S2C2 inc.

Streamlined Site Characterization & Closure

June 11, 2012

Mr. Gregory B. MacLean, P.E.
Environmental Engineer II
New York State Department of Environmental Conservation
Division of Environmental Remediation - Region 8
6274 East Avon-Lima Road
Avon, New York 14414

RE: Supplemental Remedial Investigation Activities at Carlson Park in Rochester, NY. (NYSDEC VCP Number V00514-8)

Dear Greg:

This letter addendum is intended to provide a description of supplemental Remedial Investigation (RI) activities that 100 Carlson Road, LLC proposes to conduct during the summer of 2012 as part of ongoing RI activities being implemented at the Carlson Park Site (Site). All of the proposed supplemental RI activities addressed herein have been discussed with you during recent telephone conversations. These activities represent an expansion of the Scope of Work outlined in the Supplemental Work Plan for Initial Bedrock Evaluation Activities dated February 28, 2010 (Supplemental Work Plan), and other supplemental Work Plan Addendum letters dated September 2010, August 2011, and November 2011. The Supplemental Work Plan, and subsequent addendum letters, are all addenda to the original Voluntary Cleanup Program Remedial Investigation Work Plan for Carlson Park, dated October 2004 (RI Work Plan). Accordingly, we request that this letter be considered an additional attachment to the Supplemental Work Plan.

The remainder of this letter provides a description of the additional on-site RI activities currently being proposed. It is intended that information obtained during these activities will better define both physical bedrock and bedrock groundwater quality conditions underlying the Site.

Summary of Proposed Supplemental RI Activities:

The field activities will be completed in three field events, as follows:

A. First field event: Additional shallow bedrock groundwater evaluation in the general vicinity of location BR-6, and overburden monitoring well installation;
B. Second field event: Additional bedrock evaluation, and bedrock groundwater monitoring well installation; and
C. Third field event: A comprehensive round of bedrock groundwater monitoring well sampling.

Description of Proposed Supplemental RI Activities:

Please note that all of the currently proposed supplemental on-site RI activities will be conducted using methods and procedures similar to those previously approved and used as part of the original RI Work Plan and/or the Supplemental Work Plan and addenda. The approximate locations of all currently proposed on-site supplemental RI activities are presented on the attached Figure 1. The currently proposed supplemental RI activities will be completed during three separate field events. As described in more detail below, the specific scope of work and the specific sequencing of activities will be somewhat dependent upon observations and/or information generated in the field. Accordingly, an element of the work scope associated with the subject RI activities will be dynamic in nature.

A. Additional shallow bedrock groundwater evaluation in the general vicinity of location BR-6, and overburden monitoring well installation.

The first field event to be completed as part of the currently proposed supplemental RI work will include an expansion of the shallow bedrock groundwater evaluation activities conducted in the vicinity of BR-6 in November/December 2011. As part of these activities, additional overburden groundwater quality evaluation will also be conducted, as will the installation of several additional overburden groundwater monitoring wells.

Elevated concentrations of dissolved trichloroethene (TCE) in groundwater, and/or visual evidence of dense non-aqueous phase liquid (DNAPL), were previously identified in shallow bedrock in the vicinity of location BR-6 and other nearby locations (i.e., BR-6I through BR-6IV – see attached Figure 1) situated along the southeastern property boundary of the Site. A previous evaluation of the approximately 13 to 15 feet of saturated overburden conducted in that area did not indicate the presence of groundwater quality impacts in the overburden groundwater overlying the bedrock in that portion of the Site.

The primary objective of the proposed additional shallow bedrock groundwater evaluation activities in this portion of the Site is to better characterize and delineate the highly impacted shallow bedrock groundwater zone identified to be present in the vicinity of BR-6. This evaluation is intended to help identify the source and on-site extent of these impacts, and to identify potentially appropriate locations to conduct additional deeper bedrock evaluation activities. More specifically, this task is intended to help evaluate whether or not there is a connection between the impacts observed in shallow bedrock in the vicinity of BR-6, and the localized area of DNAPL previously identified to be present at the bedrock surface beneath a loading area at Building 2, or if the shallow bedrock impacts near BR-6 are potentially associated with other on-site and/or off-site sources.

In order to meet the objectives of this task, additional adaptive shallow bedrock groundwater sampling will be conducted in the southeastern portion of the site. The approximate locations of these activities are depicted by triangles on the attached Figure 1. The three red triangles are intended to represent approximate locations for initial supplemental temporary

shallow bedrock evaluation activities. The location situated south of BR-6IV and adjacent to Blossom Rd. is intended to help identify the lateral extent of the impacts previously identified in the vicinity of BR-6, and to evaluate conditions at a location anticipated to be situated along the hydraulically upgradient property boundary. As such, information obtained from this location may be useful in determining whether shallow bedrock impacts originate from off-site or on-site sources. The two locations situated adjacent to the eastern edge of Buildings 1 and 7 are intended to better define the lateral extent of impacts and to help identify the source of possible groundwater quality impacts which may be identified at these locations.

The six purple triangles are intended to represent potential additional shallow bedrock evaluation locations to be considered based upon field observations (i.e., visual observations, and photo ionization detector (PID) readings of drill cuttings and return water, etc.), and/or analytical results obtained from the initial locations. Accordingly, the actual number and location of temporary shallow bedrock groundwater evaluation points will be determined in the field and will be based upon information obtained as field work progresses.

Although available data regarding overburden groundwater quality information was available for the previous shallow bedrock evaluation activities conducted in November/December 2011, only limited existing overburden groundwater quality information is currently available for the shallow bedrock evaluation locations planned for this event. Therefore, prior to advancing any boreholes into shallow bedrock, vertical overburden groundwater quality profiling for Volatile Organic Compounds (VOCs) will be conducted at each potential temporary shallow bedrock evaluation location. This will be done to identify the approximate depth of the bedrock surface, and to verify that no significantly impacted shallow overburden zones will be penetrated while attempting to evaluate underlying shallow bedrock conditions. In the event impacted overburden groundwater is identified at any of the proposed temporary shallow bedrock evaluation locations, additional measures may be taken to reduce the potential for introduction of impacts from the overburden into the bedrock, as appropriate, including the relocation of an evaluation point.

In addition to conducting overburden groundwater quality profiling at the temporary shallow bedrock evaluation locations, such profiling will also be conducted at the two locations currently planned for the installation of overburden and bedrock groundwater monitoring well pairs (as described herein), as depicted by red circles on the attached Figure 1. One of these locations will be situated near the intersection of Hampden and Blossom Roads, while the other will be situated south of the facility. No overburden groundwater quality information is currently available at these locations. All vertical groundwater quality profiling will once again be conducted with the use of a direct-push unit supplemented by an on-site mobile laboratory to provide rapid turnaround VOC analytical results.

Once the overburden groundwater quality profiling activities have been completed at any given location, temporary shallow bedrock evaluations will be conducted. These activities will be conducted in a similar manner to those that were completed in November/December 2011. At each shallow bedrock evaluation location, hollow-stem auger drilling will be

utilized to advance a boring of 6" or greater in diameter to refusal at the bedrock surface. The bedrock surface has been identified to typically range between 15 and 25 feet below grade in this portion of the Site. Temporary 4" PVC casing will be set at the base of the boring and sealed with bentonite. Once the temporary casing has been set and sealed, a 4" borehole will be advanced through the casing, and extended into bedrock to a depth of approximately 10 to 15 feet below the base of the temporary casing at five-foot increments. Such borehole advancement will be conducted with the use of roller bit drilling (using water as the drilling fluid). Bedrock groundwater grab sampling will then be conducted within the temporary shallow bedrock borehole. Groundwater samples will be analyzed/screened for VOCs within an on-site mobile laboratory on a rapid turnaround basis in accordance with USEPA SW-846 Method 8260B-modified. If it appears that the bentonite seal on the temporary casing is not completely isolating overlying overburden groundwater from the shallow bedrock groundwater, or if the driller notices any observable changes in groundwater yield or water loss during drilling, then an inflatable packer assembly may be utilized to help isolate the shallow bedrock groundwater. If a packer assembly is used, an attempt may be also be made to collect groundwater grab samples from multiple intervals within the shallow bedrock borehole.

All downhole equipment will be decontaminated between locations. Once bedrock groundwater grab sampling has been completed at the temporary shallow bedrock evaluation locations, the boreholes will be abandoned via tremmie-grouting and the temporary casings will be removed.

In addition, as part of this field event, an attempt will be made to install shallow overburden monitoring wells at three locations with the use of direct-push equipment. If such overburden groundwater monitoring well installation can not be accomplished at any of these locations with direct-push, then those wells will be installed with the use of conventional drilling equipment as part of second field event. Two of these locations will be situated along the southern and southeastern property boundaries as part of nested wells with proposed bedrock groundwater monitoring wells, and are identified by red circles on Figure 1. The third location is situated west of Building 5. These three wells should prove to be useful for evaluating site-wide overburden groundwater flow conditions, and will provide strategically placed permanent overburden groundwater monitoring points. An attempt will be made to collect continuous soil sampling at these well locations for lithologic logging purposes. Each of these wells will be constructed with 1.5" or 2" PVC. The locations and elevations of all temporary borings and groundwater monitoring wells will subsequently be surveyed.

B. Additional bedrock evaluation, and bedrock groundwater monitoring well installation.

The second field event to be completed as part of the currently proposed supplemental RI work will include the completion of additional detailed bedrock evaluation activities, and the installation of additional bedrock wells.

As described in detail in the Supplemental Work Plan (February 2010), additional detailed bedrock evaluation activities will include: bedrock coring and packer-testing, and downhole geophysical logging, to be followed by bedrock groundwater monitoring well installation.

The purpose for conducting this work is to obtain a more complete understanding of site-wide bedrock and bedrock groundwater quality conditions. A total of four locations are currently identified to undergo these detailed evaluation activities, and are depicted on the attached figure as red hatched squares (north-northwest area) or red circles (south-southeast area). The northwest location is intended to provide information west of location BR-8 along the property boundary at Humboldt Street, specifically to identify the western lateral extent of groundwater quality impacts in bedrock and to supplement the understanding of bedrock groundwater flow conditions. The location situated just north of Building 8 is intended to provide information at a location anticipated to be downgradient of the northern portion of the facility building complex and upgradient of the existing wells along the site perimeter. The purpose for the two south-southeast locations is to evaluate conditions at locations anticipated to be situated along the hydraulically upgradient property boundary. As such, information obtained from these locations may be useful in determining whether shallow bedrock impacts originate from off-site or on-site sources.

Based upon the results obtained from the temporary shallow bedrock evaluation activities to be conducted just east of Buildings 1, 7, and 9 during the first field event, it is possible that an additional permanent bedrock groundwater monitoring well may be proposed in that area as well.

It should be noted that at least one permanent bedrock groundwater monitoring well will be installed in the vicinity of the proposed southeast location (near the intersection of Blossom and Hampden Roads), even if highly impacted shallow bedrock groundwater is observed to be present there. In that case, such bedrock well at that location will be constructed similarly to the bedrock well installed at BR-6. At all the other locations mentioned above, with the exception of the well near MW-14, it is anticipated that bedrock coring and packer-testing will extend to a depth where minimal to no impacts are observed, or to a depth approaching the underlying natural gas accumulations as previously encountered, whichever is shallower.

In addition to the four bedrock locations to undergo detailed evaluation activities, as described above, one additional shallow bedrock groundwater monitoring well will be installed near overburden groundwater monitoring well MW-14. This bedrock well is specifically intended to verify that shallow water table VOC impacts observed to be present in that area have not extended into the underlying bedrock. As such, the objective of this bedrock well is to have a screen installed in a shallow water-bearing fracture zone situated close to the competent bedrock surface. Accordingly, a permanent steel casing will be set approximately three feet into competent bedrock at this location. Bedrock coring will be advanced approximately 10 feet below the base of the casing to visually observe bedrock fracture conditions. If a suitable water-bearing zone is observed to be present, the corehole will be reamed and a shallow bedrock well will be installed. If the bedrock at that depth is not believed to be capable of providing a sufficient yield for groundwater monitoring

purposes, the coring will be continued until a suitable water-bearing zone is identified. Although neither packer-testing nor downhole geophysical logging are currently planned for this location, groundwater grab samples may be conducted from the corehole and screened for the presence of VOCs prior to determining final screen placement.

All bedrock groundwater monitoring wells will be constructed with 2" diameter PVC screen and riser. The actual number and locations of detailed bedrock evaluations to be conducted, and depth of such evaluations and/or well screen settings will be dependent upon observations made and information obtained in the field. The locations and elevations of all permanent bedrock groundwater monitoring wells will subsequently be surveyed.

C. Comprehensive round of bedrock groundwater monitoring well sampling.

The third field event to be conducted as part of the currently proposed supplemental RI work will consist of a comprehensive round of groundwater sampling from all on-site bedrock groundwater monitoring wells and any associated nested overburden groundwater monitoring wells. Prior to conducting groundwater sampling activities, a complete round of water level measurements will be made from all Site-related groundwater monitoring wells and piezometers. This information will be used to help evaluate groundwater flow conditions at the time of sampling.

In order to obtain representative groundwater samples from the wells to be sampled as part of this event, it is proposed that similar groundwater sampling methodology be used as in previous such sampling events. Accordingly, groundwater sampling from the on-site bedrock wells will be accomplished in general accordance with American Society of Testing Materials (ASTM) Standard D6771-02 (Low-Flow Purging and Sampling for Wells and Devices Used for Ground-Water Quality Investigations). Initial purging will be accomplished with the use of a submersible bladder pump. The pump will typically be set in the center of the screened interval, unless a specific water-bearing fracture interval has been targeted during packer-testing activities. Water level drawdown will be monitored during all purging activities. In addition, purged water will pass through a low-flow cell and will be monitored for a variety of field parameters. Such field parameters will include: temperature, pH, specific conductance, dissolved oxygen (DO), oxidation reduction potential (ORP), and turbidity. All purge water will be containerized and subsequently treated on-site with the existing carbon treatment system. It is anticipated that subsequent to this monitoring event, groundwater sampling activities conducted in these wells will be accomplished with the use of passive diffusion bags (PDBs), pending approval by NYSDEC.

An attempt will be made to allow all the above field parameters to stabilize to within specific variance ranges for three consecutive readings prior to initiating groundwater sample collection. Such ranges include: <0.3' for water level drawdown; +/- 3% for temperature and specific conductivity; +/- 0.1 unit for pH; +/- 10% for DO; +/- 10 millivolts for ORP; and +/- 1 NTU for turbidity. Groundwater samples will be analyzed for the presence of VOCs by a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory in

accordance with USEPA SW-846 Method 8260B. QA/QC samples consisting of a field duplicate, a field blank, and a trip blank will be included with the sampling event. Analytical results will be validated and a Data Usability Summary Report (DUSR) will be prepared.

Schedule

It is currently anticipated that the initial subject supplemental RI field event will be initiated in June 2012. The second field event is being planned for July 2012, while the third field event should be planned for August/September 2012. The actual dates for these events will be somewhat dependent upon initial receipt of approval to proceed, information obtained during the various events (which may impact the scope of work for subsequent events), drilling contractor availability, and the actual time required to complete the initial two field events. It is currently anticipated that approximately two weeks will be required to complete each of the first two field events, while the third field event will be completed within a week.

As mentioned above, all supplemental RI activities proposed in this Work Plan addendum will be completed in a similar manner as previously conducted as part of the ongoing RI activities being completed at the Site, and will be consistent with the methodologies presented in prior Work Plans and/or addendums as previously approved by NYSDEC for this Site. Please feel free to contact me at (908) 625-3192 if you have any questions or comments concerning this matter, or if you require any additional information.

Sincerely,
S2C2 Inc.

Steven B. Gelb

Steven B. Gelb
Project Manager

CC: Jim Goff

MWBR-09 A
MW-02
MW-03
MW-14
MW-04
Building 14
MW-05
Building 5
MW-06
Building 6
MWBR-08 A
Humboldt Street
Building 8
Building 7
Building 1
Building 2
Building 3
Building 4
MWBR-01 A
Building 10A
Building 10
Building 9
MW-09
MW-10
Carlson Road
MWBR-02 A
Blossom Rd.
BR-6IV
BR-6II
BR-6I
BR-6III
BR-6V
MWBR-05
OB, A & B
MWBR-04 A
MWBR-03
OB & A
MWBR-07 A
MWBR-06 A
Hampden Road
0 55 110 220 330 440 Feet

Legend

Proposed Locations - Spring 2012

- Bedrock Eval. Location w/ Overburden and Bedrock Well
- Bedrock Evaluation Location
- Temp. Shallow Bedrock Eval. Location
- Contingency Temp. Shallow Bedrock Eval. Location
- Shallow Bedrock Monitoring Well
- Overburden Monitoring Well

Existing Locations

- Bedrock Monitoring Well - A
- Bedrock Monitoring Well - B
- Monitoring Well - OB
- Temp. Shallow Bedrock DNAPL Eval. Location
- Roads
- Railroad
- Sidewalks
- Buildings
- Property Boundary

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CARLSON PARK FACILITY
CARLSON ROAD
ROCHESTER, NEW YORK

TITLE: PROPOSED OVERBURDEN AND SHALLOW BEDROCK EVALUATION LOCATIONS - SPRING 2012

FIGURE 1

SCALE 1:1,800