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August 31, 2006

Mr. John Schwemberger
Program Assessment & Outreach Branch (7404)
OPPT, Room E827
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW (Mail Code 7404T)
Washington, D.C. 20460

Dear John:

Contract No. EP-W-04-021
Work Assignment 2-10
Amendments to Full Study QAPP

Enclosed is a report detailing amendments required to the Full Study Quality Assurance Project Plan (QAPP) for Work Assignment 2-10 titled "Quality Assurance Project Plan for Characterization of Dust Lead Levels After Renovation, Repair, and Painting." Also included is a revised signature page. If the appropriate EPA staff members approve the QAPP amendments and re-sign the signature page, Battelle will proceed with implementation of the protocols specified.

If you have any technical questions about the QAPP amendments, please contact me at 614/424-5365.

Sincerely,

Timothy R. Pivetz

Tim Pivetz
Associate Department Manager
Statistics and Information Analysis

TRP:cr
Enclosure
cc: Mr. Samuel Brown, EPA Deputy WAM

QUALITY ASSURANCE PROJECT PLAN FOR CHARACTERIZATION OF DUST LEAD LEVELS AFTER RENOVATION, REPAIR, AND PAINTING ACTIVITIES

Revision #1

August 31, 2006

Approval for Battelle:

Timothy R. Pivetz 8/31/06

Principal Investigator — Date
Tim Pivetz

9-31-06

Quality Assurance Manager — Date
Zachary Willenberg

8/31/06

Project Manager — Date
Bruce Buxton

IAN MACGREGOR 8/31/2006

Field Operations Coordinator — Date
Ian MacGregor

Approval for U.S. Environmental Protection Agency:

9/5/06

EPA Project Officer — Date
Sineta Wooten

9/5/06

OPPT QA Manager — Date
Barbara Leczynski

9/1/06

EPA WAM — Date
John Schwemberger

9/1/06

EPA Deputy WAM — Date
Samuel Brown

QAPP AMENDMENTS

PROJECT NUMBER: Work Assignment 2-10

QAPP TITLE/VERSION NO.: Characterization of Dust Lead Levels After Renovation, Repair, and Painting, Version #1

AMENDMENT NUMBER: 1

EFFECTIVE DATE: August 31, 2006

Section to be Changed/Revised	Change/Revision	Reason for Change/Revision
1.4 Project/Task Description	Sentence stating "Air samples will be collected to add additional information regarding lead levels in the three rooms, and personal air monitors will be used to evaluate worker exposure" changed to "Indoor air samples will be collected to add additional information regarding lead levels in the three rooms, and personal air samples will be obtained to monitor worker exposure for OSHA purposes only."	Clarifies that indoor air samples will be used in analysis while personal air samples will be used only for worker safety purposes
1.5 Quality Objectives and Criteria for Measurement Data	Change all mention of air samples to indicate indoor air samples, to differentiate these air samples from personal exposure air samples.	Clarifies that there are two types of air samples and only indoor air samples will be used in analysis
1.6 Special Training/Certification	To beginning of 2nd paragraph, add following sentence: "Monitoring will be used to determine if respirators and PPE are permanently needed or if workers need to be removed from the job, in accordance with OSHA requirements. Any personal blood and air samples collected are only for purposes of monitoring worker safety and will not be analyzed as part of the study."	Clarifies that blood and personal air samples are collected for OSHA requirements only
1.7 Documentation and Records	The site supervisor must record the location of both decontamination areas for interior experiments – the one just outside of the work room and the one just outside of the housing unit, and the exterior decontamination area.	Necessary for accurately considering spread of dust

Section to be Changed/Revised	Change/Revision	Reason for Change/Revision
2.1.5.1.1 Pre-Experiment Sampling	If the unit is to be used in multiple interior experiments, the post-experiment soil samples of the previous experiment may be used as the pre-experiment soil samples for the next interior experiment, where appropriate.	Reduces amount of soil that needs to be disturbed while still obtaining all necessary data
2.1.5.1.2 Prepare a Housing Unit or COF	The QAPP currently states that hallways connecting the entrance and the work areas will not be covered with plastic. Change this to state that areas connecting the entrance and work areas will be covered with plastic and that post-work hallway samples will be obtained from on the plastic. Detail how to attach the plastic to surfaces in a safe manner.	Reduces the amount of time and cost required to clean a unit between phases while yielding all data necessary to meet objectives
2.1.5.1.3 Clean a Unit to Acceptable Clearance Levels	State that clearance samples will be taken from new plastic laid down in hallways to ensure that no lead is deposited on the plastic prior to experiment.	Provides clearance data for hallway areas
2.1.5.1.3 Clean a Unit to Acceptable Clearance Levels	During the pre-experiment cleaning, if one or more samples fail to meet these clearance standards, then those areas and the other areas represented by that sample will undergo re-cleaning and re-sampling.	Clarifies that re-cleaning is necessary when samples fail clearance
2.1.5.1.5 Set up Decontamination Area	Change the section on decontamination areas for interior experiments to indicate that there will be two areas: one just outside of the work room where study personnel will use a HEPA vacuum to remove all dust and debris from their protective suits, respirators, and tools and the outer layer of booties will be removed; and one just outside of the unit, where study personnel will use a HEPA vacuum to remove any remaining dust and debris from their protective suits, respirators and tools, remove protective suit and booties, and step on a tack pad to remove any remaining dust from street shoes before leaving the property.	More specifically identifies the activities occurring in the decontamination areas
2.1.5.1.6 Conduct the RRP Work Activity	Insert the following to describe the activities that will occur before entering/exiting the study site/work room: The following steps must be followed each time study personnel ***enter*** the **study site**: • Cover clothing with a clean, disposable Tyvec (or equivalent) suit. • Place clean, disposable booties over shoes • Put on appropriate respirator.	Clarifies the activities required to enter and exit both the work room and the study site

Section to be Changed/Revised	Change/Revision	Reason for Change/Revision
	The following steps must be followed each time study personnel ***enter*** the **work room**: • Place a second layer of clean, disposable booties over the existing pair. The following steps must be followed each time study personnel ***exit*** the **work room**: • While standing in the decontamination area, vacuum the exterior of the Tyvec (or equivalent) suit and respirator with a HEPA Vacuum to remove all dust and debris. • Remove disposable booties and place in heavy duty garbage bag. • Immediately wash hands and face with soap and water. • If the contractor is equipped with the personal exposure monitor, the monitor will be removed and placed on designated shelf or hook within the work room before exiting the work room. • Remove all dust and debris from tools and equipment. The following steps must be followed each time study personnel ***exit*** the **study site**: • While standing in the decontamination area, slowly roll down Tyvec (or equivalent) suit, careful to trap all dust and debris in the suit. Place suit in heavy duty garbage bag. • Remove disposable booties and place in heavy duty garbage bag. • Remove respirator. • Shower to remove any additional dust, if necessary • Change into street clothes, if necessary based on nature of job Clean off any dust or debris left over on tools, clothing, shoes, or the exterior of waste containers prior to leaving the study site.	
2.1.5.1.11 Perform Cleaning Verification	Change the language of the verification process to indicate that all zones will undergo the first wet cloth verification before re-cleaning any of the failing zones. The same process will be used for the second wet cloth verification and re-cleaning.	Significantly decreases the time it takes to perform this activity

Section to be Changed/Revised	Change/Revision	Reason for Change/Revision
2.1.5.2.1 Pre-Experiment Sampling	Insert the following text: "Collect paint chip samples from the exterior components undergoing work to evaluate the lead concentrations of those components. The paint chip samples should measure approximately 2" by 2", and will involve collecting one paint chip sample on each of the lead-based paint components undergoing work, with a duplicate sample on large components such as walls. When two samples are necessary, one sample will be taken at approximately 1/3 distance from the start of the component, while the second sample will be taken at approximately 2/3 distance from the start of the component. To avoid contamination from paint chip sampling, plastic will be laid down below the area to be sampled, such that it would catch all resulting dust and debris."	Unintended omission of exterior paint chip sampling
2.1.5.2.1 Pre-Experiment Sampling	If the unit is to be used in multiple exterior experiments, the post-experiment soil samples of the previous experiment may be used as the pre-experiment soil samples for the next interior experiment, where appropriate.	Reduces amount of soil that needs to be disturbed while still obtaining all necessary data
2.1.5.2.3 Set up the Experiment	The responsibility of determining the size of the rule plastic has been shifted from the contractor to the site supervisor, in consultation with a contractor.	Ensures consistent use of rule plastic between jobs of the same type
2.2.3 Ambient Air Sampling	The field technicians should record the start and stop flow of the air monitors at each sampling stage, along with the start and stop time.	Necessary to determine average flow rates
2.2.4 Personal Exposure Montitoring	The field technicians should record the start and stop flow of the air monitors at each sampling stage, along with the start and stop time.	Necessary to determine average flow rates
2.2.4 Personal Exposure Montitoring	Add sentence to end of section stating "The reason for this is to provide an accurate exposure level, even when on unplanned breaks and to keep dust within the work area."	Clarifies the reason for removing personal air monitors
2.2.5 Soil Sampling	Change the soil sampling protocol from five sub-samples to three sub-samples. (Also update in the interior and exterior detailed sampling protocols.)	Reduces soil disturbance while still being consistent with the ASTM standard
2.2.7 Wind Information	Exterior work will not occur if the wind speed is in excess of 20 miles per hour as opposed to 30 miles per hour.	Other researchers suggested spread of dust with wind over 20 mph could be too extensive

Section to be Changed/Revised	Change/Revision	Reason for Change/Revision
2.2.8 Precipitation	Change protocol such that exterior work will not occur if the chance of precipitation for a given work **period** exceeds 20 percent instead of work **day**.	Better represents the meteorological conditions of the actual period of time that the work will take place

ORIGINATED BY:

Battelle Task Leader

8/31/06
DATE

APPROVED BY:

for Bruce Buxton
Battelle Project Manager

8/31/06
DATE

Quality Assurance Manager

8·31·06
DATE