EXTRA

Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

Site 2 - Former Pesticide Pit Burial Area
Stewart Air National Guard Base
Orange County, Newburgh, New York
Site # 3-36-022

March 2000

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* JOHN P. CAHILL, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Site 2 - Pesticide Pit Burial Area Inactive Hazardous Waste Disposal Site
Stewart Air National Guard Base
Orange County, Newburgh, New York
Site # 3-36-022

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Site 2-Pesticide Pit Burial Area (PPBA) 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 (40 CFR 300).

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Site 2-Pesticide Pit Burial Area inactive hazardous waste disposal 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 has been addressed by implementing the interim remedial measures identified in this ROD. The removal of contaminated soil from the site has significantly reduced the threat to public health and the environment. Therefore, a groundwater monitoring program will be implemented to monitor the effectiveness of previous remedial actions in preventing further contamination of the groundwater.

Description of Selected Remedy

Based on the results of the Remedial Investigation/Feasibility Study (RI/FS) for the Site 2-Pesticide Pit Burial Area and the criteria identified for evaluation of alternatives, the NYSDEC has selected No Further Remedial Action with continued groundwater monitoring. The components of the remedy are as follows:

- Collection of groundwater samples from three monitoring wells on a semi-annual basis for a period of two years. The groundwater samples will be analyzed for pesticides.
- Sampling results will be evaluated after two years to determine if further monitoring or remedial action is required.
- Implementation of institutional controls (deed restriction) governing future use of the site.

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.

3/31/2000
Date

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

TABLE OF CONTENTS

SECTION		PAGE
1:	Summary of the Record of Decision	1
2:	Site Location and Description	1
3:	Site History	1
4:	Site Contamination	5
4.1	Summary of Interim Remedial Measures	8
4.2	Summary of Remedial Investigation	8
4.3	Summary of Human/Environmental Exposure Pathways	8
5:	Summary of the Selected Remedy	9
6:	Highlights of Community Participation	10

FIGURES

1.	Site Location Map	2
2.	Site Map	3
3.	Subsurface Soil Sample Locations	6
4.	Sediment and Groundwater Sample Locations	7
5.	Long Term Monitoring Well Sample Locations	11

APPENDIX A

Responsiveness Summary

Attachment A: List of Public Meeting Attendee's

Attachment B: Public Meeting Questions and Responses

APPENDIX B

Administrative Record

RECORD OF DECISION

Site 2 - Pesticide Pit Burial Area Inactive Hazardous Disposal Waste Site
Stewart Air National Guard Base
Orange County, Newburgh, New York
Site # 3-36-022
February, 2000

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 (NYSDOH) has selected No Further Remedial Action with continued groundwater monitoring as the remedy to address the issues of human health and/or the environment created by the presence of hazardous waste at Site 2 - The Pesticide Pit Burial Area (PPBA), a class 2 inactive hazardous waste disposal site. As more fully described in Sections 3 and 4 of this document, previous disposal activities included the burial of 5 gallon containers and 55 gallon drums which contained pesticide residues, some of which were released or have migrated from the site to surrounding areas, including subsurface soils, sediment, and groundwater.

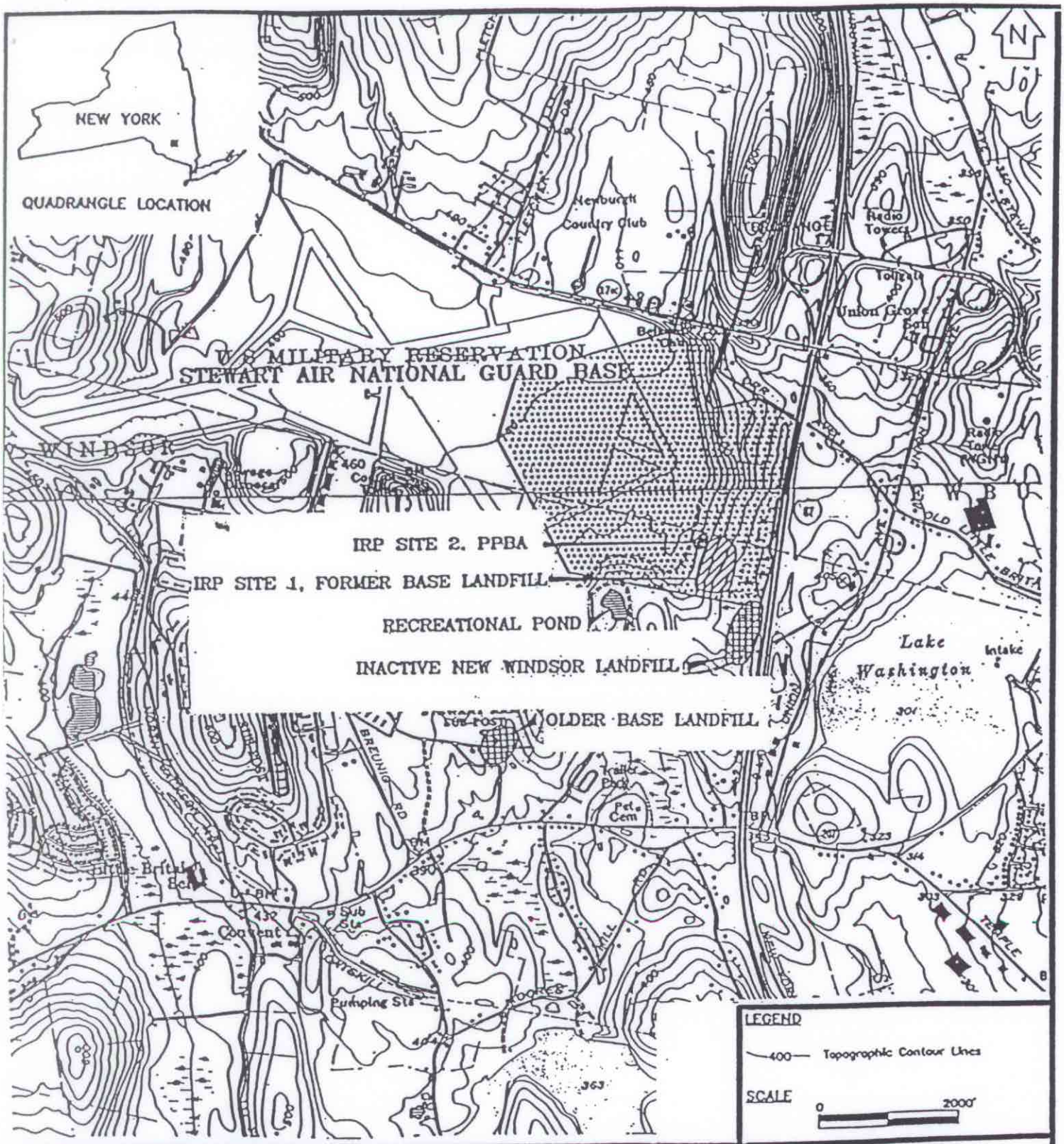
SECTION 2: SITE LOCATION AND DESCRIPTION

Stewart ANG Base is located at the Stewart International Airport (IAP) in Orange County approximately 2.5 miles west of the City of Newburgh, New York (Figure 1). The Base occupies approximately 268 acres and is located in both the Town of Newburgh and the Town of New Windsor.

Site 2, the Pesticide Pit Burial Area (PPBA) is located southeast of the airport complex at the Stewart IAP (Figure 2). The site was the location of a now backfilled pit that was used in the late 1960's to dispose of pesticide containers. The pit was approximately 20 feet by 53 feet by 12 feet deep. Site 1 (the Former Base Landfill) and Site 2 have been the subject of several previous investigations by both NYSDEC and the National Guard Bureau. A removal action was performed at Site 2 in 1988, when the pit was excavated and contaminated soils and containers were removed.

SECTION 3: SITE HISTORY

Site 2 has been the subject of several previous investigations and one removal action. The following discussion presents a summary of the scope and results of past activities conducted at the site.
The first investigation of Site 2 was performed by NYSDEC in the early 1980's. This investigation was prompted by a report indicating the possible disposal of pesticides. The disposal pit was never actually located during the NYSDEC investigation, which included both ground penetrating radar and test trenching.



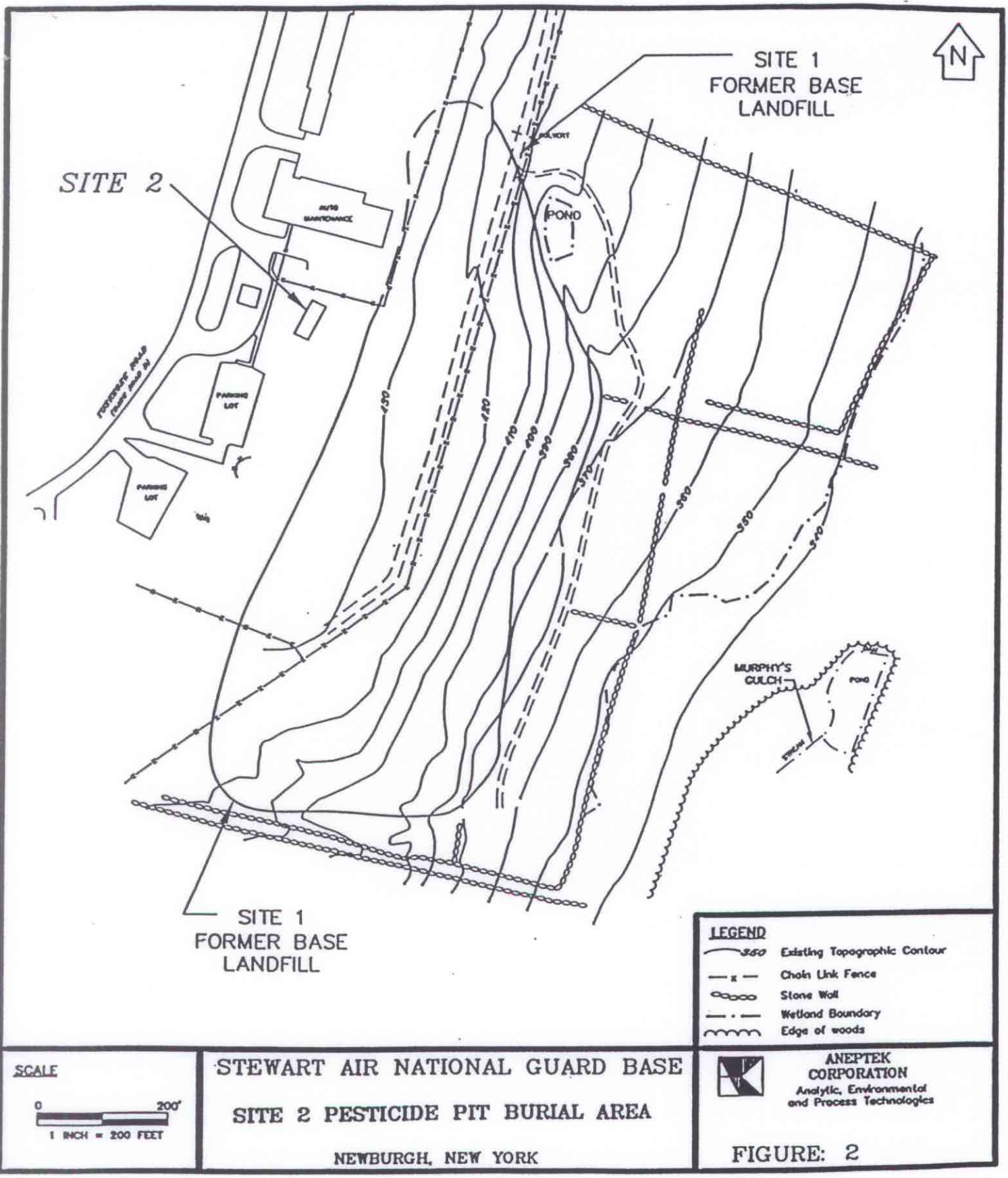
STEWART AIR NATIONAL GUARD BASE

SITE LOCATION MAP

NEWBURGH, NEW YORK

ANEPTEK CORPORATION
Analytic, Environmental and Process Technologies

FIGURE: 1


SITE 1
FORMER BASE
LANDFILL
N
SITE 2
AUTO MAINTENANCE
POND
PARKING LOT
PARKING LOT
MURPHY'S GULCH
POND
STREAM
SITE 1
FORMER BASE
LANDFILL
LEGEND
Existing Topographic Contour
Chain Link Fence
Stone Wall
Wetland Boundary
Edge of woods
SCALE
0
200'
1 INCH = 200 FEET
STEWART AIR NATIONAL GUARD BASE
SITE 2 PESTICIDE PIT BURIAL AREA
NEWBURGH, NEW YORK
ANEPTEK CORPORATION
Analytic, Environmental and Process Technologies
FIGURE: 2

In 1984, a Step I Investigation was carried out by Dames and Moore, an environmental consulting firm. Dames and Moore was able to locate the burial pit through the use of aerial photographs, a field inspection, a series of metal detector and magnetometer surveys along with a series of test pit excavations. A large anomaly in the target area that corresponded to a depression visible in the aerial photographs, along with several smaller anomalies were identified. Domestic refuse was observed in test pits excavated in the large area. Although no pesticide containers were found in the excavations, several buried containers (some labeled "Caution-Acid") were found along the western edge of the investigation area. Based on these findings, Site 2 was originally estimated to be roughly rectangular, with dimensions of approximately 15 by 25 feet.

Dames and Moore collected several soil and liquid samples from the test pits in order to better characterize the waste constituents. Pesticides were detected in the soil samples, primarily dichlorodiphenyltrichloroethane(DDT), along with dichlorodiphenyldichloroethylene(DDE) and dichlorodiphenyldichloroethane (DDD).

Dames and Moore followed up the initial investigation with a Step II Investigation conducted in 1985 and 1986. This investigation included the installation of 3 groundwater monitoring wells (designated SW-01, SW-02 and SW-03), the collection of subsurface soil samples from the monitoring well borings, and the collection of groundwater samples. The original plan was to install the borings only in the glacial till overburden; however, no groundwater was present in the till, so the borings were extended into the weathered shale bedrock, the first water-bearing zone.

In general, contaminants were not detected in the soil or groundwater samples from SW-01 and SW-03, with the exception of trace concentrations of DDT, 2,4-diclorophenoxy acetic acid (2,4-D) and dieldrin. The samples from SW-02 contained low levels of several pesticides. Of the soil samples collected from SW-02, the sample obtained from the weathered shale layer had the higher pesticide concentrations.

Dynamac Corporation (Dynamac) completed an interim removal action in 1988 as a subcontractor to Geo-Con, Inc. The plan for the removal action was to excavate the pit and dispose of the soils, drums, and containers (primarily 5-gallon containers) in a regulated, permitted hazardous waste landfill. The goal was to remove all waste materials and soils containing greater than 10 parts per million (ppm) of DDT. A 20-foot by 53-foot pit was excavated and H-piles were driven to support the walls of the excavation. The piles were driven as deep as possible, with stiff resistance (bedrock or very stiff hardpan material) generally encountered at depths of 22 to 23 feet below ground surface (bgs), or less.

Drums and containers were unearthed in the pit at depths starting at 4 feet bgs. Visual inspection showed that the containers had all been punctured prior to placement in the pit. Little or no liquid was present in the containers. Most of the containers observed were 5-gallon size, though several 55-gallon drums were present. One of the 55-gallon drums appeared to contain used motor oil. In total, 105, 5-gallon containers and 13, 55-gallon drums were removed, along with some domestic and miscellaneous refuse. The excavated wastes and soils were then hauled to Chemical Waste Management Model City Landfill near Buffalo, NY for disposal. The H-piles were dug out, cut at an approximate depth of 10 feet, and placed back in the pit. The pit was backfilled with clean

material. Most of the waste was found in the north-central area of the pit. All of the drums were found at depths of 12 feet or less. Three additional 55-gallon drums were unearthed just beyond the northern boundary of the pit so the original pit was extended northward by about 10 feet to ensure that all the drums had been excavated. A Site Inspection (SI) was performed at the site by E.C. Jordan in 1987 through 1989. The results of this effort are summarized in the Remedial Investigation (RI) Report which is available for review. The RI was performed in 1995 through 1996 by Aneptek Corporation.

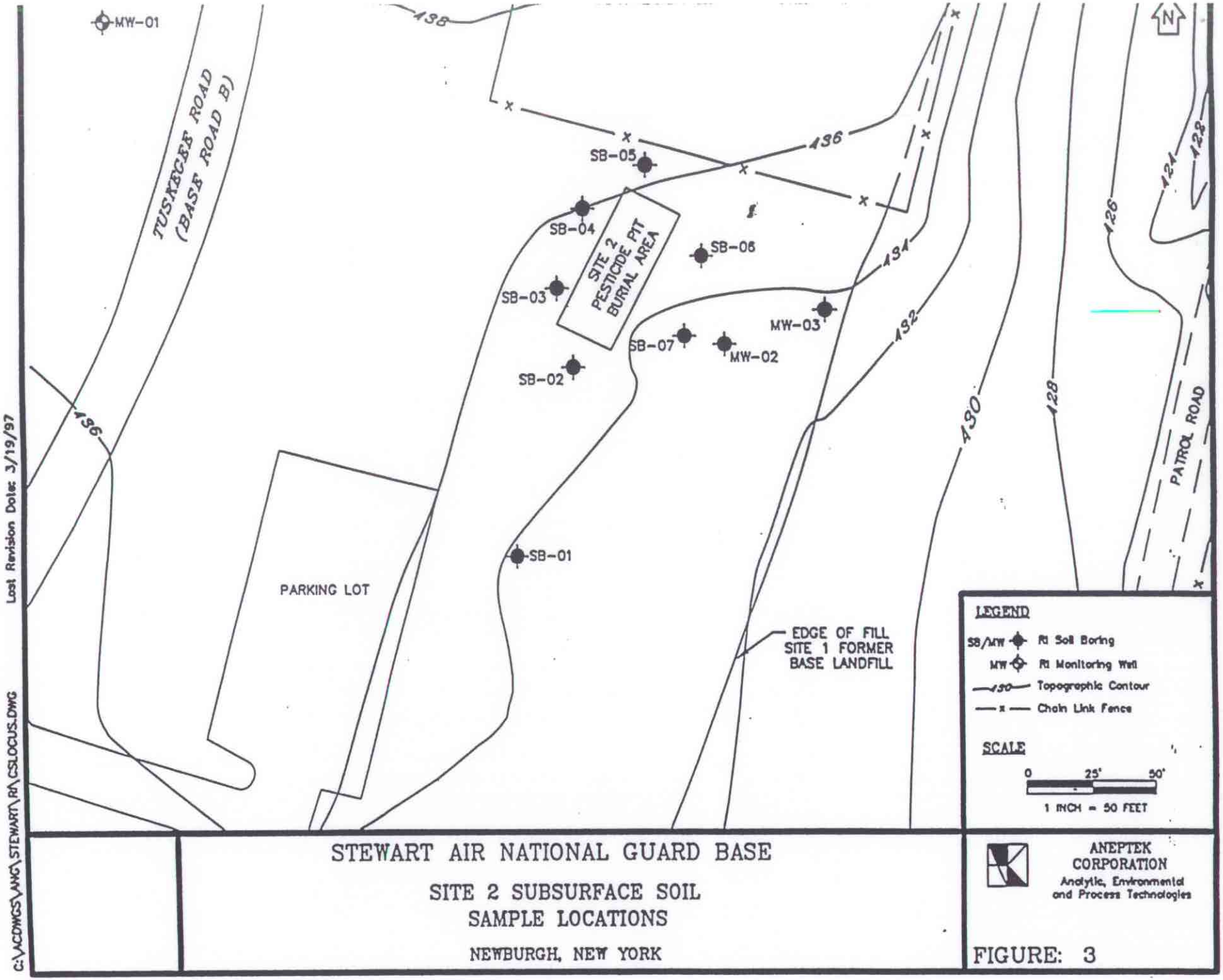
SECTION 4: SITE CONTAMINATION

Surface Soils: Surface soils were generally free of significant contamination. The only compounds exceeding site background or NYSDEC Cleanup Goals were manganese (at concentrations ranging from 664 milligrams per kilogram [mg/kg] to 1,070 mg/kg) and chromium (at concentrations ranging up to 19.7 mg/kg). No surface soil samples contained pesticide concentrations greater than their respective NYSDEC Cleanup Goals.

Subsurface Soils: The bulk of residual subsurface soil contamination appears to be present approximately 15 to 25 feet bgs in the vicinity of soil boring MW-02. Total pesticide concentrations varied from non-detect to approximately 19 mg/kg, detected in the soil boring sample MW-02-17 (17 feet bgs). Several inorganic analytes were detected at concentrations greater than their respective background or NYSDEC Cleanup Goals. The majority of these detections were found at the overburden/bedrock interface in soil borings SB-06 and MW-02. No discernible pattern of elevated concentrations of inorganic analytes was found in subsurface soils. Due to the depth of contamination and the fact that pesticides have low solubility, high sorption potential, and high retardation factors, no risk to human health is anticipated with regards to subsurface soil contamination. Sample locations are shown in Figure 3.

Sediments: Two sediment samples which contained low levels of pesticides were found in the vicinity of the ponded area. Total pesticide concentrations were found at 146.2 micrograms per kilogram (μg/kg) and 35.5 μg/kg in these two samples. Given the distance from the PPBA to these sample locations, the location of the Former Base Landfill with regards to the sample locations, and the high sorption and retardation factors of the contaminants, these results are more probably related to the Former Base Landfill than the PPBA. Sediment sample locations are shown in Figure 4.

Groundwater: Pesticides were detected in all groundwater samples, thus exceeding the State drinking water pesticide standard which requires the presence of no detectable level. Most of the detections encountered were at concentrations less than 1.0 micrograms per liter (μg/L). The maximum total pesticide concentration encountered in groundwater was approximately 16 μg/L in well SW-02, with a similar concentration of 15 μg/L detected in MW-01. The highest individual pesticide concentration found was DDT in MW-01 at 11 ppb. Given the two samples locations are not in the same area, these two similar results would indicate a radial groundwater flow in the area of the site. To the east of Site 2, groundwater pesticide concentrations decreased by an order of magnitude (a factor of 10) over a distance of approximately 540 feet. Sample/monitoring well locations are also shown in Figure 4.



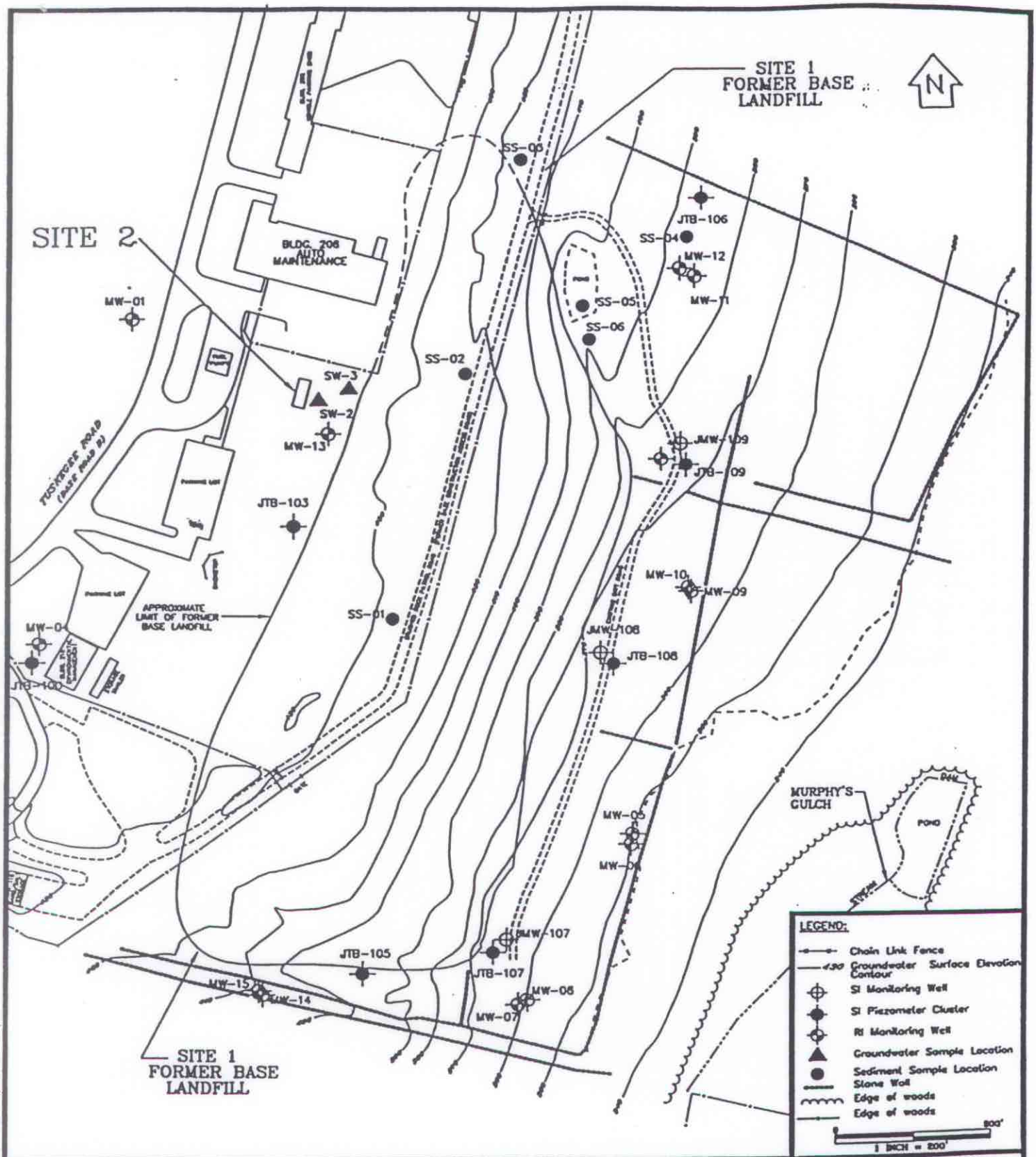
STEWART AIR NATIONAL GUARD BASE

SITE 2 SUBSURFACE SOIL SAMPLE LOCATIONS

NEWBURGH, NEW YORK

ANEPTEK CORPORATION
Analytic, Environmental and Process Technologies

FIGURE: 3



STEWART AIR NATIONAL GUARD BASE
SITE 2 SEDIMENT AND
GROUNDWATER SAMPLE LOCATIONS
NEWBURGH, NEW YORK

ANEPTEK CORPORATION
Analytic, Environmental and Process Technologies

FIGURE: 4

4.1 Summary of Interim Remedial Measures

During the course of the investigations conducted at Site 2, certain actions, known as Interim Remedial Measures (IRMs), were undertaken at the PPBA 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 addressed before completion of the RI/FS. The IRM conducted at this site is as follows:
Dynamac Corporation completed an interim removal action in 1988. The plan for the removal action was to excavate the pit and dispose of the soils, drums, and containers (primarily 5-gallon containers) in a regulated, permitted hazardous waste landfill. The goal was to remove all waste materials and soils containing greater than 10 parts per million (ppm) of DDT. A 20-foot by 53-foot pit was excavated and H-piles were driven to support the walls of the excavation. The piles were driven as deep as possible, with stiff resistance (bedrock or very stiff hardpan material) generally encountered at depths of 22 to 23 feet below ground surface (bgs), or less.

Drums and containers were unearthed in the pit at depths starting at 4 feet bgs. Visual inspection showed that the containers had all been punctured prior to placement in the pit. Little or no liquid was present in the containers. Most of the containers observed were 5-gallon size, though several 55-gallon drums were present. One of the 55-gallon drums appeared to contain used motor oil. In total, 105, 5-gallon containers and 13, 55-gallon drums were removed, along with some domestic and miscellaneous refuse. Most of the waste was found in the north-central area of the pit. All of the drums were found at depths of 12 feet or less. Three additional 55-gallon drums were unearthed just beyond the northern boundary of the pit so the original pit was extended northward by about 10 feet to ensure that all the drums had been excavated.

4.2 Summary of Remedial Investigation

A RI was performed in 1995 through 1996 by Aneptek Corporation. The RI field program included sampling of surface soils, sediments, subsurface soils and groundwater to provide data for an evaluation of site geology and hydrogeology, determination of residual contamination nature and extent, evaluation of contaminant fate and transport, and preparation of a Baseline Risk Assessment (BRA) and ecological risk characterization. Geophysical surveys were performed to locate the original location of the pesticide burial pit. Subsurface soils were screened in the field for total pesticides by immuno assay methodology to assist in the evaluation of the nature and extent of contamination. Soil and groundwater samples were also submitted to an offsite State certified laboratory for chemical analysis. Sample locations are illustrated in Figures 3 and 4. Based on the investigative results of the above RI, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment, therefore No Further Remedial Action with continued groundwater monitoring was selected as the remedy for this site.

4.3 Summary of Human/Environmental Exposure Pathways

Based on the results of the RI, a BRA was conducted to estimate the risks associated with current and future site conditions. The BRA estimates the human health and ecological risks which could result from exposure to the contamination at the Site if no remedial action were taken. The results are as follows:

Summary of Human Exposure Pathways

The human health risk assessment indicated that the risks for all current site receptors are within or below the Environmental Protection Agency (EPA) targets. The total hazard index for current site use is 0.02, which is well below the EPA target of 1.0. The total cancer risks for the current site use is 7×10^{-6}, which is within the EPA target range of 1×10^{-4} to 1×10^{-6}.

In addition, the risks for all future receptors, with the exception of future residents, are within or below the EPA targets. The hazard indices for all future receptors, with the exception of the future residential scenario, are well below the EPA target of 1.0. The hazard index for site workers is 0.01, the hazard index for area residents is 0.007, and the hazard index for construction workers is 0.01.

The only exposure scenario with unacceptable risks is the future residential scenario. The hazard index for future on-site residents is 23, mostly attributable to groundwater (hazard index = 23). The breakdown of the cancer risks is similar. Cancer risks for the on-site worker (5×10^{-6}), construction worker (3×10^{-6}), and area resident (2×10^{-6}) are all within the EPA target range of 1×10^{-4} to 1×10^{-6}. The cancer risk for the future on-site resident is 2×10^{-3}, almost all of which is attributable to ingestion of and dermal contact to groundwater. A number of extremely conservative exposure assumptions were used throughout the risk assessment process. For example, based on current plans for the Base, and the availability of City water to the area, it is highly unlikely that Site 2 will be used for residential purposes, and even more unlikely that a drinking water well would be located at the site. In addition, all exposure point concentrations and risk estimates were derived using values which tended to be conservative. Therefore, it is likely that the risks are highly overestimated and that actual site risks would be much lower.

Summary of Environmental Exposure Pathways

The ecological risk characterization indicates that of the analytes detected in sediment samples, the polyaromatic hydrocarbon (PAH) benzo(g,h,i)perylene, the pesticides DDT and DDE, and manganese, exceeded applicable sediment criteria guidelines and background levels used as screening values for sediment. These criteria guidelines were developed for the protection of benthic organisms inhabiting aquatic environments. However, the site environment does not provide valuable aquatic habitat, due to the intermittent nature of storm water discharges within the drainage ditches. Therefore, the ecological risks caused by these substances is considered less significant than the poor quality of the habitat itself.

SECTION 5: SUMMARY OF THE SELECTED REMEDY

Based upon the results of the RI, including the BRA, and the evaluation presented in Section 4.3, the ANG and NYSDEC recommend No Further Remedial Action at Site 2. This alternative does include continued long term groundwater monitoring (LTM) for pesticides at wells MW-01, MW-16, and MW-17. Monitoring wells MW-16 and MW-17 were not part of the original remedial investigation for this project. These two wells are proposed to be installed by late summer of 2000. Groundwater sampling and analysis will be performed semi-annually for a minimum of two years. Samples will be analyzed for pesticides per Environmental Protection Agency (EPA) Method 8081. This will facilitate detection of any changes in existing site conditions. Should pesticides concentrations in groundwater

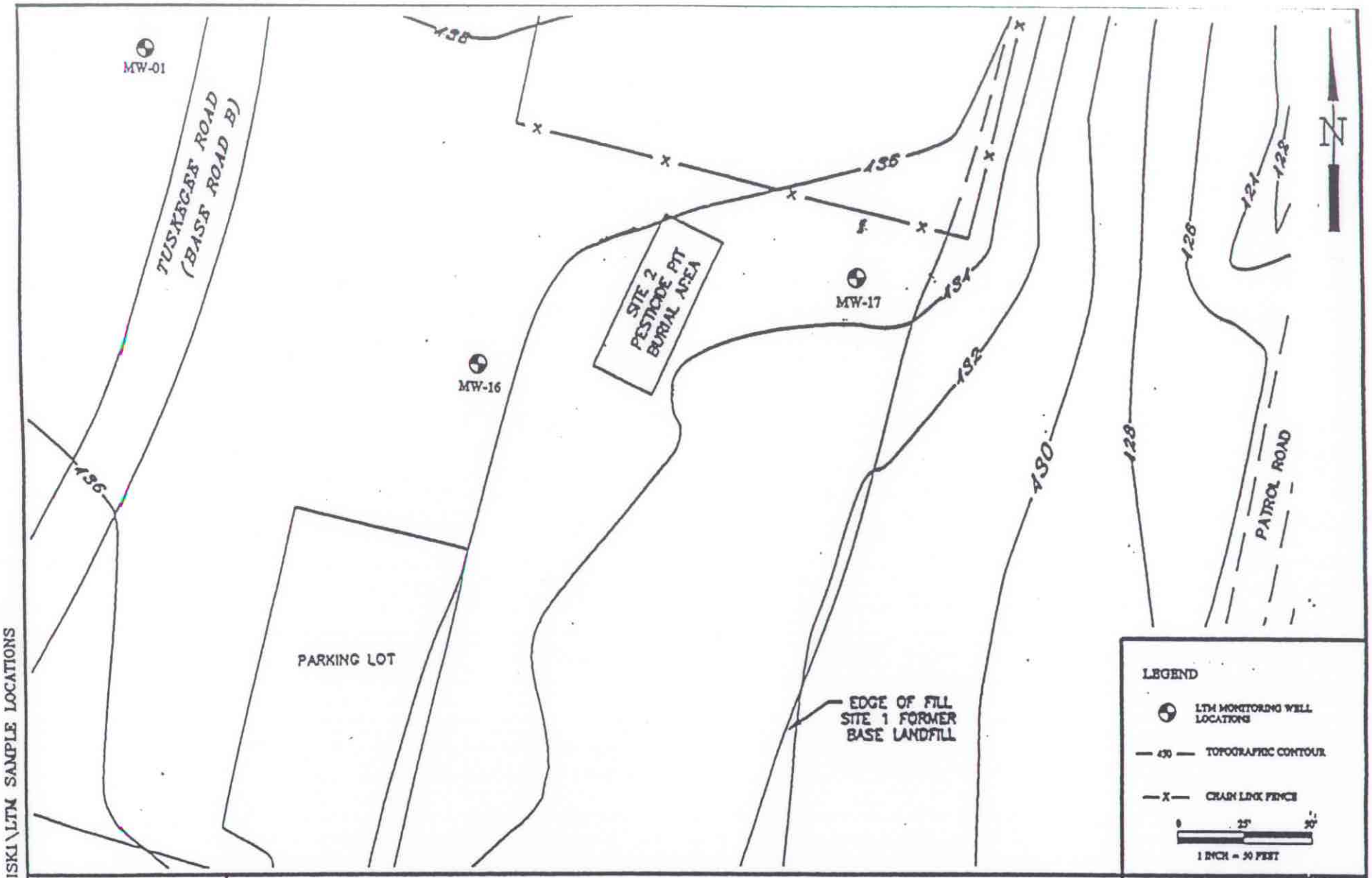
increase over time, additional investigative efforts may be necessary in the future. This recommendation is based on the fact that the only unacceptable risks associated with detected contaminants are attributable only to a future residential scenario that is highly unlikely given the current and planned future use of the area. A deed restriction will be placed on Site 2 to govern future use of the former pesticide pit area. Site 2 is located less than 100 feet from Site 1, the Former Base landfill, which is currently being capped. The Site 1 cap will also act to reduce the infiltration of water to the subsurface, which in turn will reduce the potential for residual contamination migration. LTM sample locations are shown in Figure 5.

SECTION 6: HIGHLIGHTS OF COMMUNITY PARTICIPATION

Community Acceptance - Concerns of the community regarding the RI report and the PRAP have been evaluated. A "Responsiveness Summary" is included as Appendix A. This document presents the public comments and the Department's response to the concerns raised. No written public comments were received.

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 mailed to local concerned citizens.
- A public meeting was held on October 14, 1999, at Stewart Air National Guard Base, Orange County, Newburgh, New York to present the PRAP. Questions and responses from this meeting are listed in the Responsiveness Summary.
- A Public Comment Period was established from October 1, 1999 until November 1, 1999.



STEWART AIR NATIONAL GUARD BASE

LTM GROUNDWATER SAMPLE LOCATIONS

SITE-2

NEWBURGH, NEW YORK

ANEPTEK CORPORATION
Analytic, Environmental and Process Technologies

FIGURE: 5

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

Appendix A

Responsiveness Summary

Site 2 - Pesticide Pit Burial Area Inactive Hazardous Disposal Waste Site
Proposed Remedial Action Plan
Stewart Air National Guard Base
Orange County
Newburgh, New York
Site # 3-36-022

The Proposed Remedial Action Plan (PRAP) for the Site 2 - Pesticide Pit Burial Area was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on October 1, 1999. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated groundwater, soil, and sediment at the Site 2 - Pesticide Pit Burial Area. The preferred remedy is No Further Remedial Action with continued groundwater monitoring.

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 October 14, 1999 which included a presentation of the Remedial Investigation (RI) as well as a discussion of the proposed remedy. The meeting was announced in two local newspapers approximately two weeks prior to the meeting. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. The public comment period for the PRAP ended on November 1, 1999.

This Responsiveness Summary responds to all questions and comments raised at the October 14, 1999 public meeting, no written comments were received. A list of attendee's from the public meeting is included in this document as Attachment A.

Questions raised at the public meeting and the appropriate responses are included in Attachment B of this document.

ATTACHMENT A

List Of Attendee's

Name:	Association:
Bill Brenner	Public Citizen
Andrew Kissem	Public Citizen
Felicia Hodges Griffin	Mid-Hudson Times
Wendy Kuehner	NYSDOH
Jeff McCullough	NYSDEC
Trish Heiffila	105th Air Wing Public Affairs
Michael O'Hallorn	105th Air Wing SCS
Hardy Pierce	105th Air Wing
Lt. Col. Dennis Zicha	105th Air Wing EM
Rick Ramuglia	Aneptek Corporation
Jeff Donovan	Aneptek Corporation

ATTACHMENT B

Public Meeting Questions and Responses

Q: What was the depth of the monitoring wells installed near the pesticide pit?

R: The three monitoring wells placed in closest proximity to the pesticide pit were approximately 30 feet in depth.

Q: Were the monitoring wells on the eastern side of the pit placed at a deeper depth than the wells on the western side of the pit? Was the depth of underlying bedrock consistently at the same level?

R: All the monitoring wells installed directly adjacent to the pit on both the eastern and western side were drilled to the top of the fractured bedrock, approximately 30 feet in depth. Due to the relatively small size of the area investigated, the underlying bedrock did not fluctuate in depth.

Q: What limit does the State consider as safe for pesticides in drinking water?

R: The New York State standard for public drinking water for the pesticides DDD, DDE and DDT is 5 parts per billion. Most of the area surrounding the site is serviced by public drinking water supplies, which are routinely tested for pesticides and have not been affected by this site. Several homes along Orr Avenue and Liner Road still use private drinking water supply wells, these wells were tested by the NYSDOH and no pesticides were detected. On-site concentrations of pesticides were detected above their respective groundwater standards. The New York State Ambient Water Quality Standard for class GA groundwater (source of drinking water), is 0.3 ppb for DDD and 0.2 ppb for DDE and DDT. The maximum concentration of pesticide contamination found in groundwater samples was 11 parts per billion of an individual contaminant (DDT in MW-01) with a total pesticide contaminant level of 16 parts per billion (DDD, DDE, DDT in MW-01). Note that groundwater from this location is not utilized for drinking purposes.

Q: The Record of Decision calls for long term monitoring; how long will the monitoring be conducted and who will be responsible for the monitoring program?

R: The monitoring program is scheduled for a minimum of two years, with samples taken every six months. The Air National Guard will be responsible for the monitoring program and data from sample analysis will be sent to the DEC for review. If after the two year time frame it is shown that contaminant levels still pose a problem, then additional investigative work may be required at the pit area to determine if any other sources of contamination are present.

Q: Does the DEC have reports on all test wells regarding concentrations of contaminants found?

R: All sampling information and data on soils, sediments and groundwater are contained in the Remedial Investigation report, dated September 1997, which was sent to the Department for review and for our files. Copies of reports are also available at the public repositories.

ATTACHMENT B

Public Meeting Questions and Responses

Q: What was the depth of the monitoring wells installed near the pesticide pit?
R: The three monitoring wells placed in closest proximity to the pesticide pit were approximately 30 feet in depth.

Q: Were the monitoring wells on the eastern side of the pit placed at a deeper depth than the wells on the western side of the pit? Was the depth of underlying bedrock consistently at the same level?
R: All the monitoring wells installed directly adjacent to the pit on both the eastern and western side were drilled to the top of the fractured bedrock, approximately 30 feet in depth. Due to the relatively small size of the area investigated, the underlying bedrock did not fluctuate in depth.

Q: What limit does the State consider as safe for pesticides in drinking water?
R: The New York State standard for public drinking water for the pesticides DDD, DDE and DDT is 5 parts per billion. Most of the area surrounding the site is serviced by public drinking water supplies, which are routinely tested for pesticides and have not been affected by this site. Several homes along Orr Avenue and Liner Road still use private drinking water supply wells, these wells were tested by the NYSDOH and no pesticides were detected. On-site concentrations of pesticides were detected above their respective groundwater standards. The New York State Ambient Water Quality Standard for class GA groundwater (source of drinking water), is 0.3 ppb for DDD and 0.2 ppb for DDE and DDT. The maximum concentration of pesticide contamination found in groundwater samples was 11 parts per billion of an individual contaminant (DDT in MW-01) with a total pesticide contaminant level of 16 parts per billion (DDD, DDE, DDT in MW-01). Note that groundwater from this location is not utilized for drinking purposes.

Q: The Record of Decision calls for long term monitoring; how long will the monitoring be conducted and who will be responsible for the monitoring program?
R: The monitoring program is scheduled for a minimum of two years, with samples taken every six months. The Air National Guard will be responsible for the monitoring program and data from sample analysis will be sent to the DEC for review. If after the two year time frame it is shown that contaminant levels still pose a problem, then additional investigative work may be required at the pit area to determine if any other sources of contamination are present.

Q: Does the DEC have reports on all test wells regarding concentrations of contaminants found?
R: All sampling information and data on soils, sediments and groundwater are contained in the Remedial Investigation report, dated September 1997, which was sent to the Department for review and for our files. Copies of reports are also available at the public repositories.

Q: How far has the pesticide contamination migrated in the groundwater?

R: Groundwater contamination was found in MW-01 which is approximately 200 feet west of the pit area and in MW-9/10, which are approximately 600 feet east of the pit area. No contamination was found in MW-04 which is approximately 450 feet south of the pit area. Note that MW-9/10 are located on the down gradient portion of the old base landfill and pesticide levels found in these wells (less than 1 ppb) may be attributed to the landfill and not the pit. The old base landfill has been recently capped and groundwater at the landfill will be monitored.

Q: Does this site pose a threat to the City of Newburg's water supply?

R: It is extremely unlikely that any residual contamination that remains at the site will impact the City's water supply. The site is approximately 2,200 feet west of the City's water supply (Lake Washington). There are no impacts to surface water from the Former Pesticide Pit Burial Area since the residual pesticides are approximately 20 feet below the ground surface. Additionally, all surface water from the ANG facility is diverted away from the lake and eventually discharges into the Hudson River. As part of the selected remedy, groundwater will be monitored to assure that there are no off-site impacts from the site.

Q: Is there any potential for wildlife to come in contact with the residual contamination?

R: Since the residual pesticides are approximately 20 feet below the ground surface there are no risks to wildlife in the area.

APPENDIX B

Administrative Record

ANEPTEK. 1995. Remedial Investigation/Feasibility Study Work Plan. Site 2 - Pesticide Pit Burial Area. Stewart Air National Guard Base, Newburgh, New York. August.

ANEPTEK. 1997. Remedial Investigation Report. Site 2 - Pesticide Pit Burial Area. Stewart Air National Guard Base, Newburgh, New York. September. Volumes I and II.

ANEPTEK. 1999. Proposed Remedial Action Plan. Site 2 - Pesticide Pit Burial Area. Stewart Air National Guard Base, Newburgh, New York. October.

Dames and Moore. 1986. Step 2 Report: Investigation of Buried Pesticide Containers, Stewart Air National Guard Base, Newburgh, New York. March 4.

Dynamac. 1988. Final Report on Pesticide Removal Project, Stewart Air National Guard Base, Newburgh, NY. July 19.

E.C. Jordan. 1989. Site Inspection Report, Stewart Air National Guard Base, Newburgh, New York. December.