EXECUTIVE SUMMARY
FOR
THE WAYNE COUNTY/DETROIT AREA HISTORICAL SMELTER PROJECT
WAYNE COUNTY, MICHIGAN

Prepared for:

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDIATION AND REDEVELOPMENT DIVISION
Southeast Michigan District Office
27700 Donald Court
Warren, Michigan 48092

Prepared by:

WESTON SOLUTIONS OF MICHIGAN, INC.
7800 West Outer Drive, Suite 200
Detroit, Michigan 48235

August 2008

W. O. No. 20083.028.001

Weston Solutions of Michigan, Inc. (WESTON®) was contracted by the Michigan Department of Environmental Quality (MDEQ) Remediation and Redevelopment Division (RRD) to conduct a data investigation, Phase I off-site sampling, and Phase II on-site sampling for the Wayne County/Detroit Area Historical Smelter Project in Detroit and Hamtramck, Wayne County, Michigan. The project consisted of evaluating 17 facilities in the Detroit Metropolitan Area that had been identified as potential lead smelters to determine if surrounding residential neighborhoods had been impacted by aerial deposition of lead. These 17 facilities were included on the Eckel list, a nationwide list of potential lead smelters. The list of potential smelters to be investigated was chosen by the MDEQ and included the following:

1. Master Metals – 4700 East Nevada Street
2. Detroit Lead Company – 13521 to 13535 Helen Street
3. Federal Mogul Corporation – 11031 Shoemaker Street
4. Continental Metal Company – 11500 Russell Street
5. Federated Metals Division – 11630 Russell Street
6. Michigan Smelting – 7885 Joseph Campau Street
7. Detroit Lead Pipe Works – 7001 Lyndon Street
8. Industrial Smelting – 19430 Mt. Elliott Street
9. Aetna Smelting – 1826 Illinois Street
10. Great Lakes Smelting – 1640 East Euclid Street
11. Industrial Smelting – 648 East Columbia Street
12. Wolverine White Metal – 3421 Gibson Street
13. Acme Metal Company – 1436 Holbrook Street
14. City Metals Refining – 2945 Hubbard Street
15. Federal Alloys – 924 Leland Street
16. Motex Metal Process Company – 4473 to 4475 West Jefferson Street
17. Standard Metals Company – 1560 Franklin Street

Two additional facilities were subsequently identified and targeted for investigation: Master Alloys- 2930 Denton Street; and Commodity Metals – 1641 Caniff Street.

Initial Data Investigation

The initial Project tasks included historical data investigation, and facility and neighborhood drive bys. Of the 17 facilities, two facilities (Master Metals and Detroit Lead Company) were investigated/remediated by the United States Environmental Protection Agency (U.S. EPA) and one facility (Federal Mogul Corporation/11031 Shoemaker Street Site) was initially investigated by the City of Detroit Department of Environmental Affairs (DEA). However, WESTON

reviewed the existing information for the 11031 Shoemaker Street Site and conducted off-site sampling.

The remaining fourteen facilities were evaluated based on ownership records, Sanborn maps, aerial photographs, Fire Marshall inspection/permit records, and Baseline Environmental Assessments (BEAs) which have been performed. WESTON also conducted neighborhood drive bys to determine if existing surrounding land use is consistent with the aerial photograph and Sanborn map analysis.

Based on these initial reviews, WESTON concluded that four facilities required no further assessment as there was no direct evidence of metals processing; residential neighborhoods were located outside of the expected area of aerial deposition influence; and/or existing data for the facilities or nearby properties did not indicate elevated lead concentrations. These facilities included:

1. Federal Alloys – 924 Leland Street.
2. Industrial Smelting – 648 East Columbia Street.
3. Motex Metal Process Company – 4473 to 4475 West Jefferson Street.
4. Standard Metals Company – 1560 Franklin Street.

Phase I Sampling

The remaining ten facilities required additional assessments that included interviews with facility personnel (performed by MDEQ) and Phase I sampling at nearby City of Detroit and State of Michigan owned properties (performed by WESTON). The goal of the Phase I sampling was to determine if lead, consistent with smelter-related releases, was present off-site and could be attributed to the former facilities. WESTON collected composite samples from six upwind and six downwind properties that were owned by the City of Detroit or State of Michigan for lead analysis of the fine fraction of soil. The upwind/downwind sampling locations were chosen based on the mean wind direction for the Metropolitan Detroit area between 1984 and 1991 (prevailing wind direction from the southwest to the northeast). Also, experience with previous lead investigations indicated that if lead concentrations are present from aerial deposition, they would be found within a 1,000 foot (ft) to 1,500 ft radius. Therefore, WESTON conducted sampling generally within this radius of each facility unless prohibited by development surrounding the facilities.

The Phase I analytical data was compared to MDEQ Residential and Commercial I Direct Contact Criteria for soils (400 milligrams per kilogram [mg/kg]), as established under Part 201, Environmental Remediation, of the Natural Resource and Environmental Protection Act 1994, as amended, to determine if surrounding residential neighborhoods were adversely impacted by aerial deposition of lead.

Based on the results of the Phase I sampling, the ten sites sampled were categorized as Level I or Level II Facilities. Level I Facilities were defined as sites where downwind sampling results exceeded the screening level and suggested a trend of decreasing lead concentrations with increasing distance.

Level II Facilities were defined as sites where downwind results did not exceed the screening level, but suggested an aerial deposition trend or downwind results exceeded the screening level, but did not suggest aerial deposition.

Three Level I and seven Level II Facilities were identified as summarized in the following table.

Summary of Findings	Category Companies	
Level 1	Continental Metal Company Federated Metals Division Michigan Smelting	
Level 2	Aetna Smelting City Metals Refining Great Lakes Smelting Wolverine White Metal	Acme Metal Company Industrial Smelting Detroit Lead Pipe Works

MDEQ determined that additional on-site and/or off-site sampling for the three Level I Facilities was necessary to further evaluate the threat posed by lead concentrations in soil as a result of aerial deposition. MDEQ also determined that on-site sampling at the seven Level II Facilities was necessary to further rule them out as a source of lead contamination above Residential/Commercial I Direct Contact Criteria. WESTON subsequently conducted the follow-up sampling (Phase II) for the facilities identified above. The following sections summarize the chronology of investigation and results for each of the ten facilities listed in the

table above as well as the 11031 Shoemaker Street Site, the Master Alloys Site, and the Commodity Metals Site.

A complete list of reports prepared by WESTON throughout the Project is provided on page 24.

Federal Mogul Corporation – 11031 Shoemaker Street

Currently, the Facility is partially occupied by the City of Detroit Department of Water and Sewerage Department Maintenance Group. There are two vacant industrial office buildings and a vacant watchman office. It appears there is at least one stack located on the building but the height is unknown.

The City of Detroit DEA contracted Camp Dresser & McKee to perform a Phase II Environmental Site Assessment (ESA) at the Facility. WESTON was unable to obtain a copy of the draft Phase II ESA Report for review, but was provided with the analytical results for lead and a base map showing sample locations by DEA. The Phase II data contained analytical results for 63 lead samples, 21 of which were collected from 0 to 6-inches below ground surface (bgs) and four samples were collected from 0 to 12-inches bgs. The detected concentrations of lead ranged from 9.2 mg/kg to 740 mg/kg. The levels of lead found in the soils on-Site were not indicative of long term intensive lead smelting activities.

WESTON collected 13 soil samples for lead analysis at locations upwind and downwind of the Facility between 21 through 28 December 2006 as summarized in the following table.

Upwind Properties		Downwind Properties	
5267 Lemay – greenway	(350)	5901 Conner (two greenways)	(310)
5281 Lemay – greenway	(290)		
10840 Shoemaker	(180)	5901 St. Jean (three greenways)	(**640**)
10901 Shoemaker	(160)		
5549 Springfield – greenway	(**410**)		
5561 Springfield – greenway	(220)		

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg.
Values in bold exceeded the screening level of 400 mg/kg.

The data collected during the Phase I sampling did not support that an identifiable release occurred from the Facility as a result of historic smelting operations. Further, because lead concentrations downwind and on-site were not indicative of smelting operations, no further action was recommended at the Facility related to lead concentrations above 400 mg/kg.

Master Alloys – 2930 Denton Street

Master Alloys, located at 2930 Denton Street Hamtramck, Wayne County Michigan (Detroit Metropolitan Area) is no longer in operation and an abandoned building remains on the property.

Prior to sample collection, upwind and downwind sampling areas were established within 1,800 and 1,350 ft from the Facility, respectively. A total of 24 composite samples from seven off-site properties were collected on 24 March 2004, from the area upwind and downwind of the former smelter as summarized in the following table.

Upwind Properties		Downwind Properties	
2353 Denton	(**700**)	Veterans Park (broken into six parts)	(230)
2361 Denton	(280)		
2400 Denton – greenway (broken into four parts)	(210)		

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg. Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in soil samples collected during Phase I did not suggest that lead contamination detected in downwind locations may be attributable to historic releases from smelting operations at the Facility. Further, U.S. EPA conducted a Removal Action at the Facility in October 2001 and March 2002. Approximately 2,000 tons of lead contaminated soil was removed from the Facility.

Due to the lack of downwind lead concentrations above 400 mg/kg and the U.S. EPA Removal Action conducted at the Facility, WESTON recommended no further action.

Continental Metal Company – 11500 Russell Street

Continental Metal Company, formerly located at 11500 Russell Street in Detroit, Wayne County Michigan is no longer operating and the property is currently used for scrap metal recycling.

Prior to Phase I sample collection, upwind and downwind sampling areas were established within 2,250 and 1,500 ft from the Facility, respectively. A total of 12 composite samples from six off-site upwind properties were collected on 11 November, and 3 and 4 December 2003. AKT Peerless previously collected multiple discrete soil samples within 38 residential exposure units in the downwind direction on behalf of Wayne County.

Upwind Properties		Downwind Properties
564 Englewood	(260)	Sampled previously by AKT Peerless Environmental Services (**1,451**)
527 Harmon	(170)	
532 Harmon	(200)	
587 Harmon	(130)	
581 Rosedale	(380)	
651 Rosedale	(190)	

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg. Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in soil samples collected from upwind and downwind of the Facility suggested that lead contamination detected in downwind locations may have been attributable to historic releases from smelting operations at the Facility. The downwind samples showed a strong trend of decreasing concentration with increasing distance with the highest levels of lead closest to the Facility.

Subsequently, WESTON conducted additional sampling in the neighborhood downwind of the Facility to determine the extent of lead contaminated residences; and Phase II on-site sampling to determine if the Facility was the source of downwind lead contamination. Attempts were made to obtain access agreements from the residential owners from 303 downwind residences. Access was granted to 143 of the 303 residences. A total of 372 composite samples from 143 residential properties were collected in June and September of 2004, from the area downwind of the Facility.

Of the 372 residential samples collected, 89 of the samples contained lead concentrations above 400 mg/kg, with concentrations up to 1,100 mg/kg. WESTON reviewed a 2002 AKT Peerless

report regarding the Grand Haven residential redevelopment in Hamtramck. The report summarized 315 discrete soil samples collected from 35 exposure units within the assessment area, with concentrations averaging 110 mg/kg to 668 mg/kg.

Although surface soil sample results collected from the Facility and the adjacent Dana Container property were elevated, the sample results did not indicate the Facility was the source of downwind lead contamination. Concurrent investigation of the former Commodity Metals Facility resulted in identification of the former Commodity Metals Facility, rather than Continental Metal Company, to be the source of downwind lead contamination. Therefore, WESTON recommended no further action for this Facility.

U.S. EPA subsequently conducted a Removal Action in the downwind residential neighborhood in the Fall of 2006 and Summer of 2007.

Federated Metals Division – 11630 Russell Street

Federated Metals Division, located at 11630 Russell Street in Detroit, Wayne County Michigan, was determined to be in use and currently owned by Brimar Corporation.

Prior to Phase I sample collection, upwind and downwind sampling areas were established within 2,250 and 1,500 ft from the Facility, respectively. A total of 12 composite samples from six upwind properties were collected on 11 November, and 3 and 4 December 2003. AKT Peerless previously collected multiple discrete soil samples within 38 residential exposure units in the downwind direction on behalf of Wayne County.

Upwind Properties		Downwind Properties
564 Englewood	(260)	Sampled previously by AKT Peerless Environmental Services (**1,451**)
527 Harmon	(170)	
532 Harmon	(200)	
587 Harmon	(130)	
581 Rosedale	(380)	
651 Rosedale	(190)	

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg. Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in soil samples collected from upwind and downwind of the Facility suggested that lead contamination detected in downwind locations may have been attributable to historic releases from smelting operations at the Facility. The downwind samples showed a strong trend of decreasing concentration with increasing distance with the highest levels of lead closest to the Facility.

Subsequently, WESTON conducted additional sampling in the neighborhood downwind of the Facility to determine the extent of lead contaminated residences; and Phase II on-site sampling to determine if the Facility was the source of downwind lead contamination. Attempts were made to obtain access agreements from the residential owners from 303 downwind residences. Access was granted to 143 of the 303 residences. A total of 372 composite samples from 143 residential properties were collected in June and September of 2004, from the area downwind of the facility.

Of the 372 residential samples collected, 89 of the samples contained lead concentrations above 400 mg/kg with concentrations up to 1,100 mg/kg. WESTON reviewed a 2002 AKT Peerless report regarding the Grand Haven residential redevelopment in Hamtramck. The report

summarized 315 discrete soil samples collected from 35 exposure units within the assessment area, with concentrations averaging 110 mg/kg to 668 mg/kg.

WESTON collected soil samples immediately beneath paved areas as well as concrete and brick chip samples from areas identified as former stack or smelter locations. The sample results did not indicate the Facility was the source of downwind lead contamination. Therefore, WESTON recommended no further action for this Facility.

Concurrent investigation of the former Commodity Metals Facility resulted in identification of the Commodity Metals Facility, rather than Federated Metals Division, to be the source of downwind lead contamination. U.S. EPA subsequently conducted a Removal Action in the downwind residential neighborhood in the Fall of 2006 and Summer of 2007.

Commodity Metals – 1641 Caniff Street

Commodity Metals, formerly located at 1641 Caniff Street is no longer in operation and the property is currently owned and operated by Bulldog Boiler. Commodity Metals was identified as a potential former lead smelter located adjacent to Continental Metal Company and Federated Metals Division. Phase I and II results for Continental Metal Company and Federated Metals Division confirmed that downwind residences had been impacted by aerial deposition of lead.

WESTON reviewed a BEA for Bulldog Boiler (formerly Commodity Metals) that detailed elevated concentrations of lead in soil that were indicative of previous smelting operations. The Phase II on-site sampling that was conducted for Continental Metals and Federated Metals Division ruled these two facilities out as the source of lead contamination in the downwind residential neighborhood. Therefore, Commodity Metals was determined to be the source of lead contamination downwind as a result of aerial deposition.

Attempts were made to obtain access agreements from the residential owners from 303 downwind residences. Access was granted to 143 of the 303 residences. Sampling consisted of composite samples from approximately 500 square ft exposure units, if available. A total of 372 composite samples from 143 residential properties were collected in June and September of 2004, from the area downwind of the former smelter.

Of the 372 residential samples collected, 89 of the samples contained lead concentrations above the screening level, with concentrations up to 1,100 mg/kg. WESTON reviewed a 2002 AKT Peerless report regarding the Grand Haven residential redevelopment in Hamtramck. The report summarized 315 discrete soil samples collected from 35 exposure units within the assessment area, with concentrations averaging 110 mg/kg to 668 mg/kg.

The Phase I and Phase II sampling results for the downwind residential neighborhood indicated it was clear that the area had been impacted by aerial deposition of lead. Therefore, MDEQ referred the Facility to the U.S. EPA for consideration of a Removal Action.

From September 2006 to December 2006 and May 2007 to November 2007, U.S. EPA conducted a Time-Critical Removal Action that resulted in the removal of lead-contaminated soil from 154 properties and subsequent restoration of those properties. MDEQ conducted additional

assessment sampling concurrent with the U.S. EPA Removal Action to further identify the properties within the study area for which soil removal was required. Of the 380 properties within the study area, 157 did not contain lead concentrations above 400 mg/kg. Sixty-four properties were previously remediated by Wayne County and the City of Hamtramck as part of a redevelopment project. One property owner refused access for the U.S. EPA Removal Action. At this time, U.S. EPA was seeking Judicial Warrants to gain access for assessment and possible Removal Action for the two remaining properties.

Once sampling and removal, if necessary, is completed for the two outstanding properties, no further action for this Site is recommended.

Michigan Smelting – 7885 Joseph Campau Street

Michigan Smelting, formerly located at 7885 Joseph Campau Street in Hamtramck, Wayne County Michigan (Detroit Metropolitan Area), no longer exists, and has apparently been demolished and replaced with a grassy area surrounding the existing GM-Cadillac Assembly Plant.

Prior to Phase I sample collection, upwind and downwind sampling areas were established within 2,800 and 2,300 ft from the Facility, respectively. A total of 24 composite samples from nine off-site properties were collected on 5 and 6 November 2003, from the area upwind and downwind of the former smelter as summarized in the following table.

Upwind Properties		Downwind Properties	
2445 E. Grand Ave. – greenway	(200)	1904 E. Grand Ave. – greenway	(240)
2525 E. Grand Ave. – greenway	(170)	1945 E. Grand Ave. – greenway	(320)
1530 Trombly – greenway	(360)	1998 E. Grand Ave. – greenway	(**520**)
		2918 Hendrie – greenway	(360)
		3030 Medbury – greenway	(**710**)
		5901 Mitchell – greenway	(**740**)

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg. Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in soil samples collected during Phase I suggested that lead contamination detected in downwind locations was potentially attributable to historic releases from smelting operations at the Facility. The downwind samples showed a strong trend of decreasing concentration with increasing distance with the highest levels of lead closest to the Facility.

Attempts were made to obtain access agreements from 104 downwind residences. Access was granted to 34 of the 104 residences. Phase II sampling consisted of composite samples collected from approximately 500 square ft exposure units, if available. WESTON collected a total of 91 composite samples in March 2004.

Twenty-one of the 91 samples collected contained lead above 400 mg/kg. The pattern of the additional analytical results for lead in soil samples collected downwind of the Facility did not suggest that contamination detected in downwind locations may be attributable to historic releases from smelting operations. Further, information obtained during the Phase II sampling

indicated the actual former lead smelter was located over 7,000 ft north of the investigation area, which was well outside the area of expected aerial deposition influence.

The source of the elevated lead concentrations in soil was concluded not to be from the former smelter due to the distance between the former facility location and the closest downwind neighborhood.

However, in 2007, MDEQ referred the residential area investigated during Phase I and II (referred to as the Medbury neighborhood) to U.S. EPA for a potential removal action to address the elevated lead concentrations detected on some residential and public properties. MDEQ was unable to conduct a removal/remediation due to funding constraints and the lack of an identifiable source of contamination. U.S. EPA conducted a removal action in Fall 2007 that included excavation of lead-contaminated soil at 21 properties in the Medbury neighborhood.

Detroit Lead Pipe Works – 7001 Lyndon Street

Detroit Lead Pipe Works, formerly located at 7001 Lyndon Street in Detroit, Wayne County Michigan, is not longer operating and is currently owned and used for storage for an automotive tire shop.

Prior to Phase I sample collection, upwind and downwind sampling areas were established within 2,550 and 1,800 ft from the Facility, respectively. A total of 24 composite samples from twelve off-site properties were collected on 13 November and 4 December, 2003, from the area upwind and downwind of the former smelter as summarized in the following table.

Upwind Properties		Downwind Properties	
14205 Cloverdale 14200 Cloverdale	(83)	14665 Dexter – greenway	(230)
14300 Cloverdale	(60)	14707 Dexter – greenway	(260)
14334 Cloverdale	(72)	14678 Livernois – greenway	(**490**)
14350 Cloverdale	(65)	14699 Petosky	(230)
14202 Greenlawn	(110)	14709 Petosky	(130)
14210 Greenlawn	(170)	14745 Quincey	(110)

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg.
Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in soil samples collected during Phase I did not suggest that lead contamination detected in downwind locations was attributable to historic releases from smelting operations at the Facility. However, sample locations were located near the edge of the downwind envelope creating a data gap in the downwind results; and therefore, additional sampling was recommended.

Phase II sampling consisted of the collection of six surface soils samples for lead analysis of total, fine, and coarse fractions of soils at the Facility. Phase II results indicated five of the six samples contained elevated lead concentrations that were indicative of lead smelting operations.

WESTON performed additional surface soil sampling and collected samples at depth at the Facility and neighboring properties to further evaluate the source of lead contamination. The additional sampling results indicated the off-site instances of lead concentrations above the 400 mg/kg were sporadic and not necessarily attributable to the former Facility operations. Further, X-ray fluorescence (XRF) screening performed in the residential area most proximal to the Facility did not indicate lead concentrations in surface soil were above 400 mg/kg. Nor did the

XRF screening results indicate decreasing concentrations with increasing distance from the Facility.

Based on these results, WESTON concluded that the residential neighborhood downwind of the Facility had not been impacted by aerial deposition of lead. MDEQ has notified the property owner of their Due Care obligations.

Industrial Smelting Company – 19430 Mt. Elliott Street

Industrial Smelting, formerly located at 19430 Mt. Elliott Street in Detroit, Wayne County Michigan, is no longer in operation. The current facility is occupied by a manufacturer of industrial soaps.

Prior to Phase I sample collection, upwind and downwind sampling areas were established within 2,500 and 1,800 ft from the Facility, respectively. A total of 24 composite samples from 12 off-site properties were collected on 11 November and 8 December, 2003 as summarized in the following table.

Upwind Properties		Downwind Properties	
19145 Albany	(120)	19635 Carrie	(85)
19309 Dwyer	(130)	19448 Concord	(200)
19420 Gable	(230)	19459 Concord	(340)
19303 St Louis	(130)	19444 Helen	(180)
19186 Syracuse	(93)	19456 Helen	(200)
19303 Syracuse	(42)	3900 E. Outer Dr. – greenway	(390)

Note: Values provided in parentheses were the highest analytical result for that property, in mg/kg.
Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in soil samples collected during Phase I suggested that lead contamination detected in downwind locations may have been attributable to historic releases from the Facility. The downwind samples showed a strong trend of decreasing concentration with increasing distance with the highest levels of lead closest to the Facility. However, the levels identified during the Phase I investigation were below 400 mg/kg.

WESTON collected a total of seven discrete samples from the Facility on 14 December 2006. Five of the seven samples contained lead concentrations above 400 mg/kg and were indicative of a source of lead contamination as a result of smelting operations.

However, given the low concentrations of lead in the residential neighborhood proximal to the Facility, and the distance between the Facility and the most proximal downwind neighborhood, it did not appear there was an off-site human health risk as a result of previous Facility operations.

MDEQ has notified the property owner of their Due Care obligations.

Great Lakes Smelting – 1640 East Euclid Street

Great Lakes Smelting, formerly located at 1640 East Euclid Street in Detroit, Wayne County Michigan, no longer exists. The current facility is occupied by Stress Con Industries and predominantly consists of paved surfaces.

Prior to Phase I sample collection, upwind and downwind sampling areas were established within 1,900 and 1,800 ft from the Facility, respectively. A total of 24 composite samples from ten off-site properties were collected on 6, 7, and 10 November 2003 during Phase I sampling as summarized in the following table.

Upwind Properties		Downwind Properties	
998 E. Euclid	(130)	1831 Clay – greenway	(160)
1014 E. Euclid	(**440**)	8434 Lumpkin – greenway	(**540**)
987 Melbourne	(240)	1901 Marston – greenway	(**790**)
990 Melbourne	(160)	8435 St. Aubin – greenway	(86)
998 Melbourne	(130)		
1016 Melbourne	(100)		

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg.
Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in soil samples collected during Phase I did not suggest that lead contamination detected in downwind locations may be attributable to historic releases from the Facility.

WESTON collected a total of six discrete samples from the Facility on 14 December 2006. Of the six samples collected, two of the samples contained lead concentrations above 400 mg/kg with the highest concentration of lead at 1,900 mg/kg. The sample results were not indicative of lead smelting operations. Therefore, WESTON concluded that this property is not a source of lead contamination as a result of smelting operations.

Acme Metal Company – 1436 Holbrook Street

Acme Metal Company, formerly located at 1436 Holbrook Street in Detroit, Wayne County Michigan, no longer exists, and has apparently been demolished and replaced with a grassy area surrounding the existing American Axle manufacturing plant.

Prior to Phase I sample collection, upwind and downwind sampling areas were established within 1,500 and 4,400 ft from the Facility, respectively. A total of 24 composite samples from 12 off-site properties were collected on 10 and 11 November, 2003, from the area upwind and downwind of the former smelter as summarized in the following table.

Upwind Properties		Downwind Properties	
8941 Cameron	(190)	2406 Florian – greenway	(**410**)
9200 Cameron	(240)	2620 Holbrook – greenway	(310)
9185 Chrysler	(**470**)	2703 Latham – greenway	(**560**)
9148 Delmar	(130)	9010 Lumpkin – greenway	(200)
9154 Delmar	(110)	9537 Mitchell – greenway	(**560**)
987 King	(120)	2761 Poland – greenway	(**680**)

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg. Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in soil samples collected during Phase I did not suggest that lead contamination detected in downwind locations was attributable to historic releases from operations at the Facility.

WESTON collected a total of nine discrete samples from the Facility on 14 December 2006. One of the nine samples contained a lead concentration above 400 mg/kg. The sample results were not indicative of lead smelting operations. Therefore, WESTON concluded that this property is not a source of lead contamination as a result of smelting operations.

Wolverine White Metal – 3421 Gibson Street

Wolverine White Metal, formerly located at 3421 Gibson Street in Detroit, Wayne County Michigan, no longer exists, and has apparently been demolished, and is currently a fenced lot used by DTE Energy.

Prior to sample collection, upwind and downwind sampling areas were established within 1,300 and 1,600 ft from the Facility, respectively. A total of 24 composite samples from twelve off-site properties were collected on 19 and 30 November 2003, from the area upwind and downwind of the former smelter as summarized in the following table.

Upwind Properties		Downwind Properties	
3335 Cochrane	(**640**)	2921 Fourth – greenway [Apt 939]	(170)
3344 Harrison	(200)	2921 Fourth – greenway [Apt 3139]	(170)
1530 Sycamore	(**420**)	2921 Fourth – greenway [Apt 3253]	(210)
1535 Sycamore	(350)	2921 Fourth – greenway [Apt 3466]	(240)
1559 Sycamore	(**420**)	3466 Lincoln West	(110)
1571 Sycamore	(**860**)	3490 Lincoln West	(95)

Values in bold exceeded the screening level of 400 mg/kg.
Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg.

The pattern of analytical results for lead in soil samples collected during Phase I did not suggest that lead contamination detected in downwind locations was attributable to historic releases from the Facility.

Phase II sampling consisted of the collection of six discrete samples from the Facility on 14 December 2006. Of the six samples collected, one of the samples contained lead concentrations above 400 mg/kg. The sample results were not indicative of lead smelting operations. Therefore, WESTON concluded that this property is not a source of lead contamination as a result of smelting operations.

City Metals Refining – 2945 Hubbard Street

City Metals Refining, formerly located at 2945 Hubbard Street in Detroit, Wayne County Michigan, no longer exists. The former Facility location is a paved parking lot.

Prior to sample collection, upwind and downwind sampling areas were established within 2,100 and 1,350 ft from the Facility, respectively. A total of 24 composite samples from eleven off-site properties were collected on 14 November and 5 and 8 December 2003, from the area upwind and downwind of the former smelter as summarized in the following table.

Upwind Properties		Downwind Properties	
4272 Brandon – greenway	(**490**)	781 W. Grand Blvd.	(270)
4296 Brandon – greenway	(150)	802 W. Grand Blvd.	(230)
4465 Brandon – greenway	(**470**)	2798 Roosevelt	(340)
2363 Clark – greenway	(390)	2822 Roosevelt	(170)
2350 Scotten – greenway	(350)	2803 25th St.	(220)
		2916 Vinewood	(270)

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg.
Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in soil samples collected during Phase I did not suggest that lead contamination detected in downwind locations was attributable to historic releases from the Facility.

WESTON did not conduct Phase II sampling at this Facility due to the lack of surface areas to be sampled (i.e. the former Facility location is entirely paved over). Therefore, no further action was recommended for this Facility.

Aetna Smelting – 1826 Illinois Street

Aetna Smelting, located at 1826 Illinois Street in Detroit, Wayne County Michigan, no longer exists, and has apparently been demolished and replaced by a soda bottling plant.

Prior to sample collection, upwind and downwind sampling areas were established within 2,700 and 1,500 ft from the Facility, respectively. A total of 24 composite samples from seven off-site properties were collected on 17 and 19 November 2003 from the area upwind and downwind of the former smelter as summarized in the following table.

Upwind Properties		Downwind Properties	
701 Mack (broken into six parts)	(370)	1989 Illinois	(390)
		2168 Illinois	(230)
		3701 St. Aubin	(340)
		3719 St. Aubin	(370)
		3732 St. Aubin	(**450**)
		3809 St. Aubin	(**470**)

Note: Values provided in parentheses are the highest analytical result for that property, in mg/kg.
Values in bold exceeded the screening level of 400 mg/kg.

The pattern of analytical results for lead in Phase I soil samples indicated that lead contamination detected in downwind locations may have been attributable to historic releases from smelting operations at the Facility. However, only two samples exceeded the screening level, and these were not from locations closest to the Facility.

Phase II sampling consisted of the collection of nine discrete samples from the Facility on 30 April 2007. The sample results were not indicative of lead smelting operations. Therefore, WESTON concluded that this property is not a source of lead contamination as a result of smelting operations.

SUMMARY OF THE WAYNE COUNTY/DETROIT AREA HISTORICAL SMELTER PROJECT FACILITIES

Facility	Address	Investigative Results	Subsequent Action
Master Metals	4700 E. Nevada	Investigation completed by U.S. EPA	Removal Action completed by U.S. EPA
Detroit Lead Company	13521 – 13535 Helen	Investigation completed by U.S. EPA	Removal Action completed by U.S. EPA
Master Alloys	2930 Denton	Phase I not indicative of downwind impact; Facility investigation completed by U.S. EPA.	Removal Action completed by U.S. EPA
Federal Mogul	11031 Shoemaker	Facility investigation completed by City of Detroit; Phase I investigation completed by WESTON	No further action recommended.
Federal Alloys	924 Leland	Initial Data Investigation	No further action recommended.
Industrial Smelting	648 E. Columbia	Initial Data Investigation	No further action recommended.
Motex Metal Process	4473 – 4475 W. Jefferson	Initial Data Investigation	No further action recommended.
Standard Metals	1560 Franklin	Initial Data Investigation	No further action recommended.
Continental Metal	11500 Russell	Phase I, Phase II, and AKT Peerless demonstrated downwind lead contamination as a result of aerial deposition; but the Facility was determined not to be the source.	Removal Action of affected downwind residences completed by U.S. EPA
Federated Metals	11630 Russell	Phase I, Phase II, and AKT Peerless demonstrated downwind lead contamination as a result of aerial deposition; but the Facility was determined not to be the source.	Removal Action of affected downwind residences completed by U.S. EPA.
Commodity Metals	1641 Caniff	Information discovered during Phase II indicated this Facility to be the source of downwind lead contamination.	Removal Action of affected downwind residences completed by U.S. EPA.
Michigan Smelting	7885 Joseph Campau	Phase I indicated a possible aerial deposition trend; Phase II ruled out the possibility of downwind impact as a result of smelting operations.	Removal Action of lead-contaminated residences despite lead contamination not attributable to Facility.
Detroit Lead Pipe Works	7001 Lyndon	Phase I not indicative of downwind impact; Phase II confirmed no downwind impact, but concentrations at Facility indicative of smelting operations.	MDEQ notified property owner of Due Care obligations, no further action recommended.
Industrial Smelting	19430 Mt. Elliott	Phase I indicated aerial deposition trend, but no concentrations above 400 mg/kg; Phase II results indicative of smelting operations at the Facility.	MDEQ notified property owner of Due Care obligations, no further action recommended.
Aetna Smelting	1826 Illinois	Phase I indicated aerial deposition trend, but highest concentrations were not closest to the Facility; Phase II results not indicative of smelting operations at the Facility,	No further action recommended.
Great Lakes Smelting	1640 E. Euclid	Phase I not indicative of downwind impact; Phase II results not indicative of smelting operations.	No further action recommended.
Wolverine White Metal	3421 Gibson	Phase I not indicative of downwind impact; Phase II results not indicative of smelting operations.	No further action recommended.
Acme Metal	1436 Holbrook	Phase I not indicative of downwind impact; Phase II results not indicative of smelting operations.	No further action recommended.
City Metals Refining	2945 Hubbard	Phase I not indicative of downwind impact; no Phase II sampling due to entirely paved surface.	No further action recommended.

List of Project Reports

More detailed information pertaining to the Project is presented in the following reports prepared by WESTON for MDEQ:

Summary Report for Data Investigation for the Detroit Lead Assessment Project. September 2003.

Phase I Quality Assurance Sampling Plan for the Detroit Lead Assessment Project. October 2003.

Comprehensive Phase I Sampling Summary Report for the Detroit Lead Assessment Project. March 2004.

Phase II Sampling Report for the Detroit Lead Assessment Project, Michigan Smelting – 7885 Joseph Campau Street. November 2005.

Phase I Summary Report for the Detroit Lead Assessment Project, Former Master Alloys – 2930 Denton Street. December 2005.

Phase II Sampling Report for the Detroit Lead Assessment Project, Commodity Metals – 1641 Caniff Street. September 2006.

Phase II Sampling Report for the Detroit Lead Assessment Project, Acme Metal Company – 1436 Holbrook Street. August 2007.

Phase II Sampling Report for the Detroit Lead Assessment Project, Great Lakes Smelting – 1640 East Euclid Street. August 2007.

Phase II Sampling Report for the Detroit Lead Assessment Project, Wolverine White Metal – 3421 Gibson Street. August 2007.

Phase II Sampling Report for the Detroit Lead Assessment Project, Aetna Smelting – 1826 Illinois Street. September 2007.

Phase II Sampling Report for the Detroit Lead Assessment Project, Industrial Smelting – 19430 Mt. Elliott Street. September 2007.

Phase II Sampling Report for the Detroit Lead Assessment Project, Detroit Lead Pipe Works – 7001 Lyndon Street. October 2007.

Phase I Summary Report for the Detroit Lead Assessment Project, 11031 Shoemaker Street Site. November 2007.

Removal Summary Report for the Medbury Neighborhood Site. May 2008.

Removal Summary Report for the Commodity Metals Site. July 2008.