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104 Jamesville Road Syracuse, New York 13214 USA 315.445.0224 800.477.7411 Fax 315.445.0793

11 September 2006

James H. Craft
New York State Department of Environmental Conservation—Region 8
Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414-9519

Re: Phase II Supplemental Remedial Investigation Work Plan

61 Gates Avenue, Geneva, NY

VCP No. V00119-8

Delta Project No. V004210-1

Dear Mr. Craft:

On behalf of the HB Fuller Company (HB Fuller), Delta Environmental Consultants, Inc. (Delta) is presenting New York State Department of Environmental Conservation (NYSDEC) with this Phase II Supplemental Remedial Investigation (SRI) Work Plan to address recommendations presented in Delta's 17 March 2006 Supplemental Remedial Investigation Report (SRI) and comments presented in NYSDEC's 19 May 2006 email commenting on the SRI Report. The purpose of the proposed Phase II work activities is to generate data to further define the extent of onsite and offsite impacts from chlorinated volatile organic compounds (CVOCs) in soil and groundwater at the subject site. In addition, an evaluation is proposed to assess the potential for vapor intrusion into onsite structures from potentially impacted materials, if any, that may be located beneath the northern area of the onsite building.

#### SCOPE OF WORK

Proposed additional investigation work at the site will be conducted as per the procedures detailed in the NYSDEC approved Investigation Work Plan dated July 2004, and modifications detailed in this Phase II SRI Work Plan. Additional investigation tasks, which are proposed to be conducted in late 2006 (October to December), are detailed below.

### Task 1: Soil Borings

Soil borings will be installed at six interior locations in northeastern area of building, at three exterior locations within the above ground storage tank (AST) containment area, at one location



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near the northeast corner of the northern parking area, and at all proposed shallow and deep monitoring well locations (Figures 1 and 2). Building interior and AST containment area soil boring are proposed to evaluate soil conditions beneath the building floor and containment area where NYSDEC suspects that a source of dense non-aqueous phase liquids (DNAPL) may be present in soil. Monitoring well borings and the soil boring located in the northeast corner of the parking lot are proposed to further delineate the extent of CVOCs in soils across the site.

At interior boring locations and within the AST containment area, a concrete corer will be used to remove a minimum three-inch diameter concrete core from the building floor and/or containment area bottom so that underlying soils can be sampled. Following removal of the concrete, soil samples will be collected using direct push and/or split-spoon drilling techniques. At the remaining sampling locations, soil samples will be collected using direct push and/or hollow stem auger and split-spoon drilling techniques. Soil samples will be collected continuously at all boring locations to the depth of termination of each boring. It is anticipated that all non-well borings will be sampled to a depth of approximately 12 feet below grade, which based on previous site work is expected to be within the upper saturated zone of the shallow water table aquifer. Well borings are anticipated to be sampled to depths of approximately 16 feet (shallow wells) and 30 feet (deep wells) below grade.

Soil samples will be logged by a geologist, visually inspected (with emphasis on identifying evidence of DNAPL impacts), and field screened with a photoionization detector (PID) to monitor for the potential presence of VOC vapors. Additionally, as a means of evaluating the soil samples for the presence of DNAPL, up to two soil samples per boring will be qualitatively screened in the field using soil-water shake tests (OilScreenSoil<sup>TM</sup> or similar test kits), which identify the presence of DNAPL and other petroleum hydrocarbons in soils.

Soil samples will be selected for analysis based on visual observations (staining and discoloration), PID screening results, odors, and the results of qualitative field screening kits. Selected samples (two per boring) will be collected from both the unsaturated zone and from the saturated zone or water table interface. Typically, the samples exhibiting the greatest impacts from each of these zones will be selected for analysis.

Soil samples will be analyzed for VOCs (USEPA Method 8260) by a NYSDOH ELAP-certified laboratory that participates in the contract laboratory program (CLP). Laboratory analytical procedures will adhere to NYS ASP 2000 methodologies and protocols and analytical results will be reported using NYSDEC ASP 2000 Category B deliverables. Data will be validated by a NYSDEC-approved data validation chemist and a Data Usability Summary Report (DUSR) will be prepared.

Upon completion the interior soil borings will be immediately converted to soil vapor sampling points (see Task 2). Exterior soil borings in the AST area and parking lot will be backfilled and finished at grade with concrete. Soil borings installed in proposed monitoring well locations will be converted to shallow or deep monitoring wells. All soil cuttings will be containerized onsite pending proper management.

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# Task 2: Soil Vapor Sampling

The potential for vapor intrusion into on-site structures and indoor air quality as a potential exposure pathway for CVOCs has been raised by NYSDEC and New York State Department of Health (NYSDOH). These CVOCs may be present in soils and/or groundwater beneath the buildings northern floor and will be evaluated as part of the Phase II SRI site investigative activities. All soil vapor sampling will be conducted in general accordance with NYSDEC and NYSDOH requirements and NYSDOH's "Draft" guidance document (February 2005) titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York".

The potential for vapor intrusion into onsite buildings will be evaluated by evaluating target CVOC concentrations in air samples collected from the following locations:

- sub-slab air (six locations within the northeast production area of the building);
- indoor ambient air (three locations within the building at locations to be determined), and;
- outdoor ambient air (one upwind and two downwind locations outside of the building).

Sub-slab air samples will be co-located and collected from soil borings that will be installed as part of the soil boring activities previously described in Task 1 (Figure 2). It is proposed that these samples will be collected after the boreholes are partially backfilled to a depth of at least one foot above the water table with sand. Soil vapor probes will then be installed in the borings at depths of at least one foot below the concrete floor slab. The use of soil boring is proposed to limit the penetrations through the specially coated floor slab that is located within the production area of the building. Upon completion of sampling, the soil vapor probes will be removed and the boreholes sealed to grade with 5,000 psi cement. An epoxy coating will then be applied over each borehole cut to restore the chemical resistant composition of the floor at each boring location.

One round of vapor/air sampling will be collected. Sub-slab samples will be collected following completion of interior soil boring tasks. If possible the sub-slab, indoor ambient, and outdoor ambient samples will be collected concurrently; however, in the event that soil borings are installed at the site outside of the heating season (November through March) these samples will be collected independently of the indoor and outdoor ambient air samples. Indoor and outdoor ambient samples will be collected during the heating season and at a date as close to the completion of sub-slab sampling as possible. Prior to conducting the indoor air sampling, an inventory of the products (i.e., cleaning products, solvents, etc.) used within the building will be prepared.

All air samples will be analyzed by Severn Trent Laboratories of Burlington, VT, a NYSDOH ELAP-certified laboratory by EPA Method TO-15, with minimum reporting limits in accordance with NYSDOH standards (typically 1 ug/m³) and sufficiently low to provide a comparison of the analytical results to established NYSDOH Background levels and NYSDOH Guideline values. Duplicates, field blanks, and other QA/QC samples are not proposed as part of the soil vapor sampling tasks. In addition, validation of the air sampling data is not proposed.

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## Task 3: Monitoring Well Installation and Development

Shallow Monitoring Well Installation

Seven shallow water table interface monitoring wells (MW-124 to MW-130) will be installed at the site to delineate the extent of CVOCs in groundwater onsite and offsite and to verify the nature of upgradient groundwater quality onsite (Figure 1). Well MW-124 will be located along the western side of the building and in line with the central axis of the CVOC plume to evaluate upgradient groundwater quality and to determine if there are offsite impacts migrating to the site from impacted sites located to the west and upgradient of the site. Well MW-125 will be located in the center of the northern parking lot to further define the northern edge of the CVOC plume. Well MW-126 will be located between wells MW-116 and MW-119, per NYSDEC's request, and to further refine the CVOC plume characteristics within this area of the site. Wells MW-127 through MW-130 will be located offsite and downgradient of well MW-123 in an effort to assess the lateral extent of the CVOC plume downgradient of impacted areas.

Shallow monitoring wells will be installed in soil borings (see Task 1) using HSA drilling techniques and will be constructed in accordance with NYSDEC protocols under the supervision of Delta's on-site geologist. Each of the monitoring wells will be constructed of two-inch-diameter PVC riser and ten feet of 0.01-inch slotted PVC well screen. The well screen will be installed to straddle the shallow water table. A sand pack will be installed around the well screen in each well and will extend one to two feet above the top of the well screen. A one foot to two foot thick bentonite pellet seal will be placed above the sand pack and cement/bentonite grout will be utilized to backfill the remainder of the well annulus. The wells will be completed with a steel protective casing. Following installation, reference points will be marked on the top of the PVC at each well location for subsequent surveying. All soil cuttings will be containerized onsite pending proper management.

### Deep Monitoring Well Installation

Three deep monitoring wells (MW-118D, MW-126D, and MW-123D) will be installed at the site to evaluate the vertical extent of CVOC impacts in groundwater along the central axis of the CVOC plume. Deep monitoring wells will be paired at new or pre-existing well locations. Wells will be installed to the top of the underlying clay unit (estimated depth of 20 feet to 30 feet below grade), which based on previous drilling information is reportedly present beneath the mixed silt, sand, and gravel unit encountered in the shallow wells installed in 2005 by Delta.

Deep monitoring wells will be installed in soil borings (see Task 1) using HSA drilling techniques and will be constructed in accordance with NYSDEC protocols under the supervision of Delta's on-site geologist. Each of the monitoring wells will be constructed of two-inch-diameter PVC riser and ten feet of 0.01-inch slotted PVC well screen. The well screen will be installed upward from the upper surface of the clay unit. A sand pack will be installed around the well screen in each well and will extend one to two feet above the top of the well screen. A bentonite seal (minimum of two feet) will be placed above the sand pack and extend upward into the unsaturated

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zone. A cement/bentonite grout will be utilized to backfill the remainder of the well annulus. The wells will be completed with a steel protective casing. Following installation, reference points will be marked on the top of the PVC at each well location for subsequent surveying. All soil cuttings will be containerized onsite pending proper management.

## Monitoring Well Development

Well development will begin no sooner than 24 hours after final completion of each monitoring well. Low-flow purging and development techniques will be used to develop each of the newly installed monitoring wells. Each well will be developed until the turbidity of the water is below 50 NTU, and/or field parameters (pH, conductivity, and temperature) stabilize. Development water from the wells will be checked periodically for the presence of a sheen, free product, or evidence of DNAPL. Development water will be containerized pending proper management.

### Task 4: Groundwater Sampling

Groundwater sampling of all onsite wells (newly installed and previously existing) will be conducted no sooner than one week after final development of each of the newly installed monitoring wells. Following the initial sampling event, groundwater sampling of all onsite and offsite wells (20 wells total) will be conducted every four months for a period of at least one year in an effort to monitor groundwater quality and groundwater conditions on a seasonal basis.

Prior to sampling, each monitoring well will be purged a minimum of three well volumes using low-flow purging techniques. Purge water will be containerized pending proper management. Following purging, groundwater samples will be collected directly from low flow tubing using low flow sampling techniques. Groundwater samples collected from all wells will be analyzed for VOCs (USEPA Method 8260). Additionally, groundwater samples from select wells (MW-115, MW-117, MW-118, MW-119, MW-120, and MW-121) where MBAS were detected during previous SRI sampling tasks in either October 2005 and/or January 2006 will be sampled for MBAS by a NYSDOH ELAP-certified laboratory that participates in the CLP. Laboratory analytical procedures will adhere to NYS ASP 2000 methodologies and protocols and analytical results will be reported using NYSDEC ASP 2000 Category B deliverables. Data will be validated by a NYSDEC-approved data validation chemist and a Data Usability Summary Report (DUSR) will be prepared.

#### Task 5: Surface Water and Sediment Sampling

Findings of the SRI indicated that surface waters and sediments in the offsite eastern drainage ditch had been impacted by CVOCs and that an upstream offsite source may be contributing to the impacts observed in these media. Therefore, in an effort to establish the impacts of offsite sources on surface water and sediment quality in the eastern drainage ditch, a total of five surface water and sediment samples will be collected from the drainage ditch during this task. Three samples will be collected from locations that were sampled during the SRI (SW-1 to 3 and SED-1 to SED-

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3) and two samples will be collected in upstream locations, which will be located near where drainage from an adjacent property flows onto the northern area of the site (Figure 1).

Once the sampling locations have been established, a surface water sample will be collected at each location followed by sediment sample collection. Samples will be collected from the downstream locations first, then progressively upstream, to minimize cross-contamination. The location of each surface water/sediment sample will be marked with stakes for subsequent surveying by a NYS licensed land surveyor.

Surface water samples will be analyzed for VOCs (USEPA Method 8260). Sediment samples will be analyzed for VOCs (USEPA Method 8260) and Total Organic Carbon (Lloyd Kahn method).

Sample analysis will be performed by a NYSDOH ELAP-certified laboratory that participates in the CLP. Laboratory analytical procedures will adhere to NYS ASP 2000 methodologies and protocols and analytical results will be reported using NYSDEC ASP 2000 Category B deliverables. Data will be validated by a NYSDEC-approved data validation chemist and a Data Usability Summary Report (DUSR) will be prepared.

## Task 6: Stream Gauge Installation

Stream gauges will be installed in two area of the eastern drainage ditch to monitor surface water elevations in the ditch (Figure 1). The first gauge will be installed in the ditch near the northern property line where the adjacent property owned by CCN meets the site property boundary. The second stream gauge will be installed near the midpoint of the eastern drainage ditch. Following installation of the gauges a cross section of the ditch in these locations will be established by survey and used to determine flow volumes in the ditch.

### Task 7: Surveying

Upon completion of all field tasks, the horizontal and vertical locations of all soil borings, monitoring wells, surface water/sediment sampling locations, and vapor sampling locations will be surveyed by a New York State (NYS) licensed land surveyor. Vertical elevations will be recorded to the nearest 0.01-foot. Top-of-casing elevations for each monitoring well will also be recorded to the nearest 0.01-foot. All sampling points will be referenced to an onsite fixed datum point.

### Task 8: Waste Management

Following completion of field sampling tasks, composite waste characterization samples will be collected from the drummed solid and liquid wastes that are generated during the additional investigation activities to characterize the waste for proper offsite disposal. Based on previous characterization requirements, it is anticipated that liquid waste samples will be analyzed for VOCs (EPA Method 8260) and SVOCs (EPA Method 8270 base neutral compounds) and that solid waste samples will be analyzed for TCLP VOCs (EPA Method 8260), TCLP SVOCs (EPA Method 8270), PCBs (EPA Method 8082), TCLP metals, pH, flash point and paint filter analyses.

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Waste characterization samples will be analyzed by a NYSDOH ELAP-certified laboratory. Following completion of waste profiles the investigation wastes will be transported, by permitted waste haulers, to an offsite disposal facility that is permitted to accept the wastes generated during the investigation activities.

## Task 9: Reporting

Following completion of the proposed additional tasks, data generated from these tasks will be incorporated into a Phase II SRI Report. This report will also address comments received from NYSDEC (dated 19 May 2006) regarding the SRI Report dated 17 March 2006.

#### **SCHEDULE**

Summarized below is a tentative schedule for activities associated with this Phase II SRI Work Plan.

Task	Estimated Completion Date
Submittal of Phase II SRI Work Plan to NYSDEC	September 2006
NYSDEC Review of Phase II SRI Work Plan	September - October 2006
Response to NYSDEC Comments	October 2006
NYSDEC Approval of Phase II SRI Work Plan	October 2006
Begin Fieldwork	October - November 2006
Complete Fieldwork	December 2007*
Submit Phase II SRI to NYSDEC	April 2007
NYSDEC Provides Comments to HB Fuller	May 2007
Response to NYSDEC Comments	May 2007
Finalize Phase II SRI Report	June 2007

**Note:** This schedule is estimated, and NYSDEC review durations are assumed.

<sup>\*:</sup> This date is inclusive of all the proposed groundwater sampling events.

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HB Fuller and Delta appreciate the opportunity to present this Phase II SRI Work Plan and would request a timely response so that we may implement the proposed scope of work later this fall while weather conditions are favorable. If you have any questions or comments, feel free to contact me at (315) 445-0224 or by email (mschumacher@deltaenv.com).

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

mary & Schumacher

Mark J. Schumacher

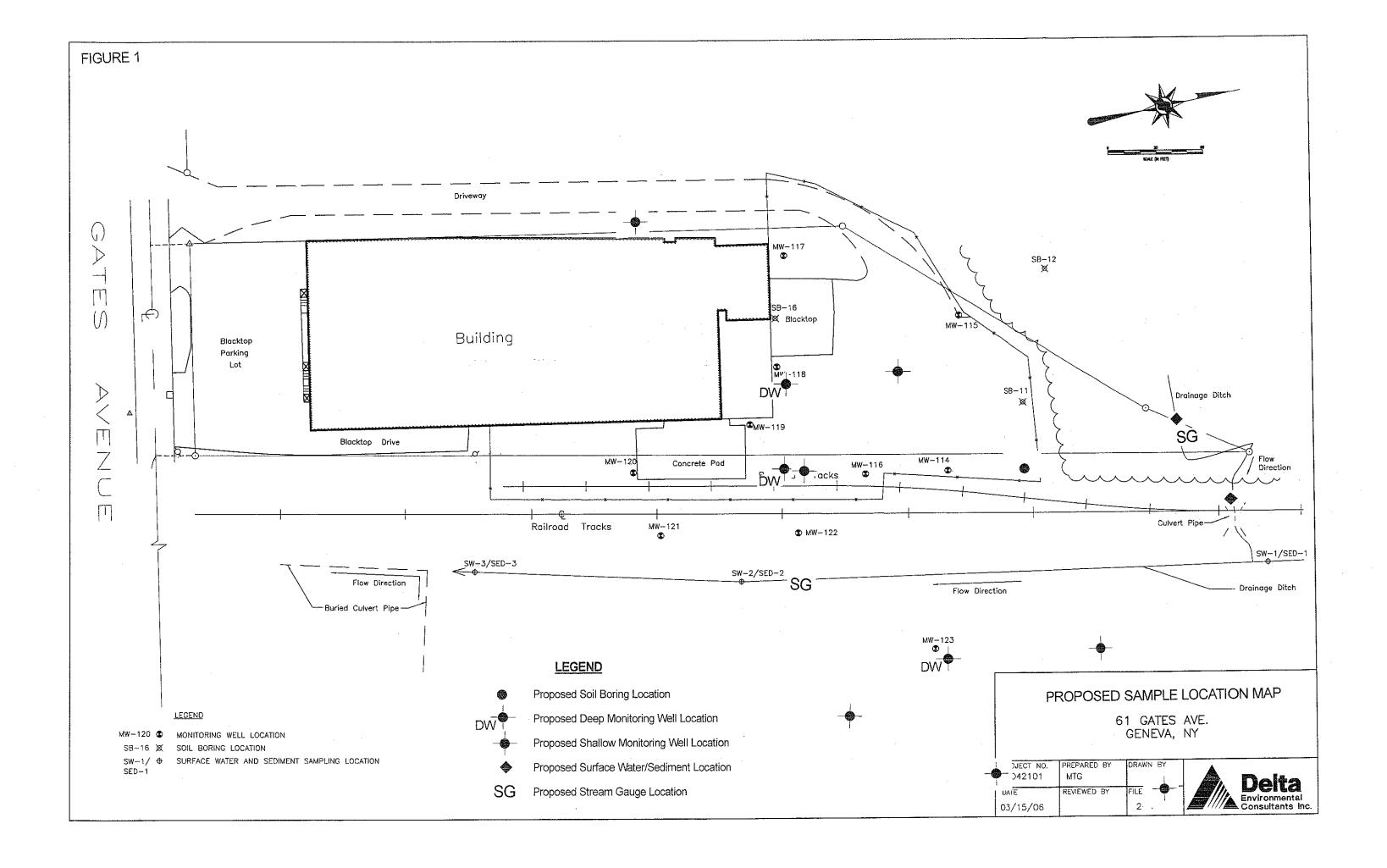
Project Manager

Cc:

David Crisman - HB Fuller

Anthony Savino - Delta Environmental Consultants

Debbie McNaughton - NYSDOH



SYONE IS TO ASSEMBLE IN FRONT OF BUILDING ON GATES AVE "

ON TYPE OF EMERGENCY ARE TO ASSEMBLE UP WIND

FIGURE 2