*	*1.30E+08*	*1.30E+08*	*1.90E+08*	*3.90E+11*	*2.30E+07*	*1.10E+08*	*2.60E+05 (EE)*
Acrylonitrile	107-13-1	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*100 (M); 52*	*100 (M); 40*	*6,600*	*5,000*	*5,100*	*10,000*	*4.60E+07*	*16,000*	*8.30E+06*	*1.2 (M*)*
Benzene	71-43-2	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*100*	*4,000 (X)*	*1,600*	*13,000*	*34,000*	*79,000*	*3.80E+08*	*1.80E+05*	*4.00E+05*	*1.7 (M*)*
Bromochloromethane	74-97-5	20 U	21 U	23 U	22 U	20 U	30 U	--	--	--	--	--	--	--	--	--	---	--
Bromodichloromethane	75-27-4	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,600 (W)*	*ID*	*1,200*	*9,100*	*9,700*	*19,000*	*8.40E+07*	*1.10E+05*	*1.50E+06*	*0.61 (M*)*
Bromoform	75-25-2	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,600 (W)*	*ID*	*1.50E+05*	*9.00E+05*	*9.00E+05*	*9.00E+05*	*2.80E+09*	*8.20E+05*	*8.70E+05*	*45 (M*)*
Bromomethane	74-83-9	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*200*	*100*	*860*	*11,000*	*57,000*	*1.40E+05*	*3.30E+08*	*3.20E+05*	*2.20E+06*	*0.90 (M*)*
Carbon disulfide	75-15-0	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*16,000*	*ID*	*76,000*	*1.30E+06*	*7.90E+06*	*1.90E+07*	*4.70E+10*	*7.20E+06 (C,DD)*	*2.80E+05*	*52 (M*)*
Carbon tetrachloride	56-23-5	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*100*	*760 (X)*	*190*	*3,500*	*12,000*	*28,000*	*1.30E+08*	*96,000*	*3.90E+05*	*0.31 (M*)*
Chlorobenzene	108-90-7	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*2,000*	*500*	*1.20E+05*	*7.70E+05*	*9.90E+05*	*2.10E+06*	*4.70E+09*	*4.30E+06 (C)*	*2.60E+05*	*82*
Chloroethane	75-00-3	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*8,600*	*22,000 (X)*	*2.90E+06 (C)*	*3.00E+07*	*1.20E+08*	*2.80E+08*	*6.70E+11*	*2.60E+06 (C)*	*9.50E+05*	*330*
Chloroform	67-66-3	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,600 (W)*	*7,000*	*7,200*	*45,000*	*1.20E+05*	*2.70E+05*	*1.30E+09*	*1.20E+06*	*1.50E+06*	*0.26 (M*)*
Chloromethane	74-87-3	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*5,200*	*ID*	*2,300*	*40,000*	*4.10E+05*	*1.00E+06*	*4.90E+09*	*1.60E+06 (C)*	*1.10E+06*	*6.9 (M*)*
cis-1,2-Dichloroethene	156-59-2	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,400*	*12,000*	*22,000*	*1.80E+05*	*4.20E+05*	*9.90E+05*	*2.30E+09*	*2.50E+06 (C)*	*6.40E+05*	*2.1 (M*)*
Dibromochloromethane	124-48-1	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,600 (W)*	*ID*	*3,900*	*24,000*	*24,000*	*33,000*	*1.30E+08*	*1.10E+05*	*6.10E+05*	*0.40 (M*,MM)*
Dibromomethane	74-95-3	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,600*	*NA*	*ID*	*ID*	*ID*	*ID*	*ID*	*2.50E+06 (C)*	*2.00E+06*	*3.5 (M*)*
Dichlorodifluoromethane	75-71-8	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*95,000*	*ID*	*9.00E+05*	*5.30E+07*	*5.50E+08*	*1.40E+09*	*3.30E+12*	*5.20E+07 (C)*	*1.00E+06*	*12 (M*)*
Diethyl ether	60-29-7	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*200*	*ID*	*2.80E+07 (C)*	*8.50E+07*	*1.50E+08*	*3.40E+08*	*8.00E+11*	*1.10E+08 (C)*	*7.40E+06*	*350*
Ethylbenzene	100-41-4	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,500*	*360*	*87,000*	*7.20E+05*	*1.00E+06*	*2.20E+06*	*1.00E+10*	*2.20E+07 (C)*	*1.40E+05*	*12 (M*)*
Hexachloroethane	67-72-1	68 U	70 U	76 U	72 U	68 U	100 U	*NA*	*430*	*1,800 (X)*	*40,000*	*5.50E+05*	*9.30E+05*	*9.30E+05*	*2.30E+08*	*2.30E+05*	*NA*	*3.2 (M*)*
Iodomethane	74-88-4	340 U	350 U	380 U	360 U	340 U	500 U	--	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene (Cumene)	98-82-8	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*91,000*	*3,200*	*4.00E+05 (C)*	*1.70E+06*	*1.70E+06*	*2.80E+06*	*5.80E+09*	*2.50E+07 (C)*	*3.90E+05*	*3.8 (M*)*
Methyl-tert-butyl ether (MTBE)	1634-04-4	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*800*	*1.40E+05 (X)*	*9.90E+06 (C)*	*2.50E+07*	*3.90E+07*	*8.70E+07*	*2.00E+11*	*1.50E+06*	*5.90E+06*	*74 (M*)*
Methylene chloride	75-09-2	170 U	170 U	190 U	180 U	170 U	250 U	*NA*	*100*	*30,000 (X)*	*45,000*	*2.10E+05*	*5.90E+05*	*1.40E+06*	*6.60E+09*	*1.30E+06*	*2.30E+06*	*130*
n-Propylbenzene	103-65-1	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*1,600*	*ID*	*ID*	*ID*	*ID*	*ID*	*1.30E+09*	*2.50E+06*	*1.00E+07*	*1,800 (DD*)*
Naphthalene	91-20-3	68 U	70 U	76 U	89	68 U	100 U	*NA*	*35,000*	*730*	*2.50E+05*	*3.00E+05*	*3.00E+05*	*3.00E+05*	*2.00E+08*	*1.60E+07*	*NA*	*67 (M*)*
Styrene	100-42-5	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*2,700*	*2,100 (X)*	*2.50E+05*	*9.70E+05*	*9.70E+05*	*1.40E+06*	*5.50E+09*	*4.00E+05*	*5.20E+05*	*150*
Tetrachloroethene (PCE)	127-18-4	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*100*	*1,200 (X)*	*11,000*	*1.70E+05*	*4.80E+05*	*1.10E+06*	*2.70E+09*	*2.00E+05 (C)*	*88,000*	*6.2 (M*,EE)*
Toluene	108-88-3	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*16,000*	*5,400*	*3.30E+05 (C)*	*2.80E+06*	*5.10E+06*	*1.20E+07*	*2.70E+10*	*5.00E+07 (C)*	*2.50E+05*	*3,700*
trans-1,2-Dichloroethene	156-60-5	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*2,000*	*30,000 (X)*	*23,000*	*2.80E+05*	*8.30E+05*	*2.00E+06*	*4.70E+09*	*3.80E+06 (C)*	*1.40E+06*	*12 (M*)*
trans-1,4-Dichloro-2-butene	110-57-6	20 U	21 U	23 U	22 U	20 U	30 U	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*100*	*4,000 (X)*	*1,000*	*11,000*	*25,000*	*57,000*	*1.30E+08*	*1.10E+05 (DD)*	*5.00E+05*	*0.33 (M*,DD*)*
Trichlorofluoromethane	75-69-4	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*52,000*	*NA*	*2.80E+06 (C)*	*9.20E+07*	*6.30E+08*	*1.50E+09*	*3.80E+12*	*7.90E+07 (C)*	*5.60E+05*	*19 (M*)*
Vinyl acetate	108-05-4	170 U	170 U	190 U	180 U	170 U	250 U	*NA*	*13,000*	*NA*	*7.90E+05*	*1.70E+06*	*2.60E+06*	*5.80E+06*	*1.30E+10*	*5.80E+06 (C)*	*2.40E+06*	*160 (M*)*
Vinyl chloride	75-01-4	20 U	21 U	23 U	22 U	20 U	30 U	*NA*	*40*	*260 (X)*	*270*	*4,200*	*30,000*	*73,000*	*3.50E+08*	*3,800*	*4.90E+05*	*0.082 (M*,MM)*
Xylenes, meta- & para-	179601-23-1	41 U	42 U	46 U	43 U	41 U	60 U	--	--	--	--	--	--	--	--	--	--	--
Xylene, ortho-	95-47-6	20 U	21 U	23 U	22 U	20 U	30 U	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	1330-20-7	61 U	63 U	68 U	65 U	61 U	90 U	*NA*	*5,600*	*980*	*6.30E+06 (C)*	*4.60E+07*	*6.10E+07*	*1.30E+08*	*2.90E+11*	*4.10E+08 (C)*	*1.50E+05*	*280 (I)*

Table 1 - Soil Data Summary
Leestma Management, LLC, 1148 & 1204 West Western Ave., Muskegon, Muskegon County, Michigan
October 2022

Sample Location:		APNSB-01	APNSB-02	APNSB-03	APNSB-04	APNSB-05	Field Blank	*Statewide Default Background Levels [1]*	*Drinking Water Protection Criteria [1]*	*GSIP Criteria [1]*	*Soil Volatilization to Indoor Air Inhalation Criteria [1]*	*Infinite Source VSIC [1]*	*Finite VSIC for 5 Meter Source Thickness [1]*	*Finite VSIC for 2 Meter Source Thickness [1]*	*Particulate Soil Inhalation Criteria [1]*	*Direct Contact Criteria [1]*	*Soil Saturation Concentration SL [1]*	*Soil VIAP SL [2]*
Depth Interval (ft):		(2-4)	(6-8)	(1-3)	(4.5-6.5)	(4-6)												
Investigative/Field Duplicate/QC:		Investigative	Investigative	Investigative	Investigative	Investigative	QC											
Laboratory ID:		22102086-07	22102086-08	22102086-09	22102086-10	22102086-11	22102086-12											
Collection Date:		10/21/22	10/21/22	10/21/22	10/21/22	10/21/22	10/21/22											
Polynuclear Aromatic Compounds	***CAS Number***																	
2-Methylnaphthalene	91-57-6	4.4 U	47 U	4.6 U	4.5 U	62 U	--	*NA*	*57,000*	*4,200*	*2.70E+06*	*1.50E+06*	*1.50E+06*	*1.50E+06*	*6.70E+08*	*8.10E+06*	*NA*	*1,700*
Acenaphthene	83-32-9	4.4 U	47 U	4.6 U	30	62 U	--	*NA*	*3.00E+05*	*8,700*	*1.90E+08*	*8.10E+07*	*8.10E+07*	*8.10E+07*	*1.40E+10*	*4.10E+07*	*NA*	*2.00E+05*
Acenaphthylene	208-96-8	4.4 U	47 U	4.6 U	4.5 U	62 U	--	*NA*	*5,900*	*ID*	*1.60E+06*	*2.20E+06*	*2.20E+06*	*2.20E+06*	*2.30E+09*	*1.60E+06*	*NA*	*DATA*
Anthracene	120-12-7	4.4 U	47 U	4.6 U	210	62 U	--	*NA*	*41,000*	*ID*	*1.00E+09*	*1.40E+09*	*1.40E+09*	*1.40E+09*	*6.70E+10*	*2.30E+08*	*NA*	*1.30E+07*
Benzo(a)anthracene	56-55-3	8.3	47 U	4.6 U	230	65	--	*NA*	*NLL*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*20,000*	*NA*	*1.60E+05 (MM)*
Benzo(a)pyrene	50-32-8	7.2	47 U	4.6 U	180	70	--	*NA*	*NLL*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*1.50E+06*	*2,000*	*NA*	*NA*
Benzo(b)fluoranthene	205-99-2	8.8	47 U	4.6 U	210	130	--	*NA*	*NLL*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*20,000*	*NA*	*NA*
Benzo(g,h,i)perylene	191-24-2	4.9	47 U	4.6 U	120	89	--	*NA*	*NLL*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*8.00E+08*	*2.50E+06*	*NA*	*NA*
Benzo(k)fluoranthene	207-08-9	5.7	47 U	4.6 U	110	61 J	--	*NA*	*NLL*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*2.00E+05*	*NA*	*NA*
Chrysene	218-01-9	13	63	5.0	260	130	--	*NA*	*NLL*	*NLL*	*ID*	*ID*	*ID*	*ID*	*ID*	*2.00E+06*	*NA*	*NA*
Dibenzo(a,h)anthracene	53-70-3	4.4 U	47 U	4.6 U	19	62 U	--	*NA*	*NLL*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*2,000*	*NA*	*NA*
Fluoranthene	206-44-0	18	60	6.6	700	98	--	*NA*	*7.30E+05*	*5,500*	*1.00E+09*	*7.40E+08*	*7.40E+08*	*7.40E+08*	*9.30E+09*	*4.60E+07*	*NA*	*NA*
Fluorene	86-73-7	4.4 U	47 U	4.6 U	49	62 U	--	*NA*	*3.90E+05*	*5,300*	*5.80E+08*	*1.30E+08*	*1.30E+08*	*1.30E+08*	*9.30E+09*	*2.70E+07*	*NA*	*4.70E+05*
Indeno(1,2,3-cd)pyrene	193-39-5	4.4	47 U	4.6 U	150	71	--	*NA*	*NLL*	*NLL*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*20,000*	*NA*	*NA*
Naphthalene	91-20-3	4.4 U	47 U	4.6 U	4.5 U	62 U	--	*NA*	*35,000*	*730*	*2.50E+05*	*3.00E+05*	*3.00E+05*	*3.00E+05*	*2.00E+08*	*1.60E+07*	*NA*	*67 (M*)*
Phenanthrene	85-01-8	4.4 U	47 U	4.6 U	620	62 U	--	*NA*	*56,000*	*2,100*	*2.80E+06*	*1.60E+05*	*1.60E+05*	*1.60E+05*	*6.70E+06*	*1.60E+06*	*NA*	*1,700*
Pyrene	129-00-0	18	77	8.7	580	120	--	*NA*	*4.80E+05*	*ID*	*1.00E+09 (D)*	*6.50E+08*	*6.50E+08*	*6.50E+08*	*6.70E+09*	*2.90E+07*	*NA*	*2.50E+07*
Metals, Total	***CAS Number***																	
Arsenic (B)	7440-38-2	3,900	3,700	**9,100**	4,400	**9,100**	--	*5,800*	*4,600*	*4,600*	*NLV*	*NLV*	*NLV*	*NLV*	*7.20E+05*	*7,600*	*NA*	*NA*
Barium (B)	7440-39-3	9,500	18,000 J	9,200	7,000	14,000	--	*75,000*	*1.30E+06*	*4.40E+05 (G)*	*NLV*	*NLV*	*NLV*	*NLV*	*3.30E+08*	*3.70E+07*	*NA*	*NA*
Cadmium (B)	7440-43-9	76 J	790	1,000	120 J	150 U	--	*1,200*	*6,000*	*3,600 (G,X)*	*NLV*	*NLV*	*NLV*	*NLV*	*1.70E+06*	*5.50E+05*	*NA*	*NA*
Chromium, Total (B, H)	7440-47-3	**20,000**	**50,000**	**140,000**	**22,000**	**38,000**	--	*18,000 (total)*	*30,000*	*3,300*	*NLV*	*NLV*	*NLV*	*NLV*	*2.60E+05*	*2.50E+06*	*NA*	*NA*
Copper (B)	7440-50-8	19,000	32,000	**77,000**	48,000	**89,000**	--	*32,000*	*5.80E+06*	*75,000 (G)*	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.00E+07*	*NA*	*NA*
Lead (B)	7439-92-1	16,000	38,000	65,000	6,900	4,600	--	*21,000*	*7.00E+05*	*5.10E+06 (G,X)*	*NLV*	*NLV*	*NLV*	*NLV*	*1.00E+08*	*4.00E+05*	*NA*	*NA*
Mercury (Total) (B)	7439-97-6	19 U	24	**280**	**940**	19 U	--	*130*	*1,700*	*50 (M); 1.2*	*48,000*	*52,000*	*52,000*	*52,000*	*2.00E+07*	*1.60E+05*	*NA*	*22 (M*)*
Selenium (B)	7782-49-2	350 U	390 U	**36,000**	390 U	380 U	--	*410*	*4,000*	*400*	*NLV*	*NLV*	*NLV*	*NLV*	*1.30E+08*	*2.60E+06*	*NA*	*NA*
Silver (B)	7440-22-4	350 U	62 J	*410*	69 J	380 U	--	*1,000*	*4,500*	*100 (M); 27*	*NLV*	*NLV*	*NLV*	*NLV*	*6.70E+06*	*2.50E+06*	*NA*	*NA*
Zinc (B)	7440-66-6	19,000	30,000	**290,000**	15,000	7,000	--	*47,000*	*2.40E+06*	*1.70E+05 (G)*	*NLV*	*NLV*	*NLV*	*NLV*	*ID*	*1.70E+08*	*NA*	*NA*
Solids, Total (%)	--	*93.4*	*91.1*	*89.0*	*90.3*	*92.8*	--	--	--	--	--	--	--	--	--	--	--	--

Results expressed in µg/Kg dry weight.
Bolded values exceed Statewide Default Background Level and an applicable criterion or screening level.
Italicized values are below Statewide Default Background Level but exceed an applicable criterion or screening level.
Underlined parameters are classified as Polynuclear Aromatic Compounds.

Data Qualifiers:
J Estimated value
U Not detected

Footnotes/Abbreviations:
[1] Part 201 Residential Soil Generic Cleanup Criteria and Screening Levels/Part 213 Risk-based Screening Levels, December 30, 2013 (GSI Criteria Updated June 25, 2018).
[2] EGLE Volatilization to Indoor Air Pathway Screening Levels, September 4, 2020.
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated criterion.
(C) Value is screening level based on the chemical-specific generic soil saturation concentration (Csat).
(D) Calculated criterion exceeds 100 percent; hence it is reduced to 100 percent or 1.00E+09 parts per billion (ppb).
(G) Criterion dependent on receiving surface water (SW) hardness; calculated criteria based on water hardness of 150 mg/L.
(H) Data provided for total chromium only; evaluated against hexavalent chromium criteria.
(J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations must be added together for comparison to criteria.
(JT) Hazardous substance may be present in several isomer forms. The VIAP SL may be used for the individual isomer provided that it is the sole isomer detected; however, when multiple isomers are detected in a medium, the isomer-specific concentrations must be added together and compared to the most restrictive VIAP SL of the detected isomers.
(M) Calculated criterion is below the target detection limit (TDL); first number is the criterion (TDL), the second is the risk-based value.
(M*) The VIAP SL may be below TDL. In accordance with Sec. 20120a(10) when the TDL for a hazardous substance is greater than the developed VIAP SL, the TDL is used to evaluate the risk posed from the pathway.
(W) Concentrations of trihalomethanes must be added together to determine compliance with criterion.
(X) Criterion is not protective for SW used as a drinking water (DW) source.
(DD) Hazardous substance causes developmental effects. Residential direct contact criteria are protective of both prenatal and postnatal exposure.
(DD*) Hazardous substance causes developmental effects. Residential VIAP SLs are protective of both prenatal exposure using a pregnant female receptor and postnatal exposure using a child receptor. Prenatal developmental effects may occur after an acute (i.e. short- term) or full-term exposure.
(EE) The acceptable air concentration (AAC) for the volatile hazardous substances is not derived using standard equations. The hazardous substance may cause adverse human health effects for less than chronic exposures (i.e. short-term or acute). The AAC for these hazardous substances is the acute or intermediate minimum risk level (MRL) developed by the Agency for Toxic Substances and Disease Registry (ATSDR), a USEPA Integrated Risk Information System (IRIS) acute reference concentration, or an acute initial threshold screening level (ITSL) by the EGLE's Air Quality Division.
(MM) Hazardous substance is a carcinogen with a mutagenic mode of action. The cancer potency values used in calculating VIAP SLs are modified using age-dependent adjustment factors for those carcinogenic chemicals identified as mutagenic.
DATA Insufficient physical chemical parameters to calculate a VIAP SL for specified media. If detections are present in specified media, health-based soil vapor value should be used to evaluate risk.
GSIP groundwater surface water interface protection
ID Insufficient data to develop criterion.
NA not available
NLL Not likely to leach under most soil conditions.
NLV Not likely to volatilize under most conditions.
SL screening level
VIAP volatilization to indoor air pathway
VSIC volatile soil inhalation criteria

Table 2 - Groundwater Data Summary
Leestma Management, LLC, 1148 & 1204 West Western Ave., Muskegon, Muskegon County, Michigan
October 2022

Monitoring Location: *Depth Interval (ft):* *Laboratory ID:* *Collection Date:*		APNTW-01 (6.5-11.5) 22102086-01 10/21/22	APNTW-02 (6-11) 22102086-02 10/21/22	APNTW-03 (7-12) 22102086-03 10/21/22	APNTW-04 (9.5-14.5) 22102086-04 10/21/22	APNTW-05 (7.5-12.5) 22102086-05 10/21/22	Trip Blank 22102086-06 10/21/22	*Residential DWC [1]*	*GSI Criteria [1]*	*Residential Groundwater VIAIC [1]*	*Water Solubility [1]*	*Flammability and Explosivity SL [1]*	*Residential GW-Shallow VIAP SL [2]*	*Residential GW-Not in Contact VIAP SL [2]*
Volatile Organic Compounds	***CAS Number***													
1,1,1,2-Tetrachloroethane	630-20-6	1 U	1 U	1 U	1 U	1 U	1 U	*77*	*ID*	*15,000*	*1.10E+06*	*ID*	*3.1*	*89*
1,1,1-Trichloroethane	71-55-6	1 U	1 U	1 U	1 U	1 U	1 U	*200 (A)*	*89*	*6.60E+05*	*1.33E+06*	*ID*	*180 (FF*)*	*17,000 (EE*)*
1,1,2,2-Tetrachloroethane	79-34-5	1 U	1 U	1 U	1 U	1 U	1 U	*8.5*	*78 (X)*	*12,000*	*2.97E+06*	*ID*	*2.4*	*71*
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	1 U	1 U	1 U	1 U	1 U	1 U	*1.70E+05 (S)*	*32*	*1.70E+05 (S)*	*1.70E+05*	*ID*	*840*	*2,700*
1,1,2-Trichloroethane	79-00-5	1 U	1 U	1 U	1 U	1 U	1 U	*5.0 (A)*	*330 (X)*	*17,000*	*4.42E+06*	*NA*	*0.47 (M*)*	*14*
1,1-Dichloroethane	75-34-3	1 U	1 U	1 U	1 U	1 U	1 U	*880*	*740*	*1.00E+06*	*5.06E+06*	*3.80E+05*	*4.7*	*130*
1,1-Dichloroethene	75-35-4	1 U	1 U	1 U	1 U	1 U	1 U	*7.0 (A)*	*130*	*200*	*2.25E+06*	*97,000*	*18*	*330*
1,2,3-Trichloropropane	96-18-4	1 U	1 U	1 U	1 U	1 U	1 U	*42*	*NA*	*8,300*	*1.90E+06*	*NA*	*1.9*	*57*
1,2,4-Trichlorobenzene	120-82-1	1 U	1 U	1 U	1 U	1 U	1 U	*70 (A)*	*99 (X)*	*3.00E+05 (S)*	*3.00E+05*	*NA*	*3.8 (M*)*	*110*
1,2,4-Trimethylbenzene	95-63-6	1 U	1 U	3.8	1 U	1 U	1 U	*63/1,000 (E)*	*17*	*56,000 (S)*	*55,890*	*56,000 (S)*	*25 (JT)*	*670 (JT)*
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	1 U	1 U	1 U	1 U	1 U	1 U	*0.20 (A)*	*ID*	*220*	*1,230*	*NA*	*0.00045 (M*,MM)*	*0.00045 (CC*,M*,MM)*
1,2-Dibromoethane (EDB)	106-93-4	1 U	1 U	1 U	1 U	1 U	1 U	*0.050 (A)*	*5.7 (X)*	*2,400*	*4.20E+06*	*ID*	*0.13*	*3.8*
1,2-Dichlorobenzene	95-50-1	1 U	1 U	1 U	1 U	1 U	1 U	*600 (A)*	*13*	*1.60E+05 (S)*	*1.56E+05*	*NA*	*370*	*11,000*
1,2-Dichloroethane	107-06-2	1 U	1 U	1 U	1 U	1 U	1 U	*5.0 (A)*	*360 (X)*	*9,600*	*8.52E+06*	*2.50E+06*	*1.4*	*41*
1,2-Dichloropropane	78-87-5	1 U	1 U	1 U	1 U	1 U	1 U	*5.0 (A)*	*230 (X)*	*16,000*	*2.80E+06*	*5.50E+05*	*2.6*	*74*
1,3,5-Trimethylbenzene	108-67-8	1 U	1 U	1.4	1 U	1 U	1 U	*72/1,000 (E)*	*45*	*61,000 (S)*	*61,150*	*ID*	*18 (JT)*	*470 (JT)*
1,3-Dichlorobenzene	541-73-1	1 U	1 U	1 U	1 U	1 U	1 U	*6.6*	*28*	*18,000*	*1.11E+05*	*ID*	*2.6*	*75*
1,3-Dichloropropene, cis-	10061-01-5	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
1,3-Dichloropropene, trans-	10061-02-6	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
1,3-Dichloropropene (Total) (Calc.)	542-75-6	2 U	2 U	2 U	2 U	2 U	2 U	*8.5*	*9.0 (X)*	*3,900*	*2.80E+06*	*1.30E+05*	*3.3 (J)*	*95 (J)*
1,4-Dichlorobenzene	106-46-7	1 U	1 U	1 U	1 U	1 U	1 U	*75 (A)*	*17*	*16,000*	*73,800*	*NA*	*5.9*	*170*
2-Butanone (MEK)	78-93-3	2.2 J	5 U	5 U	5 U	5 U	2.0 J	*13,000*	*2,200*	*2.40E+08 (S)*	*2.40E+08*	*ID*	*2,600 (DD)*	*4.30E+06 (DD)*
2-Hexanone	591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	*1,000*	*ID*	*4.20E+06*	*1.60E+07*	*NA*	*660*	*20,000*
2-Methylnaphthalene	91-57-6	25 U	**77**	**43**	**28**	5 U	1.5 J	*260*	*19*	*25,000 (S)*	*24,600*	*ID*	*66*	*2,000*
4-Methyl-2-pentanone (MIBK)	108-10-1	1 U	1 U	1 U	1 U	1 U	1 U	*1,800*	*ID*	*2.00E+07 (S)*	*2.00E+07*	*ID*	*660*	*20,000*
Acetone	67-64-1	10 U	10 U	10 U	10 U	10 U	10 U	*730*	*1,700*	*1.00E+09 (D,S)*	*1.00E+09*	*1.50E+07*	*50,000 (FF*)*	*50,000*
Acrylonitrile	107-13-1	1 U	1 U	1 U	1 U	1 U	1 U	*2.6*	*2.0 (M); 1.2*	*34,000*	*7.50E+07*	*6.40E+06*	*4.6*	*140*
Benzene	71-43-2	1 U	1 U	3.7	1 U	1 U	1 U	*5.0 (A)*	*200 (X)*	*5,600*	*1.75E+06*	*68,000*	*1.0*	*28*
Bromochloromethane	74-97-5	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	1 U	1 U	1 U	1 U	1 U	1 U	*80 (A,W)*	*ID*	*4,800*	*6.74E+06*	*ID*	*1.2*	*34*
Bromoform	75-25-2	1 U	1 U	1 U	1 U	1 U	1 U	*80 (A,W)*	*ID*	*4.70E+05*	*3.10E+06*	*ID*	*89*	*2,700*
Bromomethane	74-83-9	1 U	1 U	1 U	1 U	1 U	1 U	*10*	*5.0 (M); 4.2*	*4,000*	*1.45E+07*	*ID*	*2.1 (M*)*	*55*
Carbon Disulfide	75-15-0	1 U	1 U	1.1	1 U	1 U	1 U	*800*	*ID*	*2.50E+05*	*1.19E+06*	*13,000*	*92*	*2,100*
Carbon Tetrachloride	56-23-5	1 U	1 U	1 U	1 U	1 U	1 U	*5.0 (A)*	*38 (X)*	*370*	*7.93E+05*	*ID*	*0.41 (M*)*	*7.7*
Chlorobenzene	108-90-7	1 U	1 U	1 U	1 U	1 U	1 U	*100 (A)*	*25*	*2.10E+05*	*4.72E+05*	*1.60E+05*	*33*	*940*
Chloroethane	75-00-3	1 U	1 U	1 U	1 U	1 U	4.6	*430*	*1,100 (X)*	*5.70E+06 (S)*	*5.74E+06*	*1.10E+05*	*620*	*15,000*
Chloroform	67-66-3	1 U	1 U	1 U	1 U	1 U	1 U	*80 (A,W)*	*350*	*28,000*	*7.92E+06*	*ID*	*0.49 (M*)*	*14*
Chloromethane	74-87-3	1 U	1 U	1 U	1 U	1 U	1 U	*260*	*ID*	*8,600*	*6.34E+06*	*36,000*	*15*	*380*
cis-1,2-Dichloroethene	156-59-2	1 U	1 U	1 U	1 U	1 U	1 U	*70 (A)*	*620*	*93,000*	*3.50E+06*	*5.30E+05*	*3.4*	*95*
Dibromochloromethane	124-48-1	1 U	1 U	1 U	1 U	1 U	1 U	*80 (A,W)*	*ID*	*14,000*	*2.60E+06*	*ID*	*0.78 (M*,MM)*	*23 (MM)*
Dibromomethane	74-95-3	1 U	1 U	1 U	1 U	1 U	1 U	*80*	*NA*	*ID*	*1.10E+07*	*ID*	*8.8*	*260*
Dichlorodifluoromethane	75-71-8	1 U	1 U	1 U	1 U	1 U	1 U	*1,700*	*ID*	*2.20E+05*	*3.00E+05*	*ID*	*13*	*49*
Diethyl Ether	60-29-7	1 U	1 U	1 U	1 U	1 U	1 U	*10/3,700 (E)*	*ID*	*6.10E+07 (S)*	*6.10E+07*	*6.50E+05*	*1,200*	*36,000*
Ethylbenzene	100-41-4	1 U	1 U	1 U	1 U	1 U	1 U	*74/700 (E)*	*18*	*1.10E+05*	*1.69E+05*	*43,000*	*2.8*	*74*
Hexachloroethane	67-72-1	1 U	1 U	1 U	1 U	1 U	1 U	*7.3*	*6.7 (X)*	*27,000*	*50,000*	*ID*	*1.5 (M*)*	*43*

Table 2 - Groundwater Data Summary
Leestma Management, LLC, 1148 & 1204 West Western Ave., Muskegon, Muskegon County, Michigan
October 2022

Monitoring Location: *Depth Interval (ft):* *Laboratory ID:* *Collection Date:*		APNTW-01 (6.5-11.5) 22102086-01 10/21/22	APNTW-02 (6-11) 22102086-02 10/21/22	APNTW-03 (7-12) 22102086-03 10/21/22	APNTW-04 (9.5-14.5) 22102086-04 10/21/22	APNTW-05 (7.5-12.5) 22102086-05 10/21/22	Trip Blank 22102086-06 10/21/22	*Residential DWC [1]*	*GSI Criteria [1]*	*Residential Groundwater VIAIC [1]*	*Water Solubility [1]*	*Flammability and Explosivity SL [1]*	*Residential GW-Shallow VIAP SL [2]*	*Residential GW-Not in Contact VIAP SL [2]*
Iodomethane	74-88-4	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	1 U	1 U	1 U	1 U	1 U	1 U	*800*	*28*	*56,000 (S)*	*56,000*	*29,000*	*0.60 (M*)*	*15*
Methyl tert-Butyl Ether (MTBE)	1634-04-4	1 U	1 U	1 U	1 U	1 U	1 U	*40/240 (E)*	*7,100 (X)*	*4.70E+07 (S)*	*4.68E+07*	*ID*	*250*	*7,400*
Methylene Chloride	75-09-2	5 U	5 U	5 U	5 U	5 U	5 U	*5.0 (A)*	*1,500 (X)*	*2.20E+05*	*1.70E+07*	*ID*	*79 (FF*)*	*8,400*
n-Propylbenzene	103-65-1	1 U	1 U	1 U	1 U	1 U	1 U	*80*	*ID*	*ID*	*NA*	*ID*	*43 (DD)*	*6,100 (DD)*
Naphthalene	91-20-3	25 U	**57**	**22**	**12**	5 U	5 U	*520*	*11*	*31,000 (S)*	*31,000*	*NA*	*4.2 (M*)*	*130*
Styrene	100-42-5	1 U	1 U	1 U	1 U	1 U	1 U	*100 (A)*	*80 (X)*	*1.70E+05*	*3.10E+05*	*1.40E+05*	*33*	*960*
Tetrachloroethene (PCE)	127-18-4	1 U	1 U	1 U	1 U	1 U	1 U	*5.0 (A)*	*60 (X)*	*25,000*	*2.00E+05*	*ID*	*1.5 (FF*)*	*130 (EE*)*
Toluene	108-88-3	1 U	1 U	2.0	1 U	1 U	1 U	*790/1,000 (E)*	*270*	*5.30E+05 (S)*	*5.26E+05*	*61,000*	*300 (FF*)*	*41,000*
trans-1,2-Dichloroethene	156-60-5	1 U	1 U	1 U	1 U	1 U	1 U	*100 (A)*	*1,500 (X)*	*85,000*	*6.30E+06*	*2.30E+05*	*16*	*390*
trans-1,4-Dichloro-2-butene	110-57-6	2 U	2 U	2 U	2 U	2 U	2 U	--	--	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	1 U	1 U	1 U	1 U	1 U	1 U	*5.0 (A)*	*200 (X)*	*2,200*	*1.10E+06*	*ID*	*0.073 (M*,DD)*	*10 (DD)*
Trichlorofluoromethane	75-69-4	1 U	1 U	1 U	1 U	1 U	1 U	*2,600*	*NA*	*1.10E+06 (S)*	*1.10E+06*	*ID*	*22*	*190*
Vinyl Acetate	108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	*640*	*NA*	*4.10E+06*	*2.00E+07*	*1.80E+06*	*690*	*21,000*
Vinyl Chloride	75-01-4	1 U	1 U	1 U	1 U	1 U	1 U	*2.0 (A)*	*13 (X)*	*1,100*	*2.76E+06*	*33,000*	*0.12 (M*,MM)*	*2.1 (MM)*
Xylenes, meta- & para-	179601-23-1	2.4	2 U	2 U	2 U	2 U	2 U	--	--	--	--	--	--	--
Xylene, ortho-	95-47-6	1 U	1 U	1.0	1 U	1 U	1 U	--	--	--	--	--	--	--
Xylenes, Total	1330-20-7	2.4 J	3 U	1.0 J	3 U	3 U	3 U	*280/10,000 (E)*	*49*	*1.90E+05 (S)*	*1.86E+05*	*70,000*	*75 (J)*	*2,000 (J)*
Polynuclear Aromatic Compounds	***CAS Number***													
2-Methylnaphthalene	91-57-6	5 U	5 U	120 U	3.9 J	5 U	--	*260*	*19*	*25,000 (S)*	*24,600*	*ID*	*66*	*2,000*
Acenaphthene	83-32-9	1 U	0.074 J	24 U	0.37 J	1 U	--	*1,300*	*38*	*4,200 (S)*	*4,240*	*ID*	*3,900 (S)*	*3,900 (S)*
Acenaphthylene	208-96-8	1 U	1 U	24 U	0.10 J	1 U	--	*52*	*ID*	*3,900 (S)*	*3,930*	*ID*	*65*	*65 (CC*)*
Anthracene	120-12-7	1 U	0.087 J	24 U	0.045 J	1 U	--	*43 (S)*	*ID*	*43 (S)*	*43.4*	*ID*	*43 (S)*	*43 (S)*
Benzo(a)anthracene	56-55-3	1 U	0.36 J	24 U	0.14 J	1 U	--	*2.1*	*ID*	*NLV*	*9.4*	*ID*	*9.4 (S,MM)*	*9.4 (S,MM)*
Benzo(a)pyrene	50-32-8	1 U	0.43 J	24 U	0.18 J	1 U	--	*5.0 (A)*	*ID*	*NLV*	*1.62*	*ID*	*NA*	*NA*
Benzo(b)fluoranthene	205-99-2	1 U	0.65 J	24 U	0.31 J	1 U	--	*1.5 (S,AA)*	*ID*	*ID*	*1.5*	*ID*	*NA*	*NA*
Benzo(g,h,i)perylene	191-24-2	1 U	**0.31 J**	24 U	0.13 J	1 U	--	*1.0 (M); 0.26 (S)*	*ID*	*NLV*	*0.26*	*ID*	*NA*	*NA*
Benzo(k)fluoranthene	207-08-9	1 U	0.28 J	24 U	1 U	1 U	--	*1.0 (M); 0.80 (S)*	*NA*	*NLV*	*0.80*	*ID*	*NA*	*NA*
Chrysene	218-01-9	1 U	0.54 J	24 U	0.27 J	1 U	--	*1.6 (S)*	*ID*	*ID*	*1.6*	*ID*	*NA*	*NA*
Dibenzo(a,h)anthracene	53-70-3	2 U	2 U	48 U	2 U	2 U	--	*2.0 (M); 0.21*	*ID*	*NLV*	*2.49*	*ID*	*NA*	*NA*
Fluoranthene	206-44-0	1 U	0.79 J	24 U	0.26 J	1 U	--	*210 (S)*	*1.6*	*210 (S)*	*206*	*ID*	*NA*	*NA*
Fluorene	86-73-7	1 U	1 U	24 U	0.65 J	1 U	--	*880*	*12*	*2,000 (S)*	*1,980*	*ID*	*1,700 (S)*	*1,700 (S)*
Indeno(1,2,3-cd)pyrene	193-39-5	2 U	**0.32 J**	48 U	2 U	2 U	--	*2.0 (M); 0.022 (S)*	*ID*	*NLV*	*0.022*	*ID*	*NA*	*NA*
Naphthalene	91-20-3	1 U	1 U	24 U	2.5	1 U	--	*520*	*11*	*31,000 (S)*	*31,000*	*NA*	*4.2 (M*)*	*130*
Phenanthrene	85-01-8	1 U	0.21 J	24 U	0.76 J	1 U	--	*52*	*2.0 (M); 1.7*	*1,000 (S)*	*1,000*	*ID*	*9.5*	*290*
Pyrene	129-00-0	1 U	0.89 J	24 U	0.39 J	1 U	--	*140 (S)*	*ID*	*140 (S)*	*135*	*ID*	*140 (S)*	*140 (S)*
Metals, Total	***CAS Number***													
Arsenic	7440-38-2	1.0 J	8.2 J	28 J	8.6 J	6.1	--	*10 (A)*	*10*	*NLV*	*NA*	*ID*	*NA*	*NA*
Barium (B)	7440-39-3	37	210	250	180	70	--	*2,000 (A)*	*674 (G)*	*NLV*	*NA*	*ID*	*NA*	*NA*
Cadmium (B)	7440-43-9	1 U	2.4 J	10 U	2.5 J	1 U	--	*5.0 (A)*	*3.0 (G,X)*	*NLV*	*NA*	*ID*	*NA*	*NA*
Chromium, Total (B,H)	7440-47-3	2.7 J	**47 J**	**93**	**22 J**	2.2 J	--	*100 (A)*	*11*	*NLV*	*NA*	*ID*	*NA*	*NA*
Copper (B)	7440-50-8	1.6 J	**71**	**140**	**60**	1.3 J	--	*1,000/1,400 (E)*	*13 (G)*	*NLV*	*NA*	*ID*	*NA*	*NA*
Lead (B)	7439-92-1	0.58 J	**200**	**150**	**88**	0.54 J	--	*4.0 (L)*	*34 (G,X)*	*NLV*	*NA*	*ID*	*NA*	*NA*
Mercury (Total) (B)	7439-97-6	0.2 U	0.2 U	0.2 U	**0.31**	0.2 U	--	*2.0 (A)*	*0.0013*	*56 (S)*	*56*	*ID*	*0.088*	*2.5*
Selenium (B)	7782-49-2	5 U	50 U	**5.5 J**	50 U	0.54 J	--	*50 (A)*	*5.0*	*NLV*	*NA*	*ID*	*NA*	*NA*
Silver (B)	7440-22-4	0.84 U	8.4 U	**6.3 J**	8.4 U	0.84 U	--	*34*	*0.20 (M); 0.060*	*NLV*	*NA*	*ID*	*NA*	*NA*
Zinc (B)	7440-66-6	3.9 J	96 J	**280**	**660**	12 J	--	*2,400*	*167 (G)*	*NLV*	*NA*	*ID*	*NA*	*NA*

Table 2 - Groundwater Data Summary
Leestma Management, LLC, 1148 & 1204 West Western Ave., Muskegon, Muskegon County, Michigan
October 2022

Monitoring Location: *Depth Interval (ft):* *Laboratory ID:* *Collection Date:*		APNTW-01 (6.5-11.5) 22102086-01 10/21/22	APNTW-02 (6-11) 22102086-02 10/21/22	APNTW-03 (7-12) 22102086-03 10/21/22	APNTW-04 (9.5-14.5) 22102086-04 10/21/22	APNTW-05 (7.5-12.5) 22102086-05 10/21/22	Trip Blank 22102086-06 10/21/22	***Residential DWC*** [(1)]	***GSI Criteria*** [(1)]	***Residential Groundwater VIAIC*** [(1)]	***Water Solubility*** [(1)]	***Flammability and Explosivity SL*** [(1)]	***Residential GW-Shallow VIAP SL*** [(2)]	***Residential GW-Not in Contact VIAP SL*** [(2)]
Field Parameters	***CAS Number***													
Dissolved Oxygen (DO) (mg/L)	--	1.7	0.1	0.1 U	0.1	0.3	--	*ID*	*(EE)*	*ID*	*NA*	*NA*	--	--
Eh (mV)	--	260	76	71	120	100	--	--	--	--	--	--	--	--
pH (SU)	--	6.9	7.6	9.6	7.4	6.9	--	*6.5 to 8.5 (E)*	*6.5 to 9.0*	*ID*	*NA*	*NA*	--	--
Specific Conductance (µmhos/cm)	--	560	570	510	420	610	--	--	--	--	--	--	--	--
Temperature (°C)	--	18.5	18.7	16.0	15.7	16.1	--	--	--	--	--	--	--	--
Turbidity (NTU)	--	15	86	82	120	6.0	--	--	--	--	--	--	--	--

Results expressed in µg/L.
Bolded values exceed an applicable criterion and/or screening level.
Underlined compounds classified as polynuclear aromatic compounds.

Data Qualifiers:
J Estimated value
U Not detected above the given limit

Footnotes/Abbreviations:
[(1)] Part 201 Groundwater Generic Cleanup Criteria and Screening Levels, December 21, 2020.
[(2)] EGLE Volatilization to Indoor Air Pathway Screening Levels, September 4, 2020.
(A) Criterion is the state of Michigan drinking water (DW) standard.
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated criterion.
(E) Aesthetic drinking water (DW) value. Notice of aesthetic impact may be employed as an institutional control if concentration exceeds the aesthetic DWC but not the health-based DW value (second value, if provided).
(G) Criterion dependent on receiving surface water (SW) hardness; calculated criteria based on water hardness of 150 mg/L.
(H) Data provided for total Chromium only; compare to hexavalent Chromium criteria. If both trivalent Chromium and hexavalent Chromium are present, the total concentration of both cannot exceed the DW criterion of 100 µg/L.
(J) Substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.
(JT) Substance present in several isomer forms. The VIAP SL may be used for the individual isomer provided that it is sole isomer detected; however, when multiple isomers are detected in a medium, the isomer-specific concentrations must be added together and compared to the most restrictive VIAP SL of the detected isomers.
(L) Concentrations up to the State action level of 15 µg/L may still allow for DW use if soil concentrations are below 400 mg/Kg.
(M) Calculated criterion is below the analytical target detection limit (TDL), therefore, the criterion defaults to the TDL (first value is criterion, second value is the risk based or solubility value).
(M*) The VIAP SL may be below target detection limits (TDL). In accordance with Sec. 20120a(10) when the TDL for a hazardous substance is greater than the developed VIAP SL, the TDL is used to evaluate the risk posed from the pathway.
(S) Criterion defaults to the hazardous substance-specific water solubility limit.
(W) Concentrations of trihalomethanes shall be added together to determine compliance with the Michigan DW standard of 80 µg/L.
(X) Criterion is not protective for SW used as a DW source.
(CC*) Insufficient chemical-physical input parameters have been identified to allow the development of a VIAP SL using standard equations. The VIAP SL for GW is developed based solely on the approach that the department uses for shallow GW. If GW detections are present, soil vapor may be the most appropriate media to evaluate risk.
(DD) Hazardous substance causes developmental effects. Residential VIAP SLs are protective of both prenatal exposure using a pregnant female receptor and postnatal exposure using a child receptor. Nonresidential VIAP screening levels are protective of prenatal exposure using a pregnant female receptor. Prenatal developmental effects may occur after an acute (i.e. short- term) or full-term exposure.
(EE) Cold receiving waters ≥7,000 µg/L; Warm receiving waters ≥5,000 µg/L; Since a low level of DO can be harmful to aquatic life, the criterion represents a minimum level that on-site samples must exceed. Criteria are not applicable if GW Carbonaceous Biochemical Oxygen Demand (CBOD) is less than 10,000 µg/L and GW ammonia concentration is less than 2,000 µg/L.
(EE*) The acceptable air concentration (AAC) for the volatile hazardous substance is not derived using standard equations. The hazardous substance may cause adverse human health effects for less than chronic exposures (i.e. short-term or acute). The AAC for this hazardous substance is the acute or intermediate minimum risk level (MRL) developed by the Agency for Toxic Substances and Disease Registry (ATSDR), a USEPA Integrated Risk Information System (IRIS) acute reference concentration, or an acute initial threshold screening level (ITSL) by the EGLE's Air Quality Division.
(FF*) The AAC for the volatile hazardous substances are based on toxicity values that have been identified to have the potential to cause adverse human health effects for less than chronic exposures (i.e. short-term or acute). The short-term exposure for shallow groundwater VIAP SLs are based on modification of the standard equations by the department to develop applicable shallow groundwater VIAP SLs.
(MM) Hazardous substance is a carcinogen with a mutagenic mode of action. The cancer potency values used in calculating VIAP SLs are modified using age-dependent adjustment factors for those carcinogenic chemicals identified as mutagenic.
DWC drinking water criterion
GSI groundwater surface water interface
ID Insufficient data to develop criterion.
NA not available
NLV Not likely to volatilize under most conditions.
SL screening level
VIAIC volatilization to indoor air inhalation criteria
VIAP volatilization to indoor air pathway

Attachment D

Reimbursement Agreement