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SECTION 1.0
INTRODUCTION

1.1 Overview

This Operation and Maintenance (O & M) Plan has been prepared for the Tres Bon Cleaners Inactive Hazardous Waste Disposal Site (NYSDEC Registry # 1-30-058) located at 197 Franklin Avenue, Franklin Square, New York (the Site) as shown in Figure 1.1. Based on the results of the Remedial Investigation, or RI (FPM, March 1999), it was concluded that Site groundwater was impacted with volatile organic compounds (VOCs) and a VOC plume existed on and down gradient of the Site.

During 10 years, groundwater treatment (air stripper) and soil vapor extraction (SVE) efforts successfully remediated the site as documented in the Final RI Report (FPM, September 2003). Ongoing groundwater monitoring indicated a decrease in downgradient groundwater VOC concentrations. In accordance with the Proposed Remedial Action Plan, or PRAP (NYSDEC, January 2004) and Record of Decision, or ROD (NYSDEC, March 2004), monitoring of three Site wells (MW-1, MW-5A and MW-6) is to be performed twice a year. This O&M Plan presents the procedures to be utilized to perform the groundwater monitoring.

N

LEGEND

MW-3 MONITORING WELL

FENCE

COMMERCIAL BUILDING

MW-3

FENWORTH BOULEVARD

MW-2

HOUSE

DRY CLEANER BUILDING

MW-1

FRANKLIN AVENUE

HOUSE

HOUSE

HOUSE

COMMERCIAL BUILDING

LANGDON STREET

WOOL AVENUE

MW-5B MW-5A

MW-4

HOUSE 1057

HOUSE 1055

HOUSE 1051

HOUSE 1047

0 25 50

SCALE IN FEET

Fanning, Phillips & Molnar
Engineers

FIGURE 1.1
SITE PLAN
TRES BON CLEANERS
197 FRANKLIN AVENUE
FRANKLIN SQUARE, NEW YORK

Drawn By: LG. | Checked By: SOD | Date: 6/22/99

L:\DRAW\NICKSON\FIG 1.2.2

SECTION 2.0
GROUNDWATER MONITORING AND QUALITY ASSURANCE PROCEDURES

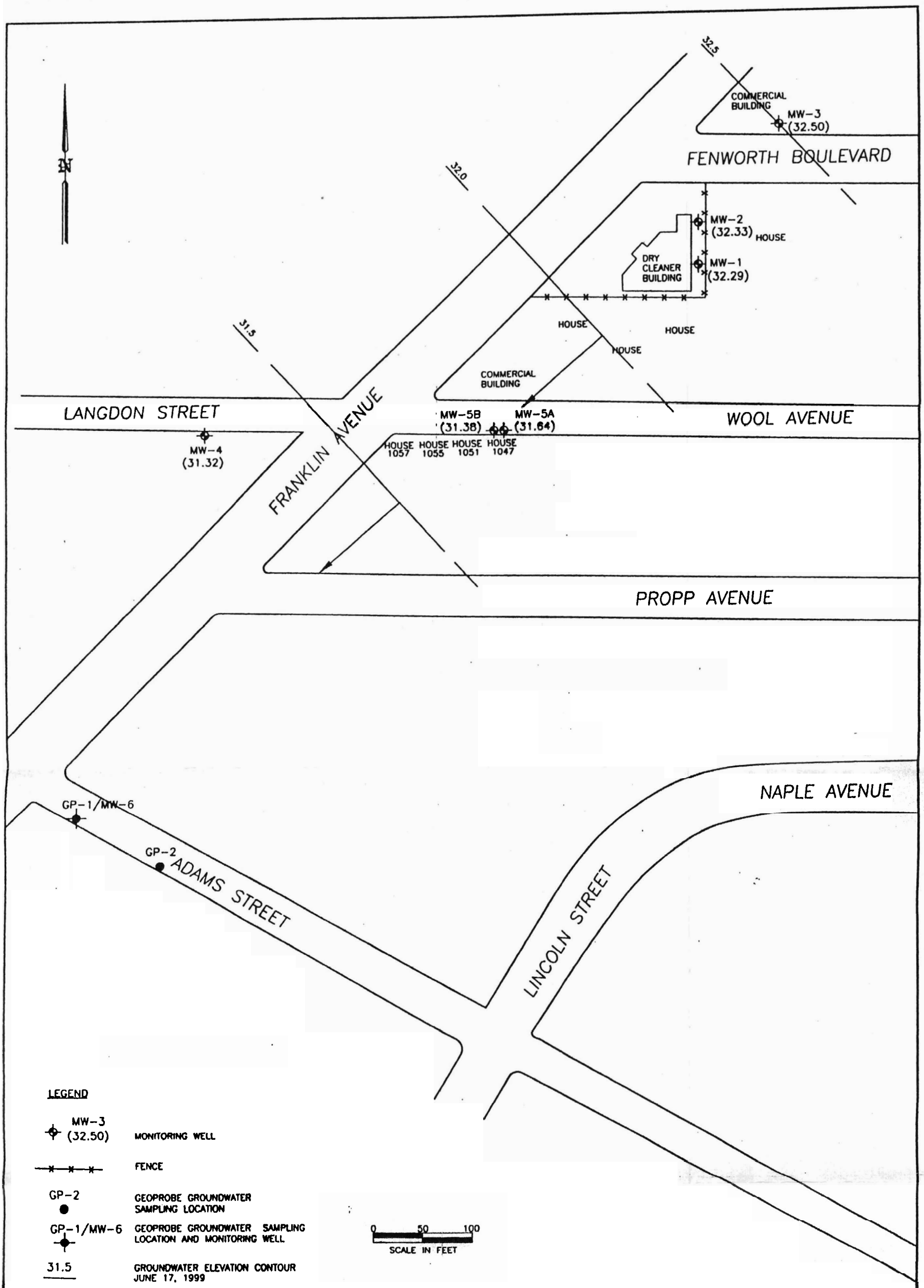
The following sections present the groundwater monitoring procedures and quality assurance/quality control (QA/QC) procedures to be utilized during the O & M activities at the Site. A site plan showing the groundwater monitoring well locations is presented on Figure 2.1. A schedule of O & M activities is also included in this section.

Groundwater sampling shall be performed at three Site wells (MW-1, MW-5A and MW-6) twice per year to evaluate groundwater VOC concentrations both on and downgradient of the Site. Copies of the available logs for each of these wells are included in Appendix A. In the event that monitoring results indicate that other Site wells should be monitored, a recommendation shall be made to the New York State Department of Environmental Conservation (NYSDEC) with a request to make the change. The groundwater monitoring program shall not be changed without the written approval of the NYSDEC.

2.1 Groundwater Monitoring Procedures

At each well to be sampled the depth to groundwater shall be measured to the nearest 0.01 foot. These measurements shall be utilized together with the well depth information to calculate the volume of groundwater within each well casing. The wells to be sampled shall then be purged of at least three but no more than five casing volumes of water using a decontaminated low-flow submersible pump or dedicated disposable bailers. Sampling shall generally performed after the turbidity of the discharged water is less than 50 nephelometric turbidity units (NTU) and the parameters pH, conductivity, and temperature have stabilized between removal of successive casing volumes of water. If the turbidity cannot be reduced to less than 50 NTU but the other parameters appear to be stable, sampling will proceed. Well purging and sampling data shall be recorded on well sampling forms, which shall be included in the bi-annual (twice-per-year) groundwater monitoring reports.

Following purging, each well shall be sampled using a dedicated disposable bailer. The retrieved samples shall be transferred to laboratory-supplied sample bottles with appropriate preservatives and the filled sample bottles shall be labeled and placed in a cooler with ice to depress the sample temperature to four degrees Celsius. A chain of custody form shall be completed and kept with the filled cooler to document the sequence of sample possession. The filled coolers shall be transmitted via overnight courier to a New York State Department of Health ELAP-certified laboratory. All samples shall be analyzed for Target Compound List (TCL) VOCs by USEPA Method 8260 or equivalent.



Fanning, Phillips & Molnar
Engineers

FIGURE 2.1
GROUNDWATER SAMPLING LOCATIONS AND GROUNDWATER ELEVATION CONTOURS
TRES BON CLEANERS
197 FRANKLIN AVENUE
FRANKLIN SQUARE, NEW YORK

Drawn By: LG.	Checked By: SOO	Date: 6/22/99

L:\DRAW\NICKSON\FIGURE3.DWG

2.2 Quality Assurance/Quality Control

QA/QC protocols include several types of procedures to assure the quality of the analytical data collected. The QA/QC procedures to be utilized during groundwater monitoring activities at the Site are described in the following sections.

2.2.1 Sampling Equipment Decontamination Procedures

All non-disposable equipment (i.e., water level indicator and pump) used during the groundwater purging activities will be decontaminated prior to use at each location to prevent cross contamination. For groundwater sampling, dedicated disposable bailers will be used. All non-disposable equipment will be decontaminated using the following procedures:

1. The equipment will be scrubbed in a bath of potable water and low-phosphate detergent;
2. Distilled water rinse; and
3. Air dry.

2.2.2 Chain-of-Custody Procedures

For each day of sampling, a chain-of-custody form will be completed and submitted to the laboratory. A copy of the chain-of-custody form will also be retained by the sampling organization for sample tracking purposes. The chain-of-custody form will include the project name, the sampler's signature, the types and sizes of sample bottles and preservatives used, the sampling locations, intervals, and the analytical parameters and methods requested.

2.2.3 Quality Assurance/Quality Control Samples

Quality assurance/quality control (QA/QC) samples shall be utilized during each groundwater sampling event. The results from the QA/QC samples shall be utilized to evaluate the accuracy and precision of the analytical results.

An equipment blank sample shall be obtained during each groundwater sampling event. An equipment blank sample shall be prepared by pouring laboratory-supplied water through the sampling apparatus and capturing the liquid in the appropriate sample bottles. The equipment blank sample shall be labeled so as not to be identified by the laboratory personnel and shall be tested for the same parameters as the associated primary environmental samples. The equipment blank sample results shall be evaluated to determine the potential for either laboratory or field contamination and to attest to the quality of the equipment decontamination procedures. One equipment blank sample shall be collected each day that sampling is conducted.

Laboratory batch QA/QC samples shall include method blank samples, the results of which are included in the chemical analytical data packages and are used to evaluate the accuracy of the laboratory equipment. The laboratory shall also utilize batch spiked laboratory control samples (LCSs) to evaluate the accuracy of the laboratory results.

2.3 Sample Analysis

All samples will be submitted to a New York State ELAP-approved laboratory. The laboratory testing and data reporting will conform to a report-only format.. Laboratory testing and data reporting will be performed by a subcontracted laboratory. The proposed subcontractor laboratory is York Analytical Laboratories, of 120 Research Drive, Stratford, CT.

The report-only laboratory reports will include sample analytical results, methods of analysis, reportable field and laboratory QA/QC sample analytical results, method limits of detection, and sample practical quantification limits (PQLs). All samples will be analyzed for TCL VOCs.

2.4 Data Evaluation and Reporting

Samples will be tracked through the field collection, laboratory analysis, and laboratory report preparation processes. FPM Group will perform the sample tracking and assemble the analytical results as they are received. The collected data will be assembled, reviewed, and evaluated to assure satisfaction of the groundwater monitoring objectives. The data from the primary environmental samples, the QA/QC samples and the laboratory QA/QC samples will be evaluated to verify that the analytical results are of sufficient quality to be relied upon to assess the potential contamination in the groundwater. The results of the data evaluation, including the QA/QC results, will be presented in the monitoring report.

The groundwater monitoring data collected will be organized and analyzed to evaluate the nature and extent of impacted groundwater at the Site, the groundwater flow direction, and to evaluate trends in groundwater contaminant concentrations. The evaluation will include preparation of a groundwater elevation contour map utilizing the depth-to-water measurements and the top of well casing elevations. The distribution and concentrations of groundwater contaminants detected will be considered relative to the former sources of the contaminants, their environmental behavior, and previous groundwater monitoring results. Maps and tables of the data from the previous Site sampling programs will be used as appropriate to assist in the analysis. The results of the data evaluation will be discussed in each bi-annual monitoring report.

2.5 Schedule

The proposed project schedule is presented in Figure 2.5.1. In general, groundwater monitoring is performed mid-year (May or June) and at the end of the year (November or December). Laboratory analyses generally require three weeks to be completed and report preparation requires another two to three weeks to complete. Therefore, each monitoring report is planned to be submitted to the NYSDEC several months prior to the next monitoring event. This schedule allows for changes in the configuration of the monitoring well network between sampling events so as to better evaluate the groundwater VOC plume behavior over time.

Although the schedule shown on Figure 2.5.1 shows that groundwater monitoring is anticipated to extend for two years, as per the ROD for this Site, the program will be periodically reevaluated and may be modified based on the anticipated continuing decline in groundwater VOC concentrations. Modifications will not be made without the written consent of the NYSDEC.

Task	Description	Month and Year			
		05/2004	11/2004	05/2005	11/2005
1	Ground water monitoring Wells MW-1, MW-5A, MW-6	x	x	x	x

Table 2.5.1
Estimated time schedule for O&M
Tres Bon Cleaners

SECTION 3.0
HEALTH AND SAFETY PLAN

3.1 Introduction

This Health and Safety Plan (HASP) has been written for compliance with "OSHA Hazardous Waste Operations Standards (29 CFR 1910.120)", the guidance documents, "Standard Operating Safety Guidelines (Office of Solid Waste and Emergency Response, 1988)" and the "Occupational Safety and Health Guidance Manual for Hazardous Waste Activities" (U.S. Department of Health and Human Services, 1985).

Scope and Applicability of The HASP

This HASP is designed to be applicable to locations where groundwater sampling is performed at the Site by all parties that either perform or witness the activities on Site. This HASP may also be modified or amended to meet specific needs of the proposed work.

This HASP will detail the Site safety procedures, Site background, and safety monitoring. All FPM personnel will be required to adopt this HASP in full.

The HASP has been formulated as a guide to complement professional judgment and experience. The appropriateness of the information presented should always be evaluated with respect to unforeseen Site conditions that may arise.

Site Work Zone and Visitors

The Site work zone (a.k.a. exclusion zone) during the performance of groundwater sampling will be a 30-foot radius about the work location. This work zone may be extended if, in the judgment of the health and safety officer (HSO), Site conditions warrant a larger work zone.

No visitors will be permitted within the work zone without the consent of the HSO. All visitors will be required to be familiar with, and comply with, the HASP. The HSO will deny access to those whose presence within the work zone is unnecessary or those who are deemed by the HSO to be in non-compliance with the HASP.

All Site workers will be required to have 40-hour hazardous material training (eight-hour refresher courses annually), respirator fit test certification, and medical surveillance as stated in 29 CFR 1910.120. Copies of documentation certifying the above-listed requirements will be kept at the Site in the possession of the HSO.

The HSO will also give an on-Site health and safety discussion to all Site personnel prior to initiating the Site work. Workers not in attendance during the health and safety talk will be required to have the discussion with the HSO prior to entering the work zone.

Emergency telephone numbers and directions to the nearest hospital, as shown in Table 3.1.2.1, will be kept at the Site in the possession of the HSO and will be available to all Site workers and visitors.

3.2 Key Personnel/Alternates

The project manager for this project is Stephanie Davis who will also act as the HSO. An assistant HSO may be designated for the field activities.

3.3 Site Background

The known chemicals in the groundwater at the Site include VOCs in the groundwater at the Site. The impacted soil at the Site has been remediated and groundwater sampling will not involve soil contact. Therefore, contact with Site soil should not pose a concern.

3.4 Task/Operation Health and Safety Analysis

This section will present health and safety analyses for the groundwater purging and sampling tasks. In general, FPM Group will employ one to two persons at the Site. No sampling or other Site operations will be conducted without the presence of an FPM Group representative on Site. In the event that the HSO is not present on the Site, the Assistant HSO will implement the HASP.

3.4.1 Groundwater Purging and Sampling Safety Analysis

Groundwater will be obtained from select Site monitoring wells. Monitoring wells will be purged by pumping or bailing and samples will be obtained by bailing. Nitrile gloves will be donned by samplers to avoid dermal contact with the groundwater. Air monitoring may be performed periodically one foot above the open well (the worker's breathing zone) if indications of VOCs are noted. Level C personal protection will be donned if steady-state concentrations exceed five parts per million (ppm) above background.

3.4.2 Other Safety Considerations

Slip/Trip/Fall Preventative Measures

To reduce the potential for slipping, tripping, or falling, the work zone will be kept clear of unnecessary equipment. In addition, all Site workers will be required to wear work boots with adequate tread to reduce the potential for slipping (work boots must be leather or chemical-resistant and contain steel toes and steel shanks).

Insects and Ticks

Insect and tick problems are expected to be minimal. Potential insect problems include, but are not limited to, bees, wasps, and hornets. Prior to commencement of work, each work area will be surveyed for nests and hives to reduce the possibility of disturbing these insects. In addition, each Site worker will be asked to disclose any allergies related to insect stings or bites. The worker will be requested to keep his or her anti-allergy medicine on Site.

Tick species native to Long Island consist of the pinhead-sized deer tick and the much-larger dog tick. Ticks are unlikely to exist at the Site due to a paucity of suitable habitat. All Site workers will be advised to avoid walking through tall grassy areas where possible and will be advised to check for ticks on clothing periodically.

General Safe Work Practices

Standing orders that will be applicable during Site operations are as follows:

- No smoking, eating, drinking, or application of cosmetics in the work zone.
- No matches or lighters in the work zone.
- All Site workers will enter/exit work zone through the Site access point.
- Any signs of contamination, radioactivity, explosivity, or unusual conditions will require evacuating the Site immediately and reporting the information to the HSO.
- Loose-fitting clothing or loose long hair will be prohibited in the work zone during any operations involving moving equipment.
- A signal person will direct the backing of work vehicles.

- Equipment operators will be instructed to check equipment for abnormalities such as oozing liquids, frayed cables, unusual odors, etc.

3.5 Personnel Training Requirements

All FPM personnel and contractor (if applicable) personnel will receive adequate training prior to entering the Site. FPM and contractor's personnel will, at a minimum, have completed OSHA-approved, 40-hour hazardous materials Site safety training and OSHA-approved, eight-hour safety refresher course within one year prior to commencing field work. The HSO will have received the OSHA-approved, eight-hour course on managing hazardous waste operations. In addition, each worker must have a minimum of three days field experience under the direct supervision of a trained, experienced supervisor.

Prior to Site field work, the HSO will conduct an in-house review of the project with respect to health and safety with all FPM personnel who will be involved with field work at the Site. The review will include discussions of signs and symptoms of chemical exposure and heat stress that indicate potential medical emergencies. In addition, review of personal protective equipment will be conducted to include the proper use of air-purifying respirators.

3.6 Medical Surveillance Program

All workers at the Site must participate in a medical surveillance program in accordance with 29 CFR 1910.120. A medical examination and consultation must have been performed within the last twelve months to be eligible for field work.

The content of the examination and consultation will include a medical and work history with special emphasis on symptoms related to the handling of hazardous substances, health hazards, and fitness for duty including the ability to wear required personal protective equipment under conditions (i.e., temperature extremes) that may be expected at the work Site.

All medical examinations and procedures shall be performed by, or under the supervision of, a licensed physician. The physician shall furnish a written opinion containing the results of the medical examination and tests, the physician's opinion as to whether the employee has any detected medical conditions which would place the worker at increased risk of material impairment of the employee's health from work in hazardous waste operations, the physician's recommended limitations upon the worker assigned to the work, and a statement that the worker has been informed by the physician of the results of the medical examination and any further examination or treatment.

An accurate record of the medical surveillance will be retained by FPM. The record will consist of at least the following information:

- The name and social security number of the employee;
- The physician's written opinions, recommended limitations, and results of examinations and tests; and
- Any worker medical complaints related to exposure to hazardous substances.

3.7 Personal Protective Equipment

3.7.1 General Considerations

The two basic objectives of the personal protective equipment (PPE) are to protect the wearer from safety and health hazards, and to prevent the wearer from incorrect use and/or malfunction of the PPE.

Potential Site hazards have been discussed previously in Section 3.4. The duration of Site activities during each round of sampling is estimated to be one day. All work is expected to be performed during daylight hours and workdays, in general, are expected to be eight to ten hours in duration. Any work performed beyond daylight hours will require the permission of the HSO. This decision will be based on the adequacy of artificial illumination and the type and necessity of the task being performed.

Personal protection levels for the Site activities, based on past investigations, are anticipated to be Level D. The equipment included for each Level D protection is provided as follows:

Level D Protection

Personnel protective equipment:

Coveralls

Gloves*

Boots/shoes, leather or chemical-resistant, steel toe and shank

Safety glasses or chemical splash goggles*

- Hard hat (face shield*)
- Escape mask*

(*) optional

Criteria for Selection of Level D Protection

Meeting any of these criteria allows use of Level D Protection:

No contaminant levels above 5 ppm organic vapors or dusty conditions are present; and

Work functions preclude splashes, immersion, or the reasonable potential for unexpected inhalation of any chemicals above the TLV.

Additional Considerations for Selecting Levels of Protection

Another factor which will be considered in selecting the appropriate level of protection is heat and physical stress. The use of protective clothing and respirators increases physical stress, in particular, heat stress on the wearer. Chemical protective clothing greatly reduces natural ventilation and diminishes the body's ability to regulate its temperature. Even in moderate ambient temperatures, the diminished capacity of the body to dissipate heat can result in one or more heat-related problems.

All chemical protective garments can be a contributing factor to heat stress. Greater susceptibility to heat stress occurs when protective clothing requires the use of a tightly fitted hood against the respirator face piece, or when gloves or boots are taped to the suit. As more body area is covered, less cooling takes place, increasing the probability of heat stress.

Wearing protective equipment also increases the risk of accidents. It is heavy, cumbersome, decreases dexterity, agility, interferes with vision, and is fatiguing to wear. These factors all increase physical stress and the potential for accidents. In particular, the necessity of selecting a level of protection will be balanced against the increased probability of heat stress and accidents.

3.7.2 Respirator Fit Testing

The fit or integrity of the facepiece-to-face seal of a respirator affects its performance. Most facepieces fit only a certain percentage of the population; thus each facepiece must be tested on the potential wearer in order to ensure a tight seal. Facial features such as scars, hollow temples, very prominent cheekbones, deep skin creases, dentures or missing teeth, and the chewing of gum and tobacco may interfere with the respirator-to-face seal. A respirator shall not be worn when such conditions prevent a good seal. The worker's diligence in observing these factors shall be evaluated by periodic checks. Fit testing will comply with 29 CFR 1910.1025 regulations.

Inspection

The PPE inspection program will entail five different inspections:

- Inspection and operational testing of equipment received from the factory or distributor;
- Inspection of equipment as it is issued to workers;
- Inspection after use;
- Periodic inspection of stored equipment; and
- Periodic inspection when a question arises concerning the appropriateness of the selected equipment, or when problems with similar equipment arise.

Storage

Clothing and respirators will be stored properly to prevent damage or malfunction due to exposure to dust, moisture, sunlight, damaging chemicals, extreme temperatures, and impact. Storage procedures are as follows:

Clothing:

- Potentially contaminated clothing will be stored in an area separate from street clothing;
- Potentially contaminated clothing will be stored in a well-ventilated area, with good air flow around each item, if possible;
- Different types and material of clothing and gloves will be stored separately to prevent issuing the wrong material by mistake; and
- Protective clothing will be folded or hung in accordance with manufacturer's recommendations.

Respirators:

- Air-purifying respirators should be dismantled, washed, and placed in sealed plastic bags.

3.7.5 Maintenance

Specialized maintenance will be performed only by the factory or an authorized repair person. Routine maintenance, such as cleaning, will be performed by the person to which the equipment is

assigned. Respirators will be cleaned at the end of each day with alcohol pads or, preferably, by washing with warm soapy water.

Decontamination Methods

All personnel, clothing, equipment, and samples leaving the contaminated (work zone) area of the Site must be decontaminated to remove any harmful chemicals or infectious organisms that may have adhered to them. Decontamination methods either (1) physically remove contaminants (2) inactivate contaminants by chemical detoxification or disinfection/sterilization, or (3) remove contaminants by a combination of both physical and chemical means. In many cases, gross contamination can be removed by physical means involving dislodging/displacement, rinsing, wiping off, and evaporation. Contaminants that can be removed by physical means include dust, vapors, and volatile liquids. All reusable equipment will be decontaminated by rinsing in a bath of detergent and water (respirators, gloves to be reused). Monitoring equipment will be decontaminated by wiping with paper towels and water. All used PPE to be discarded will be placed in an appropriate waste receptacle.

The effectiveness of the decontamination will be evaluated near the beginning of Site activities and will be modified if determined to be ineffective. Visual observation will be used for this purpose. The HSO will inspect decontaminated materials for discoloration, stains, corrosive effects, visible dirt, or other signs of possible residual contamination.

SECTION 4.0
REFERENCES

FPM Group, March 1999. *Follow-up Remedial Investigation and Remediation Work Plan. Tres Bon Cleaners, 197 Franklin Avenue, Franklin Square, Nassau County, Site Number 1-30-058.*

FPM Group, September 2004. *Final Remedial Investigation Report, Tres Bon Cleaners, 197 Franklin Avenue, Franklin Square, Nassau County, Site Number 1-30-058.*

New York State Department of Environmental Conservation, March 2004. *Record of Decision, Tres Bon Cleaners, 197 Franklin Avenue, Franklin Square, Nassau County, Site Number 1-30-058.*

New York State Department of Environmental Conservation, January 2004. *Proposed Remedial Action Plan, Tres Bon Cleaners, 197 Franklin Avenue, Franklin Square, Nassau County, Site Number 1-30-058*

APPENDIX A

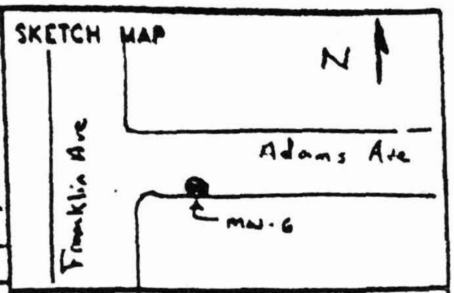
WELL INSTALLATION LOGS

DRILLING LOG

Fanning, Phillips . Molnar
Engineers
Ronkonkoma New York

PROJECT Nickson/Tran Bo.. OWNER
LOCATION Corner of Adams/Franklin W.O. NO.
WELL NO. MW 6 TOTAL DEPTH 56.50 DIAMETER 2"
Casing ELEV. 52.65' WATER LEVEL INITIAL ____ 24-hrs ____
SCREEN DIA. 2" LENGTH 10' (47'-57') SLOT SIZE 0.020"
CASING DIA. 2" LENGTH 47' TYPE PVC sch. 40
DRILLING COMP. ADT DRILLING METHOD 6 3/4 HSA
DRILLER Jim Btic LOG BY P. Losquadro DATE DRILLED 9/1/99

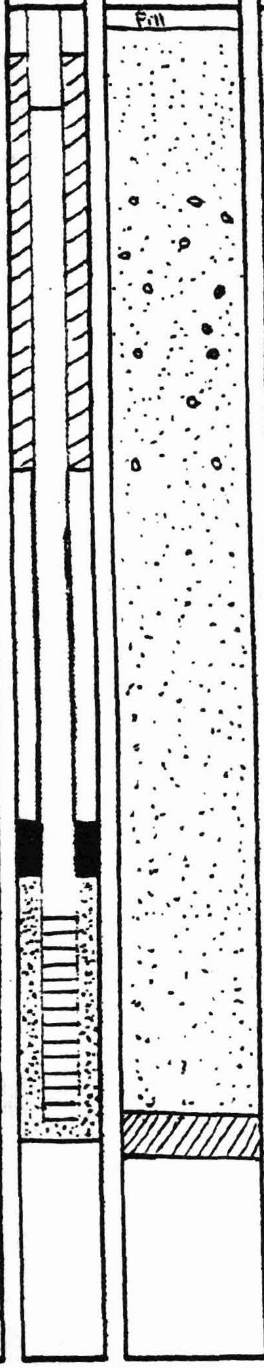
SKETCH MAP



NOTES
approx 2.5' from curb
25' from Franklin Ave

DEPTH (FEET)	FID (ppm)
2.5	0
5	
	0
10	
15	0
20	0
25	0
30	0
35	0
40	
45	
50	
55	
60	
65	

WELL CONSTRUCTION / GRAPHIC LOG



DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)

0-6" Asphalt and Road Bedding.
6"-1' SW Dark Brown sand.
1'-17' SW Brownish yellow well graded sands. Moist. No odor. (Trace gravel 8'-17')
17-23' SW yellowish red well graded sands w/ trace fine gravel. Moist, no odor.
23'-27' Browish yellow
27'-30' SW light Brown sand w/ trace biotite.
30'-34' yellowish red.
34'-45' SW Brownish yellow well graded sand w/ trace biotite. wet, no odor.
45-50 light brown.
56'-57.5' CL Brownish yellow silty clay. wet, no odor.

Completion:

56.5-46.5'	Screen: 0.02" PVC machine slotted.
57-43.7'	Well gravel: Morie #2
43.7'-41.7'	Bentonite chips (1-50# Bag) Hydrated
23'-2'	Cement Bentonite grout.
2'-Grade	Flush to grade manhole w/ sand Backfill below sleeve.