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Work Plan

Supplemental Remedial Investigation Pass & Seymour 50 Boyd Avenue Solvay, New York

August 2007

S&W Redevelopment
of North America, LLC

WORK PLAN
SUPPLEMENTAL REMEDIAL INVESTIGATION
P&S BOYD AVENUE SITE
BCP SITE # C734102

1.0 - INTRODUCTION

This Work Plan presents the approach to conduct a Supplemental Remedial Investigation (SRI) at the Pass & Seymour, Inc. (P&S) Boyd Avenue Brownfield Site (Site #C734102). In accordance with a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC), P&S completed a Remedial Investigation (RI) at the site, which it owns at 35 and 50 Boyd Avenue in the village of Solvay, New York. The results of the RI were presented in the *Brownfield Remedial Investigation Report* (RI Report) [S&W Redevelopment of North America (SWRNA), October 2006].

Based on the findings presented in the RI Report, it was determined that an SRI would be needed to further delineate the nature and extent of groundwater contamination at the site. Specifically, the SRI will characterize bedrock groundwater quality in areas where contamination exists in overburden groundwater, and will further characterize the downgradient extent of groundwater contamination.

The work completed for the SRI will follow applicable provisions set forth under the NYSDEC-approved *Brownfield Remedial Investigation Work Plan* (SWRNA, 2005), which will remain in force, including the following:

- Site Health and Safety Plan
- Community Air Monitoring Plan
- Quality Assurance Project Plan

2.0 - SCOPE OF WORK

2.1 - MONITORING WELL INSTALLATION

Additional groundwater monitoring wells will be installed at the site, as indicated on Figure 1. It is initially proposed that four (4) bedrock wells and one (1) overburden well be installed, but it is recognized that additional wells may be determined necessary based on SRI field observations and analytical findings.

2.1.1 - Overburden Monitoring Well. An overburden monitoring well will be installed downgradient of existing monitoring wells MW05-01, -02, -05, -06, and -13 (see Figure 1), north of the site boundary. This well will be installed using 4 ¼ inch inside diameter hollow stem augers, and soil samples will be collected continuously during drilling using 2-inch inside diameter split spoon samplers. A hydrogeologist will record soil characteristics in a soil boring log, including descriptions of soil color, moisture content, grain size, and photoionization detector (PID) readings.

The objective will be to advance the overburden monitoring well boring five to seven feet into the water table, and install 10 feet of well screen straddling the water table. The total depth of the well will therefore be determined by the depth to groundwater. The length of the well screen may be shorter than 10 feet depending on the depth to bedrock and the saturated thickness above bedrock. In general, if bedrock is less than 10 feet deep and the saturated thickness above bedrock is estimated to be less than 4 feet, the well screen will be 5 feet long.

The overburden well will be constructed of 2-inch diameter PVC with 0.01 inch slot screen. The well will be completed with a sand filter pack, bentonite seal, and a bolt-down protective cover cemented in place at ground surface. Following well completion, the well will be developed by bailing to reduce suspended sediments (i.e. turbidity).

2.1.2 - Bedrock Monitoring Wells. Four bedrock monitoring wells, including one upgradient well, will be initially installed. If NYSDEC and P&S agree that additional bedrock wells are needed based on observations from the first four wells, then up to three additional bedrock monitoring wells may be installed as part of this SRI Work Plan. The four proposed bedrock wells and the additional wells, if any are determined necessary, would be installed as a single field mobilization.

One bedrock monitoring well will be installed at the northern (downgradient) portion of the former western disposal area, adjacent to existing overburden monitoring well MW05-21 where organic contaminants were detected above groundwater quality standards. Another bedrock monitoring well will be installed adjacent to existing overburden well MW05-28, at the northern edge of the eastern parking lot, where organic contaminants were also detected above groundwater quality standards. One bedrock monitoring well will be installed downgradient of the site, north of existing monitoring wells MW05-01, -02, -05, -06, and -13. This bedrock well will be adjacent to the previously proposed overburden groundwater monitoring well (see Section 2.1.1), to form an overburden/bedrock well couplet. An upgradient bedrock well will be installed in the southern portion of the site.

The bedrock wells will be installed by spinning 4 inch inside diameter iron casing through the overburden, to a depth of approximately ten (10) feet into the upper weathered bedrock zone, at which point the boring will be terminated. A two inch diameter PVC monitoring well will be installed in the completed boring as the casing is removed. Each bedrock well will have five (5) feet of 0.01 inch slot screen. The well construction will include a sand filter pack extending from the bottom of the boring to two feet above the well screen, such that the top of the sand pack is three feet below the top of bedrock. A three foot bentonite seal will be placed on the top of the sand pack, such that the top of the bentonite will correspond to the top of the bedrock. The remaining space will be backfilled with a Portland cement grout.

A SWRNA hydrogeologist will examine the core runs that are retrieved from the bedrock borings for evidence of fracturing. Descriptions of rock type and fracturing will be recorded in subsurface boring logs, including rock quality designations (RQDs).

Following completion, the bedrock wells will be developed to reduce suspended sediments (i.e. turbidity) by the same bailing process described above for the overburden well.

Additional wells, if any are determined to be necessary, will have the same installation and construction requirements as described above.

2.2 - GROUNDWATER SAMPLING

One round of groundwater samples will be collected from the new monitoring wells installed as part of this SRI, plus the following existing RI monitoring wells: MW05-01, -02-, -05, -06, -13, -21, and -28.

The sampling event will include a field duplicate sample, and a matrix spike/matrix spike duplicate (MS/MSD). All of the groundwater samples and duplicate samples will be analyzed for VOCs by USEPA method 8260.

The SRI groundwater samples will be collected a minimum of one week after installation and well development. Prior to sample collection, the depth to water will be recorded in the newly installed monitoring wells, plus all of the existing monitoring wells that were sampled during the initial RI, so that shallow and bedrock groundwater contour maps may be prepared for the sampling event.

Groundwater samples will be collected in accordance with the procedures set forth in the approved RI Work Plan QAPP (SWRNA, 2005).

2.3 - DATA USABILITY SUMMARY REPORT (DUSR)

A DUSR will be completed by an independent third party, as specified in DER-10, to evaluate the quality control measures that were implemented during the field and laboratory analytical programs, with the objective of determining whether the reported analytical data are representative and usable for decision making. The DUSR will evaluate whether the data are technically defensible (i.e. were all analytical requirements met and documented).

The items that will be reviewed as part of the DUSR will include the following:

- Completeness (number of samples collected and analyzed compared to plans)
- Chain of custody complete and accurate
- Holding times
- Instrument calibration
- Relative percent difference between field duplicates

- Reasonableness of data (e.g. relationships between total and soluble analytes)
- Blank contamination

2.4 - SURVEY

The newly installed SRI monitoring wells will be surveyed and added to the site sample location map. The ground elevation and the top of PVC elevation for each new well will be measured relative to the same benchmark as the previous RI monitoring wells.

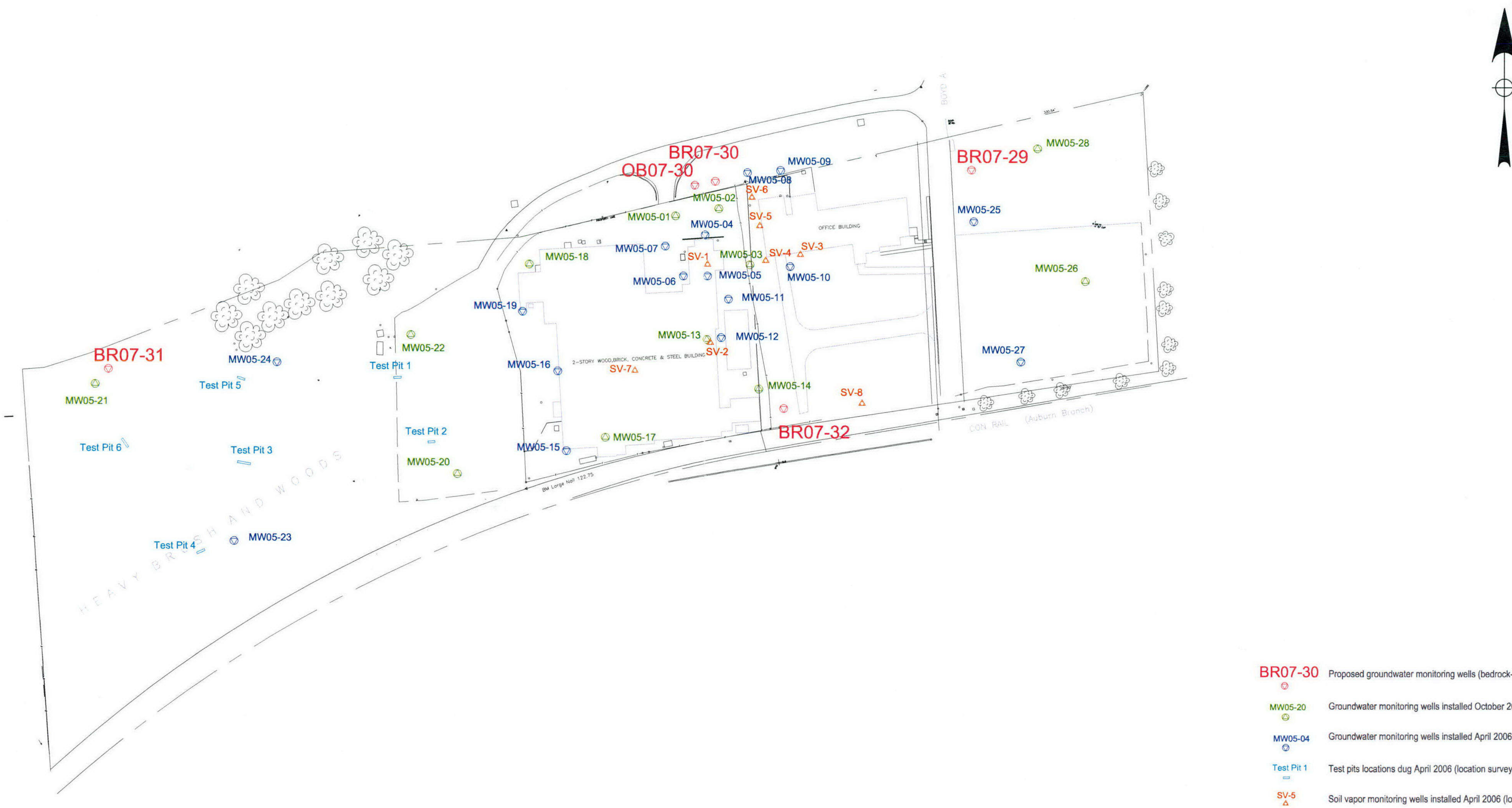
2.5 - REVISED RI REPORT

The findings of the SRI will be integrated with the previous RI data and presented in a revised RI Report. The revised RI Report will expand the discussion of the nature and extent of groundwater contamination to account for SRI findings relative to bedrock groundwater and the detected contamination, if any, downgradient (north) of the site. Conclusions and recommendations will be made, as appropriate, relative to the combined RI and SRI findings.

The revised RI Report will also address NYSDEC comments pertaining to the previous RI Report (SWRNA, October 2006), as presented in NYSDEC's June 7, 2007 comment letter, and based on subsequent correspondence and conversations including SWRNA's July 12, 2007 response letter and a July 24, 2007 meeting between NYSDEC, NYSDOH, SWRNA, and P&S.

3.0 - SCHEDULE

SRI field work will be scheduled to begin within 14 days of NYSDEC's acceptance of the scope of work presented in this SRI Work Plan. It is anticipated that the well installation, development, and sampling will require two weeks to complete. Laboratory analysis will require three weeks, and the DUSR will be completed within two weeks of receipt of the final laboratory reports. It is estimated that the revised RI Report will be provided to NYSDEC within 60 days of acceptance of this SRI Work Plan.



BR07-30	Proposed groundwater monitoring wells (bedrock-BR07, overburden-OB07)
MW05-20	Groundwater monitoring wells installed October 2005 (locations surveyed)
MW05-04	Groundwater monitoring wells installed April 2006 (locations surveyed)
Test Pit 1	Test pits locations dug April 2006 (location surveyed)
SV-5	Soil vapor monitoring wells installed April 2006 (locations surveyed)

NOTE: Up to three (3) additional bedrock well may be installed in this SRI phase, as agreed to by Pass & Seymour and NYSDEC.

SCALE in FEET

45 15 0 45 90 225

SURVEY NOTE:
THE BOUNDARY AND TOPOGRAPHIC MAPPING OF THIS SURVEY WAS PERFORMED BY DAVID W. HANNIG, L.S. 47411, LAST REVISED BY HANNIG ON JUNE 22, 1994

DATUM CORRECTIONS AND MONITORING WELL LOCATIONS BY BRYANT ASSOCIATES, P.C. ARE AS SURVEYED ON NOVEMBER 8, 2005.

S&W Redevelopment
of North America, LLC.
Syracuse, New York

DATE:7/2007 Project No.: N5005

Brownfield Supplemental RI
Pass & Seymour, Inc./Boyd Avenue
50 Boyd Avenue, Solvay, New York

Figure 1
Proposed Supplemental RI Well Locations