PROPOSED REMEDIAL ACTION PLAN

Pappas Dry Cleaning
Operable Unit Number 02: Off-Site Groundwater
State Superfund Project
Dansville, Livingston County
Site No. 826018
February 2013

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

PROPOSED REMEDIAL ACTION PLAN

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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 hazardous wastes at the site resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or feasibility study (FS). The IRMs undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the RI indicate that the site no longer poses a threat to human health or the environment. The IRM(s) conducted at the site attained the remediation objectives identified for this site, which are presented in Section 6.5, for the protection of public health and the environment. No Further Action is the remedy proposed by this Proposed Remedial Action Plan (PRAP). A No Further Action remedy may include site management, which will include continued operation of any remedial system installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the proposed remedy for the site. This PRAP identifies the IRM(s) conducted and discusses the basis for No Further Action.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

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 PRAPs. 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:

Dansville Public Library
200 Main Street
Dansville, NY 14437
Phone: (585) 335-6720

A public comment period has been set from:

2/28/2013 to 3/28/2013

A public meeting is scheduled for the following date:

3/20/2013 at 6:00 PM

Public meeting location:

Dansville Public Library, 200 Main Street, Dansville, NY

At the meeting, the findings of the remedial investigation (RI) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 3/28/2013 to:

Matt Dunham
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
mddunham@gw.dec.state.ny.us

The Department may modify the proposed remedy presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

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 site is located at 44, 46 Ossian Street in the Village of Dansville, Livingston County, New York.

Site Features: The site is situated on a .44 acre lot in a primarily residential area with some commercial uses along Ossian Street. The property currently is a vacant lot, the building was demolished to implement the on-site remedy. A commercial property located northwest of the Pappas' property is the location of the New York State Electric and Gas (NYSEG) – Dansville Former Manufactured Gas Plant (MGP) Site, Site No. 826012. The MGP Site is currently being addressed under a consent order with the Department as a separate and downgradient source of soil and groundwater contamination.

Current Zoning/Use(s): The site is currently inactive and is zoned for commercial use.

Past Use of the Site: This site operated as a dry cleaning business which serviced various commercial and residential customers from 1952 until 2002 when operations ceased. PCE was disposed of at the rear of the original site building.

Site Geology and Hydrogeology: Site geology consists of a mixture of sandy-silt, gravel, cobbles, rock fragments and other debris to thirteen feet below ground surface. At eleven to thirteen feet a confining clay unit is encountered beneath the site. This clay unit limits the potential for downward migration of the contamination from the soil and groundwater. Shallow groundwater is present between nine and thirteen feet below the ground surface. Groundwater flow is to the northwest towards the MGP site.

Operable Units: The site was divided into two operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. Operable Unit 1 (OU1) is the location of the former dry cleaner and addressed on-site soil and groundwater. Operable Unit 2 (OU2) addresses the off-site groundwater plume.

Operable Unit (OU) Number 02 is the subject of this document.

A Record of Decision was issued previously for OU 01.

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 residential use (which allows for restricted-residential use, commercial use and industrial use) as described in Part 375-1.8(g) is/are 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 included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

Pappas Bros., Inc.

Pappas Bros. Inc. is no longer a viable PRP and work is therefore being conducted under the State Superfund Program.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected during OU2 includes data for:

- groundwater

- indoor air
- sub-slab 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. The tables found in Exhibit A list the applicable SCGs in the footnotes. 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 hazardous waste 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 in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified for this Operable Unit at this site is/are:

TETRACHLOROETHYLENE (PCE)

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media were addressed by the IRM(s) described in Section 6.2. More complete information can be found in the RI/FS Report.

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 Record of Decision.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

IRM - Sub Slab Depressurization System (SSD) Installation

The Department performed Soil Vapor Intrusion (SVI) sampling in the off-site, neighborhood within the groundwater contamination plume starting at Morse Street and extending to the northwest. Nineteen property owners agreed to have their homes sampled of the 35 to which sampling was offered. Based on the sampling results, no further action was recommended for

eleven residential structures, continued monitoring was recommended for one residential structure and sub-slab depressurization (SSD) systems were installed at seven residential structures.

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.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 02.

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 site is located in a residential/commercial area in the Village of Dansville. There are no fish or wildlife receptors present. Tetrachloroethylene (PCE) and its daughter products from the former dry cleaners have impacted the groundwater in the unconsolidated geologic unit downgradient of the site.

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 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. Soil vapor intrusion sampling has identified areas of concern and actions have been taken to address exposures.

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.

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: SUMMARY OF PROPOSED REMEDY

Based on the results of the investigations at the site, the IRMs that have been performed, and the evaluation presented here, the Department is proposing No Further Action with continued operation of the subslab depressurization systems in the residential properties and monitoring of groundwater to assess the performance and effectiveness of the remedy. The Department and the NYSDOH have determined that this remedy is protective of human health and the environment.

Table 2 shows how each of the Remedial Objectives has been addressed.

The elements of the IRM already completed and the engineering controls are listed below:

1. The Site Management Plan for OU1 will be amended to include the continued operation, maintenance and monitoring of the subslab depressurization systems (SSDs) and groundwater monitoring.

To accomplish this, the:
a. institutional/engineering control plan for the site will include provisions for the management and inspection of the SSDSs; and include these systems in the site periodic reviews and certification of the engineering controls
b. the Monitoring Plan will include:

i. monitoring of groundwater in the OU2 area to assess the performance and effectiveness of the remedy;
ii. schedule of monitoring and frequency of submittals to the Department; and
iii. provision to evaluate the potential for vapor intrusion within the impacted area as shown on Figure 2, including provision for implementing actions recommended to address exposures.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1.2, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site.

Groundwater

Samples were collected from overburden groundwater which was encountered approximately 9 to 13 feet below grade surface (bgs) during the RI. The samples were collected to assess the off-site groundwater conditions downgradient of the former dry cleaner. The groundwater samples were submitted for analytical analysis for VOCs.

The groundwater sampling results indicate that the primary contaminants are VOCs in the overburden groundwater associated with the historic use of PCE at the former dry cleaner. The groundwater VOC plume has been delineated to originate on the northwest side of the site property and continues downgradient to the north toward the Dansville Municipal Airport. Figure 4 illustrates the contaminated groundwater plume delineations compiled from data collected during the RI.

The most frequent SCG exceedences were tetrachloroethene (PCE) and its associated daughter products including cis-1,2-dichloroethene (cis-1,2-DCE), trichloroethene (TCE) and vinyl chloride (VC). The highest concentrations of contamination were found on the northwest side of the property behind the former on-site building and extending across the MGP property. Little contamination extends beyond this area. As a result of the source area removal at the Pappas site and the planned removal at the MGP site. The entire area of source contamination will be excavated and removed. This encompasses the area shown in Figure 4. Beyond this area only a dilute plume of contamination remains present. No further action is necessary beyond the IRMs to address the dilute plume and any exposures resulting from this plume.

Table #1 – Groundwater - Post Remedial Action OU-1

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
cis-1,2-Dichloroethene	ND – 7.0	5	2/25
Tetrachloroethene	ND – 220	5	9/25
Trichloroethene	ND – 31	5	3/25
Vinyl Chloride	ND – 8.1	2	1/25

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.
b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

The source of the groundwater contamination identified during the RI was addressed by the OU1 remedy. The impacts from soil vapor attributable to groundwater were addressed by the IRM described in Section 6.2.

Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of site related groundwater contamination was investigated by the sampling of sub-slab soil vapor under structures, indoor air inside structures and ambient outside air. At this site due to the presence of 34 buildings in the impacted area, a full suite of samples were collected to evaluate whether actions were needed to address exposure via soil vapor intrusion.

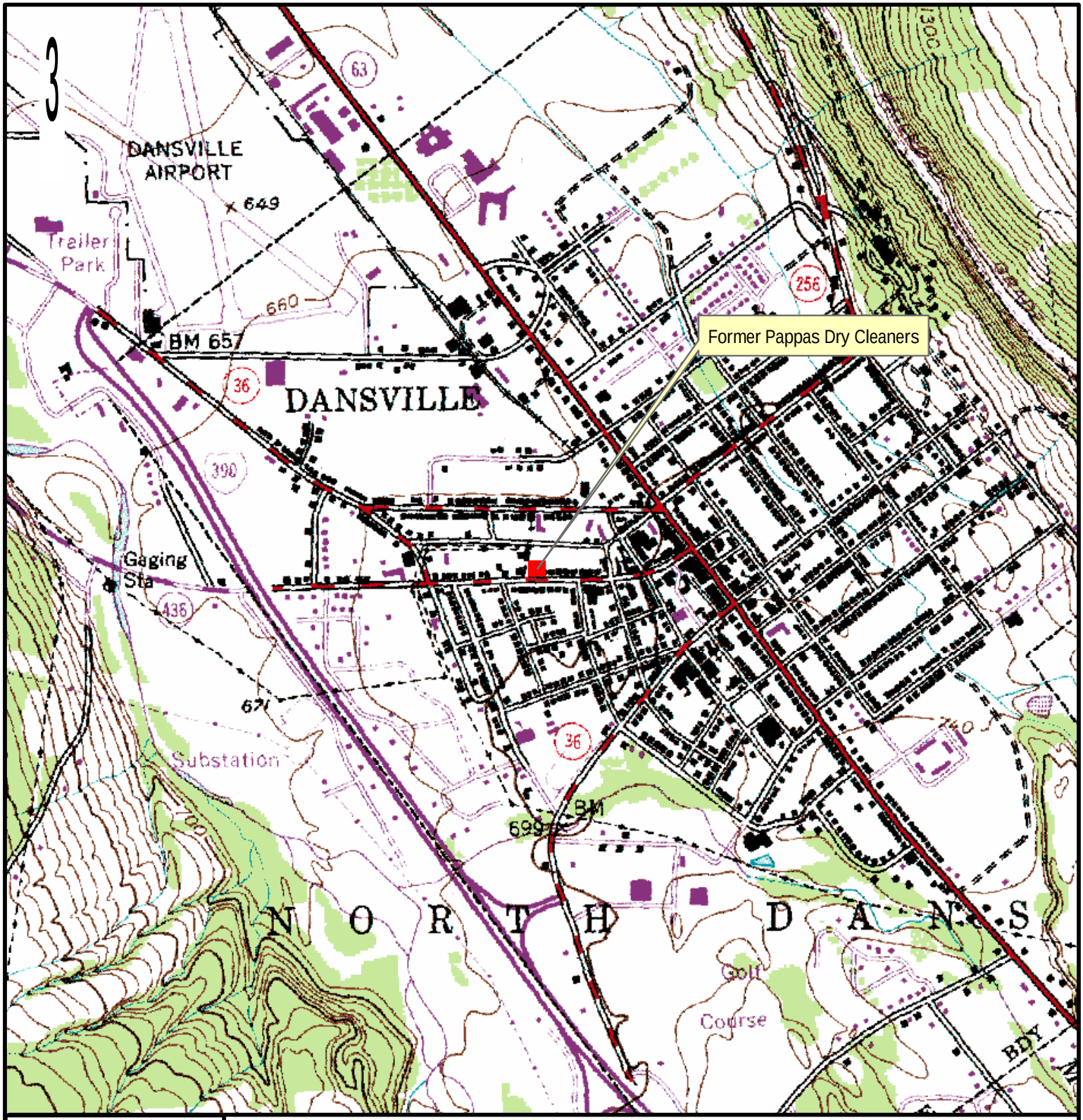
The soil vapor intrusion sampling was conducted during the 2009 and 2010 heating seasons and included the sampling of 19 structures for which access was granted to sample. For each structure sampled, sub-slab soil vapor and indoor air samples were collected in order to assess the potential for exposure via soil vapor intrusion. Outdoor air samples were collected concurrently with the sub-slab soil vapor and indoor air samples in order to evaluate outdoor air (background) quality in the vicinity of the study area. The results of the soil vapor intrusion sampling primarily indicated the presence of PCE and TCE.

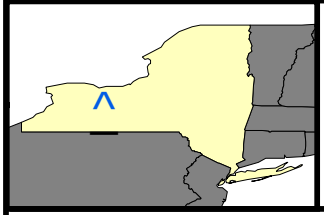
Sample results were evaluated in accordance with the NYSDOH Soil Vapor Intrusion Guidance in order to determine whether actions were needed to address exposure via soil vapor intrusion. Based on the sampling results, actions, including installation of a sub-slab depressurization system at seven off-site buildings and continued monitoring at another off-site structure, was recommended. The nature and extent of the soil vapor contamination has been delineated based on the findings of the soil vapor intrusion investigations as well as the evaluation of the groundwater plume delineation.

Soil vapor contamination identified during the RI was addressed during the IRM described in Section 6.2.

TABLE 2
SUMMARY OF SELECTED REMEDIAL ACTIONS TO MEET REMEDIAL OBJECTIVES

Remedial Action Objectives (RAOs)	Selected Remedial Actions
Groundwater RAOs for Protection of Public Health	
Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards	Monitoring of groundwater to assess the performance and effectiveness of the remedy. Community is served by municipal water
Prevent contact with, or inhalation of volatiles, from contaminated groundwater	The installation of a sub-slab depressurization (SSD) system at seven off-site structures.
Soil Vapor RAOs for Protection of Public Health	
Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site	The installation of a sub-slab depressurization (SSD) system at seven off-site structures and continued monitoring for one residential structure.





Legend

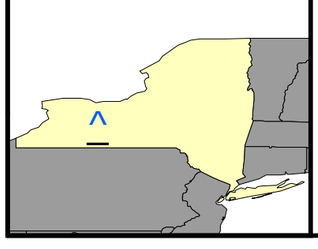
Former Pappas Drycleaners

0 0.05 0.1 0.2 0.3 0.4 Miles

FORMER PAPPAS CLEANERS SITE (8-26-018)
REMEDIAL INVESTIGATION REPORT
DANSVILLE, NEW YORK

FIGURE 1
USGS Topographic Map

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	CJS	DCC	RSC	AS SHOWN	MAY 2008	14368.08	...GIS/PROJECTS/ FIGURE6-1.MXD



Legend

- Approximate Site Boundary
- Approximate Site Boundary - NYSEG
- Major Roadway
- Arterial Roadway

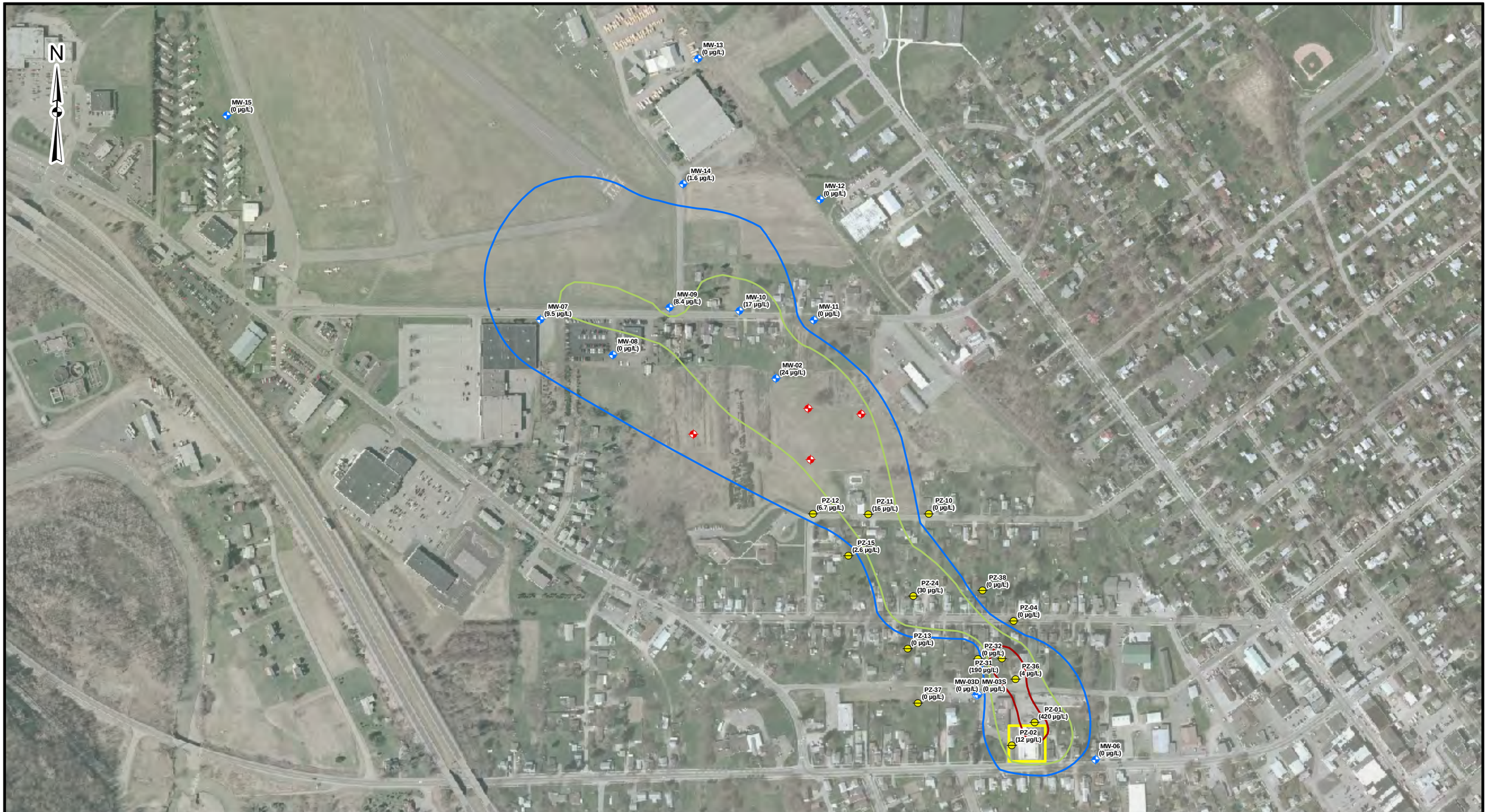
Source: NYS GIS Clearing House

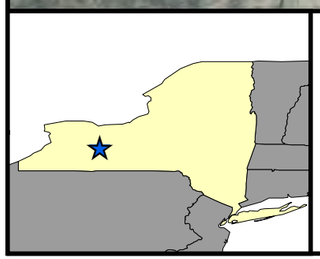
FORMER PAPPAS DRY CLEANERS (8-26-018)
REMEDIAL INVESTIGATION
DANSVILLE, NEW YORK

FIGURE 1A
Site Map 2
January 2008

Feet
0 30 60 120 180 240

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	CJS	RSC	RSC	AS SHOWN	JANUARY 2008	14368.08	GIS/PROJECTS/ FIGURE3.MXD





Legend

- Monitoring Well
- Abandoned Monitoring Well
- Piezometer
- Site Boundary

PCE Concentration

Label Note:
Monitoring Well ID
(Detected PCE Concentration - ug/L)

- 5 µg/L
- 10 µg/L
- 100 µg/L

Source: NYS GIS Clearing House

Feet

0 250 500 1,000 1,500 2,000

FORMER PAPPAS DRY CLEANERS (826018)
REMEDIAL INVESTIGATION REPORT
OPERABLE UNIT - 2 (GROUNDWATER)
DANSVILLE, NEW YORK

FIGURE 2
Interpreted PCE Isopleths
Based on February 2010
Groundwater Results

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
RSC	RSC	JCP	RSC	AS SHOWN	JUNE 2010	14368.08	GIS/PROJECTS/ FIGUREX.MXD

EA

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