Work Plan
Quality Assurance Project Plan
Florida Department of Environmental Protection

Bureau of Waste Cleanup, Program and Technical Support Section
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

FDEP Category 2 QAPP

SECTION A: Project Planning Elements		
A1. Title and Approval Page (*Project Name*):	**TOUCH OF CLASS DRYCLEANERS – LAKE WORTH** **Site Inspection Work Plan**	
Project Location:	6434 Lake Worth Road, Greenacres, Palm Beach County, FL 33463-3008 AKA: Touch of Class Dry Cleaners, Lake Worth, FL 33463 FKA: Savoir Faire Dry Cleaners of LW	
Project Requestor and Organization:	Barbara Alfano, Project Manager U.S. EPA/Region 4/Superfund Division 61 Forsyth Street SW, Atlanta, Georgia 30303	
EPA ID Number / Florida Comet ID	FLD981030729 / COM_49425	
Project Leaders *Jointly Conducted by* FDEP & AMEC E&I Name, Position, and Organization:	Brian M. Moore, Environmental Specialist III/FDEP/Bureau of Waste Cleanup/ Program & Technical Support Section/CERCLA Site Screening Group 2600 Blair Stone Road, Tallahassee, Florida 32399 Ron White, PG, AMEC E & I 2533 Greer Road, Suite 6 Tallahassee, Florida 32308	
FDEP Project Manager's Signature:	Jim McCarthy For Brian Moore Digitally signed by Jim McCarthy DN: cn=Jim McCarthy, o, ou=FDEP, email=Jim.McCarthy@dep.state.fl.us, c=US Date: 2012.04.27 11:39:13 -04'00'	Date:
Technical Reviewer's Name and Position: DAO? ☒ Yes ☐ No	Barbara Alfano, Project Manager U.S. EPA/Region 4/Superfund Division 61 Forsyth Street SW, Atlanta, Georgia 30303	
EPA DAO's Signature:	Barbara Alfano Digitally signed by Barbara Alfano DN: cn=Barbara Alfano, o=US EPA R4, ou=SRSEB, email=alfano.barbara@epa.gov, c=US Date: 2012.04.30 09:02:35 -04'00'	Date:
FDEP Section Manager:	Ferda Yilmaz, FDEP/Bureau of Waste Cleanup/ Program & Technical Support Section/CERCLA Site Screening Group	
FDEP Section Manager's Signature:	Yilmaz_f Digitally signed by Yilmaz_f Date: 2012.04.30 07:54:49 -04'00'	Date:
A2. Table of Contents	Not Applicable	
A3. Distribution List **A4. Project Personnel**	File	

SECTION A: Project Planning Elements (continued)		
Name	**Organization**	**Responsibilities**
Barbara Alfano	USEPA/Region 4/Superfund Division Office: 404-562-8923 Cell: 404-217-0286	Project Manager
Brian M. Moore	FDEP/BWC/PTSS/CERCLA SSG Cell: 850-591-2319	FDEP Site Project Manager
Ferda Yilmaz	FDEP/BWC/PTSS/CERCLA SSG Office: 850-245-8989 Cell: 850-766-0871	Project Manager
Brian Dougherty	FDEP/BWC/PTSS/CERCLA SSG 850-245-7503	Administrator
Jim McCarthy, P.G.	FDEP/BWC/PTSS/CERCLA SSG 850-245-8984	Professional Geologist
Ron White, P.G	AMEC E&I Office: 850-289-7715 Cell: 850-443-2341	FDEP Contractor
Paul Wierzbicki, P.G.	FDEP Southeast District 561-681-6677	District Liaison
Nardina Turner	USEPA - Office: 404-562-8650	Lab Coordination
Debbie Colquitt	USEPA Lab – Office: 706-355-8804	Lab
Margaret Jarosz	USEPA Lab – Office: 703-818-4351	Lab
Comments: This Project is being jointly conducted by FDEP/PTSS and AMEC E&I.		
Organizational Chart is Included in the *Superfund Site Assessment Program QAPP*, November 2009		
A5. Problem Definition/ Background:	The site was selected by the FDEP Program and Technical Support Section (PTSS) from a list, from the FDEP SE District, of ineligible drycleaners located in Palm Beach County. Touch of Class Drycleaners (TOC) is situated within Township 44 South, Range 42 East, Section 27, the site is a former store within the Lake Worth Plaza-West—a 160,335 square-foot, shopping center within a 20.13 acre rectangular parcel (PCN: 00424427000001280). The store's address was 6434 (now 6438) Lake Worth Road, in Greenacres (previously Lake Worth), Palm Beach County, Florida. The site is centered at 26°36'59.58"N (26.6166 N) latitude and 80°08'38.78"W (-80.1441 W) longitude (Figures 1 & 2). LW JOG SC LTD. is the current owner of the shopping center. In 1981, the Touch of Class Dry Cleaners reportedly began drycleaning operations at the subject (6434) address. On June 19, 1985, Dryclean Wizard, Inc, doing business as (d/b/a) Touch of Class Dry Cleaners, sent a Notification of Hazardous Waste Activity (NHWA) to the Environmental Protection Agency (EPA) for the subject address. On July 24, 1985, Dryclean Wizard, Inc. received an EPA ID Number (FLD981030729) for a RCRA Small Quantity Generator. Dryclean Wizard, Inc. operated the facility as Touch of Class Dry Cleaners until 1987.	

SECTION A: Project Planning Elements (continued)

On October 13, 1988, Savoir Faire Dry Cleaners of LW submitted an NHWA for the subject address to EPA. On October 24, 1988, EPA changed the name, corresponding with the existing EPA ID Number and subject location, from "Dryclean Wizard, Inc." to "Savoir Faire Dry Cleaners of LW", which apparently continued to operate at 6434 until 1989. In early 1990, 6434 and 6438 were joined and remodeled by the shopping center owner and leased to New York Style Pizza & Restaurant, which is currently operating at the site.

Limited information exists regarding the actual day to day operations at the Touch of Class Drycleaners site. Sampling, sponsored by the shopping center owner, on July 16, 1996, revealed a vinyl chloride (VC) concentration of 4 ug/l—exceeding the 1 ug/l Florida Department of Environmental Protection (FDEP) Chapter 62-777 Florida Administrative Code (F.A.C.) Ground Water Target Cleanup Level (GCTL) and the 2 ug/l EPA Maximum Contaminant Level (MCL)—in a ground water sample, collected from an existing shallow monitoring well (MW-1), located directly west of the facility back door. On September 19, 1996, the property owner applied for entry of the former Touch of Class Dry Cleaners into the FDEP Drycleaning Solvent Cleanup Program (DSCP). However, on March 9, 1998, the DSCP application was returned, because the analyses were not performed by a laboratory with an FDEP-approved comprehensive quality assurance plan. On May 3, 1999, the facility was ruled ineligible for the DSCP, for failure to submit a complete application. On December 11, 2009, the FDEP Southeast District referred the site to the FDEP Program and Technical Support Section for CERCLA Site Screening. An FDEP visit to the former Savoir Faire Dry Cleaners of LW site, on March 23, 2011, confirmed that the dry cleaner was gone and its space had been absorbed by the 23-year-old (opened-1989-90) New York Style Pizza Restaurant & Pizza, at 6438 Lake Worth Road.

Perchloroethylene (PCE) and its principal breakdown products (e.g., VC) are volatile, carcinogenic and moderately to highly toxic to humans, but exhibit low aquatic toxicity and bioaccumulation potential.

On July 18, 2011 a PSA was completed by FDEP based on existing file information. The PSA recommended that an Expanded Pre-CERCLIS Screening Assessment be conducted.

On October 31, 2011 a Abbreviated Preliminary Assessment Checklist was completed by FDEP. Vinyl Chloride (VC) in ground water exceeded its MCL/GCTL, yet the analysis was not performed by a laboratory with an

SECTION A: Project Planning Elements (continued)

FDEP-approved comprehensive quality assurance plan. The site is unqualified for the DSCP and shallow wells supply potable water to a large population, so sampling is recommended to determine if the site merits entry into CERCLIS. Although the PSA recommended that a PSA with sampling be conducted, it later was determined by EPA and FDEP that it was more appropriate to go straight to an APA. This APA avoided duplication of effort with a PSA and PSAWS. The APA confirmed the findings of the PSA and recommended that a site inspection (SI) be conducted at the site.

On March 2, 2012, FDEP conducted a walkover of the former drycleaner. The Restaurant is still operating. It was noted that a large Condo complex, Seminole Palms is adjacent to the site and worthy of consideration in the SI, considering the prevalent groundwater flow in direction of the complex retention pond, which provides irrigation water for the complex.

Hydrogeologic Setting and Ground Water Use

Geology/Hydrogeology: This site is within the Everglades Geomorphologic Feature of the Southern Geomorphologic Province of Florida, in an area essentially void of karst terrain. Three hydrostratigraphic units—the surficial aquifer system, intermediate aquifer system/confining unit and the Floridan aquifer system—exist in Palm Beach County. The surficial aquifer system—the primary source of fresh water in Palm Beach County—is composed of sand, sandstone, shell, silt, calcareous clay (marl) and limestone of Pliocene to Holocene age. The surficial aquifer system comprises, in ascending order, the upper Tamiami Formation (Fm), Caloosahatchee Fm, Fort Thompson Fm, Anastasia Fm and undifferentiated sediments. The water table occurs less than 5 feet below land surface (bls) and the aquifer is approximately 150 feet thick in the site area. Primarily recharged by rainfall and seepage from Lake Okeechobee and nearby canals, the surficial aquifer exists under unconfined to semi-confined conditions.

The surficial aquifer system is underlain by the impermeable/semipermeable Miocene age marls (calcareous clays) and carbonates (limestone and dolostone) of the Peace River and Arcadia Formations of the Hawthorn Group. These sediments are approximately 650 feet thick, hydraulically isolating the surficial system from the underlying Floridan aquifer system.

The Floridan aquifer system consists of Oligocene and Eocene age carbonates, of the Oldsmar Formation, Avon Park Formation, Ocala Limestone and the Suwannee Limestone. In the vicinity of the site, the Floridan aquifer system is brackish, occurring at approximately 850 feet bls.

SECTION A: Project Planning Elements (continued)	
	Site Specific Geology/Hydrogeology No lithologic logs currently exist for the actual former dry-cleaner site. **Groundwater Use** Several public water well systems, utilizing the Surficial Aquifer, exist within 4 miles of the site. These systems include the Palm Beach County Water Utilities, Village of Palm Springs, Wellington WTP, and Maralago Cay MHP. These collectively serve an estimated 105,900 persons. The nearest public water wells, Palm Beach County Water Utilities, are situated between 1.1 to 1.4 miles from the site. Several private wells exist between 1 and 4 miles from the site. (Figure 1) A site-attributable release of VC to the surficial aquifer was confirmed at a concentration above its MCL/GCTL. Surficial aquifer supply wells within 4-miles provide drinking water to a large population, so the Ground Water Migration Pathway merits concern.
A6. Project Description	Soils samples will be collected from eleven locations across the site (Figures 3, 4). Surface (0-2 feet BLS) and subsurface (2-4 feet BLS) soil samples will be collected for fixed based laboratory All the soil samples will be analyzed for VOCs. This includes PCE and its biodegradation by products trichloroethylene (TCE), cis/trans 1, 2 dichloroethylene (DCE) and VC. Selected soil samples will also be analyzed for semi-VOC (SVOC) analysis. This includes the background location (TOC001SF/SB), the interior building location (TOC002SF/SB) and rear of former drycleaner location (TOC004SF/SB & TOC005SF/SB). The soil samples will be collected using either the DPT rig Geoprobe® Macro-core® system or stainless steel hand augers. One of the surface/subsurface soil sample locations will be situated inside the building near the presumed location of the former dry-cleaner machine. A boring was previously made inside the building, where the dry cleaning machine was presumed to be located, however no additional information is available for this event. A corer will be employed to core through the concrete foundation for access to subfloor soils. One soil sample pair will be taken from in front of the former TOC. Eight soil sample pairs will be taken behind the former dry cleaner from the back door to the storm water drain. A background surface and subsurface soil pair will be collected in the northwest corner of the property. One grab sediment sample will be taken from the storm drain if possible. This will be contingent upon the presence of sediment in the bottom of the

SECTION A: Project Planning Elements (continued)

storm drain. It will be analyzed for VOCs only (Figures 3,4).

A Lithologic log will be performed to determine groundwater sampling intervals. This lithologic log will be limited to a depth of 60 feet BLS. The results from the planned lithologic log will be used for determining the groundwater screening interval depths. Zones of higher permeability above clay or sandy clay zones will be targeted for sampling. The intervals will be restricted to no more than 3 intervals per screening location. The groundwater screening samples will be collected using the Geoprobe® SP15/16 Groundwater sampler from at least six predetermined positions. The groundwater sampler screen can be exposed to as much as 41 inches for sampling. Samples from each screening location will be sent to an on-site mobile lab for laboratory analysis. A duplicate set of samples will be collected from each sample interval and put on ice. Samples exhibiting the highest levels of VOCs will be sent for confirmation to a CLP or EPA fixed based laboratory for VOC analysis. A background sample will be taken from the Northwest corner of the property, by DPT. A monitor well pair, MW-1 (depth to water – 6.40 ft) and MW-2 (depth to water 6.96 ft) exist near the back door of the former TOC. These water levels were noted on May 4, 1995, presumably when the wells were installed. Additional construction details are not available. Existing wells MW-1 and MW-2, will be sampled and attempts made to determine their depths. One of the groundwater sampling locations will be situated inside the building near the former dry-cleaner machine. The interior well will be installed through the core hole used to collect the inside soil samples. Accessibility into the building and building height will determine if this temporary well will be installed. The inside well will be installed by hand using a hand auger and a screen point pushed to the maximum depth allowable. The background (TOC001GW), interior temporary well (TOC002GW) and two existing monitor wells samples (TOCMW1GW & TOCMW2GW) will be analyzed for both VOCs and SVOCs. All the remaining groundwater samples for fixed based laboratory analysis will be collected and analyzed for VOCs only. One groundwater sample will be taken in front of the store by DPT. Four additional groundwater samples will be taken by DPT, at 3 intervals, along the eastern fence/boundary of property to access possible plume migration. As stated earlier, a mobile lab will be utilized on site, to screen groundwater samples. If contaminants are found in shallow groundwater at the fence line then a decision will be made to sample further east in the adjacent Seminole Palms townhome neighborhood. Piezometric groundwater readings taken in 1995, indicate flow to the east/southeast. The neighborhood is a concern because 1). Potential vapor intrusion issues and 2). Its sprinkler system water is drawn from the onsite retention pond. Contaminated groundwater could

SECTION A: Project Planning Elements (continued)	
	potentially be drawn to this pond. Four to six groundwater samples would be taken from the Seminole Palms neighborhood if mobile lab analyses justify. If it is determined to conduct contamination assessment activities in the Seminole Palms townhome neighborhood, a surface water sample will be collected for mobile lab VOC analysis. A background sample will be taken from the Northwest corner of the property, by DPT. (Figures 3, 4) Groundwater samples will be collected from all wells for VOC and semi-VOC analysis at fixed based CLP or EPA laboratory (Table 2)
Decision(s) to be made based on data:	If contamination is found during the SI in excess of applicable regulatory standards and actions levels, further CERCLA evaluation may be recommended.
Applicable regulatory standards, actions levels, etc.	This work is being conducted pursuant to the authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 United States Code (USC) 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Public Law 99-499, and Florida Statutes (FS), Chapter 403. Further numerical criteria is found in the *Superfund Site Assessment Program QAPP*, November 2009, page 15 and Appendices A, B, and G.
Field Study Date:	FY2012, week of May 7th
Projected Lab Completion Date:	FY2012, third quarter.
Final Report Completion Date:	Fy2012, fourth quarter

A7. Data and Field Quality Objectives and Criteria for All On-site and Off-Site Measurements
See Table 1 and 2

A8. Special Training Requirements /Special Certifications Included in the FDEP-*Superfund Site Assessment Program QAPP*

A9. Documents and Records
The final report will be prepared in accordance with the requirements of the SESD *Operating Procedure for Report Preparation and Distribution*, SESDPROC-003-R3. All field observations, measurements, and sampling activities supporting the field investigation will be recorded and documented according to the SESD *Operating Procedure for Logbooks*, SESDPROC-010-R3.

Project files will be maintained according to the SESD *Operating Procedure for Control of Records,* SESDPROC-002-R4.

SECTION B: Data Generation and Acquisition

B1. Sampling Process Design

An authoritative sampling design was chosen based on the data quality objectives of the study.

Media	Number of Samples	Sample Depth	Analyses
Surface Soil	5	0-2 feet	VOCs and SVOCs
Surface Soil	7	0-2 feet	VOCs
Subsurface Soil	5	2-4 feet	VOCs and SVOCs
Subsurface Soil	7	2-4 feet	VOCs
DPT Screening Groundwater samples	12	TBD	VOCs
DPT Screening Groundwater sample (Background)	1	Shallow	VOCs and SVOCs
Temporary Well	1		VOCs and SVOCs
Existing Monitor wells	2	Unknown	VOCs and SVOCs
QA/QC-Surface Soil duplicate	1	0-2 feet	VOCs and SVOCs
QA/QC-Subsurface Soil duplicate	1	2-4 feet	VOCs and SVOCs
QA/QC-Water duplicate	1	N/A	VOCs and SVOCs
QA/QC-Rinsate blank Soil	1	N/A	VOCs and SVOCs
QA/QC-Rinsate blank Ground Water	1	N/A	VOCs and SVOCs
QA/QC-Trip Blank-Water	2	N/A	VOCs
QA/QC-Trip Blank-Soil	2	N/A	VOCs

B2. Sampling Method Requirements

Soil Sampling	SESDPROC-300-R1
Groundwater Sampling	SESDPROC-301-R1
Sediment Sampling	SESDPROC-200-R2
Field Equipment Cleaning and Decontamination	SESDPROC-205-R1
Field Sampling Quality Control	SESDPROC-011- R2
Global Positioning System	SESDPROC-110-R2

B3. Sampling Handling and Custody Requirements

All samples will be handled and custody maintained according to the following:

SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, January 2011.
SESD Operating Procedure for Sample and Evidence Management, SESDPROC-005-R1.
SESD Operating Procedure for Packing, Labeling and Shipping of Environmental and Waste Samples SESDPROC-209-R1.

SECTION B: Data Generation and Acquisition

B4. Analytical Method Requirements

All samples will be analyzed using appropriate EPA Methods for analytes of interest.

SESD:	Samples will be analyzed in accordance with the *SESD Laboratory Operations and Quality Assurance Manual*, January 2011, which can be found at http://epa.gov/region4/sesd/asbsop/asb-loqam.pdf
CLP:	*Contract Laboratory Program Standard Operating Procedures found at http://www.epa.gov/region4/sesd/oqa/rassop.html*
Other:	N/A

B5. Quality Control Requirements. *Field Branches Quality System and Technical Procedures* - SESDPROC-011-R2

Field:	See Table 2
Laboratory:	See Table 2

B6. Instrument/Equipment Testing and Inspection Requirements

In accordance with:

Field Branches Quality System and Technical Procedures - SESDPROC-011-R2

B7. Instrument/Equipment Calibration and Frequency

In accordance with:

Field Branches Quality System and Technical Procedures - SESDPROC-011-R2

B8. Inspection/Acceptance Criteria and Requirements for Supplies and Consumables

All critical supplies and consumables for this field investigation are inspected and maintained in accordance with the following procedures:

SESD Operating Procedure for Purchasing of Services and Supplies, SESDPROC-015-R3.
SESD Operating Procedure for Equipment Inventory and Management, SESDPROC-108-R2.
SESD Operating Procedure for Field Sampling Quality Control, SESDPROC-011-R2.

The SESD Field Quality Manager and the Branch Quality Assurance Officers are responsible for ensuring that these requirements are met.

B9. Data Acquisition Requirements for Non-direct Measurements:

Does not Apply to this project.

B10. Data Management

The AMEC-EMI Field Project Manager will be responsible for ensuring that all requirements for data management are met. All data generated for this field investigation, whether hand-recorded or obtained using an electronic data logger will be recorded, stored and managed according to the following procedures:

SESD Operating Procedure for Control of Records, SESDPROC-002-R4.
SESD Operating Procedures for Logbooks, SESDPROC-010-R3.

SECTION C: Assessment/Oversight
C1. Assessments, Audits and Corrective Actions Assessments will be conducted during the field investigation according to the *SESD Operating Procedure for Project Planning*, SESDPROC-016-R1, to ensure the QAPP is being implemented as approved. The Field Project Manager is responsible for all corrective actions while in the field.
C2. Reports to Management The AMEC-EMI Project Manager will be responsible for notifying the FDEP Project Manager (Requestor) and appropriate SESD management if any circumstances arise during the field investigation that may adversely impact the quality of the data collected.

SECTION D: Data Validation and Usability

D1. Data Review, Verification, and Validation

All analytical data will be provided by the SESD Analytical Support Branch and reviewed, verified and validated in accordance with the *SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual*, January 2011.

All data derived from field measurements will be reviewed, verified, and validated in accordance with the *SESD Operating Procedure for Report Preparation and Distribution*, SESDPROC-003-R3.

D2. Verification and Validation Methods

All analytical data will be provided by the SESD Analytical Support Branch and reviewed, verified and validated in accordance with the *SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual*, January 2011.

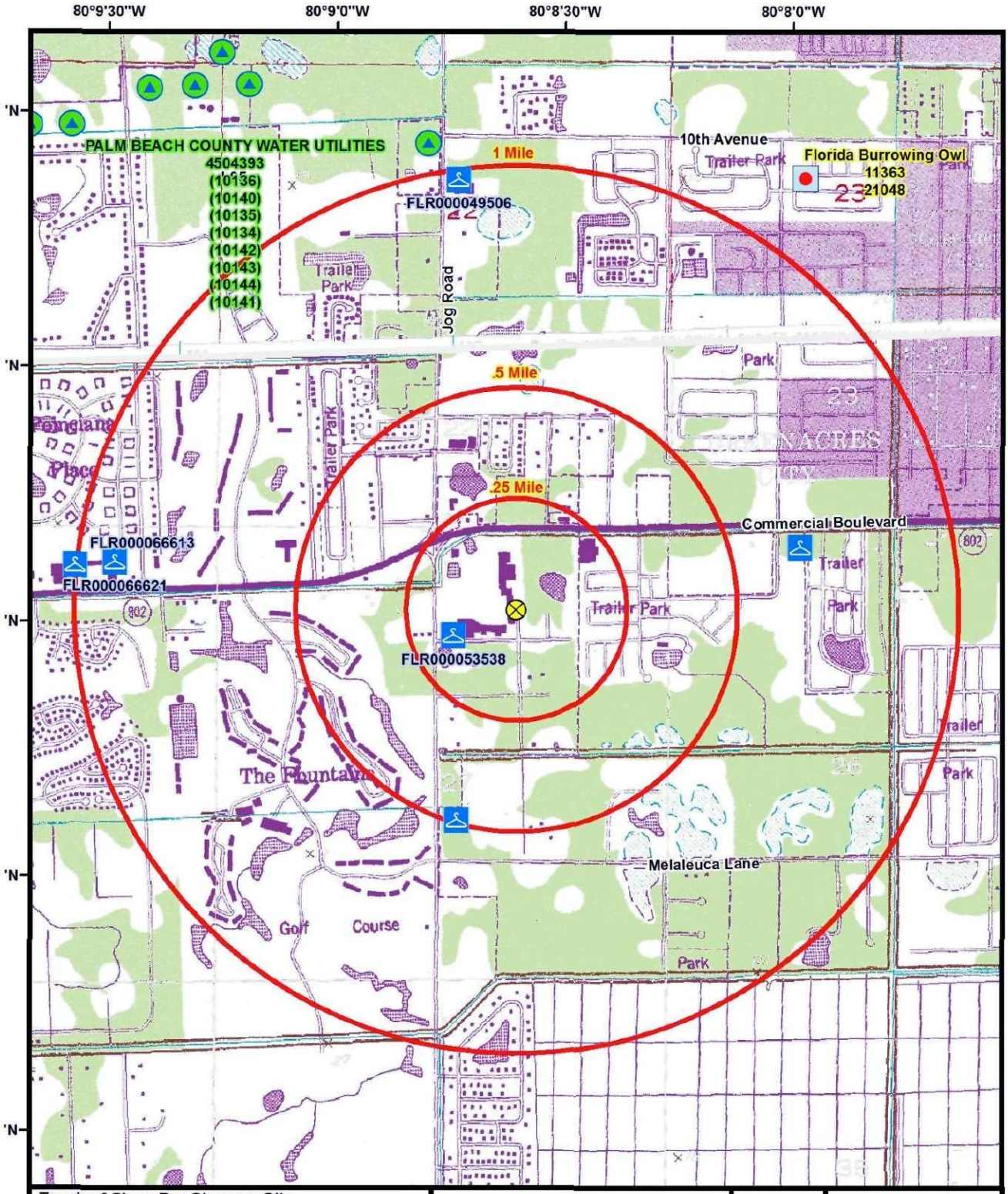
All data derived from field measurements will be reviewed, verified, and validated in accordance with the *SESD Operating Procedure for Report Preparation and Distribution*, SESDPROC-003-R3.

D3. Reconciliation of the data to the Project-Specific DQOs

The usability of all data derived from field sampling and measurements conducted during this field investigation will be evaluated in accordance with the *SESD Operating Procedure for Report Preparation and Distribution*, SESDPROC-003-R3.

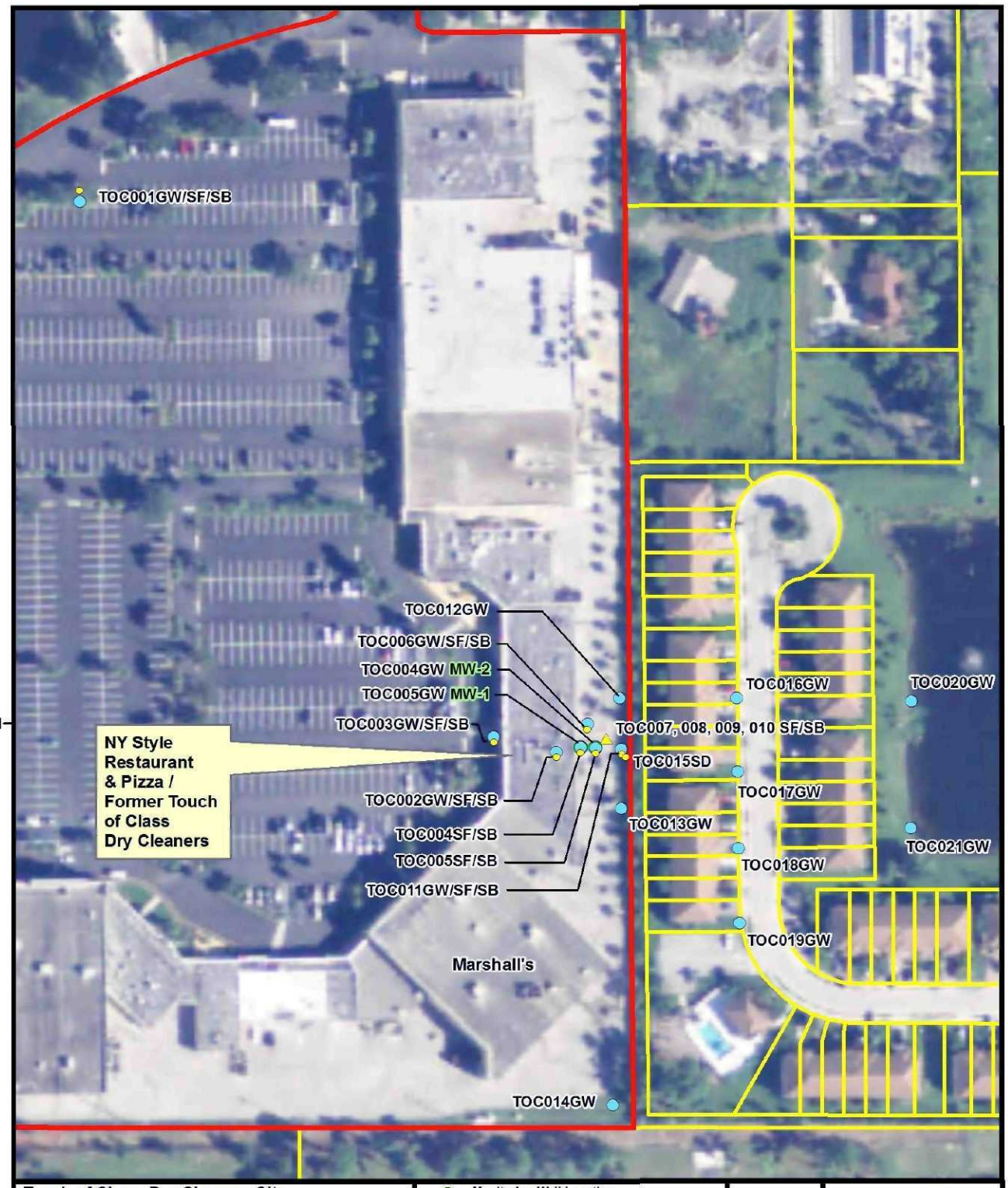
****Footnotes**:

This Quality Assurance Project Plan (QAPP) has been prepared and approved according to the EPA *Requirements for Quality Assurance Project Plans (EPA QA/R5 EPA/240/B-01/003)*, U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC, March 2001(USEPA, 2001). This document will be used to ensure that the environmental data collected for this project are of the type and quality for the intended purposes.



Touch of Class Dry Cleaners Site
Figure 1: One Mile Buffer Map
6434 Lake Worth Road
Lake Worth, Palm County, Florida 33463
(Quadrangle Topographic Map)
Prepared by: B.K. McClain Date: 5/13/2011

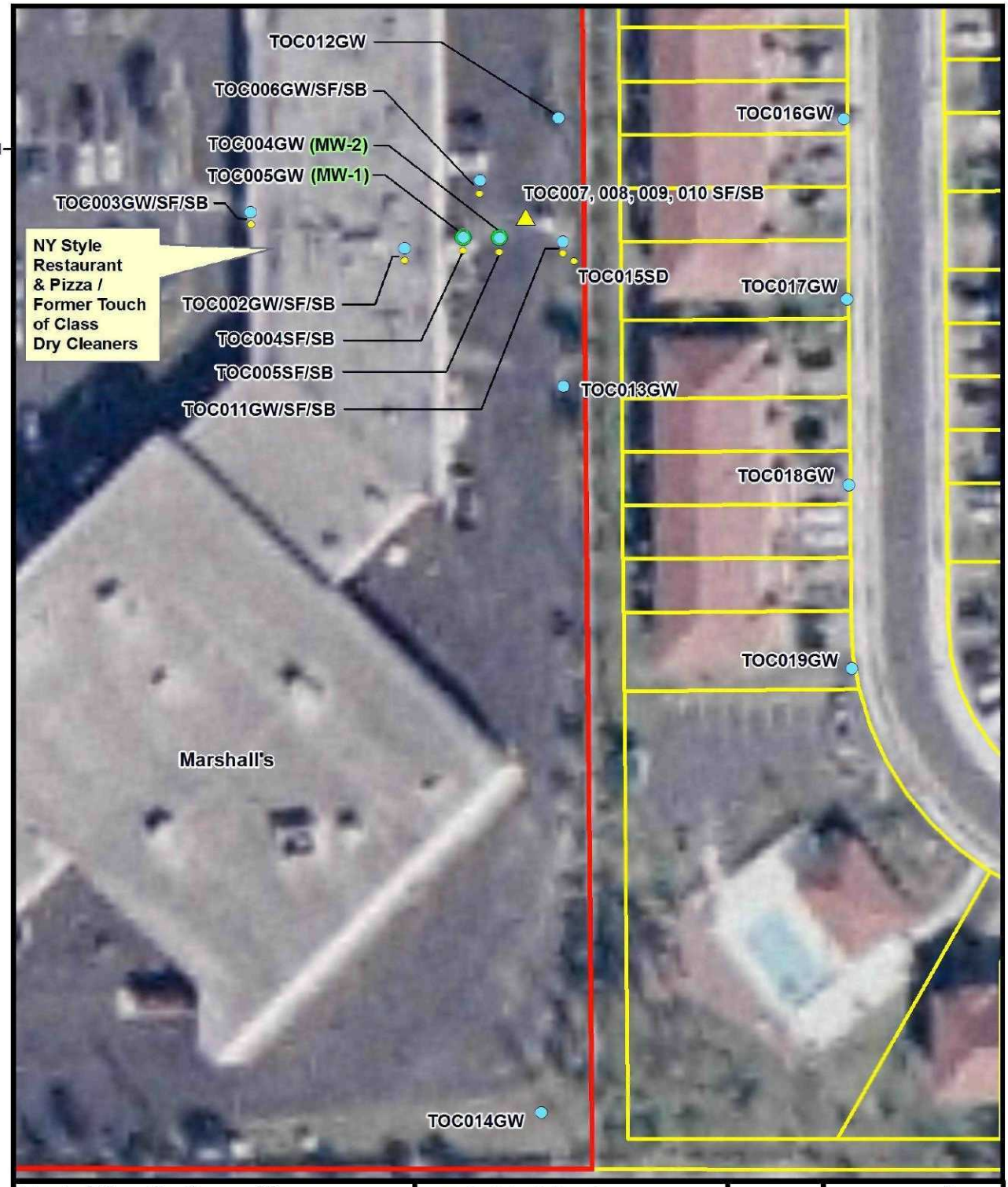
Touch of Class Dry Cleaniers Site Location
.25, .5, 1 Mile Buffers
0 500 1,000 2,000 Feet



Touch of Class Dry Cleaners Site
Figure 2: Site Sampling Location Map
6434 Lake Worth Road
Lake Worth, Palm Beach County, Florida 33463
(NAIP Imagery 2010)
Prepared by: B.K. McClain Date: 11/1/2011

Monitoring Well Location
Ground Water Sample Location
Surface and Soil Boring Sample Location
TOC016, 017, 018, SF/SB. Locations TBD
Shopping Plaza Property Parcel

0 60 120 240 Feet



Touch of Class Dry Cleaners Site
Figure 3: Site Close-up Sampling Location Map
6434 Lake Worth Road
Lake Worth, Palm Beach County, Florida 33463
(NAIP Imagery 2010)
Prepared by: B.K. McClain Date: 11/1/2011

Monitoring Well Location
Ground Water Sample Location
Surface and Soil Boring Sample Location
TOC016, 017, 018, SF/SB. Locations TBD
Shopping Plaza Property Parcel

0 25 50 100 Feet

Table 1
Data Quality Objectives

Data Quality Objectives	Action Item
State the Problem	Dry-cleaning operations began at the Touch Of ClassDrycleaners site in 1981 and continued to as late as 1989. Based on the site records, the past dry-cleaning operations involved the use of "PERC" or tetrachloroethylene. Vinyl Chloride (VC) at 4 ug/L was found in a monitoring well adjacent to the TOC back door, exceeding the FDEP GCTL, and the EPA MCL. Analyses were not performed by a Laboratory with a FDEP approved comprehensive quality assurance plan. Further work is warranted. Additional soil and groundwater contamination may exist
Identify the Decision	To determine if the site contamination poses an unacceptable risk to human health and the environment and to determine if further Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) action is warranted.
Identify the inputs to the decision	• Data will be collected to document an observed release to site soils and groundwater. • Sample results will be compared to background criteria as identified in the HRS rules. • Sample concentrations will also be evaluated for the potential risk of exposure to both human and biota. The sample results will be compared to USEPA and FDEP action levels to determine if further actions are warranted by the EPA and/or FDEP. Specifically, sample concentrations will be compared to Federal Primary and Secondary Drinking Water Standards, FDEP's cleanup target levels, Chapter 62-777, Florida Administrative Code (FAC); and FDEP's Primary and Secondary Drinking Water Standards as specified in Chapter 62-550 FAC.
Define the Study Boundaries	The investigation will focus on the areas of likely chlorinated solvent contamination including inside the building near the former dry-cleaning machine. Soil and groundwater samples will also be collected from down gradient locations immediately east of the site. If contaminants are found in shallow groundwater samples at the site boundary the investigation with be expanded to include groundwater sampling in the adjacent neighborhood. (Figure 3).
Develop a Decision Rule	If contaminant concentrations in media exceed 3x background levels, exceed applicable regulatory standards and actions levels and the Hazardous Ranking System score for the site exceeds the HRS cutoff score, the site will be recommended for further CERCLA evaluation.

Specify Tolerable Limits on Decision Errors	All sample locations will be selected, using a non-probabilistic approach so decisions will not rely upon statistical analyses.
Optimize the Design for Obtaining Data	Judgmental sampling will be exercised to minimize sampling effort. Only a limited number of samples will be collected; therefore no statistical analysis will be used in the decision.

Table 2
Touch of Class Drycleaners, Lake Worth, Palm Beach County, Florida
Site Inspection Sample Locations Rationale

Sample Type	Station ID/Sample ID	Sample Location	Rationale	Analysis
Soils				
Surface soil	TOC001/TOC001SF	Northwest area of shopping plaza parking lot	Background/control sample	VOCs & Semi-VOCs
Subsurface soil	TOC0001/TOC001SB	Northwest area of shopping plaza parking lot	Background/control sample	VOCs & Semi-VOCs
Surface soil	TOC002/TOC002SF	Inside Building near former dry-cleaner machine	Potential source area	VOCs & Semi VOCs
Subsurface soil	TOC0002/TOC002SB	Inside Building near former dry-cleaner machine.	Potential source area	VOC & Semi VOCs
Surface soil	TOC003/TOC003SF	Adjacent to TOC front door	Potential source area	VOCs
Subsurface soil	TOC003/TOC003SB	Adjacent to TOC front door	Potential source area	VOCs
Surface soil	TOC004/TOC004SF	Adjacent to MW-1	Potential source area	VOCs & Semi VOCs
Subsurface soil	TOC004/TOC004SB	Adjacent to MW-1	Potential source area	VOCs & Semi VOCs
Surface soil	TOC005/TOC005SF	Adjacent to MW-2	Potential source area	VOCs & Semi VOCs
Subsurface soil	TOC005/TOC005SB	Adjacent to MW-2	Potential source area	VOCs &Semi VOCs
Surface soil	TOC006/TOC006SF	Near rear door of former TOC	Potential source area	VOCs
Subsurface soil	TOC006/TOCH006SB	Near rear door of former TOC	Potential source area	VOCs
Surface soil	POH007/POH007SF	Rear of former TOC -TBD	Potential source area	VOCs
Subsurface soil	POH007/POH007SB	Rear of former TOC -TBD	Potential source area	VOCs
Surface soil	TOC008/TOC008SF	Rear of former TOC -TBD	Potential source area	VOCs
Subsurface soil	TOC008/TOC008SB	Rear of former TOC -TBD	Potential source area	VOCs

Sample Type	Station ID/Sample ID	Sample Location	Rationale	Analysis
Soils (Cont)				
Surface soil	TOC009/TOC009SF	Re of former TOC - TBD	Potential source area	VOCs
Subsurface soil	TOC009/TOC009SB	Rear of former TOC- TBD	Potential source area	VOCs
Surface soil	TOC010/TOC010SF	Rear of former TOC -TBD	Potential source area	VOCs
Subsurface soil	TOC010/TOC010SB	Rear of former TOC -TBD	Potential source area	VOCs
Surface soil	TOC011/TOC011SF	Rear of former TOC –near storm drain	Potential source area	VOCs
Subsurface soil	TOC011/TOC011SB	Rear of former TOC –near storm drain	Potential source area	VOCs
Sediment				
Sediment	TOC015/TOC015SD	Grab sample from storm water drain behind TOC	Potential source area	VOCs
Groundwater				
Groundwater	TOC001/TOC001GW	Northwest area of shopping plaza parking lot	Background/control sample	VOCs & Semi-VOCs
Groundwater	TOC002/TOC002GW	Inside Building near former dry-cleaner machine.	Potential groundwater contamination	VOCs & Semi-VOCs
Groundwater	TOC003/TOC003GW	Outside front of former TOC	Potential groundwater contamination	VOCs
Groundwater	TOC004/TOCMW1GW	From existing MW-1	Potential groundwater contamination	VOCs & Semi-VOCs
Groundwater	TOC005/TOCMW2GW	From existing MW-2	Potential groundwater contamination	VOCs & Semi-VOCs
Groundwater	TOC006/TOC006GW	Rear of TOC - TBD	Potential groundwater contamination	VOCs
Groundwater	TOC011/TOC011GW	Near storm water drain	Potential groundwater Contamination	VOCs
Groundwater	TOC012/TOC012GW	Near fence line North of drain	Potential groundwater contamination	VOCs
Groundwater	TOC013/TOC013GW	Near fence line South of drain	Potential groundwater contamination	VOCs
Groundwater	TOC014/TOC014GW	SE corner of property	Potential groundwater Plume	VOCs

Table 2 (Cont.)
Touch of Class Drycleaners, Lake Worth, Palm Beach County, Florida
Site Inspection Sample Locations Rationale

Sample Type	Station ID/Sample ID	Sample Location	Rationale	Analysis
Groundwater				
Groundwater	TOC016/TOC016GW	Along Seminole Palms Dr. down gradient of former TOC	Potential groundwater Plume	VOCs
Groundwater	TOC017/TOC017GW	Along Seminole Palms Dr. down gradient of former TOC	Potential groundwater plume	VOCs
Groundwater	TOC018/TOC018GW	Along Seminole Palms Dr. down gradient of former TOC	Potential groundwater Plume	VOCs
Groundwater	TOC019/TOC019GW	Along Seminole Palms Dr. down gradient of former TOC	Potential groundwater plume	VOCs
Groundwater	TOC020/TOC020GW	Near Seminole Palms retention pond/ irrigation source	Potential groundwater contamination	VOCs
Groundwater	TOC021/TOC021GW	Near Seminole Palms retention pond/ irrigation source	Potential groundwater plume	VOCs
Quality Control				
QA/QC	TOC002/TOC002GW-DUP	Inside Building near former dry-cleaner machine.	Duplicate groundwater sample of TOC002GW	VOCs & Semi-VOCs
QA/QC	TOC002/TOC003SF-DUP	Inside Building near former dry-cleaner machine.	Duplicate soil sample TOC003SF	VOCs & Semi-VOCs
QA/QC	TOC002/TOC002SB-DUP	Inside Building near former dry-cleaner machine.	Duplicate soil sample TOC002SB	VOCs & Semi-VOCs
QA/QC	TOC015/TOC015SD-DUP	From storm water drain	Duplicate sediment sample TOC015SD	VOCs
QA/QC	#R4DART#/EB01	N/A	Groundwater sampling equipment rinseate	VOCs and Semi-VOCs
QA/QC	#R4DART#/EB02	N/A	Soil/sediment sampling equipment rinseate	VOCs and Semi-VOCs
QA/QC	#R4DART#/TW001	N/A	Trip Blank Water	VOCs only
QA/QC	#R4DART#/TW002	N/A	Trip Blank Water	VOCs only
QA/QC	#R4DART#/TB001	N/A	Trip Blank Soil	VOCs only

Key:
DUP-Duplicate
EB-Equipment Blank
GW-Groundwater
QA/QC- Quality Assurance/Quality Control

Key (Cont.)

SF-Surface soil
SB-Subsurface Soil
TB-Trip Blank Soil
TBD-To Be Determined
TOC-Touch of Class Drycleaners
TW-Trip Blank Water
VOC-Volatile Organic Compounds