Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision
Colonial Cleaners Site
Lansing (T), Tompkins County
Site Number 7-55-011

March 2001

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* ERIN M. CROTTY, *Acting Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Colonial Cleaners Site
Lansing (T), Tompkins County
Site No. 7-55-011

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Colonial Cleaners class 2 inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law. The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Colonial Cleaners inactive hazardous waste site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site have been addressed by implementing the interim remedial measures (IRMs) identified in this ROD, therefore the site no longer represents a current or potential significant threat to public health and the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation (RI) for the Colonial Cleaners site and the effectiveness of the IRMs completed to address the contamination, the NYSDEC has selected **No Further Action** as the remedy for this site. However, this is predicated upon continued operation of the IRM work and systems which have been undertaken. In addition, the Department will reclassify the site from a Class 2 to a Class 4 on the New York State Registry of Inactive Hazardous Waste Disposal Sites.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and

alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

3/20/01

Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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RECORD OF DECISION

COLONIAL CLEANERS
Lansing, Tompkins County, New York
Site No. 7-55-011
February 2001

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health has selected this remedy for the Colonial Cleaners site, a Class 2 inactive hazardous waste disposal site. As more fully described in Sections 3 and 4 of this document, operation of a dry cleaning facility resulted in the disposal of hazardous wastes, primarily tetrachloroethene, at this site. These disposal activities resulted in the following significant threats to the public health:

- a potential threat to human health associated with the use of contaminated private water supply wells, dermal contact with contaminated soil and inhalation of vapors and fugitive dust emissions during possible future construction activities.

During the course of the investigation certain actions, known as Interim Remedial Measures (IRMs), were undertaken at the Colonial Cleaners Site in response to the threats identified above. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively remediated or mitigated before completion of the Remedial Investigation/Feasibility Study (RI/FS). The IRMs undertaken at this site included:

- The buildings served by contaminated private water supply wells, including the Colonial Cleaners facility and an adjacent private residence, were connected to the municipal water supply;
- Excavation of contaminated soils;
- Treatment of the excavated soils with an ex-situ soil vapor extraction system;
- Installation and operation of a soil venting system to treat contaminated soils adjacent to and underneath the building, and plugging of foundation drains; and
- Installation and operation of a groundwater extraction and treatment system.

These IRMs have proven to be effective at this site and are expected to continue to eliminate or mitigate significant threats to the environment or potential threats to public health, provided that they continue to be operated and maintained in a manner consistent with the design. Therefore, the "No Further Action", alternative was selected as the remedy for this site. However, this is predicated upon continued operation of the IRM work and systems which have been undertaken. In addition, the Department will also reclassify the site from a Class 2 to a Class 4 on the New York State Registry of Inactive Hazardous Waste Disposal Sites.

SECTION 2: SITE LOCATION AND DESCRIPTION

Colonial Cleaners is an active dry cleaning and laundry business located on a 1.55 acre lot at 1902 East Shore Drive in the Town of Lansing, New York (see Figures 1 and 2). The site is located in a predominantly residential and rural neighborhood, with small commercial businesses located along East Shore Drive. The site is bordered on the west and south by residences, on the north by a small creek, and on the east by East Shore Drive. It is located approximately 1.3 miles east of Cayuga Lake.

Site features include a one-story concrete block structure on a slab, which houses the Colonial Cleaners business. A storage shed or garage was previously located southwest of the building. This structure has been demolished and no longer exists.

The site is situated within the watershed of Gulf Creek, which empties into Cayuga Lake (see Figure 1). A tributary to Gulf Creek forms the north property border, and receives surface water drainage from the site. The property slopes gently downward to the northwest at an approximate grade of 5%.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

The Colonial Cleaners property has been operated as a dry cleaning and laundry business since 1962. Groundwater samples collected in 1990 showed the presence of tetrachloroethene (PCE), a common dry cleaning solvent, in the drinking water well at 1910 East Shore Drive (an adjacent property to the west) and in an abandoned well at 1896 East Shore Drive (an adjacent property to the south). The concentrations were 31.9 parts per billion (ppb) and 17.0 ppb, respectively, exceeding the New York State water quality standard for groundwater of 5 ppb. A groundwater sample collected from an abandoned water well on the Colonial Cleaners property contained 3,100 ppb of PCE.

In 1991, in response to the identified contamination, municipal drinking water was extended to the Colonial Cleaners facility and the 1910 East Shore Drive property.

In March of 1992 the property was placed on the New York State Registry of Inactive Hazardous Waste Disposal Sites as a Class 2 site.

3.2: Remedial History

Between 1991 and 1995, samples of various media were collected from various locations across the site by several parties, to provide more information on the nature and extent of contamination present. Samples were collected by the NYSDEC, the Tompkins County Health Department, and as part of a privately commissioned preliminary investigation by a former adjacent property owner. Samples were also collected by consultants representing Colonial Cleaners. The Remedial Investigation (RI) Work Plan (1/96) summarizes the results of the pre-RI sampling.

Analytical results indicated the presence of tetrachloroethene (PCE) in groundwater on and down gradient from the site, with the highest concentrations in the former Colonial Cleaners water supply well (Well W-4, ref. Figure 3). PCE was also found in the onsite drain tile discharge system. The drain tile discharges to the stream bordering the northern side of the property. The drain tile runs diagonally across the property, downhill from the water discharge systems. PCE was also found in subsurface soil samples collected from the property, and in various parts of the dry cleaning wastewater handling system.

As a result of this sampling and a review of former dry cleaning material handling practices, five areas of concern were identified for investigation in the RI (ref. Figure 3). These included:

- The greywater system disposal mound located on the western side of the property. This system received wastewater generated by the laundry;
- The active sanitary wastewater septic system leach field located near the northwest corner of the building;
- The inactive sanitary wastewater septic system leach field, which is located between the sanitary leach field and the raised mound greywater disposal system. This former leach field was abandoned when the raised mound system was installed in 1990;
- A former storage area on the north side of the building, reportedly used by the previous owner for storage of dry cleaning materials; and
- The location of the former storage shed, southwest of the building.

It should be noted that since the detection of dry cleaning constituents in the onsite wastewater systems, the tanks have been cleaned and a number of measures have been implemented to prevent the continued entry of dry cleaning compounds to these systems. These actions included the installation of a "closed loop" dry cleaning system to prevent releases of PCE during equipment operation and maintenance; employees are advised of spill control procedures to prevent spilled or dripped materials from entering drains or sinks; and clothing which has previously been dry cleaned is no longer allowed to be laundered in the detergent wash operation.

Colonial Cleaners entered into a Consent Order with the NYSDEC to implement a Remedial Investigation/Feasibility Study (RI/FS) for the site on June 28, 1995. A Focused RI has been conducted at the site, with fieldwork completed in August 1996. The purpose of the RI was to determine the sources, locations, extent and concentrations of contaminants in the soil which are the source of groundwater contamination, and to obtain other information about the site needed to design and implement cleanup actions.

SECTION 4: SITE CONTAMINATION

To evaluate the contamination present at the site and to evaluate alternatives to address the significant threat to human health and the environment posed by the presence of hazardous waste, the Potentially Responsible Parties (PRPs) have conducted an RI, and conducted additional investigation and sample collection as part of several IRMs.

4.1: Summary of the Remedial Investigation and Data Collection Portions of the Interim Remedial Measures

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site.

The RI was conducted in August 1996. A report entitled Focused Remedial Investigation Report, June 1997 has been prepared which describes the field activities and findings of the RI in detail. Several investigation tasks were also included as components of the various IRMs conducted at the site. These were implemented to determine the extent of soil contamination underneath the building, and to verify the current concentrations of contaminants in groundwater. The field activities and findings are described in more detail in the following letter reports:

- Preliminary Results of Groundwater Well Sampling and Sub-Floor Soil Boring Sampling, January 13, 1998;
- Excavation Confirmatory Sample Results, August 21, 1998; and
- IRM Status Report, July 1, 1999.

The RI and the data collection portions of the IRMs included the following activities:

- Excavation of test pits and test trenches to collect subsurface soil samples from the five areas of concern identified in Section 3.2: Remedial History;
- Installation of soil borings to collect soil samples from the locations of the active greywater and sanitary wastewater systems;

- Installation of soil borings through the floor of the building, to collect soil samples from underneath the building;

- Collection of groundwater samples from the four existing monitoring wells, from the former water supply wells, and from the groundwater treatment system; and

- Collection of confirmatory soil samples from the sides and bottoms of the IRM soil removal excavations.

To determine which media (soil, groundwater, etc.) contain contamination at levels of concern, the RI analytical data were compared to environmental Standards, Criteria, and Guidance values (SCGs). Groundwater SCGs identified for the Colonial Cleaners site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of Chapter I of the NYS Sanitary Code. For soils, NYSDEC TAGM 4046 provides soil cleanup guidelines for the protection of groundwater, background conditions, and health-based exposure scenarios.

Based on the RI and IRM results and a comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized below. More complete information can be found in the RI Report.

Chemical concentrations are reported in parts per billion (ppb) and parts per million (ppm). For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1: Site Geology and Hydrogeology

The geology of the site consists of approximately 4 to 8 feet of overburden soil on top of fractured shale bedrock. The overburden consists of a layer of top soil approximately 6 to 12 inches thick, a low permeability silty clay layer of 1 to 1.5 feet, and a layer of low permeability gravely silty clay from a depth of 2.5 feet to bedrock. The water table is typically below the bedrock surface. Groundwater beneath the Colonial Cleaners site flows generally west to southwest toward the gorge located southwest of the property.

4.1.2: Nature of Contamination

As described in the RI Report, many soil and groundwater samples were collected at the site to characterize the nature and extent of contamination. The primary contaminant of concern is the chlorinated solvent tetrachloroethene. Tetrachloroethene (also called perchloroethylene, PCE, or perc) is a colorless, man-made liquid which is used primarily as a dry cleaning solvent. It has a variety of other uses such as a solvent for removing grease from metal, and as a chemical intermediate (building block) in the production of other chemicals. Chlorinated solvents tend to persist in the environment and do not break down quickly. PCE in particular is volatile but only partially soluble in water, therefore it will tend to adsorb onto soil particles and evaporate into the air and soil gas.

Other contaminants found at the site include a mix of petroleum hydrocarbons, most notably propylbenzenes and xylene. These compounds were found in soil in significantly lower concentrations than PCE, and were present in only one location, near the location of a former above-ground kerosene storage tank. This contamination was detected along the west building wall in the "alcove" area (ref. Figure 3).

4.1.3: Extent of Contamination

Table 1 summarizes the extent of contamination for the contaminants of concern in soil and groundwater, and compares the data with the SCGs for the Site. The following are the media which were investigated and a summary of the findings of the investigation.

Subsurface Soil

During the RI, subsurface soil samples were collected from the five areas of concern identified above, the "alcove" area, and from a building drain on the east side of the building (ref. Figure 3). To collect the samples, test pits and trenches were excavated. In the active greywater and sanitary systems, soil borings were installed to avoid damaging the systems. The soil was screened for volatile vapors using on-site measuring equipment, and samples were collected for laboratory analysis from areas containing elevated readings of volatile vapors. A total of forty soil samples were collected from these areas and sent for analysis.

During the data collection phase for the IRM work, soil samples were collected from underneath the building by installing soil borings through the floor to depths of up to six feet. The soil was screened for volatile vapors using on-site measuring equipment, and samples were collected for laboratory analysis from areas containing elevated readings of volatile vapors. A total of seventeen soil samples were collected from underneath the building and sent for analysis.

Subsurface soils with PCE concentrations which exceeded the guidance level of 1.4 ppm (ref. NYSDEC Technical and Administrative Guidance Memoranda (TAGM) 4046, "Determination of Soil Cleanup Objectives and Cleanup Levels"), were identified in the following four areas of the site:

- **Former Storage Shed** PCE was found in subsurface soil the area of the former storage shed at concentrations of up to 160 ppm;

- **Alcove Area** PCE was found in subsurface soils adjacent to the west side of the building at concentrations up to 2.8 ppm. Elevated concentrations of petroleum hydrocarbons were also found in this location, including n–propylbenzene at 4.4 ppm, 1,2,4-trimethylbenzene at 1.7 ppm, and n-butylbenzene at 1.4 ppm, all exceeding the NYSDEC Spill Technology and Remediation Series (STARS) Memo #1, Petroleum-Contaminated Soil Guidance Policy, guidance value of 0.1 ppm;

- **East Side Building Drain** A single boring was installed on the east side of the building, near an outside floor- level drain, adjacent to an overhead door. PCE was found at 170 ppm; and

- **Beneath the Building** PCE was found in soils underneath the building at concentrations of up to 440 ppm. The highest concentrations were found along the western wall, near the dry cleaning machines.

These areas are identified on Figure 3. The analytical results are summarized in Table 1.

Groundwater

During the data collection phase for the IRM work, groundwater samples were collected from two downgradient monitoring wells, an abandoned drinking water supply well located at a residence approximately 600 feet to the west of the Colonial Cleaners facility (1910 East Shore Dr.), and the former Colonial Cleaners water supply well located approximately 10 feet south of the Colonial Cleaners building (ref. Figure 2). PCE was detected in one of the downgradient monitoring wells (ID No. W-2) at a concentration of 1 ppb, and in the Colonial Cleaners abandoned water supply well at a concentration of 2,900 ppb. The water quality standard for PCE in 6 NYCRR Parts 700-705, Water Quality Regulations, is 5 ppb.

Surface Water

The water discharge from a drain tile leading from the northwest corner of the building to a culvert west of the site, as shown on Figure 2, was sampled in 1994. Sample results showed the presence of PCE at 44 ppb, as well as cis-1,2-dichloroethene at 27 ppb, 1,1,2-trichloroethane at 9.6 ppb, and trichloroethene at 21 ppb. The water discharges into a stream on the north side of the property.

4.2: Interim Remedial Measures

An Interim Remedial Measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively remediated or mitigated before completion of the RI/FS.

The major elements of the IRMs conducted at this site included:

- Installation and operation of a groundwater treatment system;

- Excavation of contaminated subsurface soils in the vicinity of the former storage shed, the alcove, and the trench drain on the east side of the building, as shown in Figure 4;

- Removal or plugging of the foundation drains around the building;

- Covering the alcove area and the area on the east side of the building with an impermeable cap;

- Installation and operation of a soil venting system to treat contaminated subsurface soils adjacent to and underneath the building;

- Construction of an on-site ex-situ soil treatment system to treat the excavated soil; and

- The buildings served by contaminated private water supply wells, including the Colonial Cleaners facility and an adjacent private residence (1910 East Shore Drive), were connected to the municipal water supply.

The groundwater pump and treat system began operation in June 1998. The system involves the pumping of groundwater from the former Colonial Cleaners water supply well at a rate of approximately 5 gpm, treating the water through activated carbon, and discharging the water to the stream on the northern side of the property. Concentrations of PCE in groundwater were measured at 3,100 ppb in 1990, 9,600 ppb in 1992 and 2,900 ppb in 1997. In August 1998, after the system had operated for two months, concentrations had dropped to 64 ppb. In February 1999, after the system had been shut down for approximately three months, concentrations of PCE had further dropped to 2 ppb, but concentrations of 1,2-DCE and TCE had risen to 42 ppb and 15 ppb respectively. These compounds are both breakdown products of PCE. In October 1999, data revealed concentrations of 100 ppb, 140 ppb and 90 ppb for PCE, 1,2-DCE and TCE, respectively. Data from the April 2000 sampling event showed concentrations of 98 ppb, 23 ppb and <3 ppb for PCE, 1,2-DCE and TCE, respectively.

The groundwater treatment system will be operated until concentrations of contaminants in the groundwater meet groundwater standards, or until the system has achieved the maximum reduction possible. This decision will include the sampling of select monitoring wells for VOCs.

The soil excavation and installation of the air injection lines for the soil venting system beneath the building began in April 1998. As illustrated on Figure 4, approximately 230 tons of contaminated soil were excavated from the area in front of the building, the alcove area, and the area in the vicinity of the former storage shed. Due to concerns with the structural stability of the building, the excavations in front of the building and in the alcove area were limited to avoid excavating too close to the foundation. The soils which remain in those areas are being treated by the below-slab soil venting system. In all other areas, soil was removed until confirmatory samples revealed PCE concentrations were below the cleanup objective of 1.4 ppm.

Installation of the soil venting system beneath and adjacent to the building was substantially completed by September 1999. The soil venting system removes air from the soil by applying a vacuum to the highly permeable layer of soil and gravel directly underneath the concrete slab. The volatile contaminants in the soil evaporate into the air (called soil vapor) in the spaces between the soil particles, and are removed from the soil along with the soil vapor. The soil vapor extraction points were installed underneath and adjacent to the building during the soil excavation (ref. Figure

5). Because the tight soils underneath the building would limit the movement of air at the depths of greatest contamination, air injection lines were installed horizontally beneath the building one foot above bedrock, at a depth of approximately 6 feet. Air is injected at a rate of approximately 5 cfm.

The contaminated soil generated by the IRMs was initially stockpiled onsite. Polyethylene was used below the soil pile and as a cover. In the spring of 2000, a liner system was installed, the soil pile relocated, and the ex-situ treatment system was constructed. A pole barn was subsequently constructed over the treatment system. Operation of the ex-situ system is much like the sub-floor venting system. The soil is placed beneath an impermeable cover and soil vapor is removed from the soil by applying a vacuum. Air enters the soil pile through inlet lines and is withdrawn through collection lines (see Figure 6). The system includes a leachate collection/separator tank which will address any entrained moisture or water collected. This liquid is discharged to the groundwater treatment system. Construction of the ex-situ treatment system was completed in October 2000.

Vapor from both the sub-floor system and the ex-situ system is pumped through a carbon adsorption treatment system prior to discharge to the atmosphere. Active system operations began in December 2000.

Prior to a decision to decommission either of the soil venting systems, soil samples will be collected for analysis. For the sub-floor system this will include the installation of soil borings in the treatment area beneath the slab. The systems will be operated until concentrations of contaminants in the soil meet remedial objectives, or the systems have achieved the maximum reduction possible. Upon NYSDEC's approval to cease operations, the ex-situ system will reportedly be abandoned in-place, compacted and covered by a concrete slab.

4.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site.

An exposure pathway is the manner by which an individual may come in contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Pathways which are known to or may exist at the site include:

- A potential for future construction workers to be exposed to volatile organic compounds through inhalation of vapors and fugitive dust emissions, and dermal contact during possible future construction activities.

4.4: Summary of Environmental Exposure Pathways

This section summarizes the types of environmental exposures and ecological risks which may be presented by the site. The following pathways for environmental exposure and/or ecological risks have been identified:

- An apparent completed exposure pathway for plants and wildlife was to contaminants in the drain tile discharge to surface water north of the site. The drain tile was plugged at a location between the building and the discharge during the 1998 soil excavation IRM, eliminating this pathway.

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 NYSDEC and Colonial Cleaners entered into a Consent Order on June 28, 1995. The Order obligates the responsible parties to implement an RI/FS remedial program and to operate and maintain all IRMs in accordance with a Department approved O&M Plan.

SECTION 6: SUMMARY OF THE REMEDIAL GOALS AND SELECTED REMEDY

The selected remedy for any site should, at a minimum, eliminate or mitigate all significant threats to the public health or the environment from the hazardous waste present at the site. The State believes that the remedial systems now in place, which are described in Section 4.2 - Interim Remedial Measures, will accomplish this objective provided that they continue to be operated and maintained in a manner consistent with the design. These remedial actions include continued operation of the below-building soil venting system, the ex-situ soil vapor extraction system and the groundwater treatment system, until contaminant concentrations have dropped below the SCGs for the respective media. The NYSDEC will continue to oversee the remedial actions until the remedial objectives have been achieved. In the interim, the potential for exposure to future construction workers will be addressed by notification and the requirement that proper health and safety procedures be implemented for any future work. Further, appropriate engineering and institutional controls will be put in place, as necessary, at the conclusion of active remediation.

Based upon the results of the investigations and the IRMs that have been performed at this site, the NYSDEC has selected a "No Further Action" alternative for this site. The Department will also reclassify this site from a Class 2 to a Class 4. A site which is designated Class 4 on the New York State Registry of Inactive Hazardous Waste Disposal Sites is defined as one which has been substantially remediated and/or closed but that requires continued operation, maintenance and/or monitoring.

SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken in an effort to inform and educate the public about conditions at the site and the potential

remedial alternatives. The following public participation activities were conducted for the site:

- A repository for documents pertaining to the site was established.
- A site mailing list was established which included nearby property owners, local political officials, local media and other interested parties.
- A Fact Sheet was sent to the mailing list in November, 1996 providing an update on the Remedial Investigation activities at the site.
- A Fact Sheet was sent to the mailing list in July, 1997 announcing a Public Information meeting to discuss proposed IRMs.
- Public meeting was held to discuss IRMs on August 14, 1997.
- A Fact Sheet was sent to the mailing list announcing the start of field work to implement the IRMs.
- A Fact Sheet was sent to the mailing list in February, 2001 announcing the availability of the PRAP and scheduling of a Public Information meeting.
- Public meeting held on February 26, 2001 for presentation of the PRAP.
- In March 2001 a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.

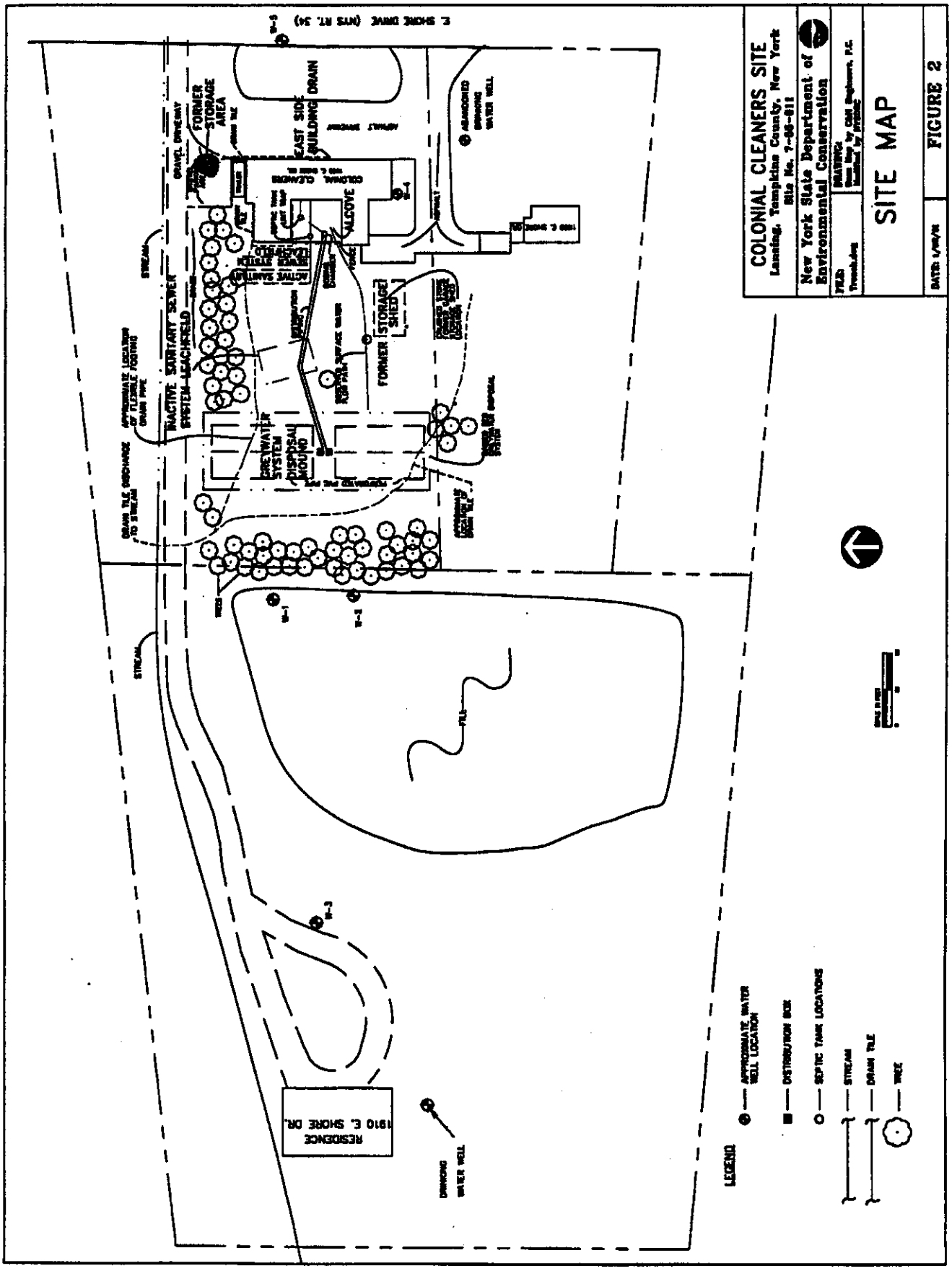
Table 1
Nature and Extent of Contamination

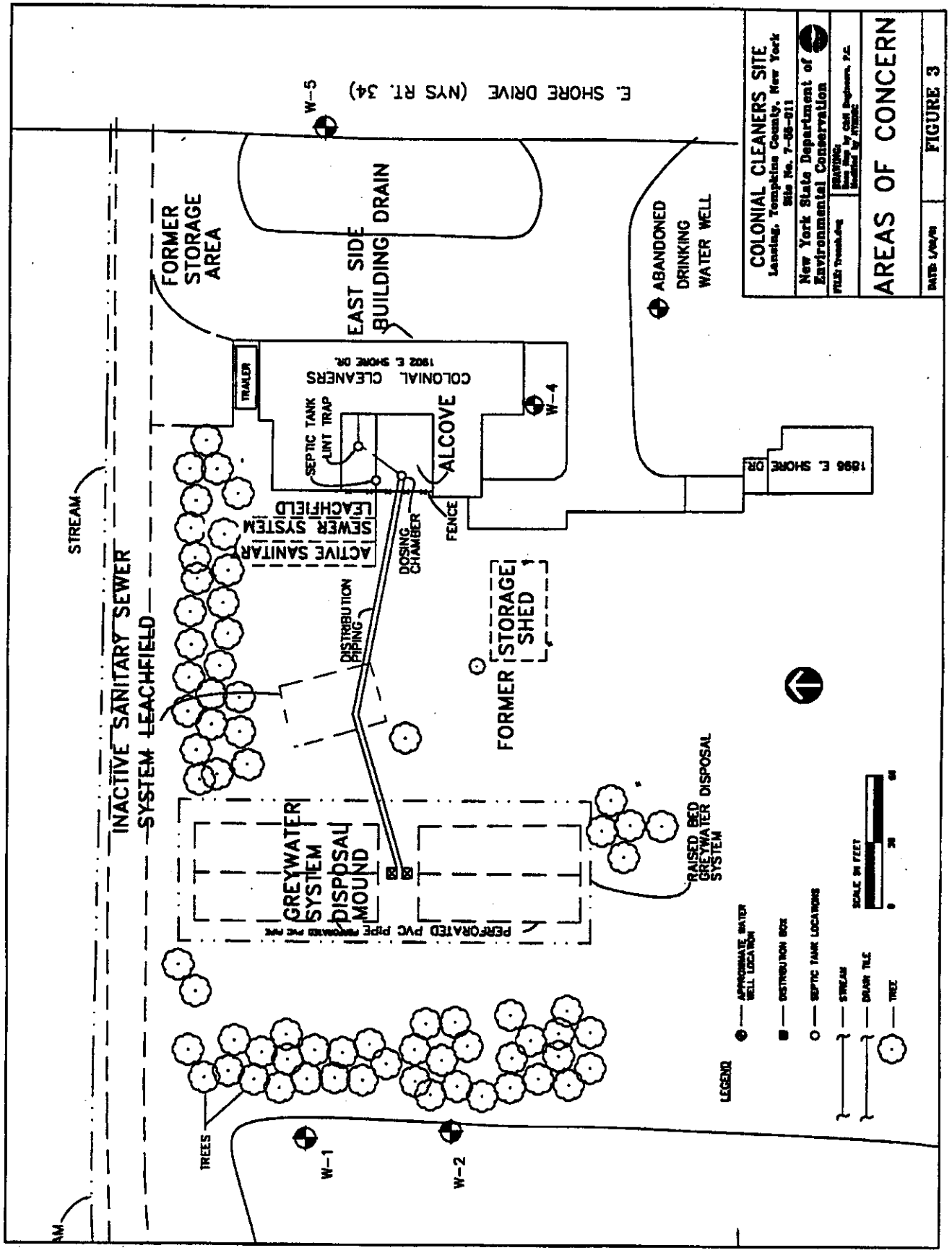
MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE	FREQUENCY of EXCEEDING SCGs	SCG
Groundwater[1]	Volatile Organic Compounds (VOCs)	Tetrachloroethene	2 to 100 ppb	4 of 5	5
		cis-1,2-Dichloroethene	ND to 140 ppb	3 of 5	5
		Trichloroethene	ND to 90 ppb	2 of 5	5
Groundwater[2]	VOCs	Tetrachloroethene	ND to 9,600 ppb	6 of 17	5
Soils[3]	VOCs	Tetrachloroethene	ND to 440 ppm	17 of 74	1.4
		Ethylbenzene	0.082 to 0.750 ppm	1 of 19	0.1[4]
		o-Xylene	ND to 2.1 ppm	1 of 34	1.2
		Isopropylbenzene	ND to 0.8 ppm	1 of 34	0.1[4]
		n-Propylbenzene	ND to 4.4 ppm	4 of 36	0.1[4]
		p-Isopropyltoluene	ND to 0.19 ppm	2 of 34	0.1[4]
		1,2,4-Trimethylbenzene	ND to 1.7 ppm	1 of 34	0.1[4]
		1,3,5-Trimethylbenzene	ND to 0.45 ppm	1 of 34	0.1[4]
		n-Butylbenzene	ND to 1.4 ppm	3 of 36	0.1[4]
		sec-Butylbenzene	ND to 0.63 ppm	1 of 34	0.1[4]

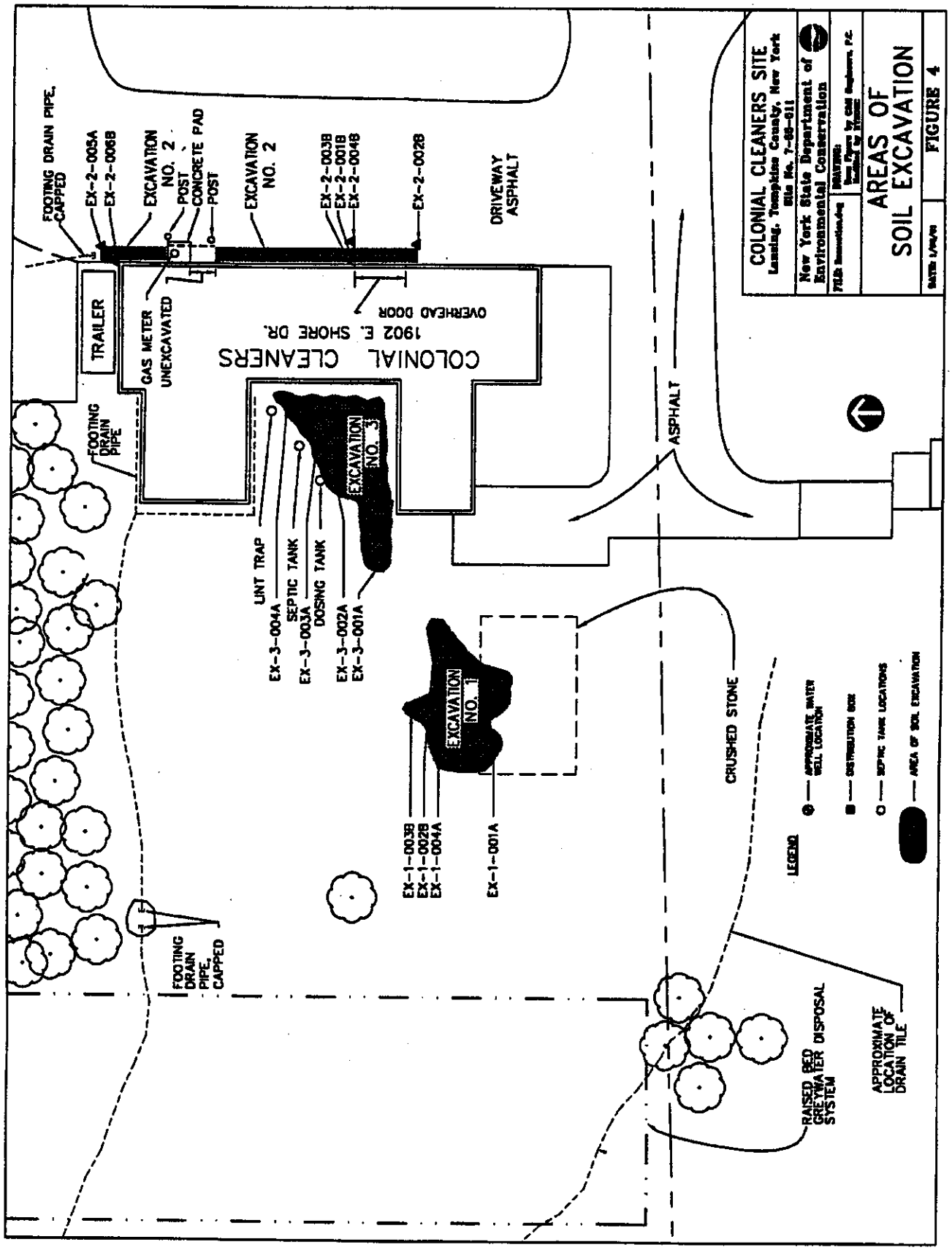
1. Influent data from the onsite groundwater treatment system (5/98-4/00)
2. Data from (a) the Focused RI Work Plan (1/96), (b) 1/13/98 IRM Data Report.
3. Data from (a) the Focused RI Report (6/97), (b) 1/13/98 IRM Data Report, (c) 8/21/98 IRM Data Report.
4. Guidance Value, Spill Technology and Remediation Series (STARS) Memo #1, Petroleum-Contaminated Soil Guidance Policy, NYSDEC Division of Spills Management, August 1992.

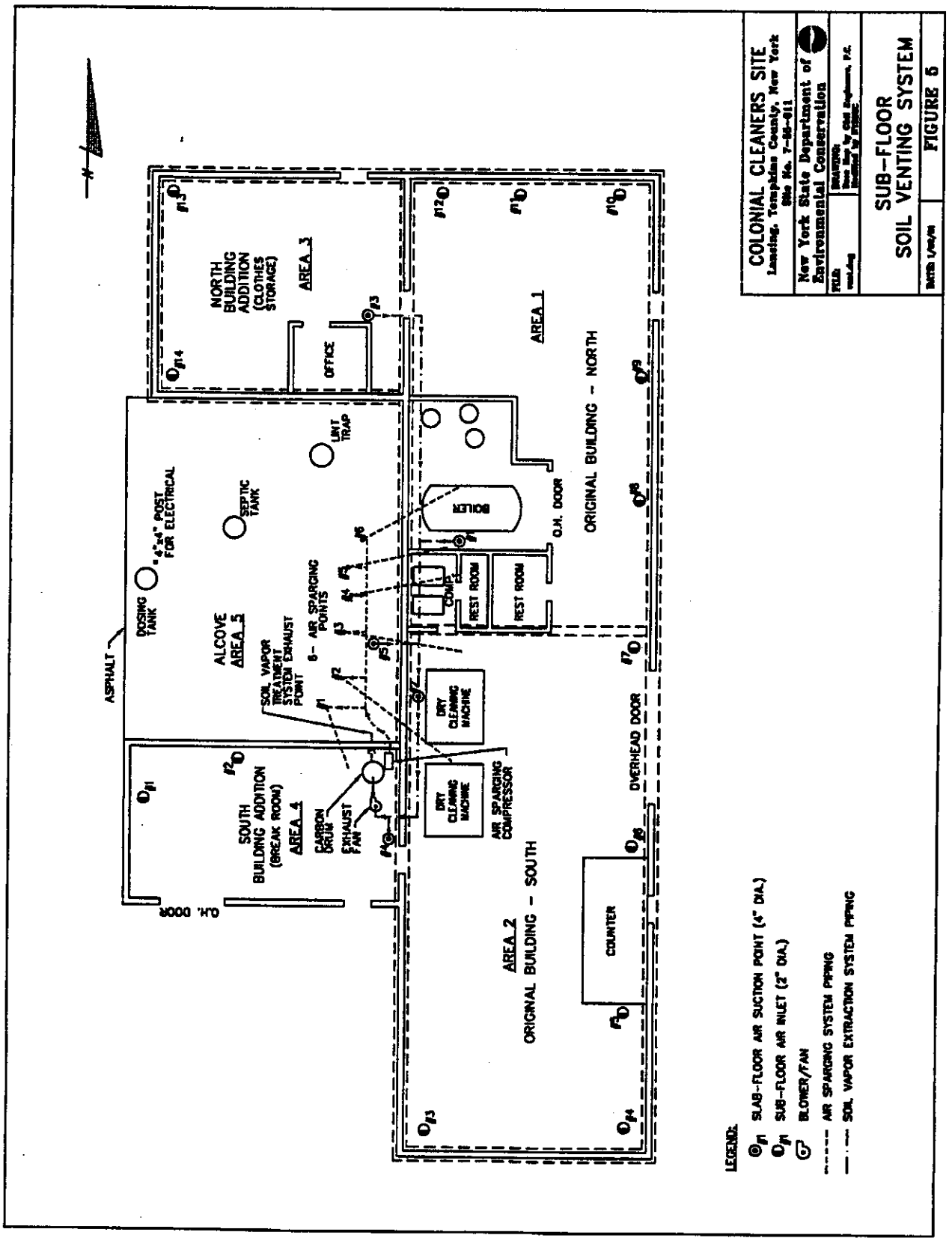

Colonial Cleaners Property
Howland Corners
Howard Corners
East Lansing
Pleasant Valley
Smith Corners
Pleasant
Valley
Cayuga
Fierce Agio
Landing Strip
West Dryden
Head Corners
Bean Hill
Malloryville
Portland Point
Crowbar Pt
Maplewood Point
550
525
30'
Copyright(C) 1997, MapQuest, Inc.

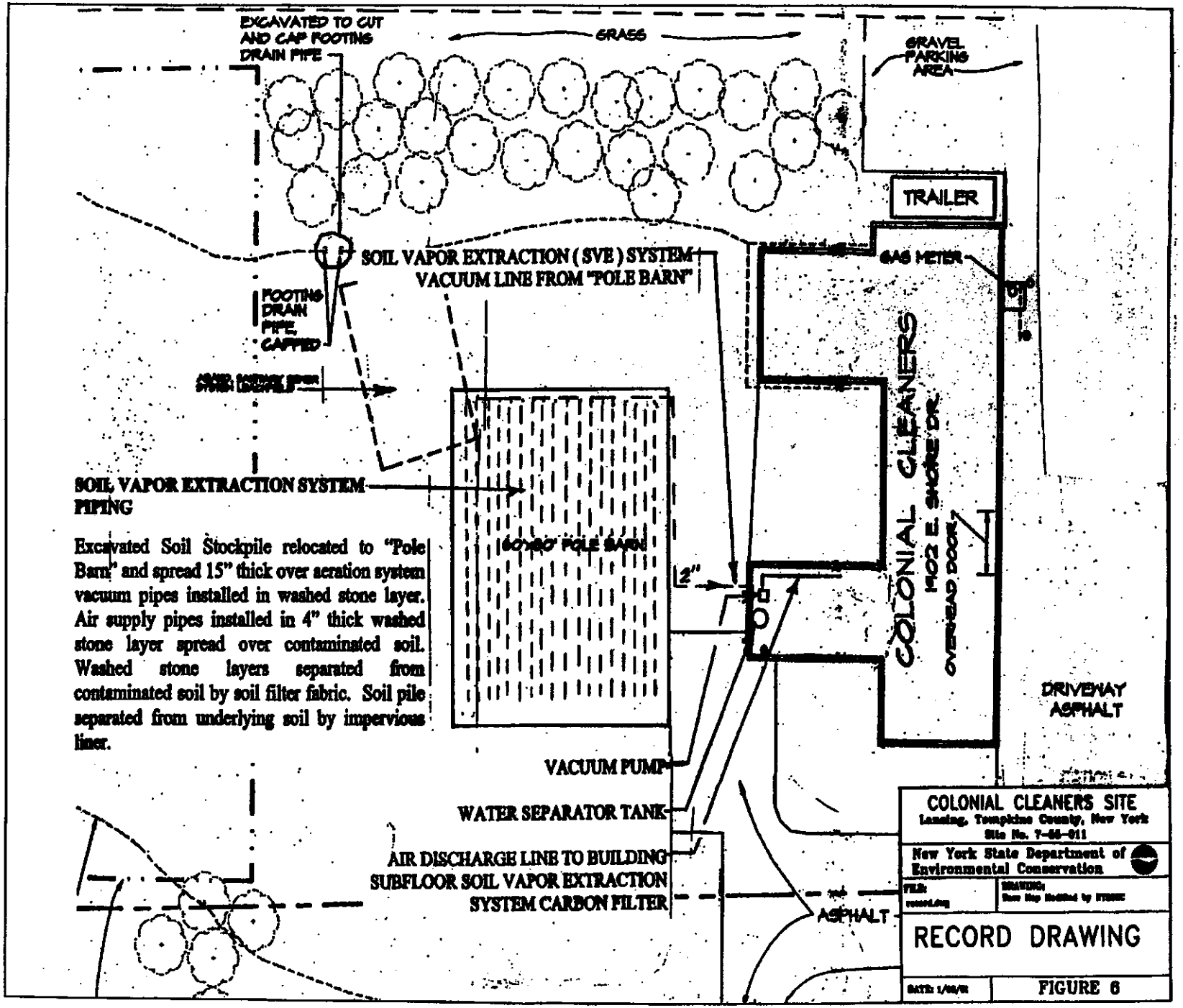
Figure 1


COLONIAL CLEANERS SITE
Lansing, Tompkins County, New York
Site No. 7-55-011
New York State Department of Environmental Conservation
SITE MAP
FIGURE 2
E. SHORE DRIVE (NYS RT. 34)
EAST SIDE BUILDING DRAIN
FORMER STORAGE AREA
GRAVEL DRIVEWAY
ABANDONED DRINKING WATER WELL
ALCOVE
STREAM
ACTIVE SANITARY SEWER SYSTEM-LEACHFIELD
APPROXIMATE LOCATION OF FLEXIBLE FOOTING DRAIN PIPE
FORMER STORAGE SHED
DRAIN TILE DISCHARGE TO STREAM
DRYWATER SYSTEM DISPOSAL MOUND
B-1
B-2
B-3
FILL
RESIDENCE 1910 E. SHORE DR.
DRINKING WATER WELL
LEGEND
APPROXIMATE WATER WELL LOCATION
DISTRIBUTION BOX
SEPTIC TANK LOCATIONS
STREAM
DRAIN TILE
TREE


COLONIAL CLEANERS SITE
Lansing, Tompkins County, New York
Site No. 7-55-011
New York State Department of Environmental Conservation
AREAS OF CONCERN
FIGURE 3
E. SHORE DRIVE (NYS RT. 34)
W-5
FORMER STORAGE AREA
EAST SIDE BUILDING DRAIN
ABANDONED DRINKING WATER WELL
1902 E. SHORE DR.
COLONIAL CLEANERS
TRAILER
SEPTIC TANK
LINT TRAP
ALCOVE
W-4
1896 E. SHORE DR.
STREAM
INACTIVE SANITARY SEWER
SYSTEM LEACHFIELD
ACTIVE SANITARY SEWER SYSTEM LEACHFIELD
DOSING CHAMBER
FENCE
DISTRIBUTION PIPING
FORMER STORAGE SHED
GREYWATER SYSTEM DISPOSAL MOUND
PERFORATED PVC PIPE
RAISED BED GREYWATER DISPOSAL SYSTEM
TREES
W-1
W-2
LEGEND
APPROXIMATE WATER WELL LOCATION
DISTRIBUTION BOX
SEPTIC TANK LOCATIONS
STREAM
DRAIN TILE
TREE
SCALE IN FEET


COLONIAL CLEANERS SITE
Lansing, Tompkins County, New York
Site No. 7-55-011
New York State Department of Environmental Conservation
AREAS OF SOIL EXCAVATION
FIGURE 4
FOOTING DRAIN PIPE, CAPPED
EX-2-005A
EX-2-006B
EXCAVATION NO. 2
POST
CONCRETE PAD
POST
EXCAVATION NO. 2
EX-2-003B
EX-2-001B
EX-2-004B
EX-2-002B
DRIVEWAY ASPHALT
TRAILER
GAS METER
UNEXCAVATED
OVERHEAD DOOR
1902 E. SHORE DR.
COLONIAL CLEANERS
FOOTING DRAIN PIPE
EXCAVATION NO. 3
ASPHALT
UNT TRAP
SEPTIC TANK
DOSING TANK
EX-3-004A
EX-3-003A
EX-3-002A
EX-3-001A
EXCAVATION NO. 1
CRUSHED STONE
EX-1-003B
EX-1-002B
EX-1-004A
EX-1-001A
LEGEND
APPROXIMATE WATER WELL LOCATION
DISTRIBUTION BOX
SEPTIC TANK LOCATIONS
AREA OF SOIL EXCAVATION
FOOTING DRAIN PIPE, CAPPED
RAISED BED GREYWATER DISPOSAL SYSTEM
APPROXIMATE LOCATION OF DRAIN TILE


COLONIAL CLEANERS SITE
Lansing, Tompkins County, New York
Site No. 7-55-011
New York State Department of Environmental Conservation
SUB-FLOOR
SOIL VENTING SYSTEM
FIGURE 5
NORTH BUILDING ADDITION (CLOTHES STORAGE)
AREA 3
OFFICE
AREA 1
ORIGINAL BUILDING - NORTH
LINT TRAP
SEPTIC TANK
4'x4' POST FOR ELECTRICAL
DOSING TANK
ASPHALT
ALCOVE AREA 5
SOIL VAPOR TREATMENT SYSTEM EXHAUST POINT
6- AIR SPARGING POINTS
BOILER
O.H. DOOR
REST ROOM
REST ROOM
DRY CLEANING MACHINE
DRY CLEANING MACHINE
AIR SPARGING COMPRESSOR
CARBON DRUM
EXHAUST FAN
SOUTH BUILDING ADDITION (BREAK ROOM)
AREA 4
O.H. DOOR
OVERHEAD DOOR
AREA 2
ORIGINAL BUILDING - SOUTH
COUNTER
LEGEND:
SLAB-FLOOR AIR SUCTION POINT (4" DIA.)
SUB-FLOOR AIR INLET (2" DIA.)
BLOWER/FAN
AIR SPARGING SYSTEM PIPING
SOIL VAPOR EXTRACTION SYSTEM PIPING


EXCAVATED TO CUT AND CAP FOOTING DRAIN PIPE
GRASS
GRAVEL PARKING AREA
TRAILER
GAS METER
SOIL VAPOR EXTRACTION (SVE) SYSTEM VACUUM LINE FROM "POLE BARN"
FOOTING DRAIN PIPE, CAPPED
SOIL VAPOR EXTRACTION SYSTEM PIPING
Excavated Soil Stockpile relocated to "Pole Barn" and spread 15" thick over aeration system vacuum pipes installed in washed stone layer. Air supply pipes installed in 4" thick washed stone layer spread over contaminated soil. Washed stone layers separated from contaminated soil by soil filter fabric. Soil pile separated from underlying soil by impervious liner.
60'x80' POLE BARN
2"
COLONIAL CLEANERS
402 E. SHORE DR.
OVERHEAD DOOR
DRIVEWAY ASPHALT
VACUUM PUMP
WATER SEPARATOR TANK
AIR DISCHARGE LINE TO BUILDING SUBFLOOR SOIL VAPOR EXTRACTION SYSTEM CARBON FILTER
ASPHALT
COLONIAL CLEANERS SITE
Lansing, Tompkins County, New York
Site No. 7-55-011
New York State Department of Environmental Conservation
RECORD DRAWING
FIGURE 6

Appendix A

RESPONSIVENESS SUMMARY

Colonial Cleaners Site
Proposed Remedial Action Plan
Lansing (T), Tompkins County
Site No. 7-55-011

The Proposed Remedial Action Plan (PRAP) for the Colonial Cleaners Site was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on February 7, 2001. This Plan outlined the Interim Remedial Measures (IRMs) that have been completed at the site to address contaminated soil and groundwater and, based on the effectiveness of the IRMs, proposed the No Further Action alternative as the remedy for the site.

The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was held on February 26, 2001 which included a presentation of the Remedial Investigation (RI) and a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. No written comments were received during the public comment period for the PRAP, which ended on March 14, 2001.

This Responsiveness Summary responds to all questions and comments raised at the February 26, 2001 public meeting.

The following are the questions and comments received at the public meeting, with the NYSDEC's responses:

Question 1: Has the property located at 1910 East Shore Drive been sampled?

Response 1: Contamination was initially identified in the groundwater samples from the drinking water well on the property. PCE was detected in 1990 at a concentration of 31.9 parts per billion (ppb). Two monitoring wells were installed in 1994 on this property downgradient of the Colonial Cleaners facility. PCE was detected in one of the wells, W-2, at a concentration of 12 ppb. In 1997 PCE was detected at a concentration of 1 ppb in well W-2. Four soil samples were also collected on this property from a depth of approximately 3 feet at locations about 60 feet west of the boundary of the site. No contamination was detected in these soil samples.

Comment 2: The presence of contamination has affected the value of nearby property (1910 East Shore Drive). This contamination will be there forever. They shouldn't be allowed to downgrade the site from a Class 2 to a Class 4.

Response 2: The IRMs that have been implemented and continue to operate at the site are expected to remove the contamination from the soil and groundwater at the site. This is the basis for the No Further Action remedy proposal. As such, the site now meets the definition of a Class 4 site as specified in 6 NYCRR Part 375. A site which is designated Class 4 on the New York State Registry of Inactive Hazardous Waste Disposal Sites is defined as one which has been substantially remediated and/or closed but that requires continued operation, maintenance and/or monitoring.

Question 3: What happened after the 1990 discovery of contamination? Did operations continue as in the past?

Response 3: Since the detection of dry cleaning constituents in the onsite wastewater systems, the tanks have been cleaned and a number of measures have been implemented to prevent the continued entry of dry cleaning compounds to these systems. These actions included the installation of a "closed loop" dry cleaning system to prevent releases of PCE during equipment operation and maintenance; employees are advised of spill control procedures to prevent spilled or dripped materials from entering drains or sinks; and clothing which has previously been dry cleaned is no longer allowed to be laundered in the detergent wash operation.

Question 4: How long will the site remain a Class 4?

Response 4: Monitoring the effectiveness of the IRMs will continue on a routine basis as specified in the Operation and Maintenance Plan. This monitoring includes sampling of soil and groundwater from the areas of contamination. The IRMs will be required to operate until it can be demonstrated that contaminant concentrations have been reduced to below cleanup standards established by the NYSDEC. It is expected this will take several years of continued operation to accomplish, at which time the site would be eligible for delisting (removal) from the New York State Registry of Inactive Hazardous Waste Sites.

Question 5: Will there be any deed restrictions placed on the property?

Response 5: The need for any deed restrictions on the property will be assessed at the conclusion of active remediation. In the meantime, the potential for exposure by future construction workers will be addressed by the requirement that proper health and safety procedures be implemented for any intrusive work at the site. The Operation and Maintenance Plan includes a Health and Safety Plan which discusses the procedures to be employed should intrusive work be necessary.

Question 6: Was sampling performed down gradient toward Gulf Creek?

Response 6: Samples were collected from a drain tile discharge to the tributary of Gulf Creek along the north side of the site. Contamination was identified in the discharge, therefore the drain was plugged eliminating discharge to surface water. Groundwater monitoring wells were installed and sampled downgradient of the source area, on adjacent property. Sampling results did not warrant additional monitoring wells in the direction toward Gulf Creek.

APPENDIX B

Administrative Record

The following documents constitute the Administrative Record for the Colonial Cleaners Site Record of Decision.

January 1996	Focused Remedial Investigation Work Plan, C&H Engineers, P.C.
June 1997	Focused Remedial Investigation Report, C&H Engineers, P.C.
January 1998	IRM Data Report, C&H Engineers, P.C.
August 1998	IRM Data Report, C&H Engineers, P.C.
February 2001	Proposed Remedial Action Plan
March 2001	Responsiveness Summary for Proposed Remedial Action Plan (Appendix A of ROD)