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Lockheed Martin Corporation

Storm Drain Sampling and Analysis Plan

Akron, Ohio

May 15, 2009

Storm Drain Soil Sampling and Analysis Plan

The purpose of this sampling and analysis effort is to evaluate the presence or absence of PCBs along a section of storm water culvert that extends from north side of Triplett Boulevard to Haley's Ditch, in Akron Ohio (Figure 1). The section of culvert that will be subject to this investigation is primarily located beneath the parking lot of the LKQ offices on Triplett Boulevard near the intersection of Langdon Street. Accumulated sediment present within this section of culvert was recently removed for disposal by Lockheed Martin.

PCBs were previously determined to be present in sediment within the storm sewer that extends from the Akron Airdock facility to Haley's Ditch. The presence of PCBs is the result of historical exfoliation of an asphaltic siding material on the Airdock that contained PCBs, specifically Aroclor 1268. As part of on-going remediation efforts, Lockheed Martin has either covered or replaced the PCB-containing materials on the Airdock, has completed soil removal activities adjacent to the Airdock, and has collected surface debris around the Airdock that may contain PCBs. Aroclor 1268 is highly insoluble, thus the presence of PCBs in the sediment is related to historical surface water transport of solid material containing PCBs into the storm sewer system. Lockheed Martin has removed sediment from the sewer system extending from the Airdock to Haley's Ditch.

Storm Drain Location and Utility Identification

The City of Akron will be responsible for identifying the approximate location and depth of the culvert based on existing mapping and the location of accessible pipe features (e.g., manholes, pipe outlet) and other appropriate methods. The approximate location of the centerline of the culvert will be marked at the ground surface using spray paint or other appropriate temporary marking method. During the recent work to remove the accumulated debris from the storm drain pipe, it was noted that the storm drain pipe does not follow a straight run from the southern end near Triplett Boulevard to the outfall at the northern end. Efforts should be taken to locate the pipe as accurately as possible so that sample locations can be properly located in the field.

Prior to any intrusive activities at the site, a utility mark-out will be performed. Lockheed Martin's sampling contractor will lead the utility location effort. This effort will include contacting Ohio's Utility Protection Service (1-800-362-2764) to request a mark-out of utilities in the proposed work areas. In addition, LKQ and the City will be consulted regarding the locations of utilities in the vicinity of the storm drain pipe on their respective properties (i.e., in areas where public utilities are not marked). Any drawings provided by LKQ and the City that illustrate utilities within the work area will be reviewed, and the locations of the utilities will be marked in the field.

In addition, a private utility locating company will be used to locate electric, gas, water, and sewer utilities within the work areas and verify utilities identified from drawings and the public utility service.

Investigation Plan

Because PCBs, particularly Aroclor 1268, are highly insoluble in water, the presence of PCBs in soil surrounding the subject culvert would be related to the migration of solid PCB containing material through cracks or off-sets in pipe joints. The most likely point of migration would be near the pipe invert, where sediments accumulate. Thus, this investigation plan will target soils outside of the culvert near the pipe invert.

Six soil samples will be collected from adjacent to the culvert at locations that traverse the LKQ parking lot. Three sample pairs, one sample located on either side of the culvert, will generally be located in the north, middle and south sections of the LKQ parking lot (Figure 1). The location of the middle sample pair was selected to target an area of the pipe that appeared to be patched. The actual locations will be determined in the field based on pipe alignment, equipment access, and presence of overhead/underground utilities.

Soil samples will be collected using direct push (e.g., Geoprobe) methods, which results in minimal vibration and minimal disturbance to the surface. If subsurface obstructions are encountered which prevent sample collection, the sample location will be moved in an effort to collect the sample. An approximately 2.25-inch diameter sampling device will be pushed to the approximate invert of the culvert at each sampling location. The sample probe will be used to penetrate the asphalt parking lot; additional cutting of the pavement is not necessary to collect the samples using direct methods. A 2-foot soil