FINAL

INSTALLATION RESTORATION PROGRAM

LONG TERM MONITORING WORK PLAN

SITE 2 - PESTICIDE PIT BURIAL AREA

STEWART AIR NATIONAL GUARD BASE
NEWBURGH, NEW YORK

DECEMBER 1999

Prepared For

AIR NATIONAL GUARD READINESS CENTER

ANDREWS AFB, MARYLAND 20762-5157

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ANDREWS AFB, MARYLAND 20331-6008

Prepared By

ANEPTEK CORPORATION

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LIST OF ACRONYMS/ABBREVIATIONS

ABB	ABB Environmental Services, Inc.
AW	Airlift Wing
ANG	Air National Guard
ANGRC	Air National Guard Readiness Center
EPA	Environmental Protection Agency
HASP	Health and Safety Plan
IAP	International Airport
IDW	Investigative Derived Waste
LTM	Long Term Monitoring
MTA	New York Metropolitan Transit Authority
NYANG	New York Air National Guard
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
PPBA	Pesticide Pit Burial Area
PRAP	Proposed Remedial Action Plan
QAPP	Quality Assurance Project Plan
QAQC	Quality Assurance/Quality Control
Aneptek	Aneptek Corporation
E.C. Jordan	E.C. Jordan Company

SECTION 1.0

1.0 Introduction

This Work Plan outlines the activities for conducting Long Term Monitoring (LTM) of Installation Restoration Program (IRP) Site Number 2 (Site 2), The Pesticide Pit Burial Area (PPBA), at the 105th Airlift Wing (AW), New York Air National Guard (ANG) Base located at Stewart International Airport (IAP), in the Town of Newburgh, New York. This work is being performed by Aneptek Corporation (Aneptek) for the Air National Guard (ANG/CEVR) under National Guard Bureau (NGB) Contract No. DAHA90-97-D-00011 Delivery Order No. 8.

1.1 Scope of Work

The scope of work to be performed at Site 2 is described in the Preferred Remedy as outlined in the Proposed Remedial Action Plan (PRAP, Aneptek October, 1999). The Preferred Remedy involves No Further Action with continued groundwater monitoring. Continued groundwater monitoring to be comprised of semi-annual sampling of three groundwater monitoring wells over a two year period. Samples will be sent to an off-site laboratory for analysis per Environmental Protection Agency (EPA) Method 8081 for chlorinated pesticides. Following each round of sampling, LTM reports will be generated presenting the results of the analysis. An annual LTM report will be submitted at the end of each year incorporating the results of the previous year's analytical results along with any other pertinent information. All sampling procedures, reports and documentation will be in accordance with New York State Department of Environmental Conservation (NYSDEC), the PRAP, and AN requirements.

The primary purpose of this monitoring program is to fulfill the closure requirements for Site 2.

SECTION 2.0

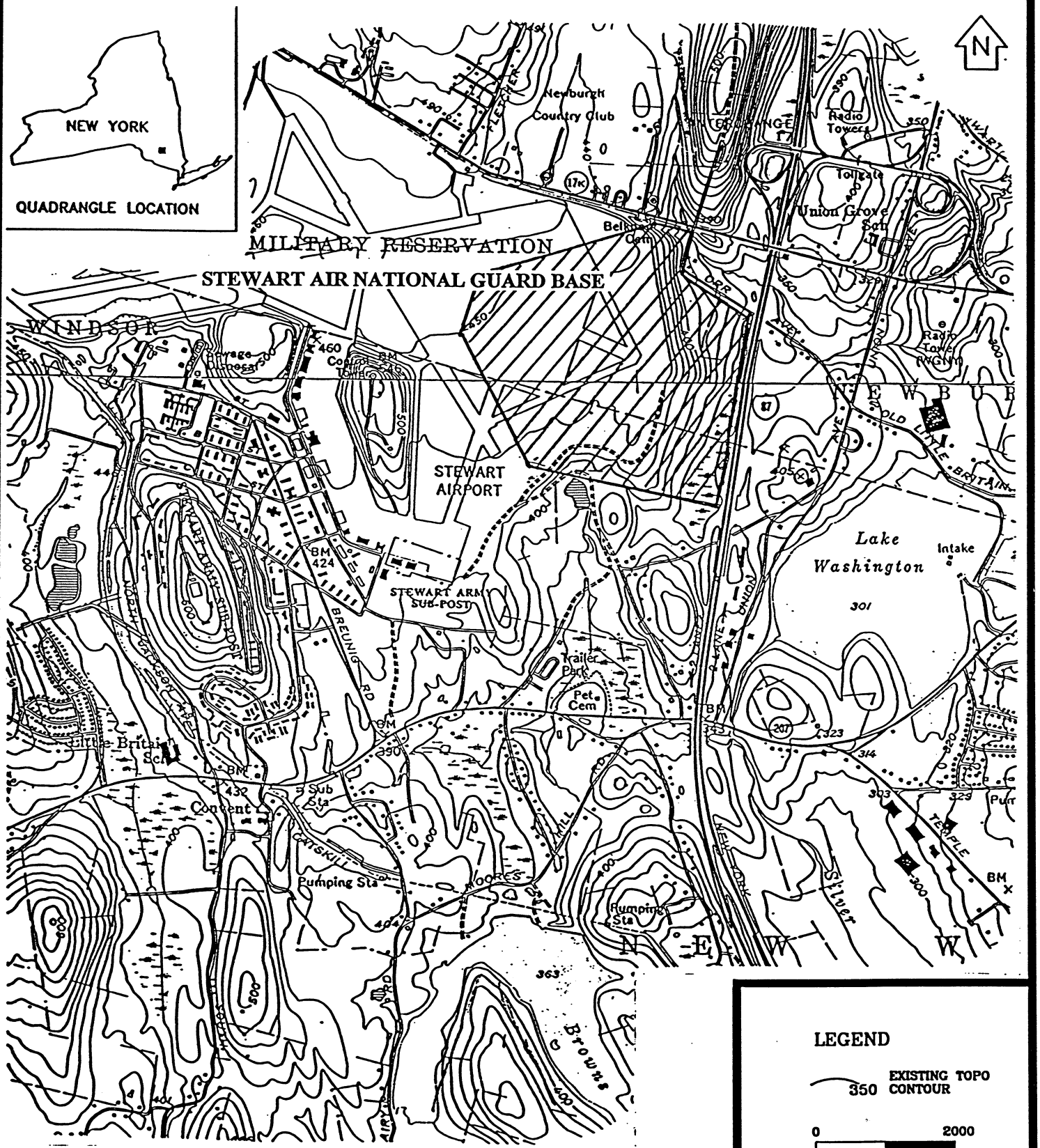
2.0 Site Background

2.1 Base Description and History

The New York Air National Guard Base (the Base) is located at the Stewart International Airport (IAP), approximately 2.5 miles west of the City of Newburgh, New York (Figure 2-1). The airport property occupies approximately 9,800 acres in Orange County NY. The Base facilities occupy approximately 275 acres and are located in the Towns of both Newburgh and New Windsor, New York.

Stewart IAP includes a number of landing strips, taxiways and airport support service areas, in addition to the New York AN Base facilities. The airport facilities are zoned for Industrial usage in the Town of Newburgh, and Airport usage in New Windsor. The Base facilities in Newburgh are bounded on the west and northwest by Industrial Zones, and on the north and east by Interchange Business Zones. In New Windsor, the Base is bounded on the south and southwest by Airport Zones, on the southeast by Planned Industrial Zones, and to the east by Office and Light Industrial Zones. Residential housing is scattered throughout most of these areas (E.C. Jordan, 1989).

The Base is located on property that was originally donated to the City of Newburgh in 1930 for use as a municipal airport. Before that time, the majority of the land was used for agricultural purposes. In 1941, a pilot training facility was constructed for cadets attending the U.S. Military Academy at West Point. From 1941 to 1969, the U.S. Air Force operated the facility as Stewart Air Force Base out of which B-57, F-100, and C-119 aircraft were flown. The aviation facilities were turned over to the State of New York in 1969 and operated by the New York Metropolitan Transit Authority (MTA). The State of New York has had continuous fee ownership of the property since 1969. Civilian aircraft and U.S. Army C-12 and Helos aircraft were operated and maintained during this time. In 1983, operation of the airfield was taken over by the New York State Department of Transportation (NYSDOT). From early 1983 to the present, the 105th AW has leased the southeastern corner of Stewart IAP from New York State. From 1983 to 1985, the unit flew and maintained Cessna O-2 aircraft. In July 1985, the 105th AW began flying the C-5A "Galaxy" aircraft. The Base continues to use these aircraft to conduct strategic airlift missions. A small contingent of the U.S. Marine Corps Reserve Airlift Command also uses a section of the Base for its air-refueling missions using the KC-130 "Hercules" aircraft.



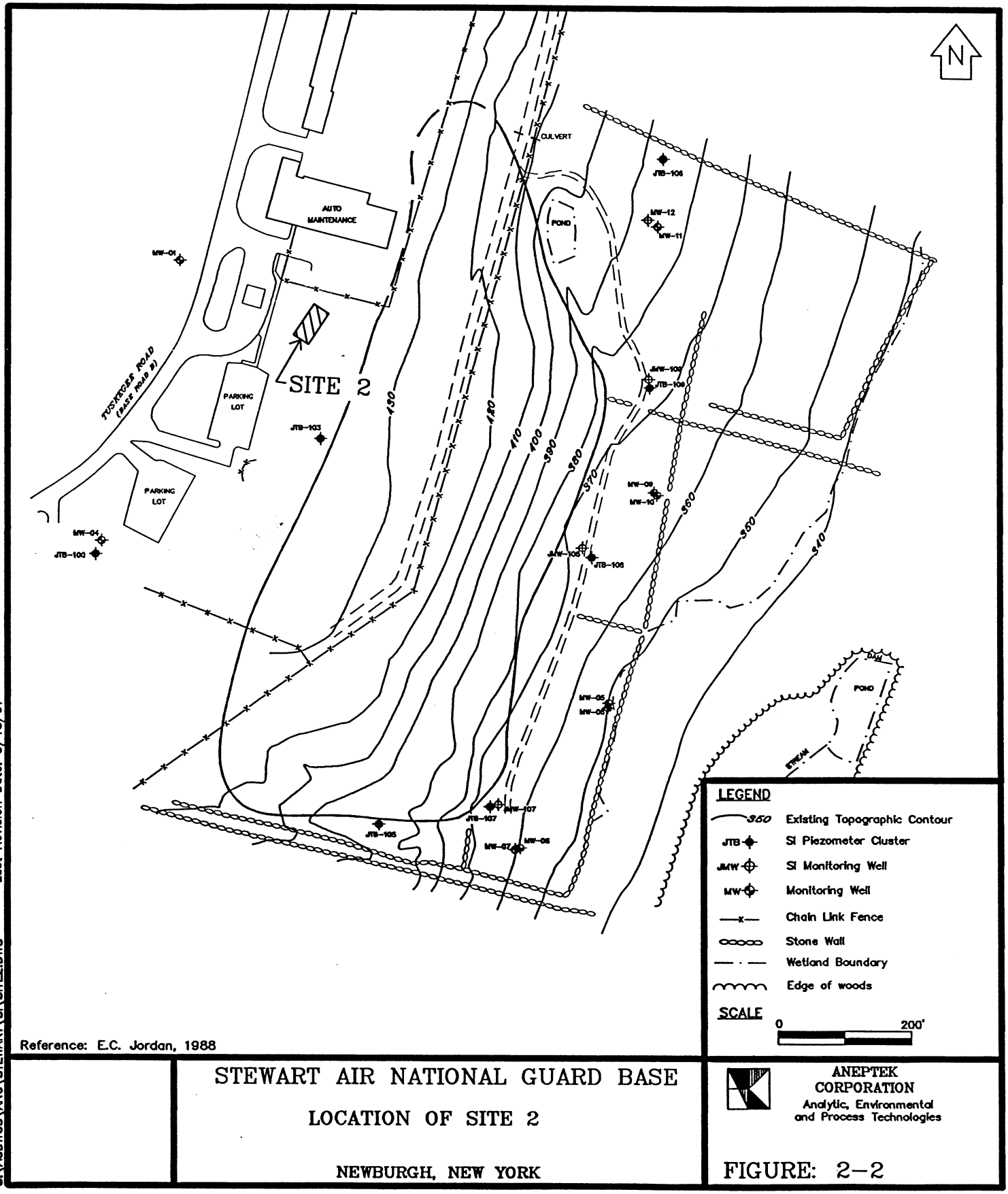
STEWART AIR NATIONAL GUARD BASE
BASE LOCATION MAP
NEWBURGH, NEW YORK

ANEPTEK CORPORATION
Analytic, Environmental and Process Technologies

FIGURE: 2-1

2.2 Site 2 Description and Background

Site 2, the PPBA, is located within the Base boundary and southeast of the airport complex (ABB Environmental Services [ABB], 1992). Site 2 is a former trench, now filled in, which was used in the late 1960's as a pesticide disposal area. The pit, which was approximately 20 feet by 53 feet by 12 feet deep, was apparently used for the disposal of 5-gallon and 55-gallon containers of pesticides. The containers were reportedly punctured prior to placement in the pit (Dames and Moore, 1988). The PPBA was the subject of a source removal in 1988. The location of Site 2 is shown in Figure 2-2.



Reference: E.C. Jordan, 1988

STEWART AIR NATIONAL GUARD BASE

LOCATION OF SITE 2

NEWBURGH, NEW YORK

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FIGURE: 2-2

C:\ACDWGS\ANG\STEWART\SI\SITE2.DWG Last Revision Date: 3/18/97

SECTION 3.0

3.0 Field Program

This field program is to be implemented in conjunction with Section 5.0, Sample Collection Procedures , the Site-Specific Health and Safety Plan (HASP) (Appendix A), the site-specific Quality Assurance Project Plan (QAPP) (Appendix B) and the Standard Operating Procedures (SOPs) (Appendix C), where applicable, as found in the original Remedial Investigation/Feasibility Study (RI/FS) Work Plan (ANEPTEK, 1995).

The field program will consist of collecting groundwater samples from three groundwater monitoring wells on a semi-annual basis for a period of two years.

3.1 Groundwater Sampling

The monitoring wells to be sampled include an existing well, MW-01, and two new wells, MW-16 and MW-17 (see Attachment A). Sampling locations are shown in Figure 3-1. The three wells are screened in shallow bedrock. For each sampling event the samples will be analyzed for chlorinated pesticides according to EPA method 8081.

The monitoring wells will be purged and sampled as described in Section 5.3.3, Groundwater Sampling, and as per SOP No. 4 in Appendix C of the RI/FS Work Plan. Samples will be collected using dedicated bailers in accordance with SOP No. 5 in Appendix C of the RI/FS Work Plan.

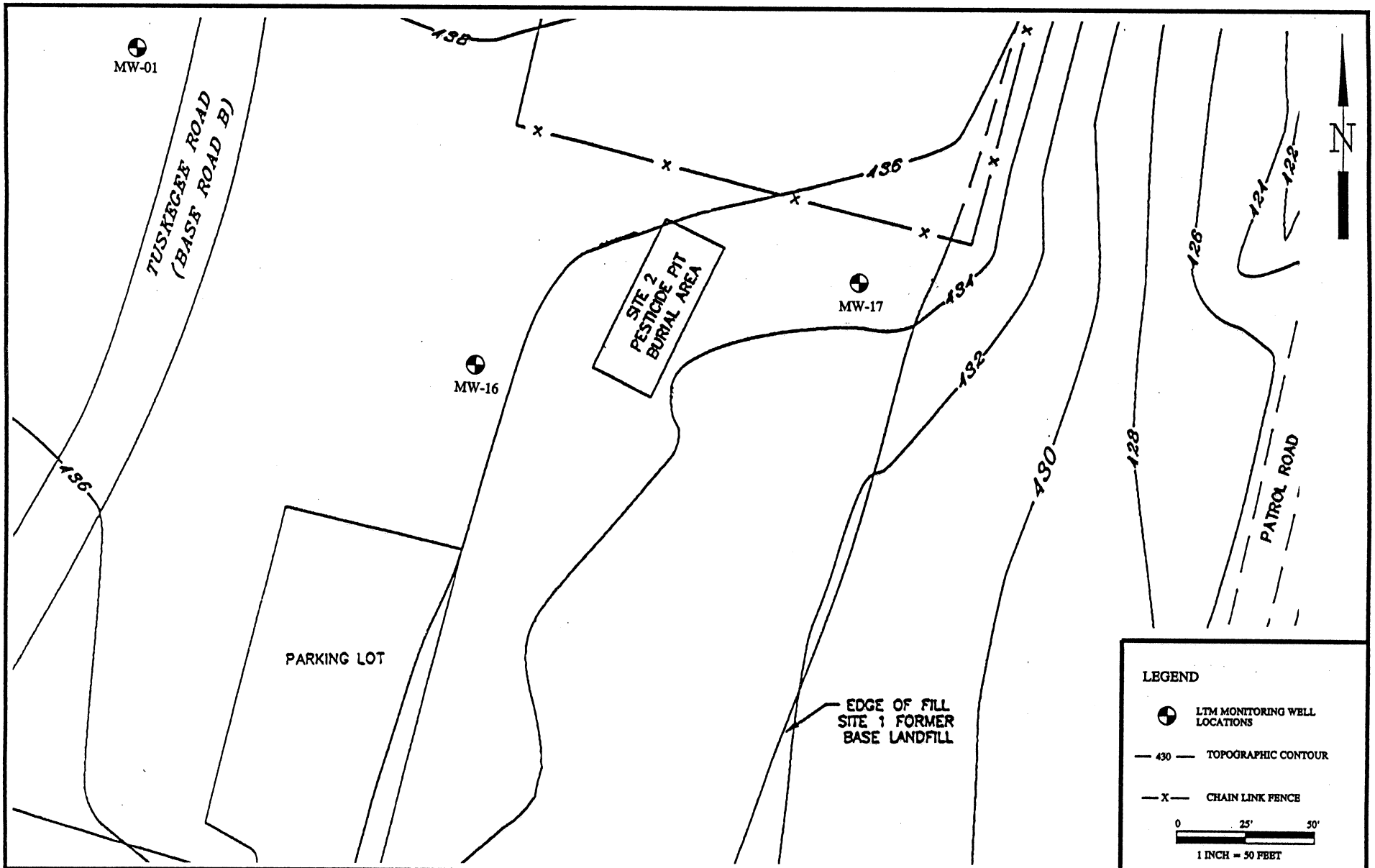
3.2 Quality Assurance/Quality Control

Quality Assurance/Quality Control (QA/QC) procedures will be followed as per Sections 5.3.3 through Section 5.3.5.6 of the RI/FS Work Plan, with the exception of Section 5.3.5.3, Field Blanks. As samples will be collected using disposal and/or dedicated equipment, there will be no equipment decontamination events.

3.3 Site Logbook Records

All information on site activities will be kept in a site logbook. The site logbook is the master document and it will contain actual field data or references to any other field documents. All site activities will be listed and the document will be signed at the end of each day. It will also contain lists of personnel on-site.

Field logbooks will be kept by individual personnel working on-site and will document all field activities. All information pertinent to sampling (including instrument calibration data) will be recorded in field logbooks. These books will be bound and pages will be consecutively numbered. Entries in the logbook will be made in black, waterproof ink and will include, as a minimum, a



STEWART AIR NATIONAL GUARD BASE
LTM GROUNDWATER SAMPLE LOCATIONS
SITE-2
NEWBURGH, NEW YORK

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FIGURE: 3-1

3-2

C:\DRAW\STEWART\DISK1\LTM SAMPLE LOCATIONS

description of all activities, individuals involved, date and time of sampling, weather conditions, any problems encountered, and all field measurements.

Sufficient information will be recorded during the sampling trip to permit reconstruction of the event without reliance on the memory of field personnel. The field equipment logbook will document the proper use, maintenance, calibration, and problems experienced with field equipment. The log will be signed and dated by personnel using the equipment.

3.4 Investigative Derived Wastes

During the semi-annual sampling events for this program, purging of groundwater monitoring wells prior to sample collection will result in Investigative Derived Wastes (IDW) in the form of groundwater. Based upon previous sample results presented in the Remedial Investigation Report, Site 2 - Pesticide Pit Burial Area (ANEPTEK, 1997), and with the consent of the NYANG and the NYSDEC, any IDW groundwater will be disposed of on the ground at the location from which it was produced.

SECTION 4.0

4.0 Health and Safety

Included in this section is an abbreviated Health and Safety Plan. This abbreviated plan provides emergency contacts and phone numbers as well as directions to the closest hospital (Figure 4-1) which provides emergency care. All other health and safety issues are provided in Appendix A, Health and Safety Plan, in the original RI/FS Work Plan.

EMERGENCY INFORMATION

Base Address

105th Airlift Wing
New York Air National Guard
One Militia Way
Newburgh, New York 12550-5043

Emergency Resource	Telephone Number
AN Fire Department:	(914) 563-2117
Contract Ambulance Service: (Requested thru ANG Command Post)	(914) 563-2286 (or 2285)
AN Safety Department:	(914) 563-2230 (or 2232)
ANG Central Security Control:	(914) 563-2355
AN Environmental Management	(914) 563-2366
CHEMTREC:	1-800-424-9300
TSCA Hotline:	(202) 554-1404
Center for Disease Control	(404) 454-4100 (24 hrs.)
Hospital:	
St. Lukes Hospital	(914) 561-4400
70 Dubois St.	
Newburgh, NY	

Directions to St. Lukes Hospital (Figure 4-1):

Exit the Base on Militia Way to the north. Turn right on Route 17K and proceed east towards Newburgh. Route 17K becomes Broadway at the city limits. Proceed east on Broadway past

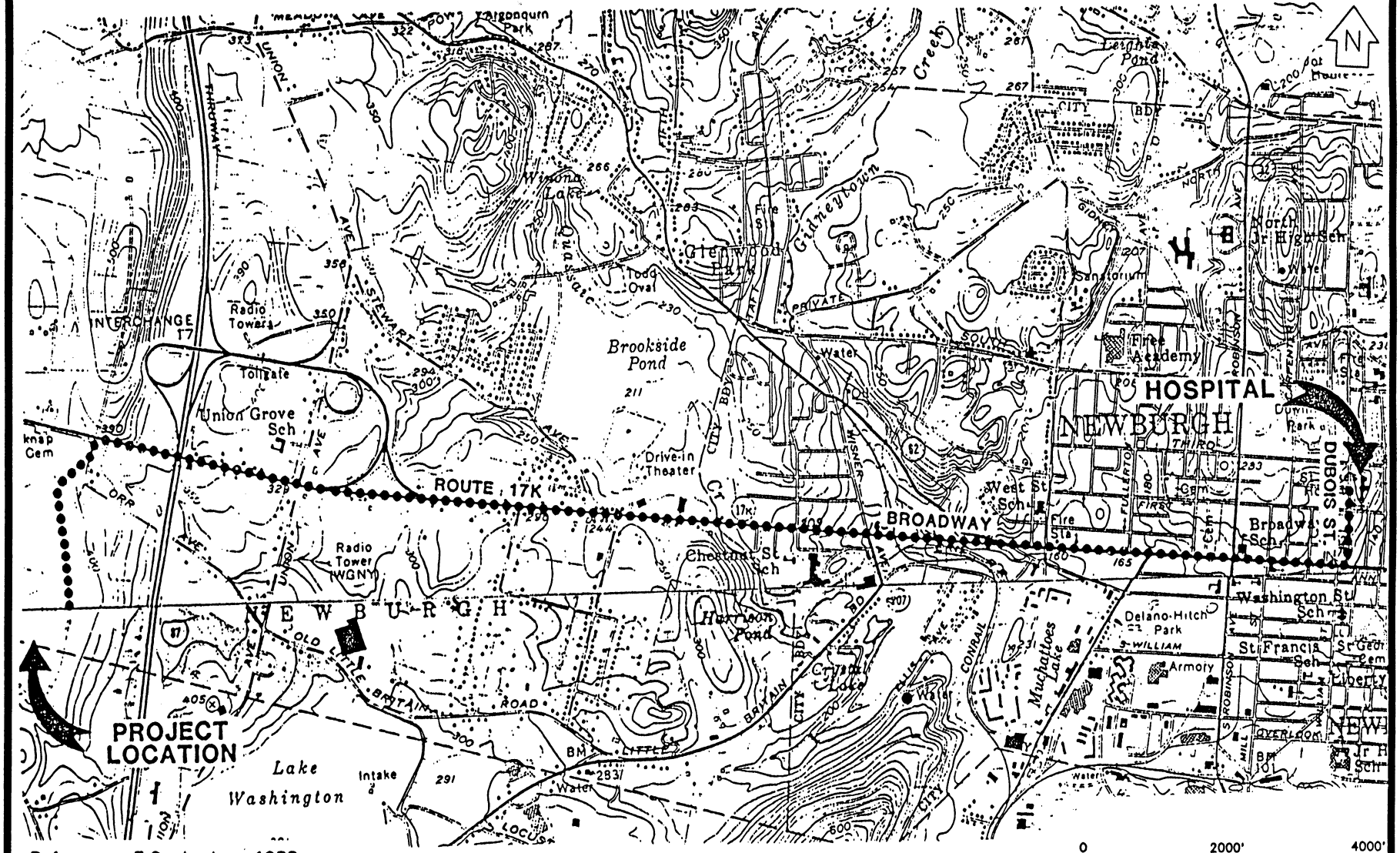

FIGURE 4-1

STEWART ANG BASE
ROUTE TO HOSPITAL
NEWBURGH, NEW YORK

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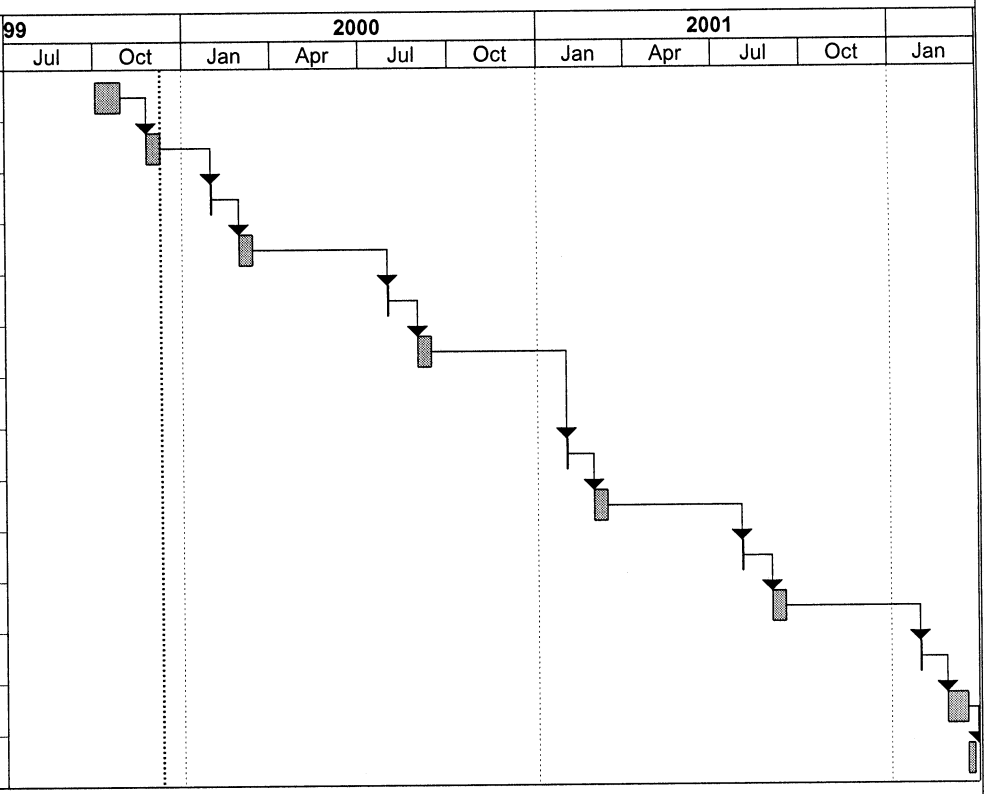
SECTION 5.0

5.0 LTM Project Schedule

The LTM Project Schedule for Site 2 is presented in Figure 5-1.

Figure 5-1 LTM 2 Year Project Schedule - Site 2, Stewart ANGB

ID	Task Name	Duration	Start	Finish
1	1A - Draft. Work Plan Site 2	20d	Mon 10/4/99	Fri 10/29/99
2	1B - Final Work Plan Site 2	10d	Fri 11/26/99	Thu 12/9/99
3	2A - 1st Semi Annual Sampling, Year 1	1d	Mon 1/31/00	Mon 1/31/00
4	3A - 1st Semi Annual LTM Report, Year 1	10d	Tue 2/29/00	Mon 3/13/00
5	2A - 2nd Semi Annual Sampling, Year 1	1d	Mon 7/31/00	Mon 7/31/00
6	3A - 2nd Semi Annual LTM Report, Year 1	10d	Thu 8/31/00	Wed 9/13/00
7				
8	2A - 1st Semi Annual Sampling, Year 2	1d	Wed 1/31/01	Wed 1/31/01
9	3A - 1st Semi Annual LTM Report, Year 2	10d	Wed 2/28/01	Tue 3/13/01
10	2A - 2nd Semi Annual Sampling, Year 2	1d	Tue 7/31/01	Tue 7/31/01
11	3A - 2nd Semi Annual LTM Report, Year 2	10d	Fri 8/31/01	Thu 9/13/01
12	3B - Final Sampling Event	1d	Thu 1/31/02	Thu 1/31/02
13	3C - Draft Summary LTM Report, Year 2	15d	Thu 2/28/02	Wed 3/20/02
14	3D - Final Summary LTM Report, Year 2	5d	Thu 3/21/02	Wed 3/27/02



Project: sched.LTM site2
Date: Thu 12/9/99

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress

a:\sched. LTM site 2

SECTION 6.0

6.0 References

ABB, 1992. Remedial Investigation/Feasibility Study Work Plan, Pesticide Pit Burial Area, 105th Military Airlift Group, New York Air National Guard, Stewart International Airport, Newburgh, New York.

ANEPTEK. 1995. Remedial Investigation/Feasibility Study Work Plan. August.

ANEPTEK. 1999. Proposed Remedial Action Plan (PRAP), Site 2 - Former Pesticide Burial Pit, Stewart International Airport, Newburgh, New York.

Dames and Moore, 1986. Step 2 Report: Investigation of Buried Pesticide Containers, Stewart Air National Guard Base, Newburgh, New York.

E.C. Jordan, 1989. Site Inspection Report. Installation Restoration Program: Volume I. Stewart Air National Guard Base, Newburgh, NY.

ATTACHMENT A

ATTACHMENT A

This purpose of this attachment is to explain the discrepancies between the monitoring wells identified to be sampled in the PRAP (Aneptek, October 1999) and those identified to be sampled in this work plan. The frequency of sampling has also been amended as to what was originally stated in the PRAP.

Following the issuance of the PRAP, the NYSDEC recommended two additional monitoring wells be installed closer to the pesticide pit for sampling purposes. The NYSDEC deemed that the original proposed wells to be sampled downgradient of the Pesticide Pit, MW-09 and MW-10, were too far away and may be adversely affected by the Former Base Landfill. The two new wells were subsequently identified as MW-16 and MW-17. The frequency of sampling events was also amended to be semi-annual instead of the original quarterly frequency. This change would have a corresponding effect on the total number of reports generated.

APPENDIX A

GROUNDWATER MONITORING PARAMETERS
FOR CHLORINATED PESTICIDES
SITE 2

LONG TERM MONITORING PROGRAM
GROUNDWATER MONITORING PARAMETERS
FOR CHLORINATED PESTICIDES
STEWART AIR NATIONAL GUARD BASE
SITE 2 - PESTICIDE PIT BURIAL AREA

Chemical Compound	Laboratory Reported Detection Limit (ug/L)	New York DWQS (ug/L)[1]
Aldrin	0.05	50 [a]
Chlordane	0.5	2
4,4'-DDD	0.1	50 [a]
4,4'-DDE	0.1	50 [a]
4,4'-DDT	0.1	50 [a]
Dieldrin	0.1	50 [a]
Endrin	0.1	0.2
Heptachlor	0.05	0.4
Heptachlor Epoxide	0.05	0.2

(1) New York State Primary Drinking Water Quality Standards, 10 NYCRR Part 5.
(a) Value for listed unspecified organic contaminants. The total for these principal unspecified organic contaminants may not exceed 100 ug/L.