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Remedial Action Plan and Quality Assurance Project Plan Addendum for REC-02: 10,000-gallon Underground Storage Tank

Ramon Qurious Park

354-380 Hudson Street
Hartford, Connecticut

January 2011

Fuss & O'Neill
146 Hartford Road
Manchester, Connecticut 06040

1997279.H30

Notice of Brownfields Cleanup Quality Assurance Project Plan/Remedial Action Plan
Ramon Qurious Park
354-380 Hudson Street, Hartford, CT

A Quality Assurance Project Plan/Remedial Action Plan for 354-380 Hudson Street, Hartford, Connecticut is available for a 30 day public review and comment period. It is available for viewing at the City of Hartford Department of Development Services, located at 250 Constitution Plaza (4th Floor), during business hours (Mon.-Fri. 9:00 a.m. – 4:00 p.m.) and the Hartford Public Library, located at 500 Main Street (Mon.-Thurs. 10:00 a.m. – 8:00 p.m., Fri. & Sat. 10:00 a.m. – 5:00 p.m., Sun. 1:00 p.m. – 5:00 p.m.). The City of Hartford has placed information about the grant and clean-up efforts on the website, www.hartford.gov/development. The Community Relations person for this project is Mr. Glenn Geathers, Neighborhood Project Manager for the City of Hartford Department of Development Services, who may be contacted by phone at (860) 757-9075, via e-mail at ggeathers@hartford.gov, or by mail at the Department of Development Services, 250 Constitution Plaza (4th Floor), Hartford, CT 06103. The City has hired Fuss & O'Neill, Inc. of Manchester, CT to perform remediation coordination and oversight. A public meeting to discuss the site clean-up plan and hear comments will be held on Wednesday January 19, 2011 at 6:00 p.m. at the Bushnell Performing Arts Center Clinton Street Entrance located at 166 Capitol Avenue, Hartford. Comments on the Quality Assurance Project Plan/Remedial Action Plan must be made at the public meeting or submitted in writing to Dan Jahne, Fuss & O'Neill, Inc., 146 Hartford Road, Manchester, CT 06040 (djahne@fando.com, 860-646-2469 x5523) by Monday February 14, 2011.

1 Title and Approval Page

Document Title	**REMEDIAL ACTION PLAN AND QUALITY ASSURANCE PROJECT PLAN ADDENDUM FOR REC-02: 10,000-GALLON UNDERGROUND STORAGE TANK RAMON QURIOUS PARK 354-380 HUDSON STREET HARTFORD, CONNECTICUT**
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REMEDIAL ACTION PLAN AND QUALITY ASSURANCE PROJECT PLAN ADDENDUM FOR REC-02: 10,000-GALLON UNDERGROUND STORAGE TANK RAMON QURIOUS PARK 354-380 HUDSON STREET HARTFORD, CONNECTICUT

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2 Project Organization and Responsibility

The following is a list of key personnel responsible for management and implementation of the proposed remedial activities at the above-referenced site. Any questions regarding project status should be directed to the principal contact. A project management organization chart is provided as Figure 2-1.

City of Hartford Principal Contact:	Mr. Glenn Geathers Economic Development Division City of Hartford 860-757-9075 ggeathers@hartford.gov
USEPA Principal Contact	Mr. Alan Peterson USEPA 617-918-1022 peterson.alan@epa.gov
Fuss & O'Neill Project Director:	David F. Hurley, LEP, PG Fuss & O'Neill, Inc. 860-646-2469 ext. 5348 DHurley@FandO.com
Fuss & O'Neill Project Manager/ Health and Safety Manager:	Daniel Jahne, LEP Fuss & O'Neill, Inc. 860-646-2469 ext. 5523 djahne@FandO.com
Quality Assurance Officer:	Sarah Rochelt Fuss & O'Neill, Inc. 860-646-2469 ext 5516 srochelt@FandO.com
Fuss & O'Neill Project Hydrogeologist/ Health and Safety Supervisor/ Project Data Management:	Rachel McQuiggan Fuss & O'Neill, Inc. 860-646-2469 ext. 5503 rmcquiggan@fando.com
Analytical Laboratories:	Theresa Ferentino Con-Test Laboratories 413-525-2332 tferrentino@contestlabs.com

3 Introduction

The following Remedial Action Plan and Quality Assurance Project Plan (QAPP) Addendum provides a framework for the proposed remedial activities and confirmatory sampling that will occur at Recognized Environmental Condition Number 2 (REC-02) the Ramon Qurious Park located at 354-380 Hudson Street in Hartford, Connecticut. The City of Hartford is the current owner of this property. The City intends to use the Site to create a community garden and eventually re-develop the Site for commercial use. As a step in the process of remediating the site, a 10,000-gallon abandoned underground storage tank (UST) will be removed along with soil from an approximate 800 square foot area that has been impacted by a release of petroleum for the tank.

Environmental remediation at this property is being funded by a U.S Environmental Protection Agency (EPA) Brownfields Cleanup Grant. The Site has been entered into the Connecticut Department of Environmental Protection (CTDEP) Voluntary Remediation Program 22a-133x for the cleanup of contamination associated with a 10,000-gallon underground storage tank that exists on the property. The CTDEP Voluntary Remediation Program 22a-133x allows for the remediation of a portion of a property associated with a specific release area. The objective of the remedial action is to remove the existing 10,000-gallon gasoline underground storage tank and remediate soil that has been impacted by a release from the tank in order to meet clean-up criteria in Connecticut's Remediation Standard Regulations (RSRs).

In accordance with EPA requirements, the format of this document follows the outline of a QAPP Addendum to provide the protocols for the sampling activities that will occur during implementation of the proposed remedial actions. In June 2006, Fuss & O'Neill submitted a Generic QAPP (RFA #06246) document to the Quality Assurance Unit of USEPA for the Capitol Region Council of Governments Metro-Hartford Community-Wide Brownfields Assessment Program. The City of Hartford is one of 34 municipalities that participate in services provided by the Metro-Hartford Brownfields Assessment Program. The format for that document was developed from the USEPA's Brownfields Quality Assurance Project Plan Guidance Document. This "Generic" QAPP defines the overall field and laboratory procedures to be used for the Capitol Region Council of Governments (CRCOG) Metro-Hartford Community-Wide Brownfields Assessment Program. This "Generic" QAPP contains several attachments, which includes field sampling Standard Operating Procedures (SOPs), field laboratory SOPs, fixed laboratory SOPs, and other attachments. The Generic QAPP was approved by the USEPA on June 20, 2006. The format of this site-specific QAPP closely follows the "Generic" document and incorporates by reference several sections in the "Generic" document that was previously submitted and approved by USEPA.

3.1 Site Description and History

The Site is an undeveloped irregular-shaped parcel of land located on the eastern side of Hudson Street, in a Residential-1 zone of Hartford, Connecticut (Hartford County). The Site is an approximately 0.88-acre property containing no improvements. Former uses of the Site

include a tool die company, auto body/top repair, medical products company, residential and laundry facilities. The Site buildings were razed in 1986. Currently the Site is vacant, however is used as a local open space. A portion of the United States Geological Survey (USGS) topographic map showing the site location is provided as *Figure 3-1*. A site plan is provided as *Figure 3-2*.

A Phase I Environmental Site Assessment (ESA) performed by Fuss & O'Neill in February 2006 revealed that Fire Marshal records reported that in October 1987, Armor Shield of Connecticut abandoned a 10,000-gallon UST. However a letter from the CTDEP dated November 4, 1987, indicated that the UST had not been abandoned in accordance with CTDEP guidance protocols (NFPA-30). The tank UST Notification form filed with the CTDEP indicated that the tank had been abandoned and filled with water. The CTDEP in their response letter recommended that to comply with CTDEP guidelines, the water in the tank must be removed and replaced with a "solid inert material". The 10,000-gallon UST was identified in the Phase I ESA report as REC-02.

3.2 Project Definition

As described in *Section 3.2.1*, environmental issues have been identified at the site from past investigations. Environmental remediation at this property is being funded by an EPA Brownfields Cleanup Grant. Environmental remediation at the Site associated with the 10,000-gallon UST will be performed under the CTDEP Voluntary Remediation Program 22a-133x. The objective of the remedial action is to remove the existing UST and excavate soil that has been impacted by the release.

3.2.1 Previous Environmental Investigations and Recognized Environmental Conditions (RECs)

This section provides a summary of previous investigations performed at the Site. The reports contained information regarding description of recognized environmental conditions (RECs), locations of RECs, and a summary of constituents of concern identified from these investigations. Existing boring locations, monitoring wells and RECs are shown on *Figure 3-2*.

Phase I Environmental Site Assessment (ESA) for 330, 324-348, 354-380 and 406 Hudson Street, February 2006, Fuss & O'Neill: In 2006, Fuss & O'Neill completed a Phase I ESA for several properties along Hudson Street. Two RECs were identified for the 354-380 Hudson Street property. REC #1 is associated with former auto body/auto top repair businesses that have historically (between 1930 and 1980) occupied the Site. REC #2 is the former and current USTs on the property. Based on the information that the Site was occupied by the Standard Auto Top & Body Company from 1960 to 1975, Fuss & O'Neill concluded that the Site was an "establishment," as defined under the Connecticut Property Transfer Law.

Phase II ESA, May 2006, Fuss & O'Neill: In 2006, Fuss & O'Neill completed a Phase II environmental investigation for the 354-380 Hudson Street property. Investigative procedures included the advancement of soil borings, installation of monitoring wells, a ground-penetrating radar survey and groundwater sampling. The Phase II investigation was conducted at the two previously identified RECs (former auto body/auto top repair operations and former and current USTs). The GPR survey identified the presence of several anomalies, including the location of the 10,000-gallon UST (REC #2). Analytical results from the investigation identified releases of constituents of concern associated with the two RECs. At REC #2, six soil samples were collected from three locations (B-05, MW-03 and MW-04). Analytical results from soil samples collected in the vicinity of the USTs suggest that a release has not occurred, however groundwater samples collected at MW-03 (adjacent to the 10,000-gallon UST) and downgradient of this location contained the volatile organic compounds methyl tert-butyl ether (MTBE) and lead. Although soil samples collected at REC #2 did not contain constituents of concern, results of the groundwater samples indicate that a release of gasoline compounds has occurred. Additional investigations at REC #2 were recommended to identify the source of the groundwater release.

Limited Phase III ESA, 2006, Fuss & O'Neill: In June 2006, Fuss & O'Neill conducted a Limited Phase III investigation to determine release source areas identified during previous investigations. Soil borings were advanced throughout the property to determine the degree and extent of release areas associated with REC #1 and to establish Site background conditions. One monitoring well was installed at REC #1. Two test pits (TP-01 and TP-02) were excavated by Columbia Drilling Backhoe Service in two areas of the site to determine if anomalies identified during the GPR survey were potential USTs. A UST was identified in TP-02 that was excavated in the vicinity of the GPR anomaly located just south of B-05 and MW-03. Based on the dimensions of the area excavated, the size of the UST was estimated to be approximately 10,000-gallons. The UST observed during the test pit excavation is the tank that was reported to be abandoned in-place in 1987. No evidence of impacted soil was observed in any of the areas excavated around the UST at TP-02. No evidence of USTs was observed in the excavation area of TP-01. Groundwater samples were collected again from monitoring wells at this REC. The volatile organic compound MTBE was not detected in groundwater samples collected during this investigation. Additional groundwater sampling at REC #2 for metals suggests that the elevated lead concentrations in groundwater identified during the Phase II ESA were the result of sediment in the samples and not indicative of a release of this constituent.

Limited Phase III Environmental Supplemental Investigation, 2009, Fuss & O'Neill: In June 2009, Fuss & O'Neill advanced four additional soil borings (B-29 through B-32) in the vicinity of the 10,000-gallon UST. Analytical results from soil samples collected at these locations indicate that a release of petroleum hydrocarbons has occurred at REC #2 as a result of a tank leak from the existing 10,000-gallon UST. Concentrations of ETPH and PAHs in soil samples collected from borings B-29 and B-31 exceed the CT RSR Res DEC and GB PMC (*Table 3-1*). Fuss & O'Neill estimated the size of the release area of be approximately 800 square feet from a depth of four to ten feet below the ground surface. Groundwater samples

were collected again from Site monitoring wells in June 2009. No VOCs or lead were detected in groundwater at MW-03 (located in the vicinity of the UST) during the Limited Phase III supplemental investigation. Fuss & O'Neill concluded that a release to soil of ETPH and PAHs had occurred at REC #2 and recommended the out-of-service 10,000-gallon UST be removed and closed in accordance with CTDEP guidelines for tank closure.

3.2.2 Constituents of Concern (COCs)

Based on the review of the previous environmental reports and the recent supplemental investigation, the COCs at the site consist of VOCs, ETPH, PAHs and methyl tert-butyl ether (MTBE).

3.3 Data Quality Objectives

The concentration of the contaminants of concern in the soil and groundwater will be evaluated relative to state remediation standards. The Connecticut RSRs (Regulations of Connecticut State Agencies Sections 22a-133k-1 through -3) were adopted January 30, 1996. The RSRs contain procedures to evaluate whether actions (e.g., remediation or institutional controls) will be required to abate identified releases of hazardous substances and hazardous waste.

Because the property has no Environmental Land Use Restrictions and is located in a GB-classified groundwater area, comparisons will be made to the following RSR criteria:

Soil - Residential (Res) Direct Exposure Criteria (DEC) and baseline GB Pollutant Mobility Criteria (PMC). The RSR Standards for Soil Remediation (RCSA Section 22a-133k-2) require that soil that has been polluted as a result of a release of hazardous waste or substance be remediated to meet the DEC to protect against the effects of contact or ingestion of contaminants. Soil must also meet the PMC, which are intended to prevent impacts to groundwater, which could result from leaching of contaminants in soil. In a GB area, the PMC applies to polluted soil located above the seasonal high water table. The seasonal high water table at the site has been established at six feet below the ground surface based on measurements obtained from the monitoring well in the vicinity of the 10,000-gallon UST (MW-03) on June 16, 2006.

The RSRs also define specific alternatives to strict compliance with the baseline numeric DEC and PMC by including self-implementing options, exceptions, and variances. These alternatives include environmental isolation of the contamination (environmentally isolated soils), rendering the contamination inaccessible (inaccessible soils), and engineered controls. Variances exist for areas covered by widespread fill or for soils that contain coal ash or asphalt fragments.

Based on the site's location in a GB-designated area, the GB PMC apply to polluted soils that might be present within the remediation area. Regardless of the site's use, the Res DEC apply to all properties located in the State of Connecticut unless an Environmental Land Use

Restriction is executed on the site's land records indicating that the parcel can only be used for industrial/commercial purposes.

Groundwater - Surface Water Protection Criteria (SWPC) and the proposed (draft) Res Volatilization Criteria (VC), or background conditions if the site's groundwater has been affected by an off-site source of contamination. The draft VC has not been formally approved, but is currently used as guidelines by the CTDEP.

The SWPC are applicable to any groundwater which ultimately discharges to a surface water body and are designed to be protective of aquatic organisms. For any environmental investigation, all groundwater is inferred to ultimately discharge to a surface water body. The VC represents concentrations of volatile organic compounds above which adverse indoor air quality impacts may occur. The proposed revisions increase compliance depth from 15 feet to 30 feet below grade and specify risk-based compliance criteria for several compounds. The VC are specific to a site's land use (i.e., residential versus industrial/commercial); however, as with the DEC, the execution of an Environmental Land Use Restriction on the site's land records is required to use the industrial/commercial criteria.

4 Remedial Objectives and Approach – Soil

4.1 Remedial Objective

The RSRs require soil remediation at the site to meet both the DEC and the GB PMC. The remedial objective for soil is to meet the requirements of the applicable RSRs found at RCSA Sections 22a-133k-1 through 22a-1333k-3 in accordance with the intended use of the property.

4.2 Remedial Approach for REC #2

The remedial approach for soil at REC #2 will include the activities described in the sub-sections below. The City of Hartford will contract a remediation contractor. Fuss & O'Neill will provide contractor oversight services and collect confirmatory soil and groundwater samples to document the effectiveness of the remediation activities. A soil management plan and contaminated material report specification will be prepared that will instruct the contractor to establish temporary soil stockpile locations, manage the stockpile locations, minimize the potential for migration of dust and soil off-site and provide requirements for excavation backfill and compaction.

4.2.1 UST Removal

A Phase I ESA completed in 2006 identified the potential presence of underground storage tanks on the property. Fire Marshal records reported that in October 1987, Armor Shield of Connecticut abandoned a 10,000-gallon heating oil underground storage tank (UST) on the

354-380 Hudson Street property. A GPR survey followed by excavation of a test pit (TP-02) confirmed the presence of a 10,000-gallon UST during the Phase II ESA (*Figure 3-2*).

The existing 10,000-gallon gasoline UST will be removed from the Site prior to any soil remediation. Soil above the tank to a depth of four feet below the ground surface will be excavated and stockpiled at the Site for possible re-use as backfill. Remaining liquid inside the tank will be removed using a vacuum-truck and properly disposed off-site at a permitted facility. The top of the tank will be cut open and residual sludge from the interior will be removed. The tank will be cleaned of residual sludge and this material will be properly disposed off-site at a permitted facility. An excavator will lift the tank from the ground and the general condition of the tank will be noted to assess the potential for release pathways to the subsurface. The tank will be removed from the ground and properly disposed off-site.

4.2.2 Soil Excavation

According to analytical results from the Limited Phase III Supplemental Investigation in June 2009, an approximate 800 square foot area of soil exists containing ETPH and PAH concentrations exceeding the Res DEC and GB PMC. This soil also contains VOCs at concentrations below the applicable CT RSR criteria. Based on results of the soil sampling, the contamination extends vertically from a depth of four (4) feet below the ground surface to a depth of ten (10) feet below the ground surface. Samples collected from B-29 and B-31 contained ETPH at concentrations of 14,000 mg/kg and 20,000 mg/kg, respectively. Soil samples from these boring locations also contained PAHs at concentrations up to 120,000 ug/kg.

Soil in the release area to a depth of approximately 4 feet below the ground surface will be temporarily stockpiled on-site. This interval of soil has not been impacted by the release from the UST and will be used to partially backfill the excavation area. Any stockpiles that are created on-site will be managed in accordance with the Connecticut Polluted Soil Stockpile General Permit.

Polluted soil from the UST release from 4 feet to 10 feet below the ground surface will be temporarily stockpiled on-site or direct-loaded for off-site disposal. A total of approximately 180 cubic yards of soil contaminated with petroleum hydrocarbons and gasoline compounds at concentrations above the Res DEC or GB PMC will be removed and transported off-site for disposal at a permitted facility. The estimated extent of the excavation area is shown on *Figure 3-2*. Soil samples will be collected to document that the limits of the excavation contain pollutant concentrations less than the RSR Res DEC and GB PMC. Soil samples will be collected from the base and sidewalls of the excavation at 20 foot intervals. It is anticipated that a minimum of four sidewall samples (one per wall) and four bottom samples (one per 200 square feet of bottom area) will be collected from the excavation limits. The goal of the remediation is to achieve compliance with the Res DEC and GB PMC. The samples will be submitted to the lab for analysis o f ETPH (Connecticut's ETPH method), PAHs (US EPA Method 8270) and VOCs (US EPA Method 8360)

4.2.3 Excavation Backfill

After the tank has been pulled and contaminated soil containing ETPH and PAHs at concentrations above the CT RSR Res DEC and GB PMC has been removed from REC #2. Stone will be used to fill the excavation area that extends below the water table. The material from the 0 foot to four foot depth interval that is temporarily stockpiled will be used to backfill the excavation above the water table to a depth of one foot below final grade. A loam and compost mixture will be used to backfill the last foot of the excavation area.

5 Sampling Design for Collection of Soil Samples

To demonstrate compliance with the Res DEC and GB PMC, soil samples will be collected from the excavation area where concentrations of petroleum hydrocarbons exceed the Res DEC and GB PMC. Proposed sample locations are shown on *Figure 3-2*. The planned soil sampling activities consist of the following:

- The existing 10,000-gallon underground storage tank will be removed from the ground and transported off-site for disposal at a permitted facility.
- Soil will be excavated from a 800 square foot area to a depth of approximately 10 feet below the ground surface.
- Soil from the 0 to 4 foot depth interval will be excavated and stockpiled at the Site on plastic lining. This material will be used to partially backfill the excavation area.
- Confirmatory soil samples will be collected along the excavation limits (bottom and four sidewalls).
- Approximately 6 soil samples will be collected from the excavation area at a spacing interval of 20 feet.
- Soil samples will be analyzed for ETPH (Connecticut's ETPH Method), PAHs (US EPA Method 8270), and VOCs (US EPA Method 8260) to determine if soil with petroleum hydrocarbon concentrations exceeding the Res DEC and GB PMC has been removed.

A summary of the proposed subsurface investigation and anticipated laboratory analysis is outlined in *Table 4-1*. A summary of the analyses, analytical method, preservation methods, holding times and other sampling details are included in *Table 4-2*. Con-Test Laboratories will be used for fixed-based laboratory analysis for this project.

6 Remedial Objectives and Approach – Groundwater

6.1 Background Hydrogeology

The topography of the subject site is generally flat with gentle slopes to the east toward the Connecticut River (USGS, 1992). The regional topography generally slopes down gradually to the east, toward the Connecticut River. Depth to groundwater measurements were gauged during the Limited Phase III investigation and supplemental investigation. Based on this data, groundwater at the site flows generally to the east/northeast. However, groundwater flow direction may be locally influenced by utility connections on and adjacent to the site and depth of urban fill placed above natural material at the site.

The property located at 354-380 Hudson Street lies within a commercial zone in Hartford.

6.2 Remedial Objective

In any groundwater classification area, the goal of groundwater remediation is to:

- Protect the existing use of the groundwater
- Prevent further degradation of groundwater quality
- Prevent degradation of surface water from discharges of impacted groundwater
- Protect human health

The groundwater classification at the site is GB; therefore, remediation must achieve compliance with the VC and the SWPC.

6.3 Compliance with the Volatilization Criteria

The VC considers the potential for VOCs in groundwater to volatilize into the air within a building at concentrations that may represent a risk to human health. The VC for groundwater is applicable to the site. In March 2006, monitoring well MW-03 was installed in the vicinity of the existing UST where concentrations of constituents of concern in groundwater would generally be the highest if a release from the UST had occurred. The VOC methyl tert-butyl ether (MTBE) was detected in the groundwater samples collected from MW-03 as well as at downgradient well MW-04. Further sampling of groundwater at these locations was conducted to confirm the presence of MTBE in groundwater. No VOCs were detected in groundwater samples collected at the Site in June 2006 and June 2009. Remediation of groundwater will not be required.

6.4 Compliance with the Surface Water Protection Criteria

The surface water protection criteria are applicable to any groundwater that ultimately discharges to a surface water body and are designed to be protective of aquatic organisms. The groundwater sample collected from well MW-03 did not contain constituents of concern at concentrations above the SWPC.

6.5 Groundwater Monitoring

Groundwater monitoring is required at the remediation area to demonstrate the effectiveness of the remediation and demonstrate compliance with RSR cleanup criteria. Three new monitoring wells will be installed at the completion of the remediation activities using a geoprobe direct-push unit. Two wells will be installed downgradient of the excavation area and one well will be installed upgradient of the excavation area. The monitoring wells will consist of ten-foot long section of 1.5-inch diameter PVC pre-packed screens that intersect the groundwater table. The wells will be completed at the surface with a curb box installed flush with the existing site grade. Following installation, the wells will be developed using a surge block to ensure proper hydraulic connection to the aquifer.

During the first groundwater sampling event, the location of the new monitoring wells will be determined based on measurements relative to the existing street and sidewalks. A level survey will also be performed to determine the relative elevation of each of the wells in order to determine a groundwater flow direction across the site.

The RSRs require a minimum of two years of groundwater monitoring in GB groundwater classified areas such as the site. If the results after one year of monitoring are favorable, an application can be sent to the CTDEP to waive the second year of monitoring. Groundwater samples will be collected using low-flow methods and submitted to a Connecticut Certified Laboratory for analysis using Connecticut Reasonable Confidence Protocols for volatile organic compounds (VOCs) Method 8260, lead by Method 6010, and PAHs by Method 8270.

7 Sampling and Analytical Procedures and Requirements

Fuss & O'Neill Standard Operating Procedures (SOPs) pertaining to sample collection (soil, sediment, soil vapor, surface water and groundwater) and sampling well installation are referenced in *Section 5.0*, *Tables 5-1* through *Table 5-9* and *Appendix C* through *Appendix J* of the Generic QAPP previously submitted for the Metro-Hartford Community-Wide Brownfields Assessment Program and include the following sub-sections:

7.1 Sampling Procedures

7.2 Mobile Laboratory and Field Screening Procedures

7.3 Analytical Procedures

7.4 Laboratory Data Package Deliverables

Specific SOPs that will be used for this project are identified in *Table 5-1*, *Table 5-2*, and *Table 5-6*.

8 Sample Handling and Custody Requirements

Procedures for sample handling and custody requirements are documented in *Section 6.0* and *Appendix E*, *Appendix F*, and *Appendix J* of the Generic QAPP previously submitted for the Metro-Hartford Community-Wide Brownfields Assessment Program and includes the following sub-sections:

8.1 Documentation of Field Activities

8.2 Sample Identification

8.3 Sample Location Identification

8.4 Sample Labels

8.5 Field data sheets

8.6 Chain-of-Custody Records

8.7 Sample Containers and Preservation

8.8 Sample Custody at the Laboratory

8.9 Sample Custody at the Fuss & O'Neill Mobile Laboratory

9 Quality Control Requirements

Quality Assurance and Quality Control samples will be collected for this project. The purpose of these samples is to confirm that laboratory results reflect the condition of the various media in the environment and are not a product of instrument or handling errors.

Each quality assurance/quality control (QA/QC) sample will be given its own sample code. When more than one QA/QC sample is submitted with a set of samples, they will be interspersed within those samples. The types of QA/QC samples that will be submitted are described in the subsections that follow.

9.1 Trip Blanks

One trip blank for VOC analysis will be collected each day that VOC samples are collected at the site to evaluate whether samples have been compromised during handling and transportation. Trip blanks will be performed for this project.

9.2 Field Blanks

Field blanks will not be obtained for this project.

9.3 Field Duplicate Samples

Field duplicate samples for analysis will be collected for groundwater and soil samples to check the precision of the laboratory analysis. Field duplicate samples will be collected at the same time as the original sample and will be analyzed for the same parameters. The field duplicate sample will be assigned a different sample ID than the original set so that the sample identity is blind to the laboratory. One field duplicate sample by matrix will be collected nominally per 20 samples submitted to the laboratory. For groundwater and surface water samples, sampling will be in the order of decreasing parameter volatility by alternating between containers in the original set and those in the field duplicate set.

9.4 Field Matrix Spike and Matrix Spike Duplicates

A matrix spike (MS) and a matrix spike duplicate (MSD) will be included in the sampling plan if a parameter in a matrix exceeds 20 locations. The laboratory Quality Assurance Plan explains the type of quality control checks that are routinely followed. This includes such items as analysis of client reference standards, matrix spikes, blanks, the use of internal standards and surrogate spikes. A MS/MSD is submitted for every 20 samples collected. The laboratory is notified which sample location is collected as a MS/MSD. The laboratory quality control compares the data of the MS/MSD. If the analytical system does not pass the initial QC limits, then the system is determined to be out of control and the cause of the problem must be determined and corrected before measurements can continue. After the problem is corrected, QC measurements are repeated to verify the calibration. If the system still does not meet control limits, the system is re-examined until the problem is corrected.

9.5 Field Sample Control Limits

The standard Fuss & O'Neill field sample control limits for quality control are specified below. If the control limits are not met, the Quality Assurance Officer will investigate the cause of the exceedance and determine the validity of the associated data.

Quality Control Sample	Control Limit
Trip Blank	Less than detection limit*
Field Blank	Less than detection limit*
Equipment Blank	Less than detection limit*
Field Duplicates	± 30% Percent Difference for Water; ± 50% difference for soil, if concentrations are > 2x RL for organic and >4x RL for inorganic parameters**

* With the exception of common laboratory contaminants of acetone, 2-butanone, methylene chloride, phthalates, and toluene, which will have a control limit of 5X detection limit.

** Discrepancies will be addressed on a case-by-case basis.

9.6 Laboratory Internal Quality Control

The laboratory Quality Assurance Plan explains the type of quality control checks that are routinely followed. This includes such items as analysis of client reference standards, matrix spikes, blanks, the use of internal standards and surrogate spikes. All calibrations are checked before sample analysis can begin. If the analytical system does not pass the initial QC limits, then the system is determined to be out of control and the cause of the problem must be determined and corrected before measurements can continue. After the problem is corrected, QC measurements are repeated to verify the calibration. If the system still does not meet control limits, the system is re-examined until the problem is corrected. The QA/QC

procedures and analytical precision and accuracy of the methods to be used for this project are provided in *Appendices G* and *I* (contract laboratory's SOPs for analytical methods and QC limits) and *Table 7-1* and *Appendix E* of the Generic QAPP previously submitted for the Metro-Hartford Community-Wide Brownfields Assessment Program.

10 Data Management and Documentation

Sections incorporated by reference to the Generic QAPP previously submitted for the Metro-Hartford Community-Wide Brownfields Assessment Program include the following sub-sections:

10.1 Introduction

10.2 Data Classes

10.3 Data Administration

10.4 DMS Output for QA Interpretation

10.5 Data Presentation

11 Assessments and Response Actions

The Project Manager is responsible for determining the need for and implementation of any corrective action measures to the sampling or analytical procedures. Corrective action will be implemented upon the identification of problems discovered through system audits by analytical data review. If a problem is identified, the QA Officer will:

- Report the problem to the Project Manager,
- Evaluate the problem in accordance with data quality objectives,
- Determine whether implementation of corrective action is required,
- Assign and implement a corrective action, and
- Evaluate the effectiveness of the corrective action.

The QA Officer may conduct an on-site audit of the field operations depending on the complexity of the work being performed. A minimum of one field audit will be conducted

during the program. The following is a list of possible occurrences that may require corrective action and the corresponding action that would likely take place:

- If any sample bottles break during transit such that insufficient sample is available to complete the analysis, that location will be re-sampled to replace the bottles that have been broken.

- If meters or other sampling equipment break or malfunction during sampling, efforts will be made to repair, re-calibrate, or replace them with back-up equipment.

- If the analysis of trip or equipment blanks indicates the presence of target analytes above acceptable concentrations, re-sampling and reanalysis of samples taken that day may be required.

- If there are unusual changes in detection limits, re-sampling, and re-analysis may be indicated.

Assessment and Response Actions for the Fuss & O'Neill Mobile Laboratory and the contract laboratories are defined in *Appendices E*, *F*, and *H* of the Generic QAPP previously submitted for the Metro-Hartford Community-Wide Brownfields Assessment Program.

12 Project Reports

Sections incorporated by reference to the Generic QAPP previously submitted for the Metro-Hartford Community-Wide Brownfields Assessment Program include the following sub-sections:

12.1 Introduction

12.2 Project Status Reports

Quarterly reports will be as required by EPA by entering data for the site into the on-line ACRES database reporting system. The first quarter begins October 1, 2010 and that the first quarterly report is due to EPA at the end of January 2011. We will also submit semi annual reports to EPA documenting progress toward achieving Minority Business Enterprise (MBE) and Woman Business Enterprise (WBE) goals.

12.3 Internal Assessments and Response Actions

12.4 Project Results

12.5 Final Project Report Format

We will prepare a report to properly document the remedial activities. The results from the confirmatory soil sampling will be added to the site environmental database. The report will include the following information and documentation:

- Review of contractor invoices
- Discussion of compliance with Remediation Standard Regulations (RSRs)
- Summary of site activities
- Site drawing depicting the limits of the excavation area and sampling locations
- Tabular summary of analytical testing results
- Soil and liquid disposal/recycling records
- Limited photographic documentation

13 Implementation Plan

13.1 Implementation Schedule

This implementation plan was prepared assuming that the site will enter a formal voluntary remediation program under CGS 22a-133x and the site will be verified by an LEP. A list of anticipated tasks and approximate target dates is presented below:

- Community Outreach Meeting – January 2011
- CTDEP and EPA RAP and QAPP Approval – January 2011
- File Public Notice – January 2011
- Secure Contractor for Active Remediation – February 2011
- Start Remediation Activities – March 2011
- Complete Remediation Activities – March 2011
- Complete Final Remedial Action Report – April 2011
- Begin Groundwater Monitoring Requirements – April 2011
- Complete Groundwater Monitoring Requirements – Second Quarter 2013
- LEP Verification – Third Quarter 2013

13.2 Public Notice

Public notice will be required throughout the remedial process as required by the various regulatory programs. Public notice is required for soil excavation.

Public notice requires that notice of intent to conduct remedial activities be issued by the following methods:

1. Publish a notice in a newspaper of substantial circulation concurrently with the submission of this RAP to CTDEP. An affidavit of publication must be provided to CTDEP when available.

2. Send a letter to the local director of public health concurrently with the submission of the RAP to CTDEP.

3. Mail a letter to each of the abutting property owners concurrently with the submission of this RAP to CTDEP; or placing and maintaining a sign (minimum size four feet by six feet) at the site for at least 30 days. The sign must be clearly visible from the local roadway.

14 Data Verification and Validation

Sections incorporated by reference to the Generic QAPP previously submitted for the Metro-Hartford Community-Wide Brownfields Assessment Program include the subsections below.

14.1 Levels of Data Validation Review

A modified Tier I level of data validation will be completed for this project.

14.2 Evaluation Criteria

15 Data Usability

The purpose of this QAPP is to outline a systematic process and structure for data quality such that the data will support decisions. The generation and use of quality data is important in the assessment of constituent impact on the site and, if necessary, in the selection of adequate responses to concentrations in soil, groundwater, sediment, surface water, indoor air, or soil gas. The function of the data verification process is to identify sampling and "analytical error" and not to make final determinations about the overall usability of the data for the project (U.S. EPA, 1996). The usability assessment will be conducted by the QAO and the results of the assessment will be reported to the Project Hydrogeologist. The usability assessment will report how validated project data is reconciled with the project quality objectives and limitations, if any, of the data. All reported limits will be below the CT RSR for the specific site for the data to be usable. Reconciliation may require re-sampling or recommending the use of selected data even through it did not meet the DQOs.

For example, assume that a sample is analyzed for SVOCs by Method 8270 and the QC for benzo(a)pyrene (BAP) is not acceptable, while the QC for all other SVOCs is acceptable. It is possible that the results may be usable for SVOCs excluding BAP.

Quality control issues will be discussed in the usability assessment and the QA Officer will recommend the use or rejection of the data. Ultimately, the end user will determine the usability of the data based on an understanding of the project data quality objectives and the results of the data verification process. The results of the usability assessment will be summarized in periodic reports developed annually.

16 References

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USEPA Region 1, Draft Calibration of Field Instruments (temperature, pH, dissolved oxygen, conductivity/specific conductance, oxidation/reduction potential [ORP] and turbidity), June 3, 1998.

Tables

Table 3-1
Summary of Detected Constituents in Soil at REC #2
354-380 Hudson Street
Hartford, Connecticut

DRAFT

CONSTITUENT	UNITS	GB PMC	Res DEC	Site I.D.	B-05	B-29	B-29	B-29	B-30	B-30	B-30	B-31	B-31	B-31	B-31	B-32	B-32	B-32	B-32	MW-03	MW-03
				Sample No.	738060313-14	784090608-27	784090608-28	784090608-29	784090608-30	784090608-31	784090608-32	784090608-33	784090608-34	784090608-35	784090608-36	784090608-37	784090608-38	784090608-39	784090608-40	738060314-34	738060314-36
				Date	3/13/06	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	3/14/06	3/14/06
				Depth (feet)	6	0.25	0.75	8	0.25	0.75	6	0.25	0.75	4.25	6.25	0.25	0.75	6	6 (Dup.)	1.5	7
Metals																					
Arsenic	(mg/kg)	----	10		----	----	----	----	----	3.1	----	----	----	----	----	----	----	----	----	----	----
Barium	(mg/kg)	----	4700		----	----	----	----	----	200	----	----	----	----	----	----	----	----	----	----	----
Cadmium	(mg/kg)	----	34		----	----	----	----	----	0.64	----	----	----	----	----	----	----	----	----	----	----
Chromium	(mg/kg)	----	100		----	----	----	----	----	30.7	----	----	----	----	----	----	----	----	----	----	----
Mercury	(mg/kg)	----	20		----	----	----	----	----	0.22	----	----	----	----	----	----	----	----	----	----	----
Lead	(mg/kg)	----	400		22.9	48	80	----	136	112	----	18.9	16.7	----	----	28.4	41.8	----	----	37	2.37
SPLP Lead	(mg/l)	0.15	----		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Extractable Petroleum Hydrocarbons (ETPH)																					
ETPH	(mg/kg)	2500	500		<10	----	----	**[14000]**	----	<12	140	----	----	**[20000]**	90	----	----	<14	<14	<10	<10
Polynuclear Aromatic Hydrocarbons (PAHs)																					
2-Methylnaphthalene	(ug/kg)	9800	474000		----	----	----	**[85000]**	----	<270	----	----	----	**[120000]**	----	----	----	<320	<330	----	----
Acenaphthene	(ug/kg)	84000	1000000		----	----	----	3000	----	<270	----	----	----	3400	----	----	----	<320	<330	----	----
Acenaphthylene	(ug/kg)	84000	1000000		----	----	----	<1000	----	<270	----	----	----	2300	----	----	----	<320	<330	----	----
Anthracene	(ug/kg)	400000	1000000		----	----	----	2500	----	<270	----	----	----	<1300	----	----	----	<320	<330	----	----
Benzo(a)anthracene	(ug/kg)	1000	1000		----	----	----	<1000	----	<270	----	----	----	<1300	----	----	----	<320	<330	----	----
Benzo(a)pyrene	(ug/kg)	1000	1000		----	----	----	<1000	----	<270	----	----	----	<1300	----	----	----	<320	<330	----	----
Benzo(b)fluoranthene	(ug/kg)	1000	1000		----	----	----	<1000	----	<270	----	----	----	<1300	----	----	----	<320	<330	----	----
Benzo(ghi)perylene	(ug/kg)	42000	1000000		----	----	----	<1000	----	<270	----	----	----	<1300	----	----	----	<320	<330	----	----
Benzo(k)fluoranthene	(ug/kg)	1000	8400		----	----	----	<1000	----	<270	----	----	----	<1300	----	----	----	<320	<330	----	----
Chrysene	(ug/kg)	1000	84000		----	----	----	<1000	----	<270	----	----	----	<1300	----	----	----	<320	<330	----	----
Dibenzo(a,h)anthracene	(ug/kg)	1000	1000		----	----	----	<1000	----	<270	----	----	----	<1300	----	----	----	<320	<330	----	----
Fluoranthene	(ug/kg)	56000	1000000		----	----	----	<1000	----	<270	----	----	----	2000	----	----	----	<320	<330	----	----
Fluorene	(ug/kg)	56000	1000000		----	----	----	7600	----	<270	----	----	----	8800	----	----	----	<320	<330	----	----
Indeno (1,2,3-cd)pyrene	(ug/kg)	1000	1000		----	----	----	<1000	----	<270	----	----	----	<1300	----	----	----	<320	<330	----	----
Naphthalene	(ug/kg)	56000	1000000		<9.1	----	----	16000	----	<270	<5.5	----	----	39000	2200	----	----	<4.9	<5.9	<9	<8.7
Phenanthrene	(ug/kg)	40000	1000000		----	----	----	14000	----	<270	----	----	----	17000	----	----	----	<320	<330	----	----
Pyrene	(ug/kg)	40000	1000000		----	----	----	1800	----	<270	----	----	----	4000	----	----	----	<320	<330	----	----
Volatile Organic Compounds (VOCs)																					
1,2,4-Trimethylbenzene	(ug/kg)	70000	500000		<9.1	----	----	<1300	----	----	<5.5	----	----	34000	3400	----	----	<4.9	<5.9	<9	<8.7
1,3,5-Trimethylbenzene	(ug/kg)	70000	500000		<9.1	----	----	<1300	----	----	<5.5	----	----	8800	900	----	----	<4.9	<5.9	<9	<8.7
Ethylbenzene	(ug/kg)	10100	500000		<9.1	----	----	<1300	----	----	<5.5	----	----	3600	320	----	----	<4.9	<5.9	<9	<8.7
M/P-xylenes	(ug/kg)	19500	500000		<9.1	----	----	<1300	----	----	<5.5	----	----	12000	1100	----	----	<4.9	<5.9	<9	<8.7
n-Butylbenzene	(ug/kg)	14000	500000		<9.1	----	----	3200	----	----	<5.5	----	----	4800	490	----	----	<4.9	<5.9	<9	<8.7
n-Propylbenzene	(ug/kg)	14000	500000		<9.1	----	----	2200	----	----	<5.5	----	----	4300	420	----	----	<4.9	<5.9	<9	<8.7
o-Xylene	(ug/kg)	19500	500000		<9.1	----	----	<1300	----	----	<5.5	----	----	6300	550	----	----	<4.9	<5.9	<9	<8.7
p-Isopropyltoluene	(ug/kg)	14000	500000		<9.1	----	----	<1300	----	----	<5.5	----	----	5200	550	----	----	<4.9	<5.9	<9	<8.7
sec-Butylbenzene	(ug/kg)	14000	500000		<9.1	----	----	3800	----	----	<5.5	----	----	4000	410	----	----	<4.9	<5.9	<9	<8.7
Xylene (total)	(ug/kg)	19500	500000		<9.1	----	----	<1300	----	----	<5.5	----	----	19000	1700	----	----	<4.9	<5.9	<9	<8.7

Notes
1) GB PMC = RSR Pollutant Mobility Criteria for GB Groundwater
2) RES DEC = RSR Residential Direct Exposure Criteria
3) Concentrations shown in **bold** and [brackets] exceed one or more of the applicable RSR Criteria.
4) --- = Not Analyzed
5) NA = Not Applicable
6) ND = constituent not detected above laboratory reporting limit
7) <value = constituent not detected above laboratory reporting limit
8) Units- mg = miligram, kg = kilogram, ug = microgram, l =liter

TABLE 4-1

PROPOSED SAMPLING SCOPE FOR REMEDIAL ACTION PLAN & QUALITY ASSURANCE PROJECT PLAN
RAMON QURIOUS PARK
354-380 HUDSON STREET, HARTFORD, CONNECTICUT

JANUARY 2011

REC Description	Sampling Objective	Proposed Investigation
REC #2 – Existing 10,000-gallon underground storage tank (UST) One 10,000-gallon gasoline tank is located in the central portion of the property adjacent to the former auto body repair building. The tank was reportedly abandoned in-place in 1987; however CTDEP recommended the tank be removed and closed in accordance with tank closure guidelines. A GPR survey and test pits excavated at the property confirmed the presence and exact location of the tank.	To remove the existing UST and excavate and remove petroleum-impacted soil exceeding the CT RSR GB PMC and Res DEC from REC #2	<u>TANK REMOVAL</u> • Soil above the UST to a depth of four feet below the ground surface will be excavated and stockpiled on the Site for possible re-use as backfill • Any remaining liquid in the tank will be removed prior to its removal from the ground • The tank will be excavated and transported for off-site disposal <u>SOIL</u> • Petroleum contaminated soil surrounding the tank (an approximate 800 square foot area) will be excavated to a depth of ten feet below the ground surface • Confirmatory soil samples will be collected from the excavation limits in accordance with CTDEP tank closure guidelines • A total of 8 soil samples will be collected – one from each sidewall and four from the excavation base • The samples will be screened in the field with a PetroFlag test kit. • Samples will be submitted to the laboratory for analysis of ETPH by Connecticut ETPH Method and PAHs by US EPA Method 8270 and one bottom sample will be submitted for VOCs by US EPA Method 8260 • One composite sample will be collected from the 0-4 foot soil stockpile and analyzed for ETPH, PAHs and VOCs to determine whether the soil can be re-used as backfill in the excavation • If it is determined that this soil is acceptable for re-use as backfill, it will be placed at the bottom of the excavation and clean fill will be brought in to backfill the rest of the excavation to the surface grade <u>GROUNDWATER</u> • Following excavation activities one monitoring well will be installed in the excavation area and a groundwater sample will be collected from the well (as well as the four other on-Site wells) • Groundwater samples will be submitted for laboratory analysis of ETPH, PAHs and VOCs.

TABLE 4-2

SAMPLING AND ANALYTICAL SUMMARY TABLE
REMEDIAL ACTION PLAN & QUALITY ASSURANCE PROJECT PLAN
RAMON QURIOUS PARK
354-380 HUDSON STREET, HARTFORD, CONNECTICUT
JANUARY 2011

REC	Matrix	No. of Samples	Analytical Parameter	Analytical Method	Sample Container	Preservation	Max. Holding Time
REC # 2 – Existing 10,000-gallon underground storage tank (UST)	Soil *Confirmatory Soil Samples*	8	VOCs ETPH PAHs	US EPA 8260 CT Method ETPH US EPS 8270	2 Voa 40 oz. 1 Voa 40 oz. 1 Glass 8 oz.	DI water Methanol Ice	14 days 14 days for extraction, 40 days for analysis 14 days for extraction, 40 days for analysis
	Water *Post-remediation Groundwater Monitoring*	5	VOCs ETPH PAHs	US EPA 8260 CT Method ETPH US EPA 8270	2 Voa 40 ml 1 Glass amber liter 1 Glass amber liter	HCl Ice Ice	14 days 7 days 7 days for extraction, 40 days for analysis

FUSS & O'NEILL

TABLE 5-1
FUSS & O'NEILL, INC.
STANDARD OPERATING PROCEDURES
SAMPLE COLLECTION
REMEDIAL ACTION PLAN &
QUALITY ASSURANCE PROJECT PLAN ADDENDUM
RAMON QURIOUS PARK
354-380 HUDSON STREET, HARTFORD, CONNECTICUT

JANUARY 2011

SOP#	Appendix	Project Sampling SOPs
010000	C*	Site Etiquette
020000	C*	Field Notebooks
020100	C*	Sample Identification Numbers
020200	C*	Sample Labels
020300	C*	Field Data Sheets
020400	C*	Chain of Custody Forms
020500	C*	Analytical Parameter Request Forms
020600	C*	Sample Logbooks
030000	C*	Sample Handling
030100	C*	Relinquishing Samples
040000	C*	Decontamination Procedures
050000	C*	Groundwater Monitoring
050010	C*	Field Parameter Monitoring
050020	C*	Sample Filtering
050100	C*	Low Flow Groundwater Sampling – Peristaltic Pump
050400	C*	Geotech Pumps
080000	C*	Soil Sampling
080600	C*	Soil Sampling - VOCs
110100	C*	Direct Push Soil Sampling
110200	C*	Direct Push Groundwater Sampling
110300	C*	GeoProbe Well Installation
160000	C*	Monitoring Well Development

*= SOPs listed in this table are presented in Appendix C of the Generic Quality Assurance Project Plan for the Metro-Hartford Community-Wide Brownfields Assessment Program

FUSS & O'NEILL

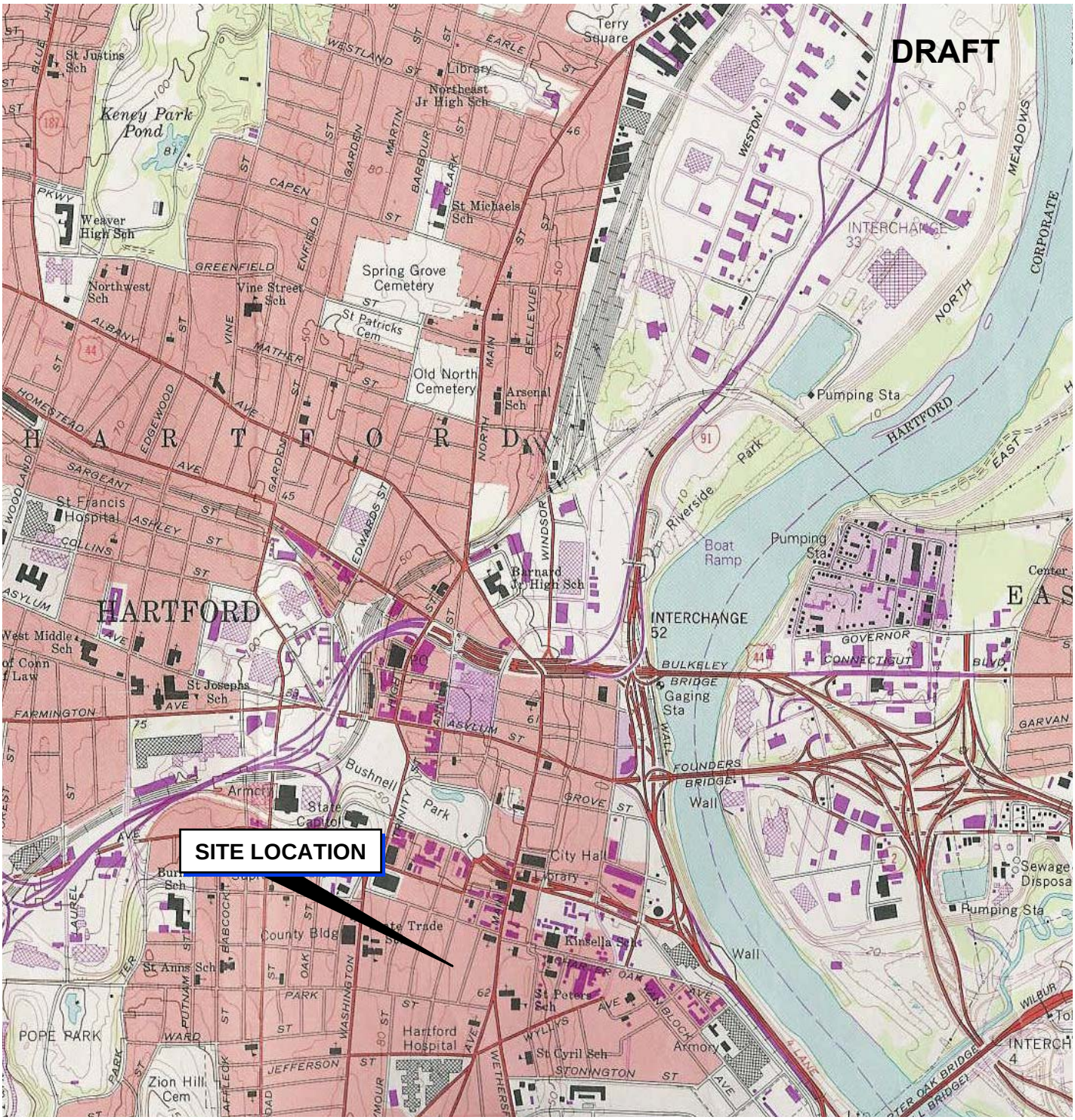
TABLE 5-2
FUSS & O'NEILL, INC.
STANDARD OPERATING PROCEDURES
FIELD SAMPLING EQUIPMENT
REMEDIAL ACTION PLAN &
QUALITY ASSURANCE PROJECT PLAN ADDENDUM
RAMON QURIOUS PARK
354-380 HUDSON STREET, HARTFORD, CONNECTICUT

JANUARY 2011

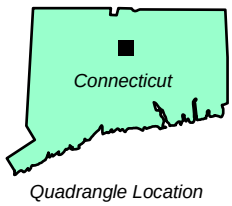
SOP #	Appendix	Field Sampling Instrument SOPs
150100	D*	Calibration and Maintenance of YSI Model 63 SCT Meter
150200	D*	Calibration and Maintenance of YSI Model 85 DO & SCT Meter
150300	D*	Calibration and Maintenance of YSI Model 600 Series Water Analyzer
150350	D*	Calibration and Maintenance of Quanta Water Quality Monitoring System
150400	D*	Calibration and Maintenance of LaMotte 2020 Turbidimeter
150510	D*	Calibration and Maintenance of Photovac 2020 Portable Photoionization Detector
150520	D*	Calibration and Maintenance of Thermo Environmental Instruments Model OVM 580B Organic Vapor Meter
150530	D*	Calibration and Maintenance of Thermo Environmental Instruments Model OVM 580EZ Organic Vapor Meter

*= SOPs listed in this table are presented in Appendix D of the Generic Quality Assurance Project Plan for the Metro-Hartford Community-Wide Brownfields Assessment Program

Figures



MAP REFERENCE:
THIS MAP WAS PREPARED FROM THE FOLLOWING
7.5 MINUTE SERIES TOPOGRAPHIC MAP:
HARTFORD NORTH,CONN. 1964 PHOTOREVISED 1992



Quadrangle Location

0 1000 2000
GRAPHIC SCALE

SCALE: 1"=2000'

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CITY OF HARTFORD
SITE LOCATION MAP
354-380 HUDSON STREET
HARTFORD CONNECTICUT

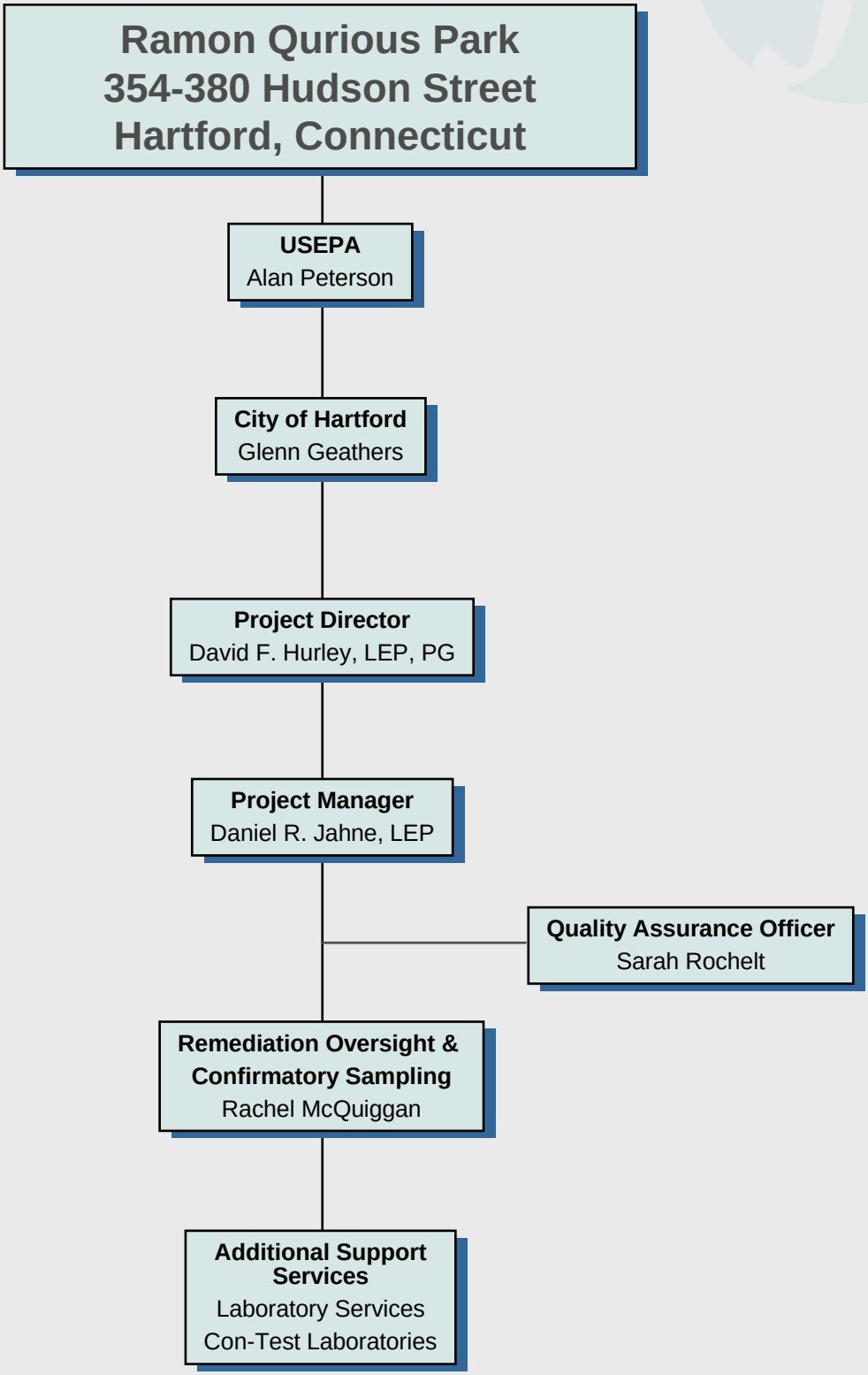
PROJ. No: 97279H30
DATE: JANUARY 2011

FIGURE 3-1

97279\H30\ECAF\Site Loc.PPT

Figure 2-1
Project Management Organization Chart

DRAFT



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DRAFT

PLAYGROUND

MW-04

LOCATION OF FORMER AUTO BODY REPAIR SITE BUILDING

REC-01

HUDSON STREET

B-29

B-05

MW-03

B-30

REC-02

B-32

TP-02

B-31

UST EXCAVATION AREA – 800 SQ.FT.

MW-05

MW-01

MW-02

APPROXIMATE LOCATION OF 10,000 GALLON UST

REC-01

LOCATION OF FORMER AUTO BODY REPAIR SITE BUILDING

BASKETBALL COURT

LEGEND

- EXISTING SOIL BORING LOCATION
- EXISTING MONITORING WELL LOCATION
- SOIL BORING WHERE ETPH AND PAH CONCENTRATIONS EXCEED RES DEC AND GB PMC
- PROPOSED CONFIRMATORY SOIL SAMPLE LOCATION
- PROPERTY LINE
- PROPOSED EXCAVATION AREA

No.	DATE	DESCRIPTION	BY
1.			

REVISIONS

PROJ. MANAGER:
CHIEF DESIGNER:
REVIEWED BY: DATE

NOTES:

MAP DERIVED FROM M.D.C. MAPPING AND OBSERVATIONS MADE DURING SITE INSPECTION.

LOCATIONS OF SOIL BORINGS, TEST PITS AND MONITORING WELLS ARE APPROXIMATE BASED ON FIELD MEASUREMENTS.

SCALE:
HORZ.: 1" = 40'
VERT.:
DATUM:
HORZ.:
VERT.:
0 20 40
GRAPHIC SCALE

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SITE PLAN AND PROPOSED REMEDIATION AREA

354-380 HUDSON STREET

HARTFORD CONNECTICUT

PROJ. No.: 1997279H30
DATE: DECEMBER 2010

FIGURE 3-2