UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

MAR 30 2011

ENFORCEMENT ACTION MEMORANDUM

SUBJECT: Approval and Funding for a Non-Time-Critical Removal Action at the Carter Carburetor Site in St. Louis, Missouri

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TO: Karl Brooks
Regional Administrator

I. PURPOSE

The purpose of this Enforcement Action Memorandum is to request and document approval of the proposed removal action described herein for the Carter Carburetor Site (Site) in St. Louis, Missouri. The removal action will involve thermally enhanced extraction of polychlorinated biphenyls (PCB) and trichloroethylene (TCE) in the subsurface soils. This action will also involve the removal of PCBs in two on-site buildings. The selected removal action will support redevelopment of the Site for industrial, commercial, and recreational uses with limited restrictions. The Site property and buildings collectively are referred to as the Facility. The following four distinct on-site contaminated areas were evaluated in the Engineering Evaluation/Cost Analysis (EE/CA) and will require removal action:

- The former TCE Aboveground Storage Tank Area (AST)
- The Carter Building, Inc., Area (CBI Area)
- The Willco Plastics Building Area (Willco Building)
- The former Die Cast Area (Die Cast Area)

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Removal site evaluation

The Carter Carburetor Corporation and Carter Automotive Products, both of which were subsidiaries of ACF Industries, Inc. (ACF) from the 1930s until about 1984, operated at the Site. The plant consisted of several connected, multi-story manufacturing, testing, office, and warehouse buildings that contained approximately 480,000 square feet of space. During its operational life, the plant manufactured carburetors for gasoline-powered and diesel-powered engines. Though exact employment figures are unavailable, the Carter Carburetor plant was a source of significant employment for the neighborhood from the 1930s until it ceased operations in 1984.

The manufacturing process included die casting and machining aluminum and zinc into carburetor components, which were then cleaned, treated with protective coatings, and assembled into carburetors on the premises. Although numerous chemicals were used in the manufacturing process, the more predominant contaminants found at the Site include PCBs and TCE. The primary PCB contamination at the Site was due to Pydraul, a hydraulic fluid once used primarily in the die cast machines. TCE was a common industrial solvent primarily used for cleaning and degreasing carburetor components. In 1984, ACF closed the Site and dismantled much of the equipment.

In the early 1980s, ACF was required by the Industrial Pollution Control Section of the Metropolitan St. Louis Sewer District to monitor and control waste water discharges containing PCBs. ACF instituted physical and procedural controls to reduce PCBs in their waste water discharges. These controls were reported to be in effect until the Facility was decommissioned in 1984. A source of the current PCB contamination was PCB-contaminated hydraulic fluid in machinery and equipment used in the Carter Carburetor manufacturing processes at the Facility.

In April 1985, the Facility was deeded to the Land Reutilization Authority (LRA) of the city of St. Louis. On the same date, the LRA deeded the Facility to Hubert and Sharon Thompson. In January 1986, the Thompsons sold the northeastern portion of the Facility (the Die Cast Area) to Edward Pivirotto and his wife. The Pivirottos subsequently failed to pay the real estate taxes on the portion of the Facility they owned, resulting in a sheriff's sale in August 1991. Because no substantive bids were received at the sale, the Pivirotto's property reverted to the LRA by operation of law in February 1992. The LRA is the current owner of the Die Cast Area, which included the two Die Cast Buildings, the South Warehouse, and parking lot.

In June 1989, Carter Building, Inc. (CBI) entered into a lease and option to purchase agreement with the Thompsons. In June 1990, CBI provided notice to the Thompsons that it was exercising its right to purchase the portion of the Facility owned by the Thompsons. Following the filing of a law suit for breach of contract and specific performance and a subsequent foreclosure proceeding, CBI received a Trustee's deed in October 1991. CBI is the current owner of the portion of the Facility (the CBI and Willco Buildings) not owned by LRA.

In 1985, the city of St. Louis' Health Department responded to a report of solvent vapors in an underground utility cable vault along North Spring Avenue near the Site. Sampling of the sludge and debris in the vault revealed TCE at levels exceeding 3,500 parts per million (ppm). Sampling of the water in the vault revealed TCE contamination as high as 260 ppm. After several months of investigation and negotiations, the vault was eventually cleaned up in January 1986 by ACF.

In August 1987, the U.S. Environmental Protection Agency (EPA) conducted a Toxic Substances Control Act (TSCA) inspection of the Facility which led to the issuance of a Complaint and Notice of Hearing to Hubert Thompson. In April 1988, Mr. Thompson contracted with an environmental contractor to clean up and remove the PCB materials and/or PCB-contaminated transformers.

In June 1988, an Administrative Order on Consent issued by EPA required Mr. Thompson to remove and dispose of the PCB transformers.

In February 1989, the Missouri Department of Natural Resources (MDNR) conducted an inspection at the Site. The inspection revealed that transformers, transformer oil, switches, and contaminated concrete had been shipped off-site for disposal. Samples collected during the MDNR inspection revealed PCB contamination in soils under an old transformer area. Following the response actions by Thompson, a cleanup verification study was performed by Environmental Operations, Inc., in November 1989. This study indicated that PCB contamination was still present in the pump room (electrical substation number 1). In April 1989, EPA collected samples at the Site and found PCB concentrations in the soils ranging from 17.2 ppm to 18.5 ppm, and levels of PCBs on concrete ranging from 2.1 micrograms/one-hundred square centimeters ($\mu g/100cm^2$) to 15,600 $\mu g/100cm^2$ in the pump room.

In March 1990, EPA conducted another TSCA inspection to determine if further cleanup action was necessary. Analysis of samples collected during this inspection indicated that surface wipe samples still exceeded regulatory cleanup standards and that a PCB transformer and two drums of contaminated material remained on-site.

Another PCB contamination study was conducted by Environmental Science and Engineering, Inc., in September 1990 for Hubert Thompson. This study focused solely on the first floor pump room (electrical substation number 1) that originally contained six transformers. As a result of this study, EPA requested that Mr. Thompson provide a description of completed and/or planned cleanup activities at the Site. In February 1991, Mr. Thompson responded that he did not have the assets to continue the cleanup activities at the Site.

The EPA's Emergency Planning and Response Branch conducted Site investigations in November 1993 and January 1994. The primary reason for the investigations was to collect environmental samples and conduct an assessment of the Site to determine if anyone had access to and could be exposed to the areas previously determined to be contaminated with PCBs. Samples were collected from areas at the Site known or suspected to have significant concentrations of PCB contamination. These areas included (a) a vaulted pump room near the

center of the CBI portion of the Facility which contained pumps, old boilers, and other equipment, and once housed electrical substation number 1; (b) locations near and below electrical substation number 3 which was on the roof of the LRA portion of the Facility; and (c) locations near electrical substation number 4 in the northeast corner of the LRA portion of the Facility. Analysis of a sediment sample taken from the floor drain in the CBI Building pump room indicated the presence of PCB contamination; however, it could not be determined if PCB contamination had or was capable of being released to the city sewer system through this floor drain. Analytical results from samples taken during the November 1993 and January 1994 investigations confirmed the presence of significant PCB contamination at and near two large PCB transformers at electrical substations number 3 and number 4, indicating that releases of PCBs had occurred from each transformer. Two drums containing highly contaminated PCB oil were also found near the PCB transformer at electrical substation number 4. A large PCB-contaminated stained area, approximately 15 feet by 40 feet in size, was discovered immediately west of the drums of PCB oil. Analytical results from samples collected also indicated that PCBs had contaminated the floors and equipment in the main part of the Die Cast Building. As a result of the discoveries, EPA requested the LRA to immediately overpack and secure the two drums of PCB oil, restrict access to the Site, and post PCB warning stickers.

EPA conducted another Site investigation in March 1994. The purpose of this investigation was to collect additional air, wipe, and dust samples to further characterize the Site and determine the potential threat to those individuals who were in the buildings on a daily basis. Analytical results from the air sampling and from 50 wipe samples of the floors, walls, and equipment at the Facility, including areas occupied by lessees, confirmed the existence of PCB contamination throughout the Facility.

In December 1995 and January 1996, EPA and its contractors conducted an Integrated Assessment Investigation in order to complete a Preliminary Assessment/Site Inspection (PA/SI) to determine if off-site migration had occurred and to provide recommendations for further action based on the results of the PA/SI. This investigation revealed six potential sources of releases of hazardous substances based on the operational history and past investigations. The potential sources were:

Transformers. One of the two 100-gallon PCB transformers was located on the roof on the western portion of the south Die Cast Building (electrical substation number 3). The second transformer was located on the northeast corner of the north Die Cast Building (electrical substation number 4). Seventeen 1-gallon PCB and/or PCB-contaminated transformers/capacitors were located inside both the north and south Die Cast Buildings and the South Warehouse Facility.

Drums. Twenty-one 55-gallon drums were staged in a room south of the south Die Cast Building. At least two drums contained PCB contamination, with PCB placard on the drums.

Metal shavings. An unknown volume of metal shavings were spread throughout both the north and south Die Cast Buildings. Analytical results indicated the shavings were contaminated with PCBs, cyanide, and heavy metals.

Smokestack/exhaust ventilation. Analysis of wipe samples collected from the smokestack/exhaust ventilation system in the north and south Die Cast Buildings revealed PCB contamination.

Sumps and trenches. Five sumps and/or trenches were located in the north and south Die Casting Buildings. Most of the sumps contained liquids and sediments. One sump was sampled and exhibited PCB contamination.

Building material and dust: Analytical results of wipe samples and building material samples collected primarily in the die casting rooms indicated PCB contamination.

Based upon analytical results from samples taken during EPA's November 16, 1993, and January 6, 1994, investigations, significant PCB contamination existed outside of the Die Cast Building in the north parking lot area. This PCB contamination was at least partially the result of releases from a PCB transformer (electrical substation number 4) located on the northeast corner of the north Die Cast Building. PCB contamination in this outside area was as high as 180,000 ppm.

In addition, on-site screening of additional surface soil samples indicated PCB contamination existed in all four directions from the Facility. This PCB soil contamination was possibly from releases of contaminants in the air through airborne PCB-laden particulates while the plant was operating.

As part of the Integrated Assessment Investigation, soil samples were collected from the nearby Herbert Hoover Boys and Girls Club (Boys and Girls Club) and from two occupied residential properties and analyzed for PCB contamination. Analytical results of the samples from these properties revealed low levels of PCB contamination in surface soils.

Analysis of wipe samples collected around the smokestack/exhaust ventilation in the Die Cast Buildings during the Integrated Assessment Investigation indicated the presence of PCB contamination. These vents were used for exhausting fumes resulting from die casting activities. The location of the contamination in this area indicated a portion of the PCB contamination inside the Die Cast Buildings resulted from daily operations during manufacturing processes.

Metal shavings spread throughout the north and south Die Cast Buildings were the result of daily die casting operations which used machine cast metals to achieve manufacturing specifications.

PCBs were used during the carburetor manufacturing process as a fire retardant to keep die casting machines from overheating. Mr. Thompson did not operate die casting machinery after he became the owner of the Facility property. Therefore, the PCB contamination on the Die Cast Buildings' walls, window fans, and buildings appurtenances appeared to be contamination that had accumulated over many years during the operation of the carburetor manufacturing processes at the Facility.

Based upon the November 1993, January and March 1994 investigations, and the December 1995 and January 1996 Integrated Assessment Investigation, EPA determined that unacceptable concentrations of PCB contamination existed on all four floors of the CBI Building and on the first floor of the Willco Building. PCBs had contaminated areas outside the building near electrical substation number 4 and on the roof of the building near electrical substation number 3 as well as surfaces inside the Die Cast Buildings. Sample analytical results exceeded cleanup levels as outlined in the Office of Solid Waste and Emergency Response Directive No. 9355.4-01, Guidance on Remedial Actions for Superfund Sites with PCB Contamination, and the PCB Spill Cleanup Policy set forth in subpart G of 40 CFR part 761.

Two drums of PCB-contaminated oil originally located near electrical substation number 4 were overpacked and relocated to another more secure part of the Site. The Facility is surrounded by commercial and residential areas. The Boys and Girls Club and a ballpark are located across Dodier Street north of the Facility. Two high schools and three elementary schools are located within one-half mile of the Facility. Numerous residences are within the immediate vicinity of the Site. Available information indicated trespassers had entered the die cast portions of the Facility in the past and may have been exposed to contamination.

On March 18, 1996, EPA determined that a time-critical removal action should be performed at the Site in order to reduce the immediate threat to human health and the environment posed by conditions at the Site. The EPA's determination that such action was necessary and a description of the actions that needed to be taken were described in the Removal Action Memorandum, signed by the Regional Administrator of EPA Region 7 on March 18, 1996.

In July 1996, EPA issued a Unilateral Administrative Order for Removal Response Activities (UAO), Docket Number VII-96-F-0026, pursuant to section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. section 9606(a), to ACF. The UAO required ACF to undertake the following actions identified in the March 1996 Removal Action Memorandum.

- Removal and disposal of a PCB electrical equipment and drums of PCB waste.
- Demolition of the two Die Cast Buildings and the warehouse building.
- Characterization, removal, and off-site disposal of all contaminated building material and debris located on the north side of the north Die Cast Building.
- Characterization and off-site disposal of the contents and demolition debris of the two Die Cast Buildings and warehouse.
- Installation of an interim cover and epoxy coating over the Die Cast Buildings' foundation floors following the demolition and removal of the two Die Cast Buildings and warehouse.

In May 1997, ACF began on-site removal actions pursuant to the 1996 UAO. The time-critical removal action required by the UAO primarily focused on the demolition and disposal of PCB- and asbestos-contaminated buildings on the northeastern portion of the Site. These buildings included two Die Cast Buildings and the South Warehouse. The South Warehouse was completely demolished, including the foundations and floor. The Die Cast Buildings were partly demolished; leaving the PCB-contaminated foundation walls and floors of the Die Cast Buildings in place. These foundations were cleaned, coated with epoxy, and covered with limestone aggregate as an interim measure. Also, approximately 1,100 tons of soil were removed from the north parking lot transformer leak area.

In July 1998, EPA conducted an investigation at the Site and collected chip, wipe, and water samples from the Carter Carburetor Manufacturing Building (the CBI Building), the largest remaining Site building, which was and is currently owned by CBI. Results of analyses of the wipe samples collected on the first floor indicated PCB contamination at levels as high as 247.5 µg/100 cm^2 with an average wipe-sample concentration inside the CBI Building on the first floor of 61.5 µg/100 cm^2. The concrete chip sample analytical results from the first floor indicated PCB concentration as high as 858 ppm with an average chip sample concentration of 176 ppm. Results of analyses of two water samples collected from a pit on the first floor indicated PCB contamination at 841 micrograms/Liter (µg/L) and 490 µg/L. On the second floor, only one wipe-sample analytical result exceeded 10 µg/100 cm^2 with a concentration of PCBs at 11.2 µg/100 cm^2. The third floor sample analytical results indicated PCB concentrations as high as 38.3 µg/100 cm^2 with an average concentration of 11.1 µg/100 cm^2.

In April 2003, ACF contracted with a consulting company to conduct additional environmental sampling at the Site. Several soil boring samples were collected at the Site, the majority of which were collected from beneath the concrete foundation floor of the two former Die Cast Buildings. The analytical results from these soil samples indicated PCB concentrations as high as 11,470 ppm in the sampled subsurface area, primarily beneath the Die Cast Buildings' concrete foundation floors. Based on the results of these soil samples, ACF estimated that 1,750 cubic yards of PCB-contaminated material at concentrations above 10 ppm were present beneath or near the former Die Cast Buildings. In addition to the PCBs, various hydrocarbon and chlorinated solvents have been identified at the Site. Tetrachloroethylene and TCE were identified in subsurface soils at concentrations of 3.46 ppm and 1.05 ppm, respectively.

In September 2005, EPA entered into a settlement agreement with ACF to conduct an EE/CA at the Site to address the remaining on-site environmental contamination. The agreement included the collection of additional data to determine the extent of contamination and an investigation of a former TCE storage tank area for possible subsurface contamination.

In the summer of 2006, ACF, and its contractors conducted environmental assessments for lead-based paint, asbestos, PCBs, and TCE. The results of this investigation confirmed and further delineated PCBs in the CBI Building, lead paint in the CBI Building and the Willco Building, and lead paint throughout both buildings. In addition, ACF's contractors identified the presence of relatively high levels of TCE in subsurface soils beneath the location of the former TCE storage tank. After review of the 2006 investigation reports, EPA determined that further investigation was needed to define the extent of TCE contamination.

In the summer of 2007, ACF's contractors conducted further investigations to further delineate the extent of the TCE in subsurface soil. In addition, ACF's contractors investigated and cleaned all accessible sewer lines on the Site. The sewer lines had previously been sampled and were shown by EPA to have contained PCB-contaminated debris. This sewer line debris was removed to the extent possible and properly disposed of. After reviewing this data, EPA directed ACF to begin conducting the Streamlined Risk Evaluation (SRE) portion of the EE/CA.

After reviewing the subsurface TCE data and the SRE, the Missouri Department of Health and Senior Services (MDHSS) recommended further assessment of vapor intrusion of TCE. In October 2008, in order to expedite the process, EPA conducted an on-site vapor intrusion study by collecting samples directly beneath building floors and other concrete slabs at the Site. The results of this study determined that TCE vapors were present beneath the on-site buildings and slabs at concentrations of concern. Further vapor intrusion sampling was conducted along the east side of the Boys and Girls Club. Based on the results of these samples and groundwater flow direction, it was determined that the TCE was not significantly impacting the Boys and Girls Club.

2. Physical location

The Site is located in the city of St. Louis, Missouri, and includes the Facility which once occupied one and one-half square city blocks. The Site is bounded on the north by Dodier Street, on the east by North Grand Boulevard, on the south by St. Louis Avenue and on the west by North Spring Avenue, but also includes the former TCE AST area which is located to the west of North Spring Avenue.

3. Site characteristics

The Site is located along Grand Boulevard about two miles north of St. Louis University in an area of small businesses and residences in the northcentral portion of the city of St. Louis. At one time, the Facility consisted of several multi-story, connected, manufacturing and warehouse buildings approximately 480,000 square feet in size, and adjacent lots located in a mixed, urban commercial/residential area. The Site property covers approximately 9 acres including the TCE AST area. The Site is 80 feet in elevation above the Mississippi River and is not within its 100-year flood plain zone. The Mississippi River is approximately two miles east of the Site.

While the residential areas immediately across Grand Boulevard are relatively stable, being occupied by retirees and lower-income homeowners, there are significant numbers of abandoned homes and businesses and vacant lots farther east and in other directions from the Site. The population around the Site is predominantly African-American.

The Boys and Girls Club is directly to the north of the Site across Dodier Street. The Boys and Girls Club facility occupies property which was formerly the site of Sportsman's Park, home of the St. Louis Browns and St. Louis Cardinals baseball teams. The Boys and Girls Club serves as a focal point for neighborhood youth activities.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

Although numerous contaminants have been detected at the Site (see table 2.1 of the EE/CA), the primary contaminants of concern are PCBs and TCE and its accompanying breakdown products. Cleanup goals for each area at the Site were established in the SRE and also include regulatory levels for PCBs. The cleanup goals for each of the four areas identified in the EE/CA are described in Section V(A)(1) below and are also summarized in the following table:

Contaminant	Sample Media Type	Removal Action Goal
PCBs	Bulk Concrete (concentrations within concrete)	1 milligram/kilogram (mg/kg) or ppm
PCBs	Segregation and disposal value for Bulk Concrete to TSCA landfill	50 mg/kg or ppm
PCBs	Soil with no restrictions	1 mg/kg or ppm
PCBs	Soil with deed restrictions only	25 mg/kg or ppm
PCBs	Soil with cap and deed restrictions	Greater than 25 mg/kg or ppm
TCE	Soil	59.2 mg/kg or ppm

The Site has been divided into four areas where hazardous substances have been released, as follows:

Former TCE AST – This area is across Spring Street immediately west of the CBI Building. This area includes subsurface soils impacted with high levels of TCE. The depth of contamination extends approximately 15 to 20 feet to bedrock. As described above, historical information indicates that releases of TCE have occurred in this area. In the summer of 2006, as part of the EE/CA process, ACF conducted limited subsurface soil sampling in this area to determine if there had been a release of TCE into the soil. Results from this sampling effort were reported in table 11 of the November 2006: "Interim Data Submission Report Round 1 Field Data," and showed concentrations of TCE in subsurface soils as high as 1,240 ppm. These results prompted a second sampling effort to better characterize the extent of TCE contamination in the subsurface. The second sampling effort was conducted during the summer of 2007 and reported in the "Interim Data Submission Report Round 2 Field Data, December 2007." The results of this sampling effort defined the lateral and vertical extent of soil contamination in the TCE AST area and indicated TCE concentrations as high as 13,700 ppm.

CBI Building – Also during Rounds 1 and 2 of Field Data collection, ACF conducted an extensive sampling of the CBI Building by collecting concrete cores, brick chips, and wipe samples within the CBI Building. Results of analysis of these samples revealed PCB concentrations as high as 4,140 ppm and PCB contamination greater than 1 ppm throughout the building with higher concentrations on the first and third floors as shown in the EE/CA figures 2-16 through 2-19.

Willco Building – The results from concrete sampling in the Willco Building also indicated PCB contamination in concrete core samples collected from the floor. However, results from these samples showed much lower concentrations with the highest reading at 5.91 ppm. Results from concrete core samples from the Willco Building are shown on figures 2-16 and 2-17 in the EE/CA.

Former Die Cast Area – The Die Cast Area has always been the most contaminated area of the Site and was the primary focus of the time-critical removal action. This area includes subsurface soils impacted with high levels of PCBs. The contaminated soils are covered with a concrete slab (the foundations of the former Die Cast Buildings) and one to two feet of gravel. Subsurface samples collected by EPA and ACF have consistently exceeded regulatory and risk-based levels with PCB concentrations as high as 270,000 ppm in the subsurface soils beneath the foundation floors of the Die Cast Buildings. Concentrations exceeding Removal Action Goals have been identified in the soil down to the limestone bedrock at a depth of approximately 20 feet. Results of PCB samples are shown on figure 2-3 of the EE/CA.

PCBs and TCE are each CERCLA hazardous substances because they are defined as hazardous substances in 40 CFR part 302.4.

5. National Priorities Listing (NPL) status

The Site is not currently on or proposed for listing on the NPL.

6. Maps, pictures, and other graphic representations

A map of the Site location and an aerial photo showing the four primary cleanup areas are included in the attached EE/CA.

B. Other Actions to Date

1. Previous actions

As described in Section II(A)(1) above, the Carter Carburetor Corporation conducted a cleanup action as a result of a release of TCE into underground utility vaults in 1986.

Hubert Thompson conducted a removal of PCB electrical equipment and soil in a transformer storage area as well as concrete and soil in the pump room of the CBI Building.

ACF conducted a time-critical removal action which involved the demolition, removal, and off-site disposal of the two Die Cast Buildings and the South Warehouse. This action also included the removal of drums of PCB waste, contaminated soil, and PCB-contaminated debris.

2. Current actions

Currently, there are no ongoing removal or remedial actions.

C. State and Local Authorities' Roles

1. State and local actions to date

MDNR has been involved primarily in a technical advisory role. MDNR has participated in potentially responsible party technical discussions and has provided review and comments on technical documents.

MDHSS has also participated in technical discussions and coordinated with EPA's toxicologist on review and approval of the SRE.

The St. Louis Development Corporation's LRA is the primary environmental agency for the city of St. Louis and owner of record for a portion of the Site. LRA has been EPA's primary local contact and has assisted in coordinating with the various city agencies when appropriate.

2. Potential for continued state/local response

EPA expects state involvement to continue or increase during this removal action. The LRA will likely continue to be EPA's primary technical contact for the city of St. Louis.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT AND STATUTORY AND REGULATORY AUTHORITIES

At any release, regardless of whether the Site is included on the NPL, where the lead agency makes the determination, based on factors in 40 CFR part 300.415(b)(2) that there is a threat to public health or welfare of the United States or the environment, the lead agency may take any appropriate removal action to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or threat of release. The factors in 40 CFR part 300.415(b)(2) which apply to this Site are:

300.415(b)(2)(i) – Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants, or contaminants.

Actual exposures may be occurring due to trespassers accessing the Site. Despite efforts by the owner to restrict access to the CBI Building, there is evidence that trespassing continues to occur. Area residents have expressed concern about potential exposures for homeless people who may be accessing the building. Also, there has been and there is a threat of release of PCBs and asbestos from the CBI Building.

Section 4.0 (Exposure Assessment) of the SRE addresses potential exposures relative to a future use scenario. The SRE describes potential future receptors as:

- Construction workers
- Industrial commercial workers
- Future adolescent recreational visitors

The exposure scenarios identified in the SRE include the following:

Future Industrial or Commercial Workers – If the CBI Building is developed for commercial or industrial use, future industrial or commercial workers could be exposed to dust containing PCBs or by direct contact with the PCB-contaminated concrete floors and walls inside the CBI Building. PCB levels in the concrete exceed the regulatory levels of 1 ppm on all floors of the CBI Building, with the highest levels on the first and third floors. Wipe sampling results were as high as 52 µg/100 cm^2 which exceeds the regulatory threshold of 10 µg/100 cm^2. Workers in the building may also be exposed to TCE vapors which could enter the building through vapor intrusion. EPA collected subslab vapor samples beneath the CBI Building which showed vapor readings as high as 66,000 parts per billion vapor. However, due to the condition of the building (i.e., no windows or heating, ventilating, and air conditioning system), EPA did not collect actual indoor air samples.

Future Construction Worker – As outlined in the SRE, a construction worker could be exposed to PCB-contaminated soil and TCE-contaminated soil through excavation activities which expose the contaminants. They also could be exposed to TCE vapors while standing in an excavation. The Removal Action Goal for TCE in soil for a construction worker is 52.9 ppm.

Future Adolescent Child – Under this exposure scenario, a future adolescent child could be exposed to PCB-contaminated soil near the surface in the Die Cast Area and TCE in the TCE AST area which is unearthed through construction activities. A construction worker could also be exposed to these contaminants. The lowest Removal Action Goal in soil for a recreational adolescent was calculated at 1.1 ppm for PCBs in soil. However, the TSCA regulatory cleanup level is 1 ppm. Since the TSCA cleanup level of 1 ppm PCBs is lower than the calculated goal, it is considered more protective and has been selected as the Removal Action Goal for the Site.

300.415(b)(2)(iv) – High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.

Both EPA and ACF have identified highly contaminated PCB soils beneath the former Die Cast Buildings. These PCBs have been detected to bedrock and are mixed with solvents such as TCE and petroleum hydrocarbons. Contaminants remaining in the soil could migrate downward to groundwater and upward through vapor intrusion to off-site receptors.

PCBs are a mixture of chemicals which are no longer produced in the United States. Historically, PCBs were used as coolants and lubricants in transformers, capacitors, and other

electrical equipment because they do not burn easily and they have good insulating properties. Other products made before 1977 which may contain PCBs include fluorescent lighting fixtures and hydraulic oils. The manufacture of PCBs ceased in the United States in 1977 due to evidence that they build up in the environment and can cause harmful health effects to humans and animals.

Health effects that have been associated with exposure to PCBs include acne-like skin conditions in adults, and neurobehavioral and immunological changes in children. PCBs are known to cause cancer in animals, and are considered probable human carcinogens.

TCE is a nonflammable, colorless liquid which is commonly used in industry as a solvent for the degreasing of metal parts. Human health effects associated with short-term exposures to TCE include headaches, dizziness, nausea, and nervous system effects such as poor coordination. Human health effects associated with long-term exposures to TCE include liver and kidney damage, impaired immune system function, and may also include cancer. TCE is considered a probable human carcinogen.

IV. ENDANGERMENT DETERMINATION

Actual or threatened release of a hazardous substance at this Site, if not addressed by implementing the response action selected in this Enforcement Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS

A. Proposed Action Description

As described above and in the EE/CA, the Site has been divided into four distinct contaminated areas and the proposed action in each area is described as follows:

The TCE AST Area – The proposed action for this area is In Situ Thermal Desorption and Vapor Extraction (ISTD/VE). The ISTD/VE Alternative utilizes simultaneous application of thermal conduction heating and vacuum extraction to treat contaminated soil in place. The applied heat volatilizes organic contaminants within the soil, enabling them to be carried in the vapor stream toward heater-vacuum wells. Gases emerging from the heated soil are collected through the vacuum wells and conveyed to an Air Quality Control (AQC) system for treatment. The AQC system performance is gauged by a Continuous Emissions Monitoring system, vapor sampling, and testing of the final off-gas. Confirmation sampling of system performance is conducted after the operation is complete.

The ISTD/VE Alternative will satisfy applicable or relevant and appropriate requirements (ARARs) for the Site. Provisions for control of vapor releases are designed into the system, including a vapor barrier constructed on the ground surface, allowing for the capture of all vapors generated during the application of heat to the impacted soils. The ISTD/VE technology will be applied to the TCE AST Area until the Removal Action Goal of 59.2 ppm TCE is achieved.

Following implementation of the ISTD/VE technology, institutional controls will be put into place. The controls will include filing of a deed restriction/environmental covenant with the property recorder specifying certain property restrictions, and notifying the city of St. Louis' Building Division of restrictions on development/environmental covenants in place at the Site.

The CBI Building – The proposed removal action for the CBI Building is demolition and off-site disposal. Prior to demolishing the building, an asbestos inspection and abatement action will be completed to remove asbestos-containing materials from the building. Following completion of the asbestos abatement, the CBI Building will be demolished and building materials segregated based on PCB concentrations. Although attached to the Willco Building, controlled demolition of the CBI Building, starting at the top floor and working down, is feasible, and with suitable precautions and shoring, the Willco Building will remain standing for future use. The Building Demolition and Disposal Alternative will achieve removal goals by removing the impacted building materials from the Site. Dismantled building materials will be transported to an appropriate disposal Facility. Based on existing analytical data, building materials could be disposed of at either a TSCA or sanitary landfill, depending upon the PCB concentrations present in the materials. If PCB concentrations exceed 50 ppm, the materials must be disposed of in a TSCA-approved landfill.

To minimize or prevent any off-site impacts during demolition, standard dust control and storm water management practices will be employed. It is anticipated that the detailed work plan for the demolition of the building will specify the type of dust control and storm water management practices to be utilized during the demolition process. Dust control may include misting, enclosure, etc., with appropriate testing to ensure fugitive dust emissions are prevented.

Following completion of the building demolition, surface soils beneath the building will be tested for PCB levels. Based on existing Site data, PCB levels beneath the building are expected to be low. However, if PCB levels are between 1 and 25 ppm, institutional controls will be required. If PCB levels are greater than 25 ppm, a protective cover will be required in addition to institutional controls. Institutional controls to be put in place include changing the zoning of the Site to prevent future use of the Site for residential or child day care/school purposes, filing of a deed restriction/environmental covenant with the property recorder specifying certain property restrictions, and notifying the city of St. Louis' Building Division of restrictions on development and environmental covenants in place at the Site.

The Willco Building – Because the PCB contamination in the Willco Building is relatively low, a thorough cleaning will be conducted in an attempt to reduce the PCB levels to below 1 ppm. In addition, an asbestos abatement action will be completed for the Willco Building. If the cleaning fails to achieve the 1 ppm goal for PCBs, the Partial Removal alternative will be implemented. The Partial Removal alternative would provide for the removal of PCBs in excess of removal action goals and involves the removal and replacement of certain sections of the first and second floor slabs (approximately 10 percent of the first floor slab and 2 percent of the second floor slab, based on the sampling conducted to date).

After completion of asbestos remediation, removal and replacement of impacted concrete slabs could begin. Shoring would be required for the removal of the second floor slab. Each section of floor slab to be removed and replaced would require shoring prior to and during saw cutting, during the removal of the slab, and during the placement and curing of the replacement slab. In addition, all water and dust generated during the saw-cutting process would need to be captured, characterized, and disposed of in an appropriate manner.

Removal and replacement of the PCB-impacted floor slabs would reduce the toxicity and risk of exposure to PCBs by removing the PCBs from the Site. The alternative complies with ARARs because concrete with PCBs above the removal action goals would no longer be present, thereby achieving the long-term goal of overall protection of human health and the environment. Short-term exposures would need to be mitigated during the development of the work plan to ensure that concrete dust and dust-laden water is not released to the environment and is contained to prevent exposure of workers performing the removal.

The selected response action includes institutional controls to prevent future use of the Willco Building for residential or child day care/school purposes.

The Die Cast Area – The ISTD/VE utilizes simultaneous application of thermal conduction heating and vacuum to treat contaminated soil and concrete without excavation. The applied heat volatilizes organic contaminants within the soil and concrete, enabling them to be carried in the vapor stream toward heater-vacuum wells. PCBs are destroyed, leaving behind inert materials. The vapors and gases extracted through the vacuum extraction wells are collected above ground and sampled to ensure no fugitive emissions occur. Confirmation sampling of system performance is conducted after the operation is complete. The ISTD/VE proposed action would satisfy ARARs for the Site. Provisions for control of vapor releases are designed into the system, including a vapor barrier constructed on the ground surface, allowing for the capture of all vapors generated during the application of heat to the impacted soils.

The removal action goal for this alternative is 1 ppm PCBs for soils and concrete, although this level may not be practically achievable through ISDT/VE for deep soils near the bedrock surface. If the soils are impacted above the 1 ppm level and this level cannot be achieved through treatment, deed restrictions in the form of environmental covenants shall be put in place with the property recorder specifying certain property restrictions. Following treatment, if PCBs remain within the soils at a level greater than 25 ppm, a protective cover combined with long-term monitoring (including groundwater monitoring) will be required. In addition, deed restrictions in the form of an environmental covenant will be required in accordance with the PCB cleanup regulations at 40 CFR part 761(a).

In addition to treatment of the impacted soils and concrete, institutional controls to be put in place include changing the zoning of the Site to prevent future use of the Site for residential or child day care/school purposes, filing of a deed restriction in the form of an environmental covenant with the property recorder specifying certain property restrictions, and notifying the city of St. Louis' Building Division of restrictions on development/environmental covenants in place at the Site.

The ISTD/VE Alternative would achieve the overall protection of human health and environment primarily by destroying the contaminants, with a fraction of the contaminants removed from the soil, collected at the surface, and disposed of at a permitted facility. This alternative satisfies all ARARs, and is effective in both the short and long term.

The ISTD/VE Alternative is technically feasible, although a pilot test will be conducted to confirm the effectiveness of the technology at the Site. The degree of effectiveness will be determined by evaluating the ability to achieve the Removal Action Goal of 1 ppm PCBs, the cost of treatment, and the implementability. The in situ nature of the process eliminates logistical complexities and minimizes exposures to nearby populations during implementation. All needed goods and services are available to perform this alternative.

In the event that the ISTD/VE Alternative pilot test concludes that the technology is not effective at the Site, excavation and off-site disposal (as described in the EE/CA) shall be implemented in this area of the Site. In this event, the Removal Action Goal for soil would remain at the 1 ppm PCBs level.

B. Contribution to remedial performance

The Site is not on the NPL.

C. EE/CA

Alternatives to the proposed removal actions were considered and discussed in the EE/CA. The proposed actions were chosen based on a comparative analysis of effectiveness, implementability, and cost.

D. ARARs

Pursuant to 40 CFR 300.415(j), removal actions will, to the extent practicable considering the exigencies of the situation, attain ARARs. The federal and state ARARs for the Site are discussed in Section 3.1.2 of the EE/CA. Table 3.1 and Table 3.2 of the EE/CA provides a list of federal and state ARARs for the Site, respectively, and are attached for reference.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

The CBI Building has become deteriorated over time. Trespassers continue to enter the building despite the owner's attempts to restrict access. If action is delayed, the condition of the building is expected to continue to deteriorate resulting in increased risk to trespassers, increased threat of releases of hazardous substances to the environment, including the potential for off-site migration of contaminants. Delayed action would also delay redevelopment of the property for future uses.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

See the attached Confidential Enforcement Addendum for this Site. For NCP consistency purposes, it is not a part of this Enforcement Action Memorandum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the contaminated soils and buildings at the Site. The removal action was developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Conditions at the Site meet NCP section 300.415(b) criteria for a removal action and I recommend your approval of the proposed removal action.

Approved:

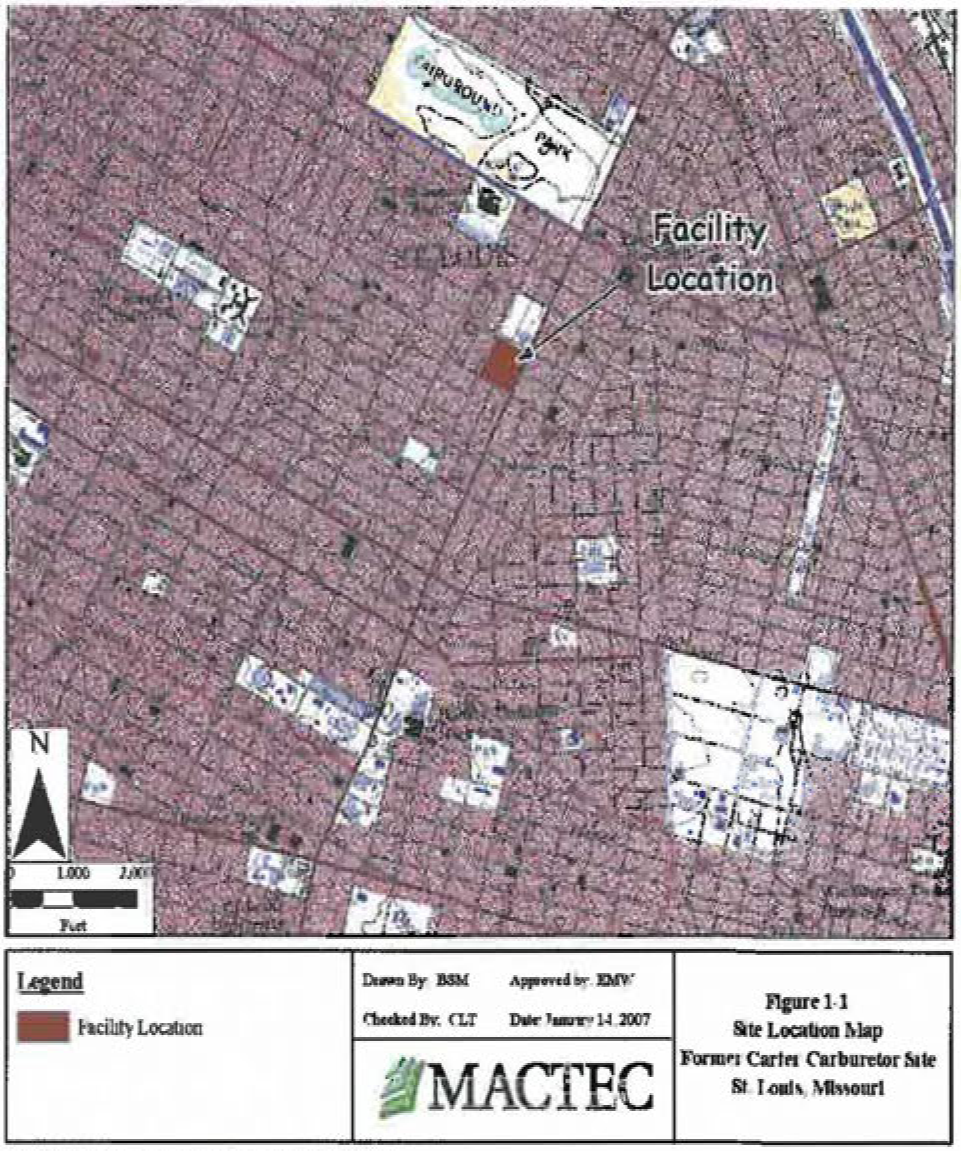
Karl Brooks, Regional Administrator

3/30/11
Date

Attachments:
1. Site Location Map
2. Site Layout
3. Table 3.1 – Action and Chemical Specific Requirements
4. Table 3.2 – Action Specific Requirements
5. Confidential Enforcement Addendum

Attachment I

Site Location Map



Attachment II

Site Layout

MACTEC

Figure 1-2
Site Layout Map
Former Carter Carburetor Site
St. Louis, Missouri

Attachment III

Table 3.1 – Action and Chemical Specific Requirements

Table 3-1
Action and Chemical Specific Requirements
Federal Applicable or Relevant and Appropriate Requirements (ARARs)
Former Carter Carburetor Site
St. Louis, Missouri

ARAR	Description	Comment
National Primary Drinking Water Standards (SDWA 40 CFR 141)	Establishes maximum contaminant levels (MCLs) and maximum contaminant level goals (MCLGs) that are health-based standards for public drinking water systems.	Chemical-specific ARAR. Since the shallow aquifer is not utilized as a public drinking water source the MCLs for organic and inorganic contaminants would not be applicable. However, MCL standards may be considered relevant and appropriate for establishing groundwater remediation goals.
State Secondary Drinking Water Standards (SWDA 40 CFR 143)	Establishes state guidelines, secondary maximum contaminant levels (SMCLs) for public water systems.	Chemical-specific ARAR. Secondary standards are not applicable but may be considered relevant and appropriate for groundwater remediation goals.
National Pollution Discharge Elimination System (NPDES) Requirements (CWA 40 CFR 122)	Regulates discharges of pollutants from any point source into waters of the U.S.	Action-specific ARAR. Applicable to releases from site during and after implementation of the removal action.
General Pretreatment Regulations for Existing and New Sources of Pollution for Publicly Owned Treatment Works (POTW) (WPCA 40 CFR 401 and 403)	Provides effluent limitations guidelines for existing sources, standards of performance for new sources, and pre-treatment standards for new and existing sources.	Action-specific ARAR. Applicable if wastewater collected during the removal from the site is discharged to a POTW.
DOT Rules for Transportation of Hazardous Materials (DOT 49 CFR 107)	Provides regulations for transport of hazardous waste on the highway system, rail system, by water or, by air.	Action-specific ARAR. Applicable to excavation and off-site treatment and disposal options requiring waste transport using public transportation system.
Standards for Identification and Listing of Hazardous Waste (RCRA 40 CFR 261)	Identifies those wastes subject to regulation.	Chemical-specific ARAR. Applicable if soils are determined t contain a hazardous characteristic. RCRA requirements are applicable to hazardous wastes generated from removal actions that are stored, treated, or disposed of and/or transported.

Attachment III

Table 3-1
Action and Chemical Specific Requirements
Federal Applicable or Relevant and Appropriate Requirements (ARARs)
Former Carter Carburetor Site
St. Louis, Missouri

ARAR	Description	Comment
Standards Applicable to Generators of Hazardous Waste (RCRA 40 CFR 262)	Regulates manifesting, pre-transport requirements, and recordkeeping and reporting for hazardous waste generators	Action-specific ARAR. Applicable if soil removed from site is determined to exhibit hazardous characteristic.
Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities (RCRA 40 CFR264, 265)	Regulations apply to owners and operators of facilities that treat, store, or dispose of hazardous waste.	Action-specific ARAR. Applicable if soil removed from site is determined to exhibit hazardous characteristic.
RCRA Land Disposal Restrictions (RCRA 40 CFR 268)	Identifies hazardous wastes that are restricted from land disposal and defines the limited circumstances under which otherwise prohibited waste may continue to be land disposed.	Chemical- and action specific ARAR. Applicable if soils are determined to be characteristic hazardous. Soils failing toxicity characteristic testing need to comply with Universal Treatment Standards prior to land disposal.
PCB Manufacturing, Processing, Distribution in Commerce and Prohibitions (TSCA 40 CFR 761)	Regulates the storage and disposal, recordkeeping and reporting, and waste disposal recordkeeping and reporting for PCB contaminated wastes.	Chemical- and action specific ARAR. Will be applicable if waste from the site is transported and stored or disposed.
Mega Rule (63 FR 35384 – 35474)	USEPA revisions to 40 CFR 761 regarding PCB contaminated waste.	Chemical- and action specific ARAR. Will be applicable if waste from the site is transported and stored or disposed.

Attachment IV

Table 3.2 – Action Specific Requirements

Table 3-2
Action Specific Requirements
State Applicable or Relevant and Appropriate Requirements (ARARs)
Former Carter Carburetor Site
St. Louis, Missouri

ARAR	Description	Comment
Demolition Landfill Design and Operation (10 CSR 80-4.010(3))	Regulate demolition landfill waste streams.	Action Specific ARAR. Disposal issues may arise from demolition activities
Disposal of hazardous waste at Sanitary Landfills (10 CSR 80-3.010(3))	Regulated quantities of hazardous waste are excluded from disposal at permitted solid waste landfills. The excavated soil must be tested prior to disposal and determination made as to whether or not it is considered hazardous and handled accordingly. Excavated soil that is not hazardous may be disposed of at a sanitary landfill, but may be considered special waste and require special handling. Prior approval must be obtained from the facility.	Action Specific ARAR. Disposal issues may arise due to hazard determination of wastes generated during removal activities.
Clean Fill Provision (260.210.9(1) RSMo)	Missouri Solid Waste Management Law that regulates clean fill	Action Specific ARAR. Ensures use of clean fill in excavations.
Definition of Solid Waste (260.200(34) RSMo)	Missouri Solid Waste Management Law definitions	Action Specific ARAR. Defines solid waste.
Definition of Clean Fill (260.200(4) RSMo)	Missouri Solid Waste Management Law definitions	Action Specific ARAR. Defines clean fill.
Permit Exemptions (10 CSR 80-2.020(9))	Allows for permit exemptions, including those for beneficial use of solid waste.	Action Specific ARAR. Allows for the use of some materials for fill on site.
Illegal Dumping Provisions (260.210.1(1)RSMo)	Missouri Solid Waste Management Law that restricts illegal dumping activities.	Action Specific ARAR. Restricts illegal dumping as a method of disposal.
Hazardous Waste Determination for Off-site Disposal (40 CFR part 261, as incorporated by reference in 10 CSR 25-4.261)	Requires containerized or bulked wastes that are removed fro off-site disposal shall be subject to hazardous waste determination requirements.	Action Specific ARAR. Containerized or bulked wastes that are removed for off-site disposal are subject to this requirement.
Hazardous Waste Transportation Requirements for Generators (40 CFR part 262, as incorporated by reference in 10 CSR 25-5.262)	Requires that hazardous waste removed and/or containerized for shipment off-site should be handled in accordance with the applicable generator regulations.	Action Specific ARAR. Hazardous waste shipped off-site is subject to these generator requirements.

Attachment IV

Table 3-2
Action Specific Requirements
State Applicable or Relevant and Appropriate Requirements (ARARs)
Former Carter Carburetor Site
St. Louis, Missouri

ARAR	Description	Comment
Hazardous Waste Transportation Requirements (40 CFR Part 263, as incorporated by reference in 10 CSR 25-6.263)	Hazardous wastes that are removed for off-site disposal shall be handled in accordance with the applicable transportation regulations.	Action Specific ARAR. Hazardous wastes that are removed for off-site disposal shall be handled in accordance with the applicable transportation regulations.
Monitoring and Management of Contaminated Groundwater Releases (40 CFR Part 264 Subpart F, as incorporated by reference in 10 CSR 25-7.264(2)(F))	Regulations governing the monitoring and management of contaminated groundwater that originated from releases from solid waste management units.	Action Specific ARAR. Releases of contaminated groundwater from solid waste management units would be subject to this rule.
Closure and Post-Closure (40 CFR Part 264 Subpart G, Closure and Post-Closure, as incorporated in 10 CSR 25-7.264(2)(G))	Regulations governing the closure and pos-closure care of all hazardous waste management facilities.	Action Specific ARAR - Hazardous waste management facilities would be subject to these closure and post-closure requirements.
Use and Management of Containers (40 CFR Part 264 Subpart I, as incorporated by reference in 10 CSR 25-7.264(2)(I))	These regulations govern the use and management of containers for hazardous waste.	Action Specific ARAR - These regulations govern the use and management of containers for hazardous waste.
Tank Use, Management, and Closure for Hazardous Wastes (40 CFR 264 Subpart J, as incorporated by reference in 10 CSR 25-7.264(2)(J))	Hazardous waste in tanks shall be handled in accordance with the tank use, management, and closure requirements.	Action Specific ARAR – Hazardous waste in tanks shall be handled in accordance with the tank use, management, and closure requirements.
Land Disposal and/or Capping of Past Disposal Areas (40 CFR 264 Subpart N, as incorporated by reference in 10 CSR 25-7.264(2)(N))	Regulations that govern land disposal and/or capping of past disposal areas.	Action Specific ARAR – Regulations that govern land disposal and/or capping of past disposal areas.
Air Emission Standards for tanks and Containers containing Hazardous Waste (40 CFR 264 Subpart CC, as incorporated by reference in 10 CSR 25-7.264(2)(CC))	Air Emissions standards for tanks and containers may apply to hazardous waste stored tanks or containers.	Action Specific ARAR – Air Emissions standards for tanks and containers may apply to hazardous waste stored tanks or containers.
Geology in regards to human health and safety (4 CSR 145-1.010)	This rule regulations the practice of geology, as it affects human health and safety, in the state.	Action Specific ARAR – This rule regulations the practice of geology, as it affects human health and safety, in the state.

Attachment IV

Table 3-2
Action Specific Requirements
State Applicable or Relevant and Appropriate Requirements (ARARs)
Former Carter Carburetor Site
St. Louis, Missouri

ARAR	Description	Comment
Abandonment of Unused Domestic Supply Wells (10 CSR 23-3.110)	This rule regulates the abandonment of unused domestic supply wells. The Missouri Department of Natural Resources' Public Drinking Well Branch of Water Protection Program regulates the construction and abandonment of public supply wells.	Action Specific ARAR – This rule governs the abandonment of unused domestic supply wells.
Construction, Regulation and Abandonment of Monitoring Wells (10 CSR 23-4.010)	This rule governs the construction, registration and abandonment of monitoring wells in the state.	Action Specific ARAR – Provides requirements for the construction, registration and abandonment of monitoring wells in the state.
Protection of caves from vandalism and pollution (L. 1981 H.S.H.B. 1192)	This act regulates the protection of caves (including sinkholes) and cave life from vandalism and pollution.	Action Specific ARAR – Geological conditions make encountering caves (including sink holes) and cave life a real possibility.
Surface and Groundwater tracing (L. 1991 S.B. 221, RSMo256.621)	This act and associated revised statue relate to surface and groundwater tracing. It requires that all persons engaging in water tracing to register with and report the results of the tracing to the Missouri Department of Natural Resources' Geological Survey and Resource assessment Division.	Action Specific ARAR – This act and associated revised statue relate to surface and groundwater tracing. It requires that all persons engaging in water tracing to register with and report the results of the tracing to the Missouri Department of Natural Resources' Geological Survey and Resource assessment Division.
Restriction of Emission of Visible Air Contaminants (10 CFR 10-5.090)	Restrict emissions of visible air contaminants	Action Specific ARAR – Restrict emissions of visible air contaminants
Restriction of Particulate Matter (10 CFR 10-6.170)	Restriction of particulate matter to the ambient air beyond the premise of origin.	Action Specific ARAR –Restriction of particulate matter in the ambient air beyond the premise of origin.
Emission of Visible Air Contaminants (10 CFR 10-5.180)	Air Quality Standards and Air Pollution Control Regulations for the St. Louis Metropolitan Area.	The site is located in St. Louis Missouri.

Table 3-2
Action Specific Requirements
State Applicable or Relevant and Appropriate Requirements (ARARs)
Former Carter Carburetor Site
St. Louis, Missouri

ARAR	Description	Comment
Asbestos Abatement Projects (10 CFR 10-6.250)	Regulates asbestos abatement projects – Certification, Accreditation, and business Exemption Requirements	Action Specific ARAR – Based on site history, asbestos containing material is present
Asbestos Abatement Projects (10 CFR 10-6.240)	Regulates asbestos abatement project – Registration, Notification and Performance Requirements	Action Specific ARAR – Based on site history, asbestos containing material is present.