PROPOSED DECISION DOCUMENT

500 South Union St. Site
Brownfield Cleanup Program
Spencerport, Monroe County
Site No. C828153
February 2013

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Decision Document (PDD). The disposal or release of contaminants at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all Proposed Decision Documents. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

Ogden Farmers' Library
Attn: Jen Magee
269 Ogden Center Road
Spencerport, NY 14559
Phone: 585-617-6181

A public comment period has been set from:
2/11/2013 to 3/27/2013

Written comments may be sent through **3/27/2013** to:

Charlotte Theobald
NYS Department of Environmental Conservation
Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414
cbtheoba@gw.dec.state.ny.us

The proposed remedy may be modified based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:
The 500 South Union Street site is located in the Village of Spencerport, Monroe County at the intersection of Union Street and Route 31 (Nichols Street). The site is located in a mixed use commercial and residential area.

Site Features:
The main site feature is a multi-tenant commercial building (approximately 12,750 square feet) that is occupied by a dry cleaner, a restaurant, a pizzeria, a salon, and a delicatessen. The exterior of the site is covered with concrete walks, an asphalt parking lot, and minimal vegetation. Parcels adjacent to the site consist of: condominiums/apartments to the north, business offices to the east, a gasoline station and convenience store to the west, and Route 31 (Nichols Street) to the south with a restaurant and vacant parcel.

Current Zoning/Use(s):
The site is currently an active commercial/retail site and is zoned for commercial use. The surrounding parcels are currently used for a combination of commercial, residential, and utility right of ways. The nearest residential area is directly to the north adjacent to the site.

Past Use(s):
The site was historically utilized as a button factory from the 1940s until the 1970's. In the early

1970s the site began use as a dry cleaner. The site is the currently the location of a dry cleaner, a restaurant, a pizzeria, a salon, and a delicatessen. The dry cleaner stopped using tetrachloroethene in their dry cleaning process in 2000. Prior housekeeping practices at the site by the dry cleaner operators/owners appear to have lead to the site contamination.

A Phase I and II Environmental Site Assessment (ESA) was conducted in 1998 as part of a real estate transaction. A second Phase I and II ESA was conducted in April 2008 as part of another real estate transaction. In July 2008 additional subsurface investigation activities were completed to further assess the up gradient and down gradient groundwater quality at the site. The studies indicated that the soil and groundwater at the site were impacted with tetrachloroethene, trichloroethene, and the associated breakdown products above the State's standards and guidance values.

Site Geology and Hydrogeology:
The overburden at the site is characterized by two subsurface areas: miscellaneous silt, sand, and gravel at depths of 0-1.5 feet below ground surface and stratified native clayey silt/sandy lean clay soils at depths of 1.5-20 feet below ground surface.

The bedrock underlying the overburden deposits consists of Silurian dolostone and was encountered at depths between 20 to 31 feet below ground surface.

The depth to groundwater ranges from 2.7 to 12.7 feet below ground surface across the site. Groundwater was encountered within two zones - shallow and deep. Shallow groundwater flow direction is estimated towards the west/southwest and follows site topography. Deep groundwater flow is toward the north/northeast following the general northerly dip of the underlying bedrock. However, deep groundwater flow direction in summer months appears to flow southwest. Seasonal variations in groundwater infiltration and storage may be the cause for the deep groundwater flow variation.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) are/is being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the Remedial Investigation (RI) Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The

Volunteer(s) does/do not have an obligation to address off-site contamination. The Department has determined that this site poses a significant threat to human health and the environment and there are off-site impacts that require remedial activities; accordingly, enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

TETRACHLOROETHENE (PCE)
TRICHLOROETHENE (TCE)
VINYL CHLORIDE

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor intrusion

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination:
The primary contaminants of concern are chlorinated volatile organic compounds, semi-volatile organic compounds, and metals. These contaminants were detected in the soil, groundwater, and vapor samples collected at the site. The contamination with respect to the chlorinated volatile organic compounds is widespread across the site.

An investigation was completed to determine the source of the contamination. A boring was attempted within the dry cleaning facility near the location of the former dry cleaning machine. The boring was advanced through the concrete floor to the subsurface. No PID readings or odors were observed from the subsurface.

Surface Soil Samples:
Three surface soil samples were collected and analyzed for the full TCL VOCs and SVOCs plus TICs, TAL Metals plus Cyanide, Pesticides/Herbicides, and PCBs. Benzo(a)pyrene at 1.5 parts

per million (ppm) exceeded the commercial use soil cleanup objective (SCO) of 1 ppm in two of the surface soil samples collected. No other results exceeded unrestricted use SCOs.

Subsurface Soil Samples:
Sixteen subsurface soil samples were collected and analyzed for the same contaminants as surface soil. The analytical data indicates that three of the 16 subsurface soil samples collected exceeded the protection of groundwater SCO: tetrachloroethene (14.67 and 2.9 ppm), m,p-xylene (1.94 ppm), acetone (0.553 ppm), and ethylbenzene (1.44 ppm). The analytical results for SVOCs, metals plus cyanide, pesticides/herbicides, and PCBs indicate no exceedance of the unrestricted SCOs, the protection of groundwater SCO or the commercial use SCO.

Groundwater:
Groundwater samples were collected from piezometers and groundwater monitoring wells. A total of 39 groundwater samples were collected for laboratory analysis. The groundwater samples were analyzed for the same contaminants as the soil samples. VOCs, SVOCs, metals, and pesticides exceeded the groundwater standards or guidance values.

Sixteen (16) piezometers/monitoring wells at the site had VOCs that exceeded the groundwater standards and guidance values (typically 5 ug/L). The highest exceedances of VOCs included acetone (53 ug/L), cis-1,2-dichloroethene (2,000 ug/L), tetrachloroethene (4,000 ug/L), trichloroethene (180 ug/L), and vinyl chloride (38 ug/L).

One monitoring well at the site had SVOCs that exceeded the groundwater standards and guidance values (typically 0.002 ug/L). The SVOC compounds with the highest exceedance included benzo(a)anthracene (0.56 ug/L), benzo(b)fluoranthene (1.6 ug/L), chrysene (6.7 ug/L), di-n-butyl phthalate (1.1 ug/L), and indeno(1,2,3-cd)pyrene (1.1 ug/L).

Two (2) monitoring wells at the site had metals that exceeded the groundwater standards and guidance values (typically 5 ug/L). The metals with the highest exceedance included cadmium (16 ug/L) and cobalt (6 ug/L).

Three (3) monitoring wells at the site had pesticides that exceeded the groundwater standards and guidance values (typically 0.01 ug/L). The pesticide compound with the highest exceedance included alpha-BHC (0.015 ug/L).

Soil Vapor:
A perimeter soil gas survey was completed at the site. Eight (8) soil gas samples and one (1) ambient air sample were collected and analyzed for VOCs (Method TO-15). VOC concentrations ranged from non-detect at several locations to 980 ug/m3 of n-butane at SV-7. Tetrachloroethene was detected between 56 and 180 ug/m3 at soil vapor locations SV-1, SV-2, and SV-3. Among the daughter products, trichloroethene, cis-1,2-dichloroethene, and vinyl chloride were detected at soil vapor location SV-3 and cis-1,2-dichloroethene was also detected at location SV-6. While there are no standards, criteria, or guidance values for soil vapor, these results indicate the potential for soil vapor intrusion to occur on-site and for contaminants to migrate off-site in the soil vapor.

Significant Threat Determination:
NYSDEC, in conjunction with NYSDOH, has determined that the site does pose a significant threat to public health and the environment.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

People are not expected to come into direct contact with site-related contaminants in the soil because buildings and pavement cover most of the site. People may come into direct contact with site-related contaminants if they dig below the surface on-site. People are not drinking contaminated groundwater associated with the site because the area is served by a public water supply that obtains its water from a different source not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential for soil vapor soil vapor intrusion to occur on and near the site will be evaluated and any actions to address exposure will be taken as necessary.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE PROPOSED REMEDY

The alternatives developed for the site and evaluation of the remedial criteria are presented in the alternative analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The remedy proposed is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The proposed remedy is referred to as the In-situ Reductive Dechlorination remedy.

The elements of the proposed remedy, as shown in Figure 2, are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:
• Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
• Reducing direct and indirect greenhouse gas and other emissions;
• Increasing energy efficiency and minimizing use of non-renewable energy;
• Conserving and efficiently managing resources and materials;
• Reducing waste, increasing recycling, and increasing reuse of materials which would otherwise be considered a waste;
• Maximizing habitat value and creating habitat when possible;
• Fostering green and healthy communities and working landscapes that balance ecological, economic, and social goals; and
• Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Direct injections of biological amendments will be conducted across the site in the chlorinated volatile organic compound impacted areas. The biological amendments are anticipated to be injected to a depth of approximately 30 feet below grade. The injection method and depth will be modified as needed based on the site conditions and the remedial design program discussed in item 1 above.

3. The on-site building, and if deemed necessary any future occupied buildings on-site, will be required to have a sub-slab depressurization system, or a similar engineered system, to prevent the migration of vapors into the building from soil and/or groundwater.

4. Excavation and off-site disposal of contaminant impacted areas in the surface soil that exceed 6 NYCRR Part 375 6.8(b) Restricted Use Soil Cleanup Objectives for commercial use. Clean fill meeting the requirements of DER-10, Appendix 5 will be brought in to replace the excavated surface soil and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element 5 below.

5. A site cover currently exists and will be maintained to allow for commercial use of the site. Any redevelopment will maintain a site cover, which may consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is required it will be a minimum of one foot of soil meeting the SCOS for the cover material as forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

6. Imposition of an institutional control in the form of an environmental easement for the controlled property that:
• requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
• allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
• restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or Monroe County Health Department;
• prohibits agriculture or vegetable gardens on the controlled property; and
• requires compliance with the Department approved Site Management Plan.

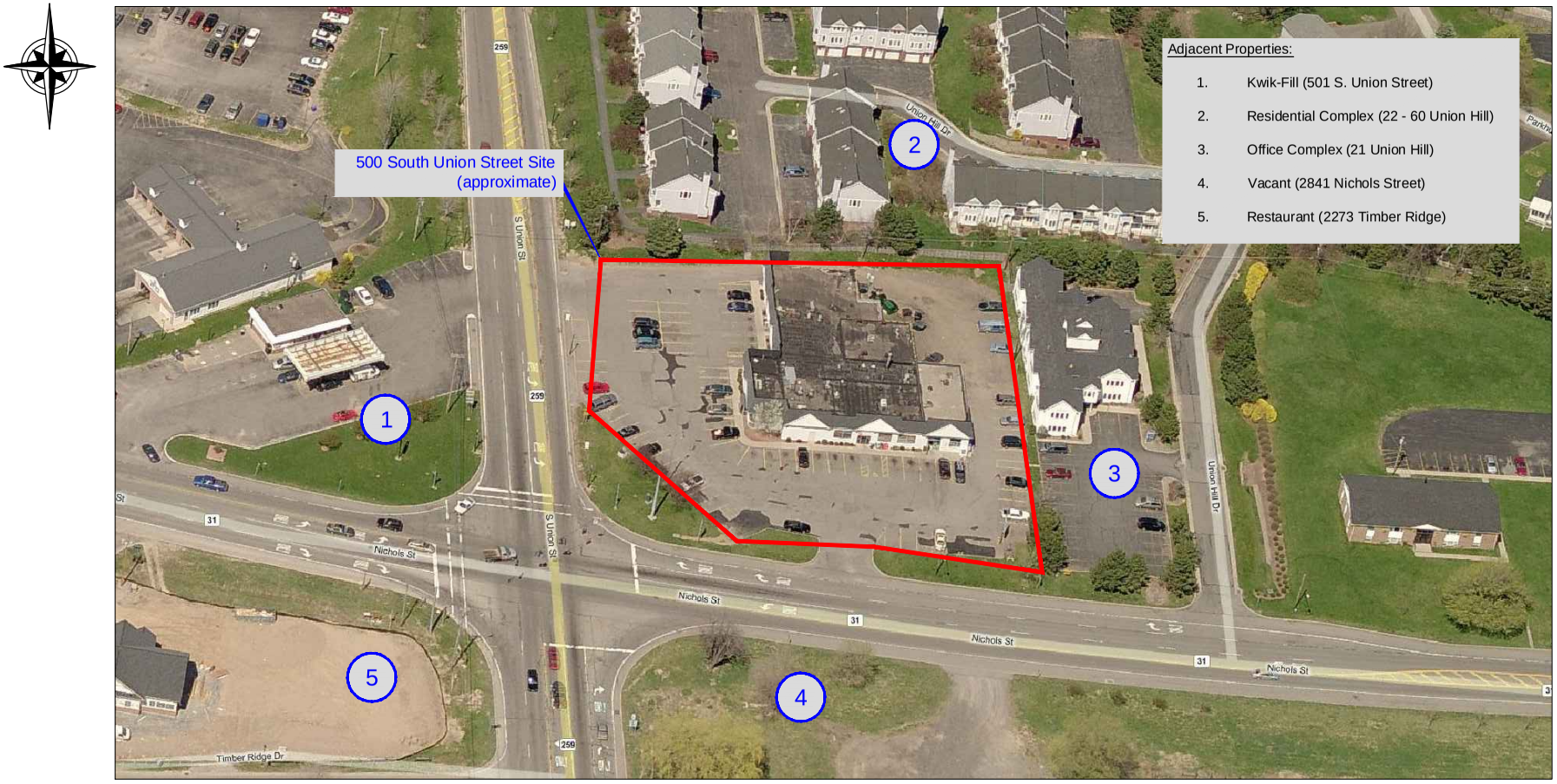
7. A Site Management Plan is required, which includes the following:
a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
• Institutional Controls: See item #6 above.
• Engineering Controls: See item #3 and #5 above.

This plan includes, but may not be limited to:
• an Excavation Plan, which details the provisions for management of future excavations;
• descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
• a provision for evaluation of the potential for soil vapor intrusion for any current or future buildings to be occupied or developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

• provisions for the management and inspection of the identified engineering controls;
• maintaining site access controls and Department notification; and
• the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
• monitoring of groundwater to assess the performance and effectiveness of the remedy;
• a schedule of monitoring and frequency of submittals to the Department;
• monitoring for vapor intrusion for any buildings occupied or developed on the site, as may be required by the Institutional and Engineering Control Plan discussed in item #7 above.

F:\CAD\TurnKey\Eyezon Associates\Remedial Investigation\Figure 2; Aerial Site Plan.dwg



TurnKey Environmental Restoration, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

PROJECT NO.: 0188-001-102

DATE: FEBRUARY 2012

DRAFTED BY: BCH

AERIAL SITE PLAN

RI-AA REPORT

500 SOUTH UNION STREET SITE
SPENCERPORT, NEW YORK
BCP SITE NO. C828153

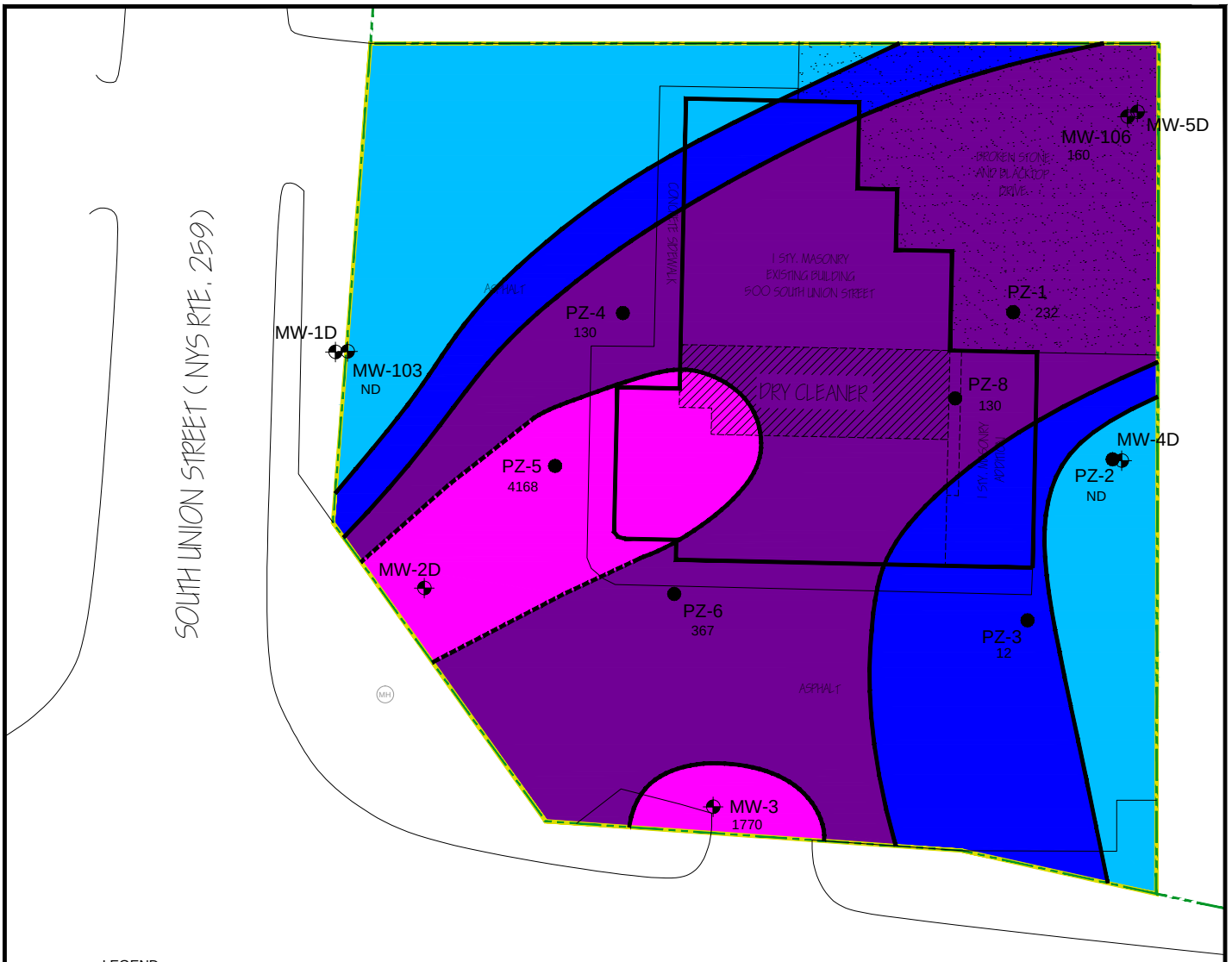
PREPARED FOR

EYEZON ASSOCIATES, INC.

FIGURE 1

F:\CAD\TurnKey\Eyezon Associates\Remedial Investigation\Figure 8; Shallow GW cVOC IsoconMap - May 2011.dwg

FIGURE 2



LEGEND:

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- PZ-4 ● PIEZOMETER
- MW-3 ⊕ SHALLOW OVERBURDEN MONITORING WELL
- MW-4D ⊕ DEEP OVERBURDEN MONITORING WELL
- 367 TOTAL cVOC CONCENTRATION (MAY 2011)
- T. cVOC CONCENTRATION 1,000 to 5,000 ppb
- T. cVOC CONCENTRATION 100 to 1,000 ppb
- T. cVOC CONCENTRATION 10 to 100 ppb
- T. cVOC CONCENTRATION ND to 10 ppb
- AREA WHERE SHALLOW/DEEP GROUNDWATER MERGE

N

50' 0' 50' 100'

SCALE: 1 INCH = 50 FEET
SCALE IN FEET
(approximate)

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PROJECT NO.: 0188-001-102

DATE: MARCH 2012

DRAFTED BY: BCH

SHALLOW GROUNDWATER - T. cVOC ISOCONCENTRATION MAP - MAY 2011

RI/AA REPORT

500 SOUTH UNION STREET SITE
SPENCERPORT, NEW YORK

PREPARED FOR
EYEZON ASSOCIATES, INC.