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Summary of Environmental Issues and Investigation Plan Tenneco Packaging Macedon Plant

Submitted to:

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100 North Street
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Submitted by:

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140 Allen's Creek Road
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(716) 271-6430

IT Project No. 775475
July 1998

INTERNATIONAL TECHNOLOGY CORPORATION

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List of Acronyms

AST	Above Ground Storage Tank
EPA	Environmental Protection Agency
GC	Gas Chromatograph
IT	IT Corporation
MEK	Methyl Ethyl Ketone
MPE	Multi-Phase Extraction System
NYSDEC	New York State Department of Environmental Conservation
PCB	Polychlorinated Biphenyls
ppm	parts per million
ppb	parts per billion
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
RSCO	Recommended Soil Cleanup Objective
SVOC	Semi-Volatile Organic Compound
TAGM	Technical Administrative Guidance Manual
TCL	Target Compound List
TPH	Total Petroleum Hydrocarbons
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WQS	New York Water Quality Standards

1.0 Introduction/Background

1.1 Introduction

This report summarizes environmental issues and outlines an investigation plan related to soil and groundwater for the Tenneco Packaging (Tenneco) Macedon Plant, in Wayne County, New York (Site). These issues correspond to investigation areas identified as areas of potential soil and groundwater contamination in the report entitled "Environmental Audit, Tenneco Packaging Speciality Products, Macedon, NY" dated April 17, 1997 (Environmental Audit Report). Information provided in the following sections is based on the Environmental Audit Report, corresponding corrections and comments to the Environmental Audit Report provided in a letter by William Hyatt Jr. of Tenneco to the New York State Department of Environmental Conservation (NYSDEC), dated September 30, 1997, and a site meeting between Tenneco, IT Corporation (IT) and NYSDEC representatives on June 11, 1998.

Provided in the following sections is a discussion of each issue and results of soil and/or groundwater sampling and analysis conducted to date, as presented in the April 17, 1997 Environmental Audit Report and September 30, 1997 letter. In areas where current or historical site operations or available analytical data suggests that potential contamination has not been thoroughly evaluated a plan for additional investigation is provided.

1.2 Project Setting

Tenneco Packaging is located in Macedon in a formerly unified facility which now includes separately owned manufacturing facilities for Tenneco, Mobil's Commercial Films Division and Huntsman Design Products. The total facility is approximately 23.6 acres in area with the plant buildings occupying approximately 92,000 square feet. The facility is bounded by Route 31 to the south, Route 350 to the west, Quaker Road and a truck trailer parking area to the east, and the New York State Barge Canal and a Pennsylvania Central Railroad Spur to the north. The facility location is shown on Figure 1-1. A site detail map showing Tenneco's portion of the property is shown as Figure 1-2. This report only pertains to Tenneco's portion of the property.

The Site contains a multi-phased extraction system which was installed by Mobil Chemical for additional remediation of the soil and groundwater at the site in the area of a 5,000 gallon lacolene and 500 gallon fuel oil spill which occurred in the 1980's. Mobil shut down the system in April 1996 with NYSDEC concurrence.

1.3 Site Geology

Based on information provided in the April 17, 1997 Environmental Audit Report, the overburden at this site is predominantly dark yellow-brown to dark gray, silty sand with traces of fine to coarse gravel.

Bedrock at the Site consists of shales and dolostones of the Salina Group. Depth to bedrock was not determined during the investigation, with borings terminated at approximately 12 feet below ground surface.

Groundwater at the Project site was encountered at depths ranging from 6.66 feet to 9.4 feet below ground surface. The April 17, 1997 Environmental Audit Report interpreted groundwater flow to the east, parallel to the canal.

2.0 Summary of Environmental Issues

This section presents a summary of environmental issues for the Site. These are grouped into issues for which investigation is considered complete and no further action is planned or for which additional investigation is considered warranted. These issues correspond to individual investigation areas identified in the April 17, 1997 Environmental Audit Report and general issues related to soil and groundwater quality at the Site. Individual investigation areas and corresponding sample locations are identified on Figure 2-1. The investigation area designations provided on this figure correspond to the designations provided in the April 17, 1997 Environmental Audit Report and are used for reference in the following sections.

During the investigation for the April 17, 1997 Environmental Audit Report, samples were collected for onsite and offsite analysis. The onsite analysis was for Volatile Organic Compounds using a mobile gas chromatograph (GC). The onsite analysis was used as a screening tool to aid in determining the depth and analysis for samples submitted to the offsite laboratory. Samples submitted to the offsite laboratory were analyzed for a combination of the following parameters:

- Target Compound List (TCL) Volatile Organic Compounds (VOC) by EPA Method 8260
- TCL Semi-Volatile Organic Compounds (SVOC) by EPA Method 8270
- Resource Conservation and Recovery Act (RCRA) Metals by EPA Methods 6010/7470
- Polychlorinated Biphenyls (PCB) by EPA Method 8081 (soil samples only)
- Total Petroleum Hydrocarbons (TPH) by EPA Method 418.1 (soil samples only)

Analytical results from the offsite analysis were compared to the following regulatory standards/guidance values:

- ***SOIL***

  TCL VOC, TCL SVOC, PCB

  Results were compared to the Recommended Soil Cleanup Objective (RSCO) listed in the NYSDEC Technical Administrative Guidance Manual HWR-94-4046 revised April 1995 (TAGM 4046). The RSCOs in TAGM 4046 are used as a guideline for evaluating a site. Factors effecting the applicability of TAGM 4046 include the regulatory status of the site, and site specific factors such as potential receptors and contaminant mobility. A summary of analytical results which exceed the RSCO is provided in Table 2-1. These results are considered to exceed regulatory comparison values.

RCRA Metals

Results were compared to TAGM 4046 RSCO and the following background levels: Eastern USA Background listed in TAGM 4046 for Arsenic, Barium, Cadmium, Chromium, Mercury and Selenium; residential screening level for Lead (400 ppm) listed in TAGM 4046; and Eastern US background for Silver (0.01 - 5 ppm) listed in the publication "Metals in Soils: A Brief Summary" by Barrett, 1982. The RSCOs in TAGM 4046 are used as a guideline for evaluating a site. Factors effecting the applicability of TAGM 4046 include the regulatory status of the site, and site specific factors such as potential receptors and contaminant mobility. A summary of analytical results which exceed both the RSCO and Background is provided in Table 2-1. These results are considered to exceed regulatory comparison values.

TPH

No standard or guidance value is available for TPH analysis. A summary of TPH results is provided in Table 2-1.

- ***GROUNDWATER***

  TCL VOC, TCL SVOC, RCRA Metals

  Results were compared to the New York Water Quality Standards (WQS), 6NYCRR Part 703, for Class GA waters. A summary of results which exceed the WQS is provided in Table 2-2. These results are considered to exceed regulatory comparison values.

The following subsections provide a brief summary of sampling and offsite analysis conducted at the Project site for the April 17, 1997 Environmental Audit Report, corresponding results above regulatory comparison numbers and discussion of results.

2.1 Areas of Completed Investigation

The following is a summary of environmental issues for which data suggests minimal impact, if any, to the environment from past operations. Subsequently, additional investigation is not considered warranted, and no further action is planned with respect to these issues.

Tenneco recognizes that there are areas on site that will continue to be investigated (see Section 2.2). As the investigation of these areas unfolds, additional data may come to light which suggests that the source of the contamination originated in one or more of the areas where Tenneco believes that the investigation is complete.

what?

2.1.1 Former Underground Fuel Line (MA-4)

A total of two soil samples were collected for analysis from borings MA-4A and MA-4B in the area of a former underground fuel line. The two samples were analyzed for VOCs, SVOCs,

Metals and TPH. Metals and VOC results were below regulatory comparison values. TPH and SVOCs were not detected. Therefore, the data suggests that the former underground fuel line has not impacted the subsurface soil and additional sampling is not required.

2.1.2 Former MEK ASTs (MA-5)

One soil sample was collected for analysis from boring MA-5, located in the area of three former Methyl Ethyl Ketone (MEK) above ground storage tanks (AST). The sample was analyzed for VOCs, SVOCs and Metals. VOC and Metals results were below regulatory comparison values. SVOCs were not detected. One groundwater sample (designated as MA-2) was collected from a temporary well installed in the MA-5 boring. This sample was also analyzed for VOCs, SVOCs and Metals (see Section 2.2.1). MEK was not detected in this sample. Therefore, the data suggests that the former MEK storage tanks have not impacted the subsurface soil and additional sampling related to these tanks is not required.

2.1.3 Former Fuel Oil AST and Diesel UST (MA-7)

A total of three soil samples were collected from Borings MA-7A and MA-7B, located in the area of two former 1,000 gallon fuel oil ASTs and one 500-gallon diesel underground storage tank (UST). Two samples were analyzed for VOCs, SVOCs and TPH. The third sample was analyzed for VOCs, SVOCs and Metals. TPH was detected in the soil samples from boring MA-7A and MA-7B ~~analyzed for TPH~~ at concentrations of 103 parts per million (ppm) and 209 ppm, respectively. No VOCs and SVOCs were detected from these samples. The remaining sample had no compounds detected above the regulatory comparison values. TPH analysis is used as a screening tool only and the hazardous constituents of fuel oil were not detected in the VOC and SVOC analysis above regulatory comparison values. Therefore, the data suggests that the former fuel oil and diesel storage tanks have not impacted the subsurface soil and additional sampling is not required.

2.1.4 Lube Oil Drum Storage (MA-9)

Two soil samples were collected for analysis from boring MA-9, located in the area which formerly stored drums filled with lube oil. During sampling black resin and coal ash were noted in the fill material. Both samples were analyzed for TPH only. TPH was detected in each sample at low levels (77.2 and 77.6 ppm), and could be present due to the fill material. TPH analysis is used as a screening tool only. Therefore, the data suggests that the former lube oil drum storage area has not impacted the subsurface soil and additional sampling is not required.

2.1.5 Ink Tray Wash Room (MA-10)

One soil sample was collected for analysis from boring MA-10, located directly outside the ink tray wash room. This wash room contains a sump which is connected to a waste ink UST (MA-8). The sample was analyzed for VOCs, SVOCs and Metals. Metals were detected below regulatory comparison values. VOCs and SVOCs were not detected. Therefore, the data suggests that the sump has not impacted the subsurface soil and additional sampling is not required.

2.1.6 Background Sample Locations (MA-14)

One soil sample was collected for analysis from boring MA-14, located up-gradient of the Site, to determine background soil conditions. The sample was analyzed for Metals. Metals results were below regulatory comparison values. However, since only one sample was collected, the metals results are not considered representative of background conditions. Instead, the range of background metals provided in TAGM 4046 and Barrett, E.L., 1982 are used for comparison of metals results for the Project.

Took only one sample for BG - now not happy with results

2.1.7 Former Glycol AST (MA-15)

A glycol AST was located south of Building 2. This tank was removed in approximately 1978 and was not in service for several years prior to removal. A total of two soil samples were collected for analysis from borings MA-15A and MA-15B, located near a former glycol AST. The samples were analyzed for VOCs and SVOCs. No VOC or SVOC compounds were detected.

The analytical conducted was not adequate to determine the presence of Glycol in the soil since Glycol is not included in the list of VOCs or SVOCs. However, most forms of Glycol are not regulated and there are no records indicating that the Glycol stored in the tanks included the regulated forms. In addition, there are no recorded spills associated with the tank. Glycol is both soluble in water and biodegradable. Therefore, there is no indication that the Glycol AST has adversely impacted the soil and, as a result, no additional sampling is proposed for this area.

2.1.8 Former Methyl Amyl Alcohol AST (MA-16)

A Methyl Amyl Alcohol AST was located in an area west of Building 12 and north of Building 10. This tank was taken out of service in September 1983 and removed in 1987. A total of two soil samples were collected for analysis from borings MA-16A and MA-16B, located in the area

of a former Methyl Amyl Alcohol AST. The samples were collected from a depth of 1.0 to 2.0 feet in an area covered by asphalt. The samples were analyzed for VOCs and SVOCs. Four SVOC compounds were detected in the sample from MA-16B slightly above regulatory comparison levels. These compounds were Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene and Chrysene. No VOCs were detected from this sample and no VOCs or SVOCs were detected in the sample from MA-16A.

The analytical conducted was not adequate to detect Methyl Amyl Alcohol since this compound is not included in the list of VOCs or SVOCs. There are no recorded spill from the Methyl Amyl Alcohol AST and there are no regulatory comparison values for this compound. Methyl Amyl Alcohol is both soluable in water and biodegradable. Therefore, there is no indication that the Methyl Amyl Alcohol AST has adversely impacted the soil and the low levels of SVOCs detected in the sample may be attributed to the asphalt. As a result, no additional sampling is proposed for this area.

2.1.9 Former Gasoline AST (MA-17)

One sample was collected for analysis from boring MA-17, located in the area of a former gasoline AST. The sample was analyzed for VOCs. No compounds were detected above regulatory comparison values. Therefore, the data suggests that the former gasoline AST has not impacted the subsurface soil and additional sampling is not required.

2.1.10 Former Electrical Transformer (MA-18)

One soil sample was collected for analysis from boring MA-18, located in the area of a former electrical transformer. The sample was analyzed for TPH and PCBs. TPH was detected at low levels (49.4 ppm). No PCB compounds were detected. TPH analysis is used as a screening tool only. Therefore, the data suggests that the former electrical transformer has minimally impacted the subsurface soil and additional sampling is not required.

2.1.11 Former UST of Unknown Contents (MA-19)

One soil sample was collected for analysis from boring MA-19, located in the area of a former UST that contained unknown materials. The sample was analyzed for VOCs, SVOCs and TPH. No compounds were detected. Therefore, the data suggests that the former UST of unknown contents has not impacted the subsurface soil and additional sampling is not required.

2.1.12 Building 6A Former Ink Room (MA-20)

One sample was collected for analysis from boring MA-20, located in the area of the former ink room outside Building 6A. The sample was analyzed for VOCs, SVOCs and Metals. No SVOCs were detected and VOC results were below regulatory comparison levels. Metals results were below regulatory comparison levels except mercury which was detected at a concentration of 0.266 ppm. This level is above the RSCO of 0.1 ppm and slightly above the background range of 0.001 to 0.2 ppm listed in TAGM 4046. Since this result is only slightly above background and groundwater samples have not detected mercury above regulatory comparison levels, the former ink room is not considered to have impacted subsurface soils and additional sampling is not proposed. Refer to Section 2.2 for discussion of groundwater results.

2.1.13 Courtyard

A potential area of concern identified in the April 17, 1997 Environmental Audit Report is the courtyard surrounded by Buildings 13, 7S and 3A. Ink products were reportedly observed at the depth of a utility line which was under repair. This report came from a single employee's recollection. Since there are no processes in the area which use or store ink products, and there are no additional accounts of ink products encountered in the soil in this area, the employee's account is considered questionable and additional sampling of soils in this area is not proposed.

2.1.14 Wastewater UST

A potential area of concern identified in the April 17, 1997 Environmental Audit Report is a possible wastewater UST located west of Building 10. There is/was no wastewater UST located west of Building 10; therefore, investigation of this area is not proposed.

Upon further investigation, it was determined that the wastewater UST referenced in the April 17, 1997 Environmental Audit Report is a tank formally located north of Building 10, not west. This tank was situated in the same general location as the current waste ink tank (see Section 2.2.4). The wastewater tank was installed in 1969 and removed prior to 1987, when the waste ink tank was installed. Refer to Section 2.2.4 for discussion of previous soil sampling and analysis conducted in this area and corresponding results.

2.2 Areas of Further Investigation

The following is a summary of environmental issues for which data suggests a potential impact to the environment from past operations. Additional investigations to further address these issues are therefore proposed, as outlined in Section 3.0.

2.2.1 Groundwater Sampling Locations (MA-1, MA-2, MA-3)

Groundwater samples were collected from temporary wells at MA-1, MA-2 and MA-3 and analyzed for VOCs, SVOCs and Metals. Arsenic, Barium, Chromium, Lead and Selenium were detected at levels above the WQS in all three samples. Cadmium was also detected in the sample from MA-1 at levels above WQS. The three temporary wells were installed without a gravel pack and were not sufficiently purged prior to sample collection. As a result of the well construction and the sampling procedure, the water samples were very turbid. Therefore, the elevated metals results may be due to metals bound in the suspended sediment of the sample.

The groundwater samples from MA-2 and MA-3 detected Toluene at concentrations of 29 parts per billion (ppb) and 12 ppb, respectively. The WQS for Toluene is 5 ppb. Ashland Chemical Company (Ashland) manufactures Lacolene. According to Ashland, Lacolene is made up of C-7 hydrocarbons, and contains Toluene, no metals and no SVOCs. Due to the fact that Toluene is known to be in Lacolene, it is possible that the Toluene found in the groundwater at MA-2 and MA-3 comes from the Lacolene spill. MA-2 very far away ds MA-3 is ug whatabout MA-7?

Given these results, the installation of permanent wells and sampling after proper development and purging is recommended to confirm the presence or absence of elevated metals concentrations and VOCs in the groundwater. In addition, hydrogeologic testing is recommended to determine any potential off-site migration. The proposed installation, sampling and testing of wells is discussed in Section 3.0.

2.2.2 Groundwater Multi-Phase Extraction System

Existing well MW-7, part of the Multi-Phase Extraction System (MPE), was sampled and analyzed for VOCs, SVOCs and Metals. No VOCs were detected. SVOCs detected above the WQS of 2.0 ppb were Benzo(a)anthracene, Benzo(b)fluoranthene and Chrysene at concentration of 6 ppb, 11 ppb and 8 ppb, respectively. Benzo(a)pyrene was also detected at a concentration of 7.5 ppb which is above the WQS value of non-detect. Since these compounds were detected at low levels and were not detected in other groundwater samples collected (MA-1, MA-2 and

MA-3), the SVOC results are considered to be localized and any impact to groundwater quality minimal.

Metals results detected the following parameters above WQS values: Barium, Chromium and Lead. MW-7 was not purged prior to sampling and is of unknown construction. The water sample collected was reported as being very turbid. Therefore, the elevated metals results may be due to metals bound in the suspended sediment of the sample.

Given these results, the installation of permanent wells and sampling after proper development and purging is recommended to confirm the presence or absence of elevated metals concentrations and SVOCs in the groundwater. In addition, hydrogeologic testing is recommended to determine any potential off-site migration. The proposed installation, sampling and testing of wells is discussed in Section 3.0.

2.2.3 Former Gasoline UST (MA-6)

A total of two soil samples were collected for analysis from borings MA-6A and MA-6B, located in an area formerly containing gasoline underground storage tanks (UST). During sampling of boring MA-6B petroleum odors were noted. Samples were analyzed for VOCs, SVOCs and TPH. The soil sample from boring MA-6B detected TPH at a concentration of 3,780 ppm. TPH was not detected in the sample from boring MA-6A. VOCs and SVOCs were not detected in either sample. TPH analysis is used as a screening tool only and the hazardous constituents of gasoline, such as benzene and toluene, were not detected in the analysis above regulatory comparison values. However, to further investigate the elevated TPH level, two soil borings and a groundwater well will be installed in the vicinity of MA-6B (see Section 3.0).

2.2.4 Waste Ink Tank and Solvent USTs (MA-8)

A total of two soil samples were collected for analysis from borings MA-8A and MA-8B, located in the area of the existing waste ink tank and the former and existing solvent USTs. A sample from MA-8A was collected from a depth of 6.5 - 7.1 feet and a sample from MA-8B was collected from a depth of 6.0 - 6.8 feet. These samples were analyzed for VOCs, SVOCs and Metals. VOCs were not detected and all other results were below regulatory comparison values. ~~Therefore, the data suggests that the waste ink tank and solvent tanks have not impacted the subsurface soil and additional sampling is not required.~~

The borings were advanced beyond the depth of sample collection. A petroleum odor was noted near the apparent groundwater table (approximately 7 to 8 feet below ground surface). Borings MA-8A and MA-8B are located in the vicinity of the 1982 lacolene spill. A soil boring will be installed in the vicinity of MA-8A and MA-8B. This boring, along with MW-7 replacement well (discussed in Section 2.2.2) will be sampled to determine whether or not the petroleum odors noted in MA-8A and MA-8B are from the 1982 lacolene spill.

3.0 Investigation Plan

The following provides an outline for further investigation in response to issues listed in Section 2.2. Approximate locations of proposed sampling points are provided on Figure 3-1.

3.1 Monitoring Well Installation

In order to supplement analytical data from previous groundwater sampling activities (see Section 2.2.1, 2.2.2 and 2.2.3), installation of five new permanent monitoring wells is proposed. Data collected from these wells will be used to help determine the following:

- Confirm groundwater flow direction;
- Confirm the theory that the high metals found in previous groundwater samples are due to turbid samples;
- Determine the source and extent of contaminants detected in the groundwater;
- Establish up gradient background levels; and,
- Determine the level of contaminants, if any, in the groundwater leaving the site.

The newly installed wells should be located in the general vicinity of MA-1, MA-2, MA-3, MW-7, and MA-6. During installation, continuous soil samples should be collected, visually inspected and screened with a organic vapor analyzer. The wells should be constructed using 2-inch diameter PVC with a maximum screen length of 10 feet. Clean quartz sand followed by a bentonite seal and cement grout should be placed around the well screen and riser. Upon completion of installation, each of the wells should be developed and tested for hydraulic conductivity. Each newly installed well should be purged and sampled for Gasoline Range Organics by Method 8015 GRO, Diesel Range Organics (with fingerprinting) by Method 8100M, VOCs by Method 8260, SVOCs by EPA Method 8270, and RCRA Metals (filtered and unfiltered). During sampling turbidity of the sample water will be measured. Quarterly water level monitoring for one year of the five newly installed wells should be conducted to determine changes in groundwater flow direction related to seasonal changes in precipitation and changes in the level of the adjacent Canal.

3.2 Soil Sampling

In order to supplement analytical data from previous sampling activities (see Section 2.2.3 and 2.2.4), three additional soil borings will be installed. Two borings will be installed in the vicinity of MA-6 B, and the third boring will be installed in the vicinity of MA-8A and MA-8B.

Continuous soil samples will be collected, visually inspected and screened with an OVA. These borings will be advanced to a depth of two feet below contamination, based on visual inspection of the soil and OVA results. The soil sample with the highest OVA reading from each boring will be submitted for analysis of Gasoline Range Organics by Method 8015 GRO, Diesel Range Organics(with fingerprinting) by Method 8100M, VOCs by Method 8260, SVOCs by EPA Method 8270, and RCRA Metals.

TABLES

TABLE 2-2

Summary of Groundwater Sample Results*
Tenneco Packaging
Macedon, NY

		Sample Location/Designation			
		Southern edge of property	*Northeastern edge of property, North of B-16*	*Northwest edge of property, North of B-21*	*In area of Lacoline spill*
Constituents	**WQS**	**MA-1**	**MA-2**	**MA-3**	**MW-7****
Volatile Organic Compounds					
Toluene	5		29	12	
Semi-Volatile Organic Compounds					
Benzo(a)anthracene	2.0				6
Benzo(a)pyrene	ND				7.5
Benzo(b)fluoranthene	2.0				11
Chrysene	2.0				8
Inorganic Analytes					
Arsenic	25	217	70.8	39.2	
Barium	1000	5250	926	537	437
Cadmium	10	17.6			
Chromium	50	667	403	237	98.4
Lead	25	791	973	84.2	376
Selenium	10	381	101	40	

Notes:

All results in parts per billion (ppb)

ND: Non Detect

WQS: New York Water Quality Standards for Class GA waters, 6 NYCRR Part 703

* Table shows all detected TPH values and results exceeding NY Water Quality Standards

** MW-7 is part of the existing groundwater extraction system. Sample also refered as MPE.

why aren't all Results shown?

TABLE 2-1

Summary of Soil Sample Results*
Tenneco Packaging
Macedon, NY

			Sample Location/Designation/Depth (feet)							
			South of former gasoline USTs North of Bldg.-11	*Adjacent to Canal and East of Bldg.-12*	*Adjacent to Canal and East of Bldg.-12*	*South of fire tank, North of Bldg.-7N*	*South of fire tank, North of Bldg.-7N*	*West of Bldg.-12*	*North of Bldg.-16, Adjacent to Canal*	*Outside the Northwest corner of Bldg.-6A*
			MA-6B-2	MA-7A-3	MA-7B-2	MA-9-1	MA-9-2	MA-16B-2	MA-18-2	MA-20-2
Constituents	**RSCO**	**BG**	7.0 - 8.0	4.0 - 4.8	6.4 - 7.1	1.0 - 1.5	3.0 - 3.5	1.0 - 2.0	4.6 - 5.6	4.1 - 5.0
Volatile Organic Compounds										
none										
Semi-Volatile Organic Compounds										
Benzo(a)anthracene	0.224	NA						0.67		
Benzo(a)pyrene	0.061	NA						0.55		
Benzo(b)fluoranthene	0.224	NA						0.83		
Chrysene	0.4	NA						0.63		
Inorganic Analytes										
Mercury	0.1	0.001 - 0.2								0.266
Total Petroleum Hydrocarbons										
TPH	NA	NA	3780	103	209	77.2	77.6		49.4	

Notes:

All results in parts per million (ppm)

RSCO: Recommended Soil Cleanup Objective listed in NYSDEC Technical Administrative Guidance Manual HWR-94-4046 revised April 1995 (TAGM 4046)

BG: Background - Eastern USA Background listed in TAGM 4046 (Arsenic, Barium, Cadmium, Chromium, Mercury, Selenium), residential screening level of 400 ppm listed in TAGM 4046 (Lead), and Eastern US background of 0.01 - 5 ppm listed in "Metals in Soils: A Brief Summary" by Barrett. E.L. 1982 (Silver).

* Table shows all detected TPH values and results exceeding NY Recommended Soil Cleanup Objective and Background

FIGURES

DRAWING NUMBER

CHECKED BY | APPROVED BY

DRAWN BY

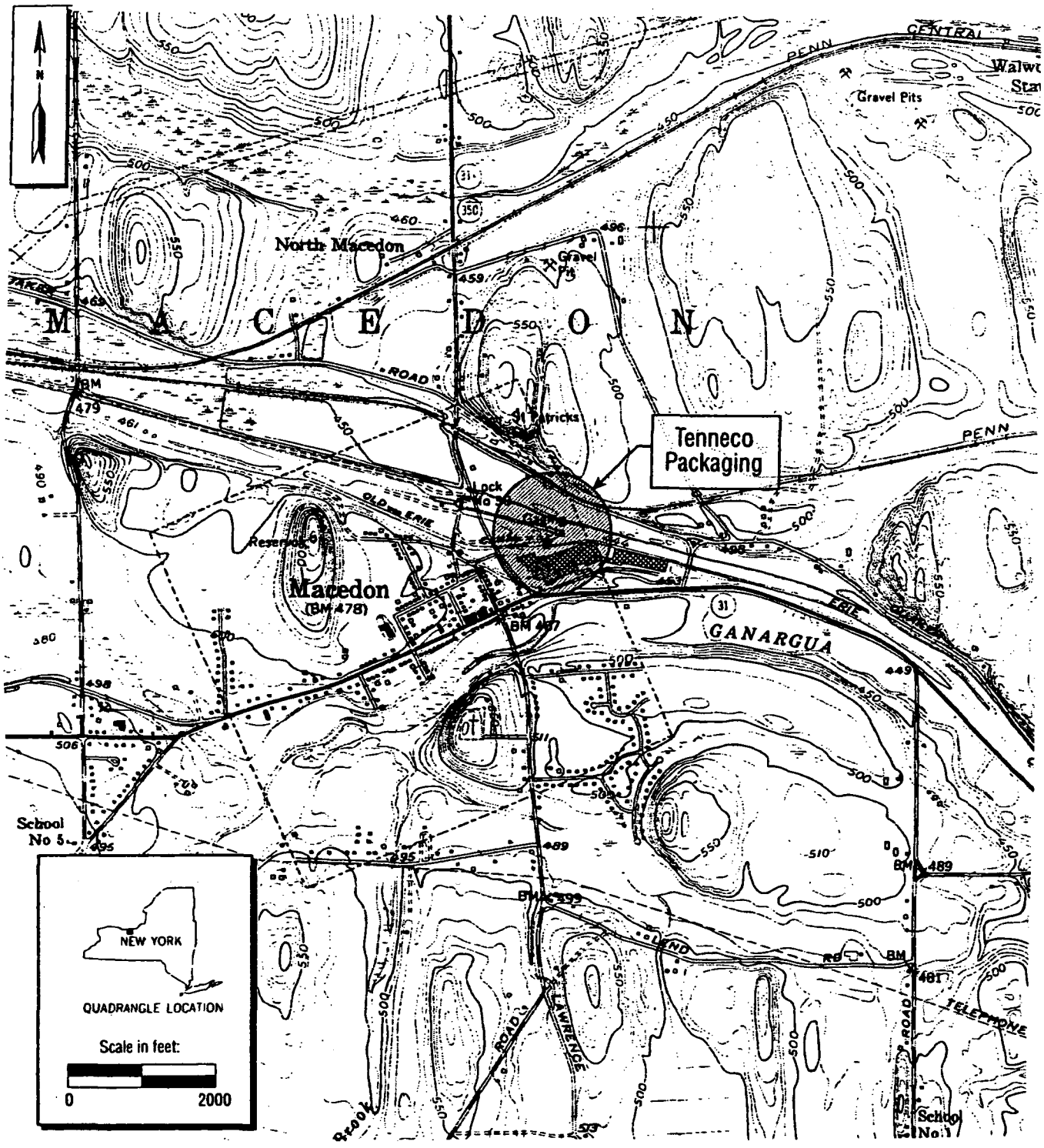

FIGURE 1-1
Project Location

Tenneco Packaging
Macedon, New York

Prepared For:

Tenneco Packaging

INTERNATIONAL TECHNOLOGY CORPORATION

132298

DRAWING NUMBER

CHECKED BY
APPROVED BY

DRAWN BY

OLD ERIE CANAL

FLOW

approx location spring area

FORMER GASOLINE USTs

FORMER SOLVENT TANKS

SOLVENT TANKS

INK STORAGE

TRAY WASH

COOLING TOWER

FIRE TANK

MEK TANKS REMOVED BY FILMS DIV. 1986

BLDG. 34

GAS PUMP REMOVED 10/91

MA-1 MA-2 MA-3 MA-4A MA-4B MA-5 MA-6A MA-6B MA-7 MA-7B MA-8A MA-8B MA-9 MA-10 MA-14 MA-15A MA-15B MA-16A MA-16B MA-17 MA-18 MA-19 MA-20 MW-7

BLDG. 11 BLDG. 21 BLDG. 21A BLDG. 22 BLDG. 5 BLDG. 10 BLDG. 6 BLDG. 6A BLDG. 6B BLDG. 7N MACHINE SHOP BLDG. 7S MAINTENANCE BLDG. 8 BLDG. 10A BLDG. 10C BLDG. 13 BLDG. 14A BLDG. 16 BLDG. 16A BLDG. 16B BLDG. 1 BLDG. 2 BLDG. 3 BLDG. 3A

APPROXIMATE LOCATON OF OLD UNDERGROUND FUEL LINES

piezometer to give shallow GW info.

Legend:

- ● Previous Well Location
- ⊙ Previous Soil Sampling Location
- ■ Proposed Well Location (approximate) (3)
- ⊡ Proposed Soil Sampling Location (approximate)

(3) + 2 on-site (field chosen)

Notes:

1. Base plan and previous sample locations from CH2M HILL's report "Environmental Audit Report, Tenneco Packaging, Macedon, New York" dated April 17, 1997.

FIGURE 3-1
Proposed Sample Locations

Tenneco Packaging
Macedon, New York

Prepared For:

Tenneco Packaging

0' 100' 100'

INTERNATIONAL TECHNOLOGY CORPORATION

65360

DRAWING NUMBER

CHECKED BY

APPROVED BY

DRAWN BY

FORMER SOLVENT TANKS

SOLVENT TANKS

BLDG. 12

FIRE TANK

COOLING TOWER

BLDG. 34

INK STORAGE

BLDG. 11

TRAY WASH

BLDG. 21

MACHINE SHOP

BLDG. 7N

BLDG. 16A

BLDG. 16

BLDG. 16B

BLDG. 8

BLDG. 5

BLDG. 10

APPROXIMATE LOCATON OF OLD UNDERGROUND FUEL LINES

MAINTENANCE

BLDG. 7S

BLDG. 21A

BLDG. 13

BLDG. 10A

BLDG. 10C

BLDG. 22

BLDG. 6

Boiler Room

BLDG. 2

BLDG. 3A

BLDG. 1

BLDG. 6A

BLDG. 6B

0' 100' 100'

65360

Notes:

1. Base plan from CH2M HILL's report "Environmental Audit Report, Tenneco Packaging, Macedon, New York" dated April 17, 1997.

FIGURE 1-2
Site Detail

Tenneco Packaging
Macedon, New York

Prepared For:

Tenneco Packaging

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWING NUMBER

CHECKED BY
APPROVED BY

DRAWN BY

OLD ERIE CANAL

FLOW

FORMER GASOLINE USTs

FORMER SOLVENT TANKS

SOLVENT TANKS

INK STORAGE

COOLING TOWER

FIRE TANK

MEK TANKS REMOVED BY FILMS DIV. 1986

BLDG. 34

GAS PUMP REMOVED 10/91

TRAY WASH

MACHINE SHOP

APPROXIMATE LOCATON OF OLD UNDERGROUND FUEL LINES

MAINTENANCE

BLDG. 21

BLDG. 21A

BLDG. 22

BLDG. 6

BLDG. 5

BLDG. 10

BLDG. 11

BLDG. 7N

BLDG. 16A

BLDG. 16

BLDG. 16B

BLDG. 8

BLDG. 7S

BLDG. 13

BLDG. 14A

BLDG. 10A

BLDG. 10C

BLDG. 2

BLDG. 3

BLDG. 3A

BLDG. 1

BLDG. 6A

BLDG. 6B

MA-1
MA-2
MA-3
MA-4A
MA-4B
MA-5
MA-6A
MA-6B
MA-7A
MA-7B
MA-8A
MA-8B
MA-9
MA-10
MA-14
MA-15A
MA-15B
MA-16A
MA-16B
MA-17
MA-18
MA-19
MA-20
MW-7

Legend:

- ● Previous Well Location
- ⊙ Previous Soil Sampling Location

Notes:

1. Base plan and previous sample locations from CH2M HILL's report "Environmental Audit Report, Tenneco Packaging, Macedon, New York" dated April 17, 1997.

FIGURE 2-1
Previous Sample Locations

Tenneco Packaging
Macedon, New York

Prepared For:

Tenneco Packaging

0' 100' 100'

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