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ENVIRONMENTAL SITE ASSESSMENT REPORT
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK, USA

Prepared by:

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October 1998

Project No.: 983-6470

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October 7, 1998

Project No.: 983-6470

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RE: FINAL ENVIRONMENTAL SITE ASSESSMENT REPORT
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK, USA

Gentlemen:

Golder Associates Inc. is pleased to submit to you two copies each of the Final Environmental Site Assessment Report for the Stewart International Airport in New Windsor, New York, USA. The attached report presents Golder Associates Inc.'s findings relative to the Site's environmental baseline conditions, compliance status and airport expansion areas.

If you should have any questions, please do not hesitate to contact us.

Very truly yours,

GOLDER ASSOCIATES INC.

Thomas G. Pullar, P.E.
Senior Environmental Compliance Engineer

P. Stephen Finn, C.Eng.
Principal

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EXECUTIVE SUMMARY

Golder Associates Inc. (Golder) was retained by National Express Group PLC (NEG) to perform an Environmental Site Assessment and compliance audit of the Stewart International Airport located in New Windsor, New York, USA. NEG requested the assessment in the anticipation of entering a long-term lease of the airport property as part of the privatization of operations. The assessment and audit were completed pursuant to the terms and conditions contained in Golder Proposal No. PR3-6836 and addendum dated July 22, 1998.

The goal of the project was to perform a Phase I Environmental Site Assessment following the American Society for Testing of Materials Standard E 1527-97, establish baseline environmental conditions at the airport prior to the lease, and identify potential environmental liabilities associated with historical activities at the Site. In addition, the facilities were to be evaluated for compliance with applicable environmental rules and regulations. Airport expansion areas were to be evaluated preliminarily for development limitations relative to the National Environmental Protection Act due to the presence of wetlands, rare or endangered species, and historically sensitive areas.

Golder personnel visited the Site during the week of August 10, 1998 to observe the airport facilities and interview key personnel relative to the Site's history and operations. The Site has been in operation since 1937 and became the "Wings of West Point", providing flight training to Army cadets. The Site has been owned and operated by the U.S. Army, the U.S. Air Force, the Metropolitan Transportation Authority and the New York State Department of Transportation.

Based on the information gathered during the assessment process, Golder has identified the following areas of environmental concern at the Site:

- Approximately 11 waste dump sites, including a landfill that received waste from the airport and related operations for 40 years;
- Undocumented underground storage tank closures, and documented closures indicating soil contamination in excess of state cleanup standards remaining in place;
- Documented free petroleum product under a fuel farm and loading area;
- Former and existing water supply wells and septic systems;
- Existing tanks and infrastructure with the potential for soil contamination;
- Former fire training and shooting ranges;
- Multiple spills, stained soil areas and undocumented remediation efforts; and,
- Undocumented tenant operational practices with regards to waste handling and permitting.

Concern with the environmental issues at the airport is heightened due to the presence of a topographically-downgradient surface water supply lake 1,500 feet away from the Site, and the New York City Catskill Aqueduct running directly through the Site. Further investigative measures are recommended to determine the presence and extent of contamination at the Site.

Compliance issues were raised relative to the fuel farms, air emissions, and waste handling. Due to the presence of contaminated soil, compliance has not been achieved with environmental restoration regulations. The airport appeared to be meeting the permit requirements for the SPDES, nuisance wildlife harvesting and herbicide regulations. The county health department indicated no problems or complaints relative to the regulated water wells or septic systems.

In addition to addressing identified areas of concern and current compliance issues, it is recommended that NEG implement a Site-wide Environmental Management System (EMS). Implementation of an EMS will maintain compliance and ensure best environmental management practices by tenants so as to minimize future liabilities.

The proposed expansion areas evaluated for development limitations included the access road from Drury Lane to the airport terminal, the southern cargo area and the Control Tower site northeast of the Cessna/Amex Hangars. While there are several wetland areas and threatened species in the area proposed for development, no conditions were noted that would preclude development in the expansion areas.

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1.0 INTRODUCTION

1.1 Purpose

This report presents the results of the Environmental Site Assessment and Compliance Audit (ESA) conducted at the Stewart International Airport, New Windsor, New York, by Golder Associates Inc. (Golder) on behalf of National Express Group PLC (NEG). The purpose of the ESA was to provide a preliminary evaluation of potential environmental liabilities associated with the Site and to visually assess baseline environmental conditions at the facility prior to the privatization of operations by NEG. The work was conducted in accordance with Golder's proposal to NEG dated June 17, 1998 and an addendum thereto dated July 22, 1998.

The ESA was conducted following the American Society for Testing and Materials (ASTM) Standard E 1527-97, entitled "Standard Practice for Environmental Site Assessments: Phase I Site Assessment Process". In addition to the tasks required by the ASTM standard, Golder performed a review of aerial photographs, a search for fire insurance maps, and a review of local soil, geological, hydrogeological and hydrological conditions.

Facility compliance with applicable environmental regulations was evaluated by visual observation, regulation review and interviews with regulatory personnel. In addition, Golder performed a preliminary review of certain proposed airport expansion areas for consistency with the National Environmental Protection Act.

1.2 Limitations

The ASTM standard states:

> *"No environmental site assessment can wholly eliminate uncertainty regarding the potential for unrecognized environmental conditions in connection with a property. Performance of this practice ... is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and [the practice recognizes] reasonable limits of time and cost."*
> (ASTM E 1527-97, 4.5.1, "Uncertainty Not Eliminated")

This report was prepared by Golder Associates Inc. for the exclusive use of NEG and is intended to provide NEG with a limited assessment of the potential for the occurrence of environmental concerns at the subject properties. Any other use of this report by NEG, or by any third party, is at their sole risk.

The assessment included observation of the Site buildings and grounds, and the exterior of the buildings located on adjacent properties only. The scope of the project was limited to identifying potential environmental liabilities at the Site and those that would be reasonably observable on the surrounding properties while respecting trespass laws.

Because Site boundaries were not firmly established at the outset, a Site ownership title search was not completed. The project did not include sampling, analysis, or other evaluation of any materials on the property. A comprehensive evaluation of ecological resources of the Site was not performed.

This report is based on information obtained by Golder personnel during the Site visit from visual observations and inquiries made to property managers and/or current employees. It is based solely on the condition of the property at the time of the visits, supplemented by limited environmental information provided to Golder by others as described in this report. Golder cannot accept responsibility for any deficiency, misrepresentation, or inaccuracy contained in this report as a result of omissions, misrepresentation or fraudulent acts by the persons interviewed or information provided.

1.3 Report Organization

The ESA and compliance audit report has been organized to present the relevant Site information followed by the compliance evaluation and assessment of the airport expansion areas. In order to facilitate the evaluation of the property in an organized manner, the Site has been broken down into zones based on location and use. The zones comprise the following structures, facilities and surrounding land:

Zone 1

Fire Station
Administration/State Police Building
AMR Offices
Hangars A and B
Terminal
SAGE Building Complex
Building 2227
Fuel Truck Staging Area
Lav Dump Station

Zone 2

Tower Hill
Hangars E and G
Rifton Aviation Hangar (Building 112)
Buildings 105 and 110
Airport Employee Houses

Zone 3

200 Series Buildings
400 Series Buildings
700 Series Buildings
800 Series Buildings
2300 Series Buildings
Southwest Fuel Farm

Zone 4

Former Fire Training Area and Rifle Range
Vehicle Maintenance Building
Cargo Terminal

Zone 5

Cessna Hangar
American Express Hangar
Auto Auction
Northeast Fuel Farm

Zone 6: Off-Site Facilities

USDA Animal Impoundment Complex
Air National Guard Base
Industrial Park
County Transfer Station
Can Plant
Crestview Lake Complex

The location and boundaries of the zones are shown on Figure 2. Areas of concern that are not associated with a specific building or structure are addressed in the narrative for the zone in which the area is located.

A Site description is provided in Section 1.0 and 2.0 of this report. Section 3.0 presents the results of the background search for the Site, including the database search, aerial photograph review and regulatory interviews. The individual zones are discussed in Sections 4.0 through 9.0. Discussions regarding the compliance status for the Site operation are presented in Section 10.0

entitled Regulatory Evaluation and Compliance Status. Section 11.0 presents the environmental assessment of the proposed expansion areas at the airport. Sections 12.0 and 13.0 present a summary of the findings for the ESA and compliance audit, and Section 14.0 lists the references used during report preparation. Supporting documentation is presented in the attached tables, figures and appendices.

2.0 SITE SUMMARY

2.1 Site History

The region in which the airport is located has a documented history dating back to pre-Revolutionary times. In the early 1900's, agricultural activities supported the local economy. The primary products were fruit and dairy products from orchards and dairy farms located throughout the region. In 1917, the Catskill Aqueduct was completed, which, to this day, conveys drinking water from reservoirs in the Catskill Mountains to New York City.

In approximately 1931, Samuel Lachlan Stewart donated 172 acres of his farmland to the City of Newburgh for the purpose of building an airfield, to be named in honor of his father, Captain Lachlan Stewart. The City of Newburgh purchased additional lands, and with the help of the Civil Works Administration, construction of the airfield was started in 1932. The airfield was donated to the US Army in 1936, just prior to its completion in 1937. Subsequently, Stewart was used for flight training of West Point cadets, termed the "Wings of West Point", and additional lands were added to the airfield property.

In 1948, Stewart Field was turned over to the newly formed Department of the Air Force, with portions of the base remaining under the control of the Army for housing and training. The Air Force operated the Stewart Air Force Base until 1970, when control was turned over to the Metropolitan Transportation Authority (MTA), a New York State agency, for operation as a general aviation facility. The Stewart Airport, as it was then called, was operated by the MTA until 1983, when the facility was turned over to the New York State Department of Transportation (NYSDOT). NYSDOT has operated the facility from 1983 to the present.

2.2 Site Description and Boundaries

Stewart International Airport is located in the Towns of Newburgh and New Windsor, in Orange County, New York (Figure 1). The town line bifurcates the Site in an east-west direction. The property is located off of Exit 17 of the New York State Thruway, which forms a portion of its eastern boundary. In general, the property to be leased by NEG (hereinafter referred to as the Site) is bounded by Interstate 84 and New York Route 17K to the north, Drury Lane to the west and New York Route 207 to the south. Specific property boundaries for the NEG lease are shown on Figure 3, and encompass approximately 2,449.9 acres of developed and undeveloped land. This includes 48.2± acres of undeveloped runway protection zone west of Drury Lane not visually observed by Golder, and 1.5± acres of parking lot west of the SAGE building not specifically indicated on the figure. The property boundaries shown in Figure 3 were provided

based on a Site survey dated April 24, 1998, by Joanne Darcy Crum, Licensed Surveyor No. 49673.

Excluded from consideration are the properties to be retained by the Army, which include the Stewart Army Sub-post, Hangars 108 and 109, and Buildings 712 and 1004 near the terminal parking lot. Also excluded is the postal facility located north of the Site. Included are the Stewart Industrial Park, the Metal Can Plant, the Air National Guard Base (interview only) and Crestview Lake, which are tenant facilities to be leased through NEG.

2.3 Adjoining Property Descriptions

The northeastern boundary of the Site abuts State Route 17K. The properties along Route 17K, from the intersection of Interstate 84 to the bridge over Interstate 87, include the following: landscape supply, three houses, farm stand, vacant office building, Newburgh Auto Auction, funeral home, car repair shop, bar/restaurant, Grainger corporate office park, professional offices, Citgo gas station and a cemetery. All of these properties, except the cemetery, are on the opposite side of Route 17K from the Site. The cemetery is adjacent to the entrance of the Orange County Waste Transfer Station. The Transfer Station and other properties within the Site boundary are described in detail in Sections 4.0 through 9.0.

The eastern boundary of the Site falls within the area bounded and paralleled by Interstate 87. This area is mostly undeveloped, except for the Town of New Windsor Landfill. Between I-87 and Union Avenue, which connects Route 17K and State Route 207 (i.e., the northern and southern boundaries of the Site), are restaurants, a Wal-Mart shopping center, bank, and municipal building/highway department. Between I-87 and the Site boundary are primarily residential properties.

The southern boundary of the Site abuts State Route 207. The properties along Route 207 between I-87 and Bruenig Road include: Mobil gas station, New York Telephone building, Society for Prevention of Cruelty to Animals center and cemetery, Gulf gas station, Cumberland Farms store/gas station, trailer park, Stewart Mall (a small plaza with shops and restaurants) and an auto sales shop. Off of Route 207, near the I-87 overpass, is Silver Stream Road, which runs north into the Site. Between Route 207 and the Site fenceline that blocks Silver Stream Road is a trailer park and private residence. The properties along Route 207 between Bruenig Road and

Drury Lane include: Citgo gas station, Cenco gas station, pizza restaurant, convent, houses, elementary school, and some undeveloped marsh and forest areas.

The U.S. Military Academy Stewart Sub-post is also located within the area west of the Site, but north of Route 207. Generally, the land west of Breunig Road, and south of A Street , with the exception of the Southwest Fuel Farm (SWFF) and the 2300 Sewer Buildings are Army Sub-post properties. Army buildings bordering the Site may have associated underground storage tanks (USTs). The Post Exchange, located west of the short-term parking area, has a dry cleaning service, but sends the items off-Site for processing. The Army wastewater treatment plant and vehicle maintenance facilities are located west of the SAGE Building along A Street. These facilities, along with the other neighboring properties referred to above, have potential areas of concern that may impact the environmental integrity of the Site.

Drury Lane marks the western boundary of the study area, for the purposes of this Assessment. The true property line extends west of Drury Lane, on the opposite side of Stewart Properties. Both sides of Drury Lane are mostly comprised of undeveloped forest and marsh lands. There are a few houses and an Auto Electric business on Drury Lane, north of the overpass to I-84. Access roads to the USDA Animal Import Center and Crestview Lake are located on the east side of Drury Lane, as well. These two properties are described in detail in Section 4.0.

The northwestern boundary of the Site lies between Interstate 84 and the Stewart Industrial Park, the properties of which are described in detail in Section 4.0. The area north of I-84 appeared to be undeveloped. The closest accessible routes to this boundary were Drury Lane and Route 17k, which intersect. The portion of Route 17K between Drury Lane and I-84 included the following properties: houses, delicatessen, BF Goodrich, dental office, gym, Pleasure Island (entertainment), and a Mobil gas station.

2.4 Airport Activities and Tenants

Stewart International Airport is currently operated by NYSDOT as a full service aviation facility. The airport offers approximately eighty regularly scheduled daily flights to nine hub cities in the United States. The airport also conducts charter flights and cargo operations. Since it is located approximately fifty miles from New York City, the airport typically serves the general public and businesses in the New York Metropolitan Area. The majority of the buildings at the airport serve

support functions related to operations, including hangars for aircraft maintenance, administrative offices, fire fighting, and refueling. A building inventory is provided in Table 2.

A detailed description of the airport tenants is provided in Sections 4.0 through 9.0. Stewart Industrial Park, which is adjacent to the airport facility on its northern boundary, houses a number of tenants, including U.S. Postal Service (excluded from this study), Grand Union, Marriott Courtyard, Federal Express, Nelco, Amscan, and LSG/Sky Chefs, among others. The other major tenants on Site include the U.S. Department of Agriculture's (USDA) Animal Import Center, where agriculturally-important animals are quarantined upon importation to the United States, and the Anheuser-Busch Metal Container Corporation, where aluminum cans are produced and labeled for the beverage industry. Other major tenants at the Site include Federal Express, Airborne Express, American Express, Emery, Cessna/Citation, and AMR Services. AMR Services provides significant operational services to Stewart International Airport, including fueling, deicing, aircraft maintenance, and cargo services. Also located within the Site is Air National Guard Base and the Orange County Transfer Station.

2.5 Physical Setting

2.5.1 Physiography and General Geology

The Site is located within the Wallkill River basin which drains the western slopes of the Hudson Highlands section of the New England Uplands Physiographic Province in eastern New York. Marlboro Mountain which lies northeast of the Site is one of the more spectacular hills in the highlands east of the Site. Topographically this region is characterized by knobby, small, almost conical hills such as Cronomer Hill east of the Site. The hills and ridges are bounded by lowland swamps, marshes and lakes (e.g., Orange Lake and adjacent swamps north of the Site) within stream valleys which drain the Wallkill River system. In addition, numerous man-made reservoirs such as Browns Pond and Lake Washington (south of the Site) are also common. Lake Washington, topographically downgradient of the Site is used as a source of potable water for the Town of Newburgh. The region-wide topography displays most of the signs of Pleistocene glaciation which extensively modified the Wallkill Valley and surrounding uplands. Bedrock ridges provided convenient pathways for the advance of the glacial ice lobes. The softer rocks of the Wallkill Valley were scoured deeply, and upon glacial retreat, large lakes were left behind. A variably thick mantle of glacial till and outwash deposits now occurs over the bedrock in the Wallkill lowlands. The north-flowing Wallkill River and its tributaries which eventually drain

into the Hudson River near Kingston are virtually alone in draining the lowlands west of the Hudson Highlands.

The Hudson River, which lies several miles east of the Site, has cut a narrow gorge through the highlands which are largely made up of crystalline metamorphic gneisses and schistose rocks which are as much as 1000 to 1350 million years old, formed during the Grenville orogeny. The high ridges rising to an elevation of about 700 feet east of the Site are underlain by these crystalline metamorphic rocks which are in turn capped by thrust fault-bounded, metamorphosed generally dark colored, greywackes, shales and sandstones of the Taconic Klippe (Taconic highland) which are of Ordovician age (about 500 to 450 million years old). The highlands are separated from the adjacent lowlands by the northern extension of the Ramapo Fault system. Within the lowland valleys, which generally attain an elevation of 400 feet, the bedrock consists of lowland-Taconics consisting of Ordovician age shales, sandstones and greywackes assigned to the Normanskill and Martinsburg formations. These lowland rocks have not undergone the intensity of metamorphism witnessed by the highland rocks. Bedrock strike is generally north-northeast. The weakly developed foliation or cleavage, and bedding dips are generally westerly, although local reversals of dip are known where folds transect the formations.

In addition, according to a Site geologic map generated by Environmental Data Resources, Inc. (EDR) for Golder Associates (Appendix A), a fault line bisects the Site in a northeast-southwest orientation. The map shows the fault line as passing approximately beneath the intersection of the two runways at the airport.

2.5.2 Hydrogeology

The Hudson highlands are dominated by dense, igneous and metamorphic rocks which have undergone extensive deformation. Groundwater flow within these units is controlled by secondary porosity which includes fractures, joint and faults. In areas where carbonate rock formations exist, groundwater flow may be through solution enlarged conduit systems. The Wallkill lowlands as mentioned above are underlain by weakly metamorphosed, interbedded sandstones, greywackes and shales. The bedded nature would allow for both strike-parallel and dip-parallel components of groundwater flow with eventual discharge of the groundwater to local area stream valleys or lakes. Because the bedrock in both the highlands and lowlands is covered by glacial deposits which include till, outwash clays, silts, sands and gravels and terrace deposits, the groundwater recharge and discharge relationships between bedrock units and overburden

units (including local, man-made fill) could be quite complex. In general, the overburden units would serve to recharge groundwater within the bedrock. Groundwater in the bedrock or deeper units may exist under confined or unconfined conditions. Local confining conditions are anticipated where lacustrine clay or till deposits are present within the glacial sediments. These deposits may also retard or inhibit recharge of groundwater to other units below them.

Present day deposits within the marshes and swamps in the lowlands suggest that groundwater is at, or very close to, the existing grade. This fact is verified by the presence of sump pumps in many basements of airport buildings. To a large extent, much of this water may be perched above the glacial deposits outlined above, or may be locally recharged by deeper groundwater flow adjacent to the stream valley. Several smaller hills are also present around the Site. Some of these hills may be underlain by bedrock which may then locally serve to increase the hydraulic head between the lowlands and the hills. If the glacial deposits serve as a confining layer between the bedrock and the surficial deposits, groundwater beneath the glacial deposits is anticipated to be under confining conditions. However, it is to be noted that the glacial deposits may be absent in some portions of the lowlands. In these areas, the surficial groundwater may be in direct hydraulic connection with the deeper groundwater.

At the present time, little data on the complex interrelationships of the geologic units is available, regarding the lateral extent, thickness and lithology. Given these limitations, it is not possible to develop an anticipated hydrogeologic flow model for the Site at this time.

2.5.3 Hydrology

The main Stewart International Airport facility is located at an elevation of 491 feet above mean sea level (MSL). Runoff from the Site drains in four watersheds. The highest natural point in the vicinity of the Site, which is about 600 feet above mean sea level, is the man-made treated water reservoir on the Army Sub-post that supplies the Site and certain tenants with potable water. Surface drainage from the southwestern portion of the Site goes to a marshland through which an unnamed stream passes and ends at the Beaverdam Lake, located about two miles south of the Site. Surface drainage from the central western portion of the Site (i.e., the end of Runway 09/27) empties to Crestview Lake, which is actually composed of two manmade lakes separated by a berm but connected by a culvert. Drainage from the northern and northwestern portions of the Site is carried by a stream towards a very large marshy area that contains Orange Lake. Drainage from the eastern portion of the Site empties to a stream that runs along the eastern side

of the industrial park and Orr Avenue, under the New York State Thruway. Surface drainage from the southeastern portion of the Site, which carries the majority of runoff, empties to the Silver Stream Creek and ultimately to the Hudson River. This runoff can be diverted to Lake Washington, which lies approximately 1,500 feet southeast of the airport property line, through a structure located southeast of the intersection of Route 207 and Union Boulevard. Lake Washington serves as a municipal water supply to the Town of Windsor. Rec Pond is located between Lake Washington and the Site, and receives runoff from several storm sewers at the Site including the Air National Guard Base and an off-Site source, believed to be the Grainer Industrial Park. Also, the Catskill Aqueduct runs beneath the western portion of the Site from the northwest towards the southeast, and conveys New York City drinking water from reservoirs in the Catskill Mountains to the city. The Army Sub-post draws its water from the aqueduct to supply the treatment plant and reservoir that supplies the airport with potable water.

2.5.4 Soils

According to the USDA Soil Conservation Service's Soil Survey of Orange County, New York, the soils in the vicinity of the runway and terminal areas consist of dump or fill material (Du) and smoothed Udorthents (UH). The latter are soils formed in manmade cut and fill areas, consisting of excavated earthy material. The material typically either has been brought in from other areas and leveled or consists of soil remaining from excavations or cuts. The material is typically gravelly loamy sand to silty clay loam and well drained.

The undisturbed areas around the Site mainly consist of Mardin gravelly silt loam (MdB, MdD) and Erie gravelly silt loam (ErB). Both soils are soil formed in glacial till deposits derived from sandstone, shale and slate. The Mardin soil is moderately well drained and the Erie soil is somewhat poorly drained.

3.0 BACKGROUND SEARCH

3.1 Environmental Database Search

Golder retained EDR of Southport, Connecticut to search federal and state agency computer records for information pertaining to environmental liabilities at the subject property of potential impacts from neighboring facilities. EDR's federal records search included:

- Emergency Response Notification System (ERNS);
- Hazardous Materials Incident Reporting System (HMIRS);
- Material Licensing Tracking System (MLTS);
- National Priority List (NPL);
- NPL Liens (NPL Lien);
- Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS);
- CERCLA Consent Decrees (CONSENT)
- Resource Conservation and Recovery Information System (RCRIS);
- Polychlorinated Biphenyls Activity Database System (PADS);
- Records of Decision (ROD);
- Chemical Bulk Storage Database (CBS UST);
- Toxic Substances Control Act (TSCA);
- Former Manufactured Gas Sites (Coal Gas);
- NPL Site Deletions;
- Major Oil Storage Facilities Database for Underground Storage Tanks (MOSF UST);
- Major Oil Storage Facilities Database for Aboveground Storage Tanks (MOSF AST);
- Solid Waste Facilities / Landfill Sites (SWF/LS);
- RCRA Corrective Action Activity Database (CORRACTS);
- Leaking Underground Storage Tanks (LUST);
- RCRA Administrative Action Tracking System (RAATS);
- Facility Indexing System (FINDS);
- NY Spills Information Database (SPILLS);
- Toxic Chemical Release Inventory (TRIS).

A computer-generated listing of sites was provided itemizing governmental records from the above databases based on ASTM-recommended search distances from the Site perimeter boundary. Significant findings based on a review of the EDR report are summarized in the following paragraphs. A copy of the entire EDR report is provided in Appendix A. No Sanborn Fire Insurance Maps were available for the study area.

Several listings were identified within the ASTM-specified search distances from the above-named databases, which are located on the Site. The Air National Guard Base was listed as having been removed from the CERCLIS list in February 1995, once it was designated as "No Further Remedial Action Planned" (NFRAP). The records indicate an inactive landfill and

abandoned pesticide disposal area at the Base, which both belong to NYSDOT. The Base is also listed as a Large Quantity Generator of hazardous waste under RCRA.

Another site that was designated as NFRAP and removed from CERCLIS was the New Windsor Landfill, which is located between the southeastern property line of the Site and the New York State Thruway. The site occupies 14 acres and is closed. Hazardous waste was disposed in the landfill from 1962 to 1976, in addition to municipal and industrial wastes. Waste located on the Site was reportedly excavated and placed in the New Windsor landfill. The landfill was then capped in 1993 and is under post-closure monitoring. The landfill has leachate collection and gas venting systems in place. The leachate is treated in a publicly operated treatment works. The contaminants of concern in the leachate, soil, and groundwater include heavy metals and semivolatile organics.

There are two additional hazardous waste facilities in the study area, both of which are located on the other side of Lake Washington from the Site. The Interlake Plant is located on Temple Hill Road, near Union Avenue. The plant formerly manufactured steel shelving and stored hazardous waste containing benzene, metals, trichloroethylene and methylene chloride. No evidence of contamination was found prior to its closure in 1983. The other site is Macbeth Kollmorgen, which is located at 405-415 Little Britain Road (a.k.a. Route 207). This is a ten acre site at which paint research is conducted and instruments and software related to the evaluation of color systems are manufactured. Hazardous waste solvents were disposed of on-site from 1952 to 1980, which resulted in groundwater contamination. Nearby residential wells were contaminated and either carbon filtration systems were installed on the wells, or the residences were connected to public water. Some soil removal was completed on-site, and work continues under State oversight.

The following listings for areas at the Site were identified on the Leaking Underground Storage Tank (LUST) list, many of which referenced tank overfills as the source of release of petroleum product:

- The Cessna Hangar (3 Express Drive), no additional information was given;
- A tank tightness testing failure at a #2 fuel oil UST at the bowling alley (February 25, 1994);

- A leak of jet fuel from a vent due to heat expansion, the exact location of which was not reported (July 1, 1994);
- The Stewart Army Subpost, where a water line was hit and ruptured while a #2 fuel oil tank was being excavated (September 29, 1993);
- A release to soil at Army Building 1906 at A and 5th Streets caused by a tank overfill, the product and contaminated soil were reportedly removed (June 18, 1990);
- Discovery of contaminated soil while pulling gasoline tanks at an undisclosed location, with contaminated soil stockpiled at the Airport (April 6, 1994);
- Discovery of contaminated soil during the excavation of a #2 fuel oil tank at Building 122 (May 31, 1996);
- A reported overfill of jet fuel at a commercial vehicle (December 6, 1995);
- Small quantity spills at a fueling pad (August 2, 1995) and inside Gate 110 (February 18, 1996);
- Overfills occurred at a #2 fuel oil tank (July 28, 1994) and a jet fuel tank (July 19, 1995);
- Other tank overfills of unspecified jet fuel tanks occurred on January 11, 1992, September 17, 1992, and August 1, 1993;
- An airplane overfill (March 12, 1996);
- Building 2605 on 6th Street operated by the Army experienced a #2 fuel oil UST tank failure (October 15, 1997); and
- Contaminated soil was excavated but the cleanup activities were not reported as complete.

Approximately ten additional sites around the border of the Site were included in the LUST list. Nearly all of the sources of release were gas stations, many of which had underground tanks that failed tightness testing. In some cases, the releases reached groundwater and affected surrounding private water wells.

The EDR Report lists thirteen sites that are either small or large quantity generators of hazardous waste. Some of these generators are located within the Site, such as AMR Services, Metal Container Corporation, and the Air National Guard Base.

Twenty-five listings under the Spills Information Database were identified within the study area, most of which were identified as having occurred at Stewart International Airport. Some of these

have been previously discussed. Spills and releases were noted at the following properties: the Cumberland Farms Gas Station (Route 17K and Rock Cut Road); the Mobil Service Station at 1117 Union Avenue, where a pump and treat system was installed in 1990; and the BP Station at 635 Route 207 (across from the main entrance to Stewart International Airport), where contaminated soil was discovered upon the excavation of gasoline USTs in 1991. Unspecified contaminated soil was discovered at the Site in May 1996, and it appears that the contamination was not addressed. Various spills of jet fuel were reported during the filling of tank trucks or aircraft on the apron, ramps, or runway, which were typically cleaned up with sorbent material. Most of the spills were due to either equipment failures or tank overfills. Many of these records do not indicate the quantities of the spills, although nearly all of the recorded spills involved petroleum products. The U.S. Army reported a land-released substance during a tank closure in December 1997. The tank was abandoned in place and soil samples showed naphthalene contamination. No remedial activities were reported as having been completed.

Approximately 150 "orphan" sites were identified in the EDR Report. The data was insufficient for these sites to specifically identify the locations. Most of the sites were listed in the LUST, UST, or RCRIS databases. These sites are listed towards the end of the EDR Report.

3.2 Aerial Photograph Review

Golder viewed available aerial photographs provided by EDR/National Aerial Resources for the following years: 1957, 1965, 1977, and 1994. In addition, many aerial photographs were reviewed at the site during the visit and were used as part of the assessment. Aerial photograph review confirmed many of the areas of concern discovered during the Site visit and personnel interviews. The review of the EDR photographs revealed the information presented below, and copies are provided in Appendix B.

1957 – Runways 09/27 and 16/34 are present, but the only taxiways to Runway 09/27 that existed were Taxiways A5, B1, B2, B3, C, E, F, and G. Airplanes were parked on the apron behind Hangars A through I. Runway 09/27 had not yet been extended over the Aqueduct. Crestview Lake had been constructed, and the upper Lake extended northward to what is now the extended Runway 09/27. Interstate 84 was not yet constructed in this area. The area that currently comprises the Air National Guard Base appears as a large paved area in this photograph.

Disturbed areas are noted in the following locations: west of Runway 09/27 in the future runway extension area; Commissary Hill; north of Runway 09/27 but east of Building 2290; south of Taxiway F in the area of the airport landfill, including areas "outside" the Perimeter Road and east of the 200 series buildings. Much of the surrounding land appears under agricultural utilization. The Army Sub-post appears similar to current configurations, without Hangars 108/109 and with many of the buildings that were subsequently demolished. The engine test cell (Building 147) is not constructed.

1965 – The Air National Guard Base area is not constructed. Rec Pond is evident southeast of Runway 16/34. A portion of the airport landfill for brush, concrete and rubble is apparent south of the end of Taxiway F. A small waterbody appears southwest of the Vehicle Maintenance Building next to parked aircraft, that was not apparent on the 1957 photo.

The engine test cell (Building 147) has been constructed. The additional housing units for the Army Sub-post are visible, along with significant disturbance in the wetland areas west of the Sub-post. Surrounding property appears similar to the 1957 photographs. The New Windsor Landfill is visible.

1977 – Runway 09/27 has been extended over the Aqueduct, and Taxiway A3 and a portion of taxiway A have been added. The New Windsor Landfill is evident just west of I-87. Interstate 84 has been constructed. The area comprising the Orange County Waste Transfer Station appears to have been developed. The area containing the rifle range and fire training areas has been disturbed and roads or pathways have been added.

Buildings and disturbed areas are visible in the vicinity of the current Cessna Amex Hangars. The area east of the current ANG Base appears disturbed or recently graded. The airport landfill has expanded. Hangars 108/109 are visible. The Industrial Park area contains what appear to be residential structures.

1994 – The USDA Animal Import Center has been added. Runway 09/27 has been extended to its current configuration and the Upper Lake of Crestview Lake has been partly filled in to accommodate the runway extension. The taxiways have been modified into the current arrangement. The Air National Guard Base has been further developed and several aircrafts are parked in the apron area. The airport landfill area has been expanded towards the Rec Pond but

appears not recently used. The marshy areas around Drury Lane are more visible than in previous photos. This photo generally represents conditions observed during Golder's site visit, including such items as the Stewart Industrial Park, the Cessna/Army Hangar and the Can Plant.

The New Windsor Landfill closure appears complete and the former fill area on the Site that was excavated during closure is visible. The concrete rubble at the southern end of the Runway 16/34 is not visible. The property due east of the Transfer Station appears disturbed. Disturbed areas are noted along Perimeter Road, northwest of Taxiway G and the rifle range has been filled. The surrounding area is considerably more developed.

3.3 Regulatory File Review

Golder personnel visited the NYSDEC Region 3 offices in New Paltz and Tarrytown, New York to review the Solid Materials, Environmental Permits, Spills Management, and Water Program files related to the Site. Copies of key file material are provided in Appendix C. The Air Resources and Land and Forests programs previously responded indicating that they had no files for Stewart International Airport.

Solid Materials Files

Most of the information in the NYSDEC Solid Materials program file pertained to the investigation and closure of the pesticide burial site and landfill on the Air National Guard base (NYSDEC File No. 336022). The file includes initial site investigations from 1983 and recent reports and design documents relative to landfill closure by the Air National Guard. A risk assessment of the pesticide burial site was prepared by E.C. Jordan Company in November 1988. The result of the investigations at the Air National Guard base was the removal of the pesticide drums and contaminated soil from the Site, and the closure of the landfill by installation of a low permeability cap. No other remedial measures are proposed at this time.

Of note in the Solid Materials file is an October 11, 1988 proposal from James P. McGuiness of NYSDOT at Stewart International Airport regarding the investigation of two landfill sites at the airport. NYSDOT proposed that Stetson-Harza Inc. perform historical research, a Site inspection, a geophysical investigation, and soil gas investigation at two landfill sites at the airport. The site locations were not discussed and no follow up correspondence or reports were located in the file. An unattached site Map from Stetson-Harza was found in the file identifying the various landfills at the site including the one at the southern end of Runway 16/34.

Environmental Permits

The only environmental permit file observed relative to Stewart International Airport was a permit for the installation of an 8 inch gas line through freshwater wetlands along Route 207 near Breunig Road to serve the New Britain Elementary School. Permit No. 3-3348-149/1-0 was issued to the Central Hudson Gas and Electric Corporation for this project.

Spills Management

NYSDEC restricted the review of Spills Management files to three cases. Golder requested the following files:

- DEC Spill No. 9208136 - Hangar C tank closure;
- DEC Spill No. 9208421 - related to the discovery of drums during the New Windsor Landfill Closure; and
- DEC Spill No. 9410845 - Building 800 tank closure.

In addition, the file on the Federal Express Flight 1406 fire was requested.

The Hangar C tank closure spill was reported by the contractor, Carl Stillman of Testco Inc., on October 4, 1992. The correspondence reviewed by Golder was similar to that observed in the Stewart files. The spill report was marked "NFA" by NYSDEC, indicating No Further Action was required to be taken. The file contained incomplete information on contaminated soil disposal. Up to 90 cubic yards was to be thermally remediated and reused on-Site. Up to 500 cubic yards was reportedly going to be stockpiled, turned periodically, and sampled until the analysis showed compliance with applicable regulatory levels and on-Site reuse was allowed. No follow up correspondence was located in the files.

The New Windsor Landfill spill report related to the discovery of drums during the closure of the New Windsor Landfill. The discovery was reported by Carl Danonburger of Chem Waste Management, and referred to the Division of Solid and Hazardous Materials for follow up action.

The Building 800 spill file refers to "many tanks being removed" by Tyree in November 1994. The file included the spill information and was labeled "File Closed" and no further information was provided.

The Federal Express DC-10 fire was assigned DEC Spill No. 9607109. The file included data and field reports from sampling and analysis performed by NYSDEC and Miller Environmental. Newspaper articles with accounts of the incident were included. The results of the analyses indicated no adverse environmental impact from the incident on- or off-Site, and no follow up action was taken by NYSDEC.

Water Program

The Water Program files were comprised of the SPDES permits for the Air National Guard base and Stewart International Airport. Available files related to the Stewart Army Sub-post and other Army bases were not reviewed.

The airport SPDES files included some minor violations regarding flow reports and submission of the Discharge Monitoring Reports on a timely manner. NYSDEC acknowledged receipt of the 1997-1998 Deicing Report required by the permit.

An outstanding item noted in the file was a request by NYSDEC dated September 19, 1996 for a Spill Prevention Control and Countermeasure (SPCC) Plan for the airport and Guard base. The plan was to include all airport operations in addition to the fuel farms and coordinate response activities with the ANG. The request was prompted by the Federal Express DC-10 fire. The ANG responded that they would prepare the requested plan; however, no response was received from the airport.

General File Material

In addition to the personal file reviews at NYSDEC offices, Golder obtained copies of several NYSDEC files under the Freedom of Information Law. Copies of the file material that relates to the Site are provided in Appendix C.

General environmental listings for Orange County were forwarded by NYSDEC to Golder for review. The listings included the following: SARA Title III reports, Hazardous Waste Remediation Sites, Solid Waste Facilities, Mined Land Reclamation Sites, Commercial Hazardous Waste Treatment, Storage and Disposal Facilities, Hazardous Waste Generators, Reported Spills (1985-present) and Petroleum Bulk Storage Facilities.

Stewart International Airport and tenants were included on the following lists: Metal Container Corporation (SARA Title III); Stewart International Airport-DOT and New Windsor Landfill (hazardous waste remediation sites); Newburgh Transfer Station (solid waste facilities); Stewart International Airport and tenants (multiple spills); and, New Windsor-Crestview, Stewart Field-Citgo, and Stewart International Airport (bulk storage). The item of most concern is the reference to the NYSDOT landfill under hazardous waste facilities, particularly since the listing is rated as a "significant threat to the public health or environment-action required." This file was reviewed during the visit to the NYSDEC offices, and referred to the landfill undergoing closure on the Air National Guard base.

Materials received from the Division of Solid and Hazardous Materials included past inspections of the Army Sub-post (Hangars 108/109) in 1985 and 1987. A 1987 inspection of AMR Services was conducted that revealed problems with mixing waste fuel with waste oil. The problem was subsequently rectified by AMR through additional testing and correspondence. A 1993 letter to Dick Wilson of Airport Group of New York, Inc. (AGNY) responded to an inquiry related to the disposal of lead paint chips. Laboratory results for lead, cadmium, and nickel, dated September 9, 1996 from EnviroTest Laboratories, Inc., of wipe samples from the Federal Express DC-10 jet in response to the fire were also provided.

3.4 Personnel Interviews

3.4.1 Site Interviews

In addition to the persons interviewed at the specific tenant facilities and listed in the respective report section, Golder interviewed the following persons to compile the information presented in the report:

- George Kocan, NYSDOT Property Manager
- Richard Wilson, Sr., Supervisor of Maintenance, Air Group of New York
- Anthony Meluso, P.E., former Airport Engineer, Air Group of New York
- Jack Stamant, P.E., NYSDOT Engineer
- Thomas Torkilson, NYSDOT Engineer
- Lt. Col. Thomas Kiggins, Garrison Commander, Stewart Army Sub-post

3.4.2 Regulatory Interviews

Chuck Stroble, Stewart Army Sub-post Engineer, was interviewed relative to the sewage service for the airport. Mr. Stroble indicated that all of the airport's wastewater flows to the Army Wastewater Treatment Plant (WWTP), with the exception of the USDA Animal Impact Center and the Maintenance Building on the north side of the runway, and the Can Plant. Provisions had been made to connect to the existing 30" interceptor in Breunig Road to convey flow to the New Windsor WWTP in the future when the Sub-post is closed. Currently the Army has no compliance problems from the wastewater discharged by the airport.

An environmental assessment of the Site was performed in June 1998 by Laura Greninger of NYSDOT. The assessment was part of the program wherein state facilities are audited to ensure compliance with applicable environmental regulations. Ms. Greninger was contacted relative to her inspection. The assessment was of NYSDOT facilities only, and did not include tenants. The only violations found were several minor issues related to the tanks at the Site and NYSDOT had apparently addressed most of the problems, with the exception of labeling tanks and equipment and updating the spill plan.

Richard McGooey, P.E., Engineer for the Town of New Windsor, was contacted regarding the sewage service for the airport. Mr. McGooey stated that the airport was in Sewer District 20, and only minor flows were treated by New Windsor other than the Can Plant discharge. He referred Golder to John Egitto of CAMO Pollution Control for specific questions regarding the airport's compliance with New Windsor's sewer discharge standards. Mr. McGooey explained the plans to connect the USDA Animal Impact Center to the Army plant and the entire airport and Sub-post to New Windsor when the Army leaves the Sub-post in 1999. Some provisions have been made for the connection to New Windsor, including the installation of a gravity line from the USDA facility to the Army pump station and a 30" sewer in Breunig Road. Additional work will be required to complete the physical connection to New Windsor.

John Egitto of CAMO Pollution Control (contract operator of the New Windsor WWTP) was interviewed relative to the wastewater discharge from the airport. According to Mr. Egitto, the airport only discharges deicing fluid after analyzing the fluid and receiving approval from CAMO, and the New Windsor plant had no problems relative to the discharge.

The Orange County Department of Environmental Health was contacted regarding water supply and septic system compliance. Bill Ottaway was interviewed regarding the on-lot septic systems at the Site. Mr. Ottaway was not aware of any problems, complaints or recent approvals relative to the Site. No regular inspections were made. He indicated that typically complaints would be made to NYSDEC.

Debbie Memmelaar of the Department of Environmental Health was interviewed regarding water wells and bathing place permits for the Site. The Department of Environmental Health issued a bathing beach permit for the Crestview Lake complex and a restaurant permit was issued for the snack bar. Disinfection is required of the well water before use, and Crestview must perform daily chlorine residual and monthly coliform testing while in operation. Monthly operation reports must be filed. Periodic inspections were made at the site to review operations and insure compliance with applicable Health Department regulations. The septic system was included in the inspection only to the extent that Department personnel observed the absorption bed area for outbreaks. No problems have been observed or reported at Crestview. Ed Sims, engineer for the Department of Health, was contacted regarding any public water supply wells at or near the Site and stated that none existed to the best of his knowledge.

Golder contacted representatives from NYSDEC to discuss the Site relative to environmental conditions. Dolores Wehrfritz, with the Site Restoration Division in Region 3, was contacted relative to the tank pulls and spill cleanups at the site, since she was the point of contact listed in the closure correspondence reviewed at the Site. Ms. Wehrfritz stated that she had not handled the Site for the last three or four years, and that Joe McCarthy (no longer with the Department) and Dave Traver were the persons most familiar with the recent history at the site. When asked about the past incidents, Ms. Wehrfritz indicated that there had been multiple spills at the Site and many tank closures. Individual spill reports would have to be reviewed for details. According to Ms. Wehrfritz, typically, tanks closures were handled by pulling the tank, sampling if there were signs of leakage, removing any visibly contaminated soil if possible, and closing the excavation. Little else was done regarding remediation or investigation. No closure approval letters from DEC were issued. She stated that NYSDEC "didn't have much luck" with getting NYSDOT or AGNY to pursue contamination at the Site and that budget and contractual constraints often dictated the end of a project. For example, while removing the ten 25,000-gallon jet fuel tanks across Breunig Road from the SWFF, the contract allowed for only 200 tons of contaminated soil per tank and any more than that was not removed, regardless of the extent of the product

migration. Little enforcement action was taken since the Site was either federal or state property. Ms. Wehrfritz was not aware of any outstanding compliance orders or pending enforcement actions by DEC against the airport.

Dave Traver of NYSDEC was contacted regarding the current status of tanks and spills at the Site. Mr. Traver refused to comment and referred Golder to the file clerk to schedule a file review of specific cases (see Section 3.3).

4.0 ENVIRONMENTAL BASELINE SURVEY-ZONE 1

4.1 Overview of Zone 1

Zone 1 comprises the buildings and land in the central portion of the airport. These include the fire station, administrative offices, administration building, Hangar A, Hangar B, the SAGE Building complex, Building 2227 and the terminal. It is bounded by the property line, Taxiway A, Taxiway B1 and Taxiway C. A listing of Zone 1 facilities is provided in Table 1-1. All buildings are shown on Figure 3. This figure also has a key code representing the building reference numbers.

4.2 Facility-Specific Interviews and Observations

4.2.1 Stewart International Airport Main Terminal, First Street

Description of Activity

The terminal (Building 128) serves as the passenger and cargo loading/unloading facility for the airlines serving Stewart International Airport. The first floor of the terminal contains the ticketing counters and food service facility. The back side of the building contains cargo/luggage handling areas, which are adjacent to the apron that leads to the airplane taxiways. The second floor of the terminal contains the waiting area and gates to the airplanes. The terminal underwent a major modification and expansion in 1997 which increased its size from 39,000 square feet to 90,000 square feet.

Previously Identified Environmental Concerns

Airport staff reported that a sanitary sewer pipe partially collapsed in front of the terminal building near the former Hangar D (Building 128), and was not repaired. Hangar D has since been replaced by the existing Terminal. Sewage is conveyed through the uncollapsed portion of the pipe presently. Also at former Hangar D, prior to terminal construction, a heating oil UST may have existed. Closure documentation was not provided for Golder to review.

According to a NYSDOT representative, the elevator shaft in Terminal A, contains a solvent type and/or septic type odor. A sump pump in the bottom of the elevator shaft removes accumulated water to the storm sewers, and reportedly contains standing water that creates the malodor. The elevator shaft could not be accessed during Golder's Site walkthrough. Adjacent to the terminal, it was reported by NYSDOT staff that solvent contamination was present in the soil beneath the terminal and parking area under former Hangar C north of the terminal. It was also reported that

impacted soils were not delineated and that remedial efforts were not undertaken. The potential for groundwater impacts has not been evaluated.

Interview and Questionnaire Results

The Operations Manager at the terminal stated that the rear portion of the terminal, adjacent to the flight apron, was newly constructed about one year ago. The front of the terminal is older, and was refurbished. No USTs exist at the terminal and no polychlorinated biphenyls (PCBs) or asbestos containing materials (ACM) were observed. There are two elevators, hydraulically operated.

Deicing operations were reported to occur at Gates 1 through 7. The deicing fluid (propylene glycol) is stored in an aboveground storage tank (AST) on the apron. When required, deicing vehicles are filled with propylene glycol and sent to the aircraft. Used deicing fluid enters a collection system comprised of two grated surface drainage trenches, and one, 30,000-gallon glycol recovery UST is on the apron and two are along First Street.

When not deicing, stormwater runoff flows through two, 30,000-gallon oil/water separator USTs (one on the apron and one along First Street) and discharges to drainage ditches or storm sewers under the conditions of a SPDES permit. No vehicle or aircraft maintenance is performed at the terminal. According to the Operations Manager, the terminal is strictly domestic, so there would be no customs issues such as non-importable items.

Site Observations

A brief walkthrough was conducted at the rear of the terminal and within the public areas of the terminal. An AMR spill cart was parked on the apron behind the terminal. The apron in the vicinity of the terminal was in good condition. The cart contained rags and a drum in order to clean up incidental spills. Floor drains were observed in the luggage handling area. The terminal representative speculated that the drains emptied to an oil/water separator, but could not state with certainty the ultimate disposition of any material entering the drains.

Inside the first floor of the public area of the terminal was the Jet Set Deli lunch counter/grill, a ticket counter, three car rental counters and the terminal concourse. All areas observed appeared to be well maintained. No environmental concerns were observed.

Records Review

No records were made available for review.

Inventory of Materials

Generally, materials such as jet fuel or deicing fluid are brought on-Site as needed via truck.

4.2.2 AMR Services; Administration (Building 140), Hangar A (Building 136) and Hangar B (Building 132), 1037 First Street

Description of Activity

AMR performs a variety of services at Stewart International Airport, including: fueling (Jet A, aviation gasoline, or AV-Gas), aircraft maintenance, vehicle maintenance, ramp services or ground handling, passenger services, aircraft "hangaring" (i.e., temporary storage or parking of aircraft) and cargo services. AMR's administration building (Building 14) on First Street contains a café, offices and flight school. Hangar A, or Building 136 contains offices and maintenance and hangaring operations. Hangar B, or Building 132 contains offices and vehicle maintenance and cargo services operations. A portion of Hangar B is leased to the United Parcel Service (UPS).

Previously Identified Environmental Concerns

The Assistant Vice President/General Manager of AMR, with whom the interview and Site walkthrough were conducted, stated that all three buildings operated by AMR have asbestos containing materials. The ACM in the portion of the building leased to UPS was reported to have been removed. The review of ACM was not within the Scope of Work being performed by Golder. We understand that a Building Condition survey has been undertaken by others, and that ACM issues are to be covered in that survey.

Interview and Questionnaire Results

The AMR representative stated that there were no USTs or ASTs in the buildings, with the exception of a 250-gallon waste oil tank outside of Hangar B. However, historical observations indicates that fuel oil USTs were previously present at both Hangar A and Hangar B. No information regarding the condition of soils and groundwater in the vicinity of the former USTs at the time of their removal was available for review.

Water is used primarily for deicing and sanitary services. Water is also used for cooking in the café (Anna's Runway Café) located within AMR's office building (Building 140). All of the fueling conducted by AMR occurs on the flight apron via tanker truck; no fueling is conducted on the runways.

Site Observations

In the basement of the office building (Building 140) was a boiler room containing one gas-fired boiler. The boiler blowdown and air conditioner condensate discharges to the stormwater drain. A large sump pump was also located in this room. The AMR representative stated that there are no electrical transformers on their property. All of the piping in the basement appears insulated with suspect asbestos containing material (ACM). Testing would be required to confirm its presence or absence. On the first floor of this building was Anna's Café, a flight school, offices and a lounge. One air emissions source was observed from the hood over the grill at the café.

Hangar A (Building 136) consists of a wood frame building with suspect corrugated (non-friable) asbestos transite cladding. It was constructed around 1940. All of the piping in the hangar has suspect ACM wrap insulation. Next to the hangar area was a work room containing four work benches. Inside the room was an open 55-gallon drum containing aerosol cans, open paint cans, rags, and other debris. This area also contained compressed gas cylinders and a flammables locker. Rooms adjacent to the work area contained 12-volt batteries, a parts storage area, and a wet chemical storage area. The chemical storage area contained opened 55-gallon drums and cans stored on wooden pallets, as well as shelves full of unused turbine oil, motor oil, and other maintenance materials. No drains were noted in these rooms. The air compressor located in the hangar area was itself stained and the floor beneath it was stained. The hangar contained ceiling fans with no exhaust.

An area adjacent to the hangar room is rented by Thomas Aircraft Parts, who sells parts but does not perform maintenance work. The floor of the hangar is comprised of large cement blocks which are sealed. The floor is sloped to a drain, which was stated to go to the storm sewer. There is no oil/water separator in this Hangar. Any waste oil that is drained from filters or otherwise generated is reported taken to the 250-gallon waste oil AST outside of Hangar B. AMR does not classify any of its waste as hazardous material or segregate any special wastes from the trash, except for waste oil. Any Jet A fuel, which typically is disposed of as a result of spills and contained in sorbent, is sent off-Site to Environmental Product Services to be thermally

remediated. Motor oil is supplied by NOCO in 55-gallon drums; empty drums are returned to the vendor. For any other drums, AMR cuts off the top and bottom and puts the drum into the trash.

The northeast portion of Hangar B (Building 132) is leased by UPS and is separated from the rest of the hangar by a chain link fence. At UPS' request, ACM were removed from the piping and walls within its leased space, prior to its occupancy. Parked in the hangar was a truck used for deicing. A 60/40 mix of propylene glycol and water is used for deicing. In the back of the hangar were 12 empty drums and 4 full drums of fuel ice inhibitor, sitting on containment pallets. The use of deicing fluid is strongly dependent upon the temperature and amount of precipitation. In 1997, about 75,000 gallons of the propylene glycol mixture were used. The annual usage has been as great as 160,000 gallons. Behind the parked deicing truck was the vehicle maintenance shop. In this area were used tires, which are removed by Rapid Tire, a pneumatic oil filter crusher and a Safety Kleen parts washer. The oil filter crusher is not a hot crusher, and used filters are put into the trash. At the time of the Site visit, the sink lid of the parts washer was open, but was not being used. No vehicle air conditioning work is done in this shop, although it used to be performed. The hangar room also contained a flammable locker.

The walkthrough continued around the hangar buildings and the apron. Outside the southwest corner of Hangar B a 250-gallon waste oil tank with secondary containment was observed. Adjacent to the tank were three compressed gas bottles of unknown contents, which had been stored there indefinitely. According to AMR, no company was willing to haul the bottles away for disposal. The apron is located adjacent to the eastern side of the hangars. The apron is sloped 2.5° from north to south, and contains two perimeter drains (the outermost drain serving as a secondary drain). The apron was in good condition, with no major pitting or cracks observed. Any waste deicing fluid flows south, towards the inner drain. The inner drain runs along the taxiway to a collection tank at the end. The outer drain heads towards the collection tank located south of the main terminal. Normally, storm water flows through an oil/water separator and is discharged to a storm sewer. A diversion valve must be closed, when needed, to divert the deicing fluid from the oil/water separator to glycol recovery UST. AMR stated that Stewart International Airport Operations, who is advised by AMR prior to a deicing event, is responsible for closing the valve. AMR is responsible for conducting the actual spraying of the deicing fluid, but is not responsible for the collection and recovery of the fluid. Reportedly, Stewart International Airport recovered 71 million gallons of contaminated water last year, although only 75,000 gallons of deicing mixture had been used. To AMR's knowledge, the collected deicing

mixture is tested off-Site for glycol concentration, and the results determine whether the wastewater is sent to the Town of New Windsor sanitary sewer or is trucked off-Site. AMR is not involved in the deicing operations at the Cargo Building. AMR asserted that deicing is never performed on the runways.

Records Review

A review was performed of AMR's recent SARA Title III Tier 2 reports and Material Safety Data Sheets (MSDS) sheets. The latest Tier 2 submission was dated February 17, 1998. The report showed the daily usage of AV gas from the Northeast Fuel Farm and fuel trucks, Turbo A fuel from the Northeast and Southwest Fuel Farms and fuel trucks, automobile gasoline from the Northeast Fuel Farm and fuel trucks, and propylene glycol from the deicing pad tank and deicing truck. Until 1996, the reports showed that ethylene glycol was used as a deicing fluid. Also, crystallized urea is supplied by Stewart International Airport for deicing of the runways and aprons.

The MSDS sheet for Safety Kleen "Premium Solvent" was reviewed. Typical of parts washing solvent, this brand contains petroleum distillates, naphtha, Stoddard solvent and mineral spirits. Based on the MSDS sheets, other chemicals used at the hangars include such items as: lubricants, acetone, oil, spray paint/paints, battery cleaner and coating, brake fluid, engine cleaner, hydraulic fluid, degreaser, MS-182 freon solvent, thinners and brake cleaners.

Manifests were requested for the Safety Kleen solvent. After a lengthy search for copies of any manifests and a call to Safety Kleen, AMR determined that it does not manifest the solvent waste when the parts washer is serviced, due to the small quantities generated.

Inventory of Materials

The main materials stored on-Site are transient truckloads of propylene glycol/water mixture and fuel, as well as waste oil and the vehicle maintenance materials listed above.

4.2.3 Fire Station (Building 142), End of First Street (Adjacent to Taxiway B1)

Description of Activity

The fire station provides a base for emergency response to fire-related incidents occurring at Stewart International Airport. The station is staffed with personnel from the Air National Guard Base who are trained in fire fighting and emergency response techniques.

Previously Identified Environmental Concerns

No previous environmental concerns were identified.

Interview and Questionnaire Results

There were no personnel on-Site during the Site visit. It was not known where the firefighters were or how to contact them at that time. According to NYSDOT representatives, the station was refurbished a few years ago.

Site Observations

A short walkthrough was conducted of the station. The station has four bays available for fire trucks and one spill response unit. Adjacent to this area is an office and a separate room for sleeping/living quarters. The facility was very clean and appeared to have been recently painted.

Records Review

No records were made available for review. Historical documentation indicates that a fuel oil UST formerly existed adjacent to the fire station.

Inventory of Materials

No materials were inventoried. In general, the station houses fire trucks, response equipment and drums of fire fighting foam. No other chemicals were observed in the station area.

4.2.4 SAGE Building, 4011 A Street (Building 2201)

Description of Activity

The first floor of the Semi-Automatic Ground Environmental (SAGE) Building houses Mom and Pop's Candy Company (Mom and Pop's). The remaining floors of the four-story building are vacant. Mom and Pop's receives chocolate, melts it, molds it into various shapes (e.g. lollipops, holiday motifs), and packages it for resale.

Previously Identified Environmental Concerns

The SAGE Building was constructed in 1955 and used until 1969 as an Air Defense Command Post for the eastern United States (Metropolitan Transportation Authority, Sage Building Evaluation, Part One). During this time, three diesel engines, believed to be generators, were in operation. A literature review indicates the existence of two former 30,000-gallon underground diesel fuel tanks and associated piping. An old Site map shows three underground tanks in a tank

farm located about 100 feet east of the northeast corner of the Power Building (Building 2207). It is not known whether the tanks were ever removed or when they became inactive. There was also a day tank for each diesel engine, equipped with high and low level switches, that stored fuel for the engine system. At one time, an electrical substation on the west side of the Power Building (adjacent to and behind the Main Building) housed transformers that received power from a local utility source. It is not known if these transformers contained PBCs. They are no longer present on-Site.

Interview and Questionnaire Results

Mom and Pop's has rented the first floor of the Sage Building since 1996. There are 25 employees at the facility. All of the water, obtained from a public source, is used either for sanitary (e.g. bathrooms) or equipment/general cleanup. There is no significant machinery associated with the chocolate melting or remolding process. With respect to Mom and Pop's, no issues of environmental significance were identified.

Site Observations

The SAGE Building is a four-story structure with no windows. The walls are reportedly three feet thick and constructed of reinforced concrete. A freight elevator in the northeast corner of the building is inoperative, and there is no basement. Aside from the Mom and Pop's production facility, the first floor contains a storage room for cardboard boxes and a warehouse area. The warehouse room, which was used until recently by a foreign trade enterprise, contains tracks on the ceiling that were formerly used as an electric hoist and trolley system. The circuit breaker panel in the warehouse contained breakers for equipment such as: sump pump, cooling tower sump pump, exhaust fan, fuel oil pump, and concentrator. An open sump pit in the engine room, at the rear of the main building, contained standing oily water and piping. The pit contained piping which appears to have led to the former underground storage tanks located outside the building. The exhaust fan in the warehouse room vents through the ceiling. Historical reports indicate that this area comprised the former Power Building, which housed three diesel generators and four air intakes at the north wall. This building also contained the electrical power, heating, cooling and water supply equipment when the SAGE building was in use.

A walk-through of the Mom and Pop's activities was conducted. Chocolate is brought in and melted. The melted chocolate is reformed using plastic molds into novelty items and packaged/shipped for resale. The main appliances used are small plug-in melting units and

household-type refrigerators. No water is used in this process (except for equipment cleaning). Electricity is supplied to the operation, but heating is not provided to the building. Chlorine bleach and water are used to clean the floors. This, in addition to water from the bathroom, comprises the wastewater stream. It was not known to where the floor drains empty. Dumpsters are present for trash and recyclable materials. According to the owners, the Health Department has inspected the operation and no citations have been issued.

A walk-through of the vacant floors was conducted. Because there are no windows, there is no natural light to the building. The upper floors contained air conditioning equipment. The piping was insulated with suspect ACM, and ACM is suspected to be present in the floor tiles.

Outside and behind the north side of the building was a concrete cooling tower structure (Building 2203) with standing water in the in-ground portion of the tower. A suspect UST vent pipe and fill cap were observed on the eastern side of the building. All USTs at the SAGE building were reported by AGNY to have been removed. Suspect UST fill portals were also observed at the loading dock on the east side of the building. No documentation was provided regarding UST removals. It is not known if the USTs remain.

A small, rusty incinerator was located on the west side of the building, adjacent to an approximately 275-gallon rusty AST. No staining was noted on the ground by the tank or incinerator. Refractory brick was observed to be present inside the unit. A number of electrical transformer units were observed on the west side of the building inside a fenced enclosure. The units were not labeled, but appeared intact with no leakage or stained soil observed. There were no records available for review by Golder regarding PCB testing at these transformers, or any other electrical equipment in the building.

Two shipping entrances were present in the building, and included entrance containing drums, which appeared to be empty.

Records Review

No records associated with the Mom and Pop's activities were made available for review.

Inventory of Materials

The materials present in the Mom and Pop's portion of the building were raw chocolate, molded chocolate pieces, packages ready for shipping, used plastic molds, and cardboard boxes.

4.2.5 Building 2292, A Street

Description of Activity

The building is located just east of the SAGE Building, across the parking and within the same fence enclosure. The building is a one-story garage-like structure constructed of cinder block, with a flat roof. A loading dock was noted on the parking lot side.

Site Observations

The building is leased to an electrical contractor for material storage. A 275-gallon fuel oil AST was observed on the north side of the building which supplies an oil-fired ceiling heater inside. While access to the interior was not obtained, observation through the windows indicated no apparent areas of environmental concern.

4.2.6 Building 2227, Perimeter Road (Former Rockets and Munitions Storage)

Description of Activity

Building 2227 is located south of the perimeter road along the north side of Commissary Hill. The building is a one-story structure constructed with block walls and a flat roof, and enclosed by a chain-link fence. According to historical Army and NYSDOT documents, the building was used to store rockets and munitions.

Site Observations.

Currently, the building is unoccupied and used for the storage of equipment including pumps. An UST was identified outside the building by airport personnel, estimated at 550-gallons for diesel fuel, which was scheduled for removal in August 1998. The area surrounding the building was used by the DOT to store excess equipment prior to disposition off-Site. Some painting of the equipment took place on the ground and staining was evident on the asphalt paving. In addition, suspect shot blasting granules were observed on the ground south of the building.

4.2.7 Administration Building (Building 138), First Street

Description of Activity

Building 138 serves as the Administration Building for the airport. It is a one-story structure, with wood framing and brick facing. The first floor contains offices and conference rooms.

There is a basement with additional offices and record storage areas. The building is heated with a gas-fired boiler, which appeared to be a converted oil-fired unit. The building was served by an underground heating oil storage tank.

Site Observations

No environmental concerns were observed outside the building. Inside the structure, suspect asbestos tiles were present throughout the building. A sump is present in the boiler room to handle storm water from stairwells. A floor drain was present in the boiler room, and groundwater seepage was flowing across the floor into the drain. The area was stained with mixed suspect petroleum hydrocarbon and algae growths.

4.3 Other Areas of Environmental Concern

4.3.1 Commissary Hill, First and A Streets

Commissionary Hill is located in the center of Zone 1, Commissary Hill was named for the former Commissary that was located at the southern base of the hill. The hill area was comprised of relatively steep side slopes and a relatively flat top portion graded in past. The top portion was flat open sided with drainage swales and roads graded across the surface. Wooded areas containing mostly sapling trees, are located on side slopes and part of the upper plateau. The eastern portion of the hill contains concrete pedestals, formerly used to support a tower or beacon. No obvious issues of environmental concern were observed on the hill.

4.3.2 Hangar C (Building 130), First Street

Hangar C was formerly located in this zone, between Hangar B and the main passenger terminal. The hangar was demolished in 1992-1993. In October 1992, the 4,000-gallon fuel oil UST serving the hangar was excavated and removed. Considerable petroleum contamination was discovered in the vicinity of the UST and NYSDEC was notified and assigned spill number 92-08136 to the project. Some contaminated soil was excavated, but progress was hampered by the proximity of the excavation to the adjacent foundation wall and floor slab from Building 130. Organic vapors were also detected which led to additional soil-gas investigations, soil sampling and soil excavation. Site conditions prevented excavation of all the contaminated soil.

In addition to the petroleum hydrocarbon contamination, the soil was found to be contaminated with volatile organic compounds, including tetrachloroethene (also called PCE or perchloroethene) and pyrene. Several meetings were held with NYSDEC personnel to discuss the investigation and remediation of the Site. DEC personnel indicated that groundwater

contamination was not a concern and the remediation focussed on the removal of the contaminated soil. Subsequent soil investigations used soil-gas detectors to determine the extent of contamination, no monitoring wells were required or installed and no groundwater analysis was performed. In addition, the source of the volatile organic compounds was not determined. The lack of groundwater analysis in this area coupled with the remnant soil contamination is a concern.

Several files were reviewed pertaining to the Hangar C tank closure. No definitive closure plan could be found that summarized the work performed, provided post-excavation sample results or supplied a final DEC approval letter. Based on the information provided, it is Golder's opinion that contaminated soil may remain in the vicinity of the former hangar building that exceeds the New York State cleanup criteria. No further comment can be made with respect to groundwater.

4.3.3 LAV Dump Station, Taxiway B1

The LAV dump station is a receptacle for the contents of aircraft holding tanks, located along Taxiway B1, just northeast of the fire station building. The actual facility is a sanitary sewer manhole with a hole cut in the top to allow a hose to be dropped into the manhole and the holding tanks contents discharged to the sanitary sewer. According to airport personnel, if the hose does not fit into the manhole, the cover is removed and the tank discharged into the opening. No diking or containment is provided. The sewer is connected to the Army sewage treatment plant. No problems with wastewater quality were mentioned by Army personnel from the LAV station or the airport in general. However, airport personnel mentioned that problems often occurred with line blockages from materials dumped into the manhole. The sewer line had to be cleaned to prevent the backup of sewage onto the ground. An improved receiving station has been designed for the apron area south of the terminal, but has not been constructed.

During Golder's Site visit, evidence of spillage was observed on the ground surrounding the manhole.

4.3.4 Aircraft Fueling Tanker Staging Area, Taxiway B1

The aircraft fueling tanker staging area is located across Taxiway B1 from the LAV dump station. Many tankers are parked in this area while in use fueling aircraft at various locations in the airport. The asphalt under the tankers was observed to be broken and weathered, and the asphalt and soil was stained. Staining was present over an area of about 200 feet by 5 feet.

clean and well maintained. A transformer was located just outside the office area. It is reportedly owned by the local utility, Central Hudson Power Corporation, and was not labeled for PCB content.

Records Review

Records other than the Phase I report were not made available to review as a part of the Site walk-through and interview.

Inventory of Materials

A complete inventory of the materials stored and handled by Rifton is available from the facility. With the exception in the ASTs, all quantities observed were small and no obvious issues of environmental concern were noted.

5.2.4 Hangar G (Building 118), Apron side of First Street

Description of Activity

Building 118, also known as Hangar G, is a NYSDOT facility located at First and Y Streets. Historically, it was used by the Air National Guard as a hangar and office. Presently, it is used by NYSDOT for material storage. The building has corrugated asbestos (transite) siding.

Site Observations

The structure is in poor condition. Fluorescent fixtures were noted inside. Suspect ACM was noted throughout the building. Outside, the asphalt is in poor condition, and four hydraulic loading docks were observed along First Street.

5.2.5 Hangar E (Building 122), Apron side of First Street

Description of Activity

Building 122, also identified as Hangar E, is a NYSDOT facility located on First Street, south of the Terminal Building. It has been used historically for aircraft maintenance, and is presently used for material storage. The structure is corrugated metal on block.

Site Observations

NYSDOT stores equipment, salt and sand inside the building. Suspected mercury vapor lights are used in addition to fluorescent fixtures. Given the building age, lead paint is also possible, and the paint observed was peeling. The building was served by a former UST that was removed. However, two suspect USTs were noted on the south side of the building, as evidenced by vent and fill pipes (Figure 5). It was reported that one of the suspect tanks was used for glycol

recovery from the ramp outside the hangar. It was also reported that the tank was used to capture cleaning fluids, reported to contain benzene, used to clean the aircraft serviced in the hangar and on the south ramp. The tank is reported by Air Group of New York, Inc. (AGNY) staff to have leaked. No information was provided regarding the second suspect UST.

5.2.6 Test Cell (Building 147), Taxiway F

Description of Activity

Formerly the location of an engine test cell, Building 147 has more recently been used for material storage by NYSDOT. Engine test cells involved mounting various test engines on a stand and operating the engine under varying performance loads. Concerns are often related to fluid (i.e., fuel, lubricating oil, and coolant) discharge onto the ground near the cell.

Site Observations

The building was in generally poor condition. A tar-like material was present on the ground surface near the building entrance. Staining was also present on the ground surface in and near the building. An aboveground storage tank cradle was noted, with the tank removed leaving the concrete supports for what is estimated to have been a 2,000-gallon fuel tank. Distressed vegetation was observed.

An abandoned taxiway near Building 147 was being used to store various materials, including asbestos transite sheeting, scrap wood and steel, airport signs, crushed drums, and the frame of a Federal Express jet that burned at the airport upon landing. No surface staining was observed in this area. Previously, this runway was used as a "catch-all storage area." It was reported to have been cleaned up recently.

5.2.7 Air Traffic Control Tower (Building 148), Tower Hill

Description of Activity

Building 148 is the air traffic control tower, located on Tower Hill overlooking the airport. It is a four-story block and steel structure used by air traffic controllers to monitor and direct airport flight traffic.

Site Observations

No obvious issues of environmental concern were observed inside the building. On the outside of the building, at the north east corner, a former AST tank cradle was observed. Airport staff indicated that a former gasoline AST was present at this location. The area was not noted to be stained.

5.2.8 Generator Buildings (Building 149 and 150), Tower Hill

Description of Activity

Building 149 is a one-story brick building housing the DOT and FAA regulator and generator for emergency power for the control tower. Building 150 is a one-story metal building associated with the emergency generator.

Site Observations

A 5,000-gallon underground diesel fuel storage tank is present to fuel an emergency generator to supply backup power to the Control Tower. The tank was scheduled to be closed in-place during August 1998 and replaced with a 1,000-gallon aboveground storage tank. An existing 1,000-gallon diesel AST is present on the north side of the building. No soil staining was observed in the area. No other areas of environmental concern were noted.

5.2.9 Airfield Lighting Control (Building 151), Tower Hill

Description of Activity

A one-story metal structure, Building 151 was historically used for airfield lighting control, and presently contains two suspect PCB containing General Electric oil-filled, transformers, Serial No. 9977150 and 9974172. One of the units was in service, the other out of service.

Site Observations

No leakage was noted from the transformers. No obvious issues of environmental concern were noted in the vicinity of Building 151.

5.2.10 Electrician's Shop (Building 153), Tower Hill

Description of Activity

A one-story brick structure historically used for storage, it is presently used as an electrician's shop.

Site Observations

Three electrical transformers were noted on the ground outside the building, which may possibly contain PCBs. No leakage was observed. There were indications of sandblasting activities, reportedly for runway light fixtures. A small fume hood was observed for painting activities. Fluorescent fixtures were present in the building.

5.2.11 Transmitter Building (Building 155), Tower Hill

Description of Activity

Building 155 is a one-story block structure historically used as a transmitter building. It is presently used to store FAA equipment.

Site Observations

FAA equipment is presently stored inside. A pad was observed that might have been used to support a generator. Fluorescent light fixtures were present inside the building along with suspect vinyl asbestos floor covering.

5.2.12 DOT/LAT Transmitter Building (Building 156)

Description of Activity

Building 156 is a one-story wood structure that historically was used for an FAA transmitter. It is currently vacant.

Site Observations

Documentation (General Building Plan dated June 14, 1991) indicates that a former fuel oil UST was present at the building. No further information was available regarding tank closure and/or soil or groundwater contamination. Suspect ACM was observed inside. No surface staining was noted in the area.

5.2.13 DOT/LAT Receiver Building (Building 157), Tower Hill

Description of Activity

Building 157 is a one-story metal structure that houses a DOT/LAT receiver.

Site Observations

Three out of service oil filled transformers were present in the building. Airport staff reported that they may contain PCBs.

5.3 Other Areas of Environmental Concern

5.3.1 Former Airport Landfill, Southern end of Runway 16/34

Located at the end of Runway 16/34 is the former airport landfill. The Site is comprised of several dump sites, none of which has been delineated or characterized. The areas nearest the ANG Base and the end of Runway 16/34 are reportedly construction/demolition waste dump

sites, used by both the airport and the ANG primarily for the disposal of concrete from demolition activities. According to the ANG environmental officer, the concrete apron that was part of the runway before the ANG base was constructed was removed and placed in this area. The areas still contains visible concrete rubble, asphalt, soil, reinforcing bar and piping throughout the surface of the fill area. It is estimated that at least 30 feet to 40 feet of debris is present. While it is generally agreed by the parties interviewed that the material is predominantly construction and demolition debris, no one is certain that other types of waste material were not placed in the fill. In addition, the material was not placed in a controlled manner, meaning oversized material is present and the compaction and structural integrity of the fill cannot be accurately determined.

Further southwest of the concrete fill area is the historic airport landfill. According to the parties interviewed, the area from the bend in the perimeter road at the northeast corner of the Can Plant to the end of Runway 16/34 was used to landfill all of the wastes generated by the airport operation from 1937 until the late 1970's. Reportedly, all waste generated, including hazardous, municipal, construction and demolition, were disposed of in this location. There are also concerns reported by airport personnel regarding live munitions being present in the landfill. A portion of the landfill was encountered when construction of the proposed connector road to the Interstate was started. It was reported that the project was terminated shortly thereafter.

The concrete fill area is visible on all aerial photographs of the Site, and debris is presently visible on the ground surface throughout the fill. Seeps from the toe of the landfill slope are reportedly present, although not witnessed by Golder during the Site visit. Brush fills are present on or near the landfill area where vegetative debris has been placed.

5.3.2 Residences and Pumphouse, Buildings 158, 164 and 162, Square Hill Road

A Site visit was conducted to the residences that are in the southeast corner of the Site, off of Square Hill Road (off State Route 207). This portion of Square Hill Road is not accessible to the general public, as a chain link fence with a locked gate demarcates the Site property line. The residence closer to Route 207, noted formerly as Building 164 or the Brochetts House, no longer exists, as it was demolished in recent years. The second house (Building 158 or the Cleland House) is located at the end of Square Hill Road. The house serves as an active private residence, although the occupants were not at home during the Site visit. It is reportedly a building of historic significance. The septic system at this house is about 3-4 years old. There was a hydrant

located at the far edge of the backyard of the residence, and an active drinking water well reportedly exists on the property but could not be located.

On the east side of Square Hill Road, just inside the fenceline, was a small yellow shack labeled Building 162. This building serves as a water supply well pumphouse. A powerline was attached to the building. Downhill on the same side of Square Hill road, outside the Site property line, was a trailer park containing some fifty mobile homes.

5.3.3 Former Incinerator (Building 160), Square Hill Road

A former incinerator, identified as Building 160, was located along the southern property boundary along Square Hill Road. The incinerator reportedly handled all burnable materials from the Site, although unit type and capacity could not be ascertained. The disposal location of ashes, coke and clinker generated by the incinerator is not known.

5.3.4 Glycol Recovery Tank and Oil/Water Separator, Apron side at base of Tower Hill

Zone 2 contains a 30,000-gallon oil/water separator and a 30,000-gallon glycol recovery tank on the edge of the apron at the base of Tower Hill. Both tanks are underground tanks of concrete construction. Under normal circumstances, apron runoff flows through the separator and is discharged to a storm sewer or drainage ditch. When deicing takes place, a diversion must be turned to divert the flow to the glycol recovery tank. The deicing runoff is stored in the tank until it is analyzed and approval is given for disposal. Disposal options include the Town of New Windsor WWTP, and facilities in Connecticut and New Jersey. All loads are reportedly tracked through manifests or bills of lading. Similar tracking provisions are reportedly in place for waste oil from the separator.

5.3.5 Former Hangars F and H (Buildings 120 and 114), First Street

Former Hangars F and H were located on the apron side of First Street. Both have been demolished; Hangar F following a fire. Little documentation is available regarding the former operations at the hangars and any ancillary facilities such as storage tanks. Concerns include aircraft maintenance activities that would generate paint, thinner, and solvent wastes. In addition, it was reported that the foundation of Hangar F remains in ground, which could impact future airport construction activities.

6.0 ENVIRONMENTAL BASELINE SURVEY-ZONE 3

6.1 Overview of Zone 3

Zone 3 is located on the southeastern edge of the Site, between Breunig Road and First Street, running from the entrance on Route 207 to A Street. The zone includes the southwest fuel farm, the NYSDOT maintenance area, and several blocks of office buildings (Figure 2). A listing of facilities in Zone 3 is provided in Table 1-3.

6.2 Facility-Specific Interviews and Questionnaires

6.2.1 200 Series Buildings, First and Second Street

Building 202 (LAT Maintenance)

Description of Activity

Building 202 is a one-story structure with wood framing and corrugated asbestos (transite) siding, located just north of First Street in the NYSDOT Maintenance Area. It remains part of the maintenance facility, as has been its historical function.

Site Observations

The building has transite siding and suspect ACM throughout, including on the basement boiler. A former 3,000-gallon fuel oil UST was removed from the area in 1995, and closure documentation indicated that contamination remained following tank removal and excavation of approximately 40 cubic yards of contaminated soil.

Building 204

Description of Activity

Similar to Building 202, Building 204 is a one-story structure with a wood frame and corrugated asbestos siding. It is also part of the NYSDOT vehicle maintenance complex.

Site Observations

The floor in Building 204 was heavily stained. Suspect ACM was noted throughout the building, including on the basement boiler. The supply tank for the boiler was not confirmed, but is believed to be the former UST by Building 202.

Building 206

Description of Activity

Building 206 is a one-story, wooden frame structure with corrugated asbestos (transite) siding. It is located in the NYSDOT maintenance area and currently used as a storage facility.

Site Observations

Suspect ACM was observed throughout the building. Dry goods, paints and diesel fuel were observed stored in various containers (up to 55-gallon drums) in the building. Flammables storage areas were not available and should be provided along with proper containment. A suspect UST was located along the south side of the building as suspect fill and vent pipes were noted.

Building 208 (Former Oil Pumping Station)

Description of Activity

Listed in the 1991 Building Inventory as an oil pump station, located across First Street from the Rifton Hangar. Associated with the building were five USTs, containing diesel, gasoline and glycol. The tanks were removed, but no closure documentation was provided. No information was available regarding soil and/or groundwater conditions at the time of the removal.

Site Observations

No obvious issues of environmental concern were observed during the Site visit.

Building 210 (Former NYSDOT Maintenance Garage)

Description of Activity

Building 210 served as a NYSDOT maintenance garage. It was a wooden frame structure located in the center of the 200 Series of Buildings at the corner of First Street and Second Street. Historically the building was used for salt and coal storage. It has been demolished and the area is used for open storage. Two 4,000-gallon diesel and gasoline ASTs are present upon a large concrete surface.

Site Observations

Road sweeping materials were noted on the concrete surface near to the existing ASTs. Road sweepings were reportedly disposed of in the concrete dumping area southeast of Runway 16/34.

Building 212 (Avis Rental Car Building)

Description of Activity

Building 212 is a one-story garage structure that has historically been used for vehicle maintenance and as part of the park and drive system. The Site formerly contained seven underground storage tanks for gasoline, heating oil and waste oil (see Table 3). The tanks have been removed but no closure documentation was provided. The building is currently used by Avis for rental car service.

Site Observations

The pump island remains intact in front of the facility. Three bays are available for car service with in-ground vehicle hoists. Drums of oils, antifreeze, and cleaners were stored inside the building.

Building 214 (LAT Open Storage)

Description of Activity

Historically, Building 214 was used for lumber storage. Currently, the building is used for material storage. The structure is a one-story wooden building, of a lean-to style.

Site Observations

NYSDOT uses the building for the storage of dry goods and lighting fixtures, along with drums of "Scorch Plus" (approved herbicide), unidentified drums containing liquids and lubricating oils. Suspect ACM was noted throughout the structure. The asphalt is severely worn and cracked in the front of the structure. The storage areas beneath the lean-to are earthen. An out of service 200-gallon fuel oil UST was also observed stored in the area.

6.2.2 400 Series Buildings, First and C Street

Buildings 400 and 402 (Former Maintenance Storage)

Description of Activity

Buildings 400 and 402 are one-story brick buildings used by NYSDOT for material storage and warehousing. A 1,000-gallon heating oil UST was removed from Building 400 in 1995 and 64 cubic yards of contaminated soil were removed. An associated soil sample showed contaminant levels below NYSDEC cleanup standards. However, due to the tanks proximity to the foundation, sampling of the entire excavation could not be accomplished.

Site Observations

No obvious issues of environmental concern were noted during the Site visit.

Building 404 (Putnam Freight Building)

Description of Activity

Building 404 is a one-story, wooden frame building with transite siding. The Air National Guard formerly used it as a warehouse. A 3,000-gallon heating oil UST was removed in 1994 and the closure report indicated that all contaminated soil was removed and that all post-excavation samples were below applicable state cleanup standards. Based on this information, this former tank installation is no longer an area of concern. Currently it is used by Putnam Freight for the storage of dry goods prior to shipment.

Site Observations

The asphalt around the building is cracked and severely weathered. Suspect asbestos-containing materials were noted in the siding and roofing materials. Pole-mounted transformers were observed outside the building, but no leakage or staining was noted from or under the units. Vinyl floor tiles were observed. No other environmental concerns were noted.

6.2.3 700 Series Buildings, First and D Street

Description of Activity

The 700 Series buildings are located along D Street, between First Street and Breunig Road. The structures are one- and two- story brick and masonry units. Historically the buildings were used for offices. Currently, the buildings are sublet to various tenants, most of which operate office-type businesses. Building 708 is vacant and gutted.

Each building in the 700 Series had an associated heating oil UST. The tank for Building 700 was reportedly closed, but was on the 1991 inventory list and no closure documentation was provided. Buildings 702 and 704 tanks were closed in 1995 but the closure report indicated that contamination remains. Buildings 706 and 708 had tanks that were closed in 1995 and 1994 respectively, and closure reports indicating that all contamination was removed. Buildings 710 and 740 had tanks that were closed in 1995, but the closure report indicated that no samples were taken (710) or contamination remained (740).

Site Observations

Select buildings were toured during the Site visit and considered representative of the remaining structures. All are heated with gas-fired units that replaced former oil-fired heaters supplied by USTs. Most buildings have basements, and all have fluorescent lighting fixtures. Suspect ACM is present throughout the buildings. North of Building 710 is the Long Term Parking lot for the

airport. North of Building 700, three suspect PCB filled transformers were observed on the ground surface with a fence enclosure.

6.2.4 800 Series Buildings, Breunig Road

Description of Activity

The 800 series buildings are one-story brick and masonry structures located between Second Street, Breunig Road, Y Street and C Street. The buildings are heated with gas-fired units and were formerly served by oil-fired boilers with accompanying USTs.

The tanks for Buildings 800, 802 and 806 were closed in 1995 and the closure report indicated that contamination remained above the state standards and not all sides of the excavation were sampled. Therefore, the former UST installations remain an area of concern. Building 804 had its tank removed in 1995, but no post-excavation samples were taken since no leakage was observed. The tank for Building 808 was closed in 1995, and post-excavation sampling showed soil contaminant levels below state standards.

Building 800

Building 800 formerly housed the State Police. It currently houses an office co-op.

Building 802 (NYS Police)

Building 802 houses the New York State Police in a one-story brick masonry structure. There is an existing UST and pump island at the building. The UST is reported to be a 2,000-gallon unleaded gasoline tank installed in 1989. No obvious areas of environmental concern were noted.

Building 804 (NYS Police Crime Lab)

Building 804 houses the New York State Police Crime Laboratory in a one-story brick masonry structure. The lab handles evidence and performs some analysis on suspect materials. Previous surveys indicated that the lab handles hazardous substances, however, all are identified and appeared to be handled in an acceptable manner. A complete list of the substances handled by the lab is available. Ten fume hoods were identified venting to the atmosphere.

Building 806 (Bank of New York)

Currently houses the Bank of New York, which handles financial shipments through the airport. The building is currently undergoing renovations. Access to the building was not made possible. No obvious issues of environmental concern were identified outside the building.

Building 808

A one-story wooden frame building with a brick facing, the building was historically leased to the Marines. It is currently undergoing renovations for future use by a construction contractor and no areas of obvious environmental concern were noted.

Building 810 (Bowling Alley)

Building 810 is the bowling alley. Access inside was not possible, but no areas of environmental concern were noted around the building. A 275-gallon out of service heating oil AST is reportedly in the basement. An associated fill line was observed on the outside wall. The building is currently heated with natural gas.

6.2.5 Pool Area, Breunig Road

The pool area, which is closed, is located within the block northeast of the intersection of Breunig Road and C Street. Adjacent to the main swimming pool is a small wading pool, which contained water and vegetation. The pool area is enclosed by a chain link fence, which was in fair condition. The main swimming pool was observed to be in a state of disrepair, with missing tiles, chipped concrete and cracks. On the north side of the pool was a bathhouse, which was padlocked. On the east side of the swimming pool was a retaining wall containing drain pipes. On the south side of the pool was a shelter containing three chlorine tanks. One of the walls of the shelter had collapsed. Access could not be gained to the tanks to determine whether they still contained chlorine; thus, it is assumed that some chlorine remained in the tanks. A power line was present at the corner of the chlorine tank building.

6.2.6 2300 Series Buildings

Building 2300 (Hertz and Budget Car Rentals)

Description of Activity

Building 2300 is a one-story brick-faced building located on the western side of Breunig Road, north of the Southwest Fuel Farm. According to historical documents, the building has been used for motor pool activities. USTs were formerly located in the area for gasoline and diesel storage. In addition, two USTs, a 550-gallon waste oil tank and a 1,000-gallon heating oil tank, were listed on the 1991 tank inventory and are believed to have been removed, however, no closure documentation was provided. The tank inventory also indicated an oil/water separator to the rear (south) of the building, but this could not be confirmed.

Currently one 1,000-gallon and one 2,000-gallon ASTs are present on the asphalt at the front of the building and are used for refueling vehicles.

Site Observations

Hertz and Budget car rental agencies currently occupy the building. They clean and fuel the cars at this location here in preparation for rental at the airport. The garage has four active bays, a rear storage area and a partial basement. One hoist was observed in the rear storage area and one bay, on the building front and currently not in use, had a service pit to allow access to the underside of vehicles without the use of a hoist. The rear storage area contained two 275-gallon heating oil ASTs, used to supply the heater in an adjacent room.

According to Site personnel, no service is performed on the automobiles. Fluids are checked and topped-off if needed and the cars are cleaned, while servicing is performed at off-Site facilities. Fluids were stored in drums around the shop area and in the rear room. Each tenant stores gasoline in aboveground storage tanks, one for each tenant and one 1,000-gallon and one 2,000-gallon unleaded gasoline tanks were observed. The tanks are prefabricated units with secondary containment and overfill protection.

The basement contained what appeared to be the original coal-fired heating equipment. Two heaters were observed, but neither appeared to be functioning. A boiler on the first floor now provides heat to the building. A sump was observed which reportedly handled floor drain water, however, the point of discharge could not be confirmed. Runoff from the property, which contained indications of antifreeze, flowed into a drainage ditch along the east side of the building.

Building 2302 (Former Motor Pool Building)

Description of Activity

The building was vacant during the Site visit and access to the interior could not be obtained. The building is a one-story brick-faced structure, similar in features to Building 2300. It is believed that the building was associated with former motor pool activities.

Site Observations

Observation through the windows showed the building to be empty. It was reported by Hertz and Budget employees that some material is stored inside the building associated with the rental car facilities.

Building 2306

Description of Site Activity

The building is a one-story brick-faced structure, similar in appearance to Building 2300. It is also believed to have been associated with the motor pool. The garage has several bays and an office area. A 1,000-gallon heating oil UST was removed in 1994 and post-excavation soil sampling showed contaminant concentrations below applicable state standards.

Site Observations

An excavation contractor, Ultimate Land Development, currently occupies building 2306. Personal materials from the owner are being stored in the garage bays. The building is served by gas heating, but formerly used heating oil. The adjacent property to the north contains an Army building with an underground storage tank, as indicated by fill and vent pipes and a manway.

6.3 Other Areas of Environmental Concern

6.3.1 Southwest Fuel Farm, West Side of Breunig Road

Description of Activity

The SWFF is the original fuel farm for the airfield, designed and constructed in the 1940's. The most recent fuel storage tanks, constructed in 1955, included two large aboveground storage tanks (311,246-gallons and 215,663-gallons) in a containment dike. The larger aboveground tank, containing military Jet Fuel A (JP-4), was removed in 1995 with no confirmatory soil samples taken. The fuel farm presently consists of one fixed-roof, 215,663-gallon steel aboveground storage tank in a gravel-covered soil-lined containment area, and a pump house (Building 2312), which contains the transfer pumps for loading and unloading the storage tank. According to the 1991 tank inventory, one 2,000-gallon fiberglass underground storage tank is provided northwest of the pump house for waste fuel and pumphouse spill containment.

The storage tank is supplied from the unloading area located across Breunig Road from the fuel farm. The unloading area is used to transfer fuel from incoming tankers into the storage tank, as well as to load aircraft fueling tankers from the storage tank. The area consists of a sloped, paved driveway with standpipes for tanker use. The area has an asphalt diversion berm on the downhill side to divert spillage into a 5,000-gallon storage tank, located on the fuel farm side of Breunig Road. Uncontaminated runoff from the area flows into the stormwater basin located west of the intersection of Breunig Road and Route 207.

The fueling area is adjacent to the former location of ten 25,000-gallons USTs that contained Jet A. The tanks were removed in the late 1980's, however, leakage occurred and residual soil, groundwater, and free product contamination remained after tank removal.

Previously Identified Environmental Concerns

There are several known environmental concerns in the vicinity of the SWFF. A May 1990 report from Greenman-Pedersen, Inc. evaluated the fuel system at the airport and reported on contamination in the vicinity of the eastern tank and containment dike and the pump house. Reports in 1991 and 1992 by Greiner, Inc. regarding the preliminary contamination assessment of the SWFF indicated that there was free product under the fuel farm. Soil borings and monitoring wells were installed to investigate the contamination, and a map showing the contaminated soil and groundwater and free product in the area was constructed. There is anecdotal evidence that a remediation program was instituted to recover the free product, however, no reports or documentation were provided.

Contamination was also discovered when the ten 25,000-gallon Jet A USTs were removed. While some contaminated soil was excavated along with the tanks, the Greiner reports indicate that significant contamination remains. According to the personnel interviews, there have been no successful remediation efforts in this area. Contaminated soil was excavated and soil gas vents were installed under the northern portion of the nearby Anheuser Busch Metal Container Corporation can plant due to the presence of contamination from the former USTs in close proximity to the building.

Finally, in addition to the known areas of contamination, the underground piping serving the SWFF was last tested over five years ago, and the piping is over twenty years old. Also, a section of piping was blind-flanged without any testing for leakage.

Site Observations

The containment area around the removed AST was overgrown with vegetation, but the berms could be seen. The active tank was observed with no visible product on the ground inside or outside the containment berm. The berm sidewalls were covered with stone, however, the underlying soil, visible on the bottom of the containment area, did not appear to be capable of containing precipitation, bringing into question the permeability of the material and its compliance with the 10^{-7} cm/sec requirement as per regulation. A dike drain was observed along the south side of the berm, and no soil staining was evident at the discharge point. The creek just south of the fuel farm showed no visible evidence of any impact from the SWFF.

Monitoring wells were noted around the perimeter of the berm, and the grout seal on the well nearest the pump house was broken. Unlabeled suspect PCB-containing transformers were observed along the pump house, but no leakage or soil staining was observed in the surrounding soil. The pump house interior had no indications of any product leakage or spillage. Records indicate that there is a 2,000-gallon fiberglass UST for waste fuel at the SWFF, and a vent pipe was observed in the area. The 5,000-gallon spill tank was observed and appeared empty. Some rusting was evident on the tank exterior, and the influent PVC pipe was supported by wooden frames, but was uneven, sagging and potentially unstable.

6.3.2 Short-term Parking Area, First Street at Terminal

The short-term parking area is located across First Street from the terminal. The parking lot and loop road area formerly contained Buildings 1002, 1006, 2222 and 2246. Building 1002 contained the former base dry cleaning operation which had an associated heating oil UST. Building 1004 exists on the property and reportedly had a heating oil UST, but is excluded from this assessment. Building 1006 was the former post office which had a heating oil UST. Building 2222 was the commissary which is believed to have had a heating oil UST. The use of Building 2246 could be ascertained. The contents of the reported USTs, groundwater and soils is not known. No data regarding UST removal was made available for review.

Two other buildings existed, Numbers 900 and 902, in the block below the parking area, adjacent to the pool, which were believed to have had associated heating oil USTs. Building 900 was the former NCO Club and Building 902 was the former movie theater. The buildings have since been demolished. Building 2241, location unconfirmed, served as a former precision instrument calibration facility, and also had an associated heating oil UST. The contents of the reported USTs, groundwater and soils is not known. No data regarding UST removal was made available for review.

The nature of the former operations in this area present the potential for soil and groundwater contamination.

6.3.3 Glycol Recovery Tanks and Oil/Water Separator, First Street

Zone 3 contains a 30,000-gallon oil/water separator and two 30,000-gallon glycol recovery tanks located on First Street, north of Hangar E and Building 404 respectively. Both tanks are underground tanks of double-walled steel construction with corrosion protection. Under normal

circumstances, apron runoff flows through the separator and is discharged to a storm sewer or drainage ditch. When deicing takes place, a diversion must be turned to divert the flow to the glycol recovery tank. The deicing runoff is stored in the tank until it is analyzed and approval is given for disposal. Disposal options include the Town of New Windsor WWTP, and facilities in Connecticut and New Jersey. All loads are reportedly tracked through manifests or bills of lading. Similar tracking provisions are reportedly in place for waste oil from the separator.

6.4 General Observations

A guard shack (Building 101) was formerly located at the intersection of Breunig Road and Route 207, at the airport entrance. The structure has been demolished and removed. No remnants from the building can be observed.

7.0 ENVIRONMENTAL BASELINE SURVEY-ZONE 4

7.1 Overview of Zone 4

Zone 4 is located in the northern central portion of the Site, bounded by Taxiways A and G, Route 17k, the Industrial Park and the New York City Aqueduct. The zone includes the NYSDOT maintenance garage and cargo terminal, along with the former fire training area and rifle range (Figure 2). Areas of concern are shown on Figures 4 and 5. A listing of the facilities in Zone 4 is provided in Table 1-4.

7.2 Facility-Specific Interviews and Questionnaires

7.2.1 Emery Freight (Building 2269), Cargo or Perimeter Road

Description of Activity

Emery conducts freight sorting and transfer. Commercial freight brought in via truck or airplane is staged and sorted at this facility for shipment to the appropriate destination.

Previously Identified Environmental Concerns

No environmental concerns were previously identified.

Interview and Questionnaire Results

This Emery facility commenced operation in May 1990. There are no USTs or ASTs located on the property. Any vehicle or equipment maintenance is performed by outside contractors, who bring in and remove any raw materials or wastes resulting from maintenance activities. The facility is served by public water, which is generally used for sanitary and equipment cleaning purposes. Wastewater enters the sanitary sewer. Wastewater from truck washing is collected and placed in 55-gallon recovery drums. Emery does not consider itself a generator of hazardous waste. The only waste streams generated by Emery are trash and maintenance-related wastes, such as changed tires, that are hauled off-Site by contractors. Emery does not conduct any fueling of aircraft or vehicles; all fueling is performed by AMR. Deicing is performed by Rifton on the apron adjacent to the building.

Site Observations

A Site tour was conducted of Emery's facility, which included an office area, the main warehouse and the apron. The warehouse contains an enclosed cage for flammable materials storage. This area contains absorbents, raw materials used for maintenance activities, oil and filters.

Flammable materials that are undergoing commercial shipment are stored separately and inspected according to international protocols. A check sheet is completed by a hazardous materials specialist to verify such characteristics as the origin of the material, amount and packaging. If the material is damaged or otherwise ineligible for shipment, the material is placed into a recovery drum until it is authorized for disposal. This has only occurred once at this Emery facility. The hazardous material staging area is marked by painted red lines, a hanging sign and two drums filled with concrete at the outer corners of the designated area.

Hub areas are marked throughout the warehouse, marking various staging areas for freight destined for a particular city. Each loading bay of the warehouse represents a different city. A conveyor belt was present in the warehouse. The ceiling contained about 10 exhaust fans in order to vent fumes from the forklifts out through the roof. A storage bin that was formerly used for aircraft freight was being used for storage of paint cans and thinners. Small propane tanks were stored in cages in an area sheltered by a roof.

Outside, on the south side of the building, was a maintenance bay operated by Dynair, Emery's maintenance contractor. In this area was a locked flammables storage cabinet, an unlabeled horizontal plastic chemical container, an upright plastic bin for used oil, and an unlabeled full green drum. On the north side of the building are loading docks for trucks to pick up and deliver freight. No staining was evident on the pavement. The water/gas room and electrical/phone room for the entire building are present on the north side.

A concrete apron was located adjacent to the south side of the building. The apron contained a grate and subsurface drain which apparently directs stormwater runoff and waste deicing fluid to underground receiving tanks downstream of the facility. According to a NYSDOT representative, the concrete deicing portion of the pad was completed in Fall 1997. On the eastern edge of the apron were three unlabeled drums sitting on pallets, five nitrogen and oxygen gas bottles on a hand truck, ten 275-gallon plastic tote bins of propylene glycol (i.e., deicing fluid), and four drums of concrete that, according to an Emery employee, are used to balance the aircraft. According to this employee, this deicing fluid is owned by Emery and kept on the apron as reserve, since there were problems during the previous winter with deicing trucks running out of fluid prematurely. The edge of the apron contains a 12 inch wooden berm that is not continuous (i.e., spaces exist between the wooden blocks). Outside the edge of the apron is a stormwater ditch.

Records Review

No records were made available for Golder to review.

Inventory of Materials

The main materials stored on-Site are the propylene glycol and propane. Emery's service contractor accumulates and stores some waste oil and deicing fluids on the apron at the cargo terminal. In addition, there are smaller amounts of paints and thinners stored on-Site, as well as temporary staging of hazardous materials destined for commercial shipment by truck or air.

7.2.2 Glycol Recovery Tanks and Oil/water Separator, Cargo Building No. 2269, Perimeter Road

Aircraft deicing is performed on the Emery cargo area apron by Rifton. Deicing fluid flows into a grate-covered drain that is connected to an oil/water separator system and glycol recovery tanks.. At the bottom of the drain are three diversion valves operated manually from the ground surface to send flow to the desired tank. Normally, surface runoff flows into the two, 30,000-gallon steel oil/water separators, installed in 1997. During deicing procedures, flow is diverted into two 20,000-gallon steel glycol recovery USTs, installed in 1997, that receive and store propylene glycol from deicing operations at the Air Cargo Building apron.

The USTs are steel and are labeled as being corrosion-protected (i.e., Sti-P3). Vent pipes from the tanks were evident at ground surface. No further information about these tanks was made available to Golder during the Site visit.

Before the installation of the new glycol recovery facilities, the deicing area was served by two 30,000-gallon recovery tanks located east of the Cargo Building. The steel tanks have been disconnected and are no longer in service. They remain in the ground. No data was made available for Golder to determine the condition of the soil and groundwater in the area.

7.2.3 Building 2290-NYSDOT Maintenance Garage, Perimeter Road at Runway 09/27

Description of Activity

Building 2290 in located north of Runway 09/27, adjacent to the New York City aqueduct. The building has seven garage bays, and NYSDOT occupies the eastern four bays. The other bays are

occupied by Reese Aircraft, owned by K.D. Aviation, Inc. (2 bays), and Federal Express (1 bay). The building is a one story frame structure with corrugated metal siding.

NYSDOT performs a wide variety of equipment maintenance functions in the garage including motor repair, lubrication, machining, and general operations. Federal Express uses the garage to load their aircraft and transfer packages from their shipping facility in the Industrial Park. Reese Aircraft services customer aircraft from their two garage bays, and also has an aircraft painting operation.

Previously Identified Environmental Concerns

Several areas of environmental concern have been identified at Building 2290. The structure has been in existence since the early days of airport operation as a maintenance facility and the former animal impoundment center. The building is served by an on-lot septic system, which is a concern due to the activities performed and materials handled. A former 1,000-gallon diesel UST was removed, but no closure documentation was available. A 12,000-gallon heating oil UST, located on the eastern side of the building was closed in 1995, but closure documentation indicates that soil contamination exceeding state cleanup standards remains.

Maintenance facility staff indicated that the diesel AST had previously overflowed and spilled onto the ground surface (aggregate) near the tank. Surface cleanup activities were reported to have occurred. No record with any subsurface assessment or remedial activities was available for review.

Federal Express maintained a deicing operation and glycol recovery system on the western end of the building. The system included an in-ground recovery sump and a 5,000-gallon aboveground, steel storage tank. Glycol entering the sump was pumped into the aboveground tank for off-Site disposal. The system was operated for approximately two years until maintenance costs became prohibitive and the system was shut down. Deicing now takes place at the cargo facility if needed.

NYSDOT maintains a 10,000-gallon aboveground storage tank of potassium acetate for deicing purposes. In addition, a 3,000-gallon diesel AST and fuel pump is provided for fueling NYSDOT fleet vehicles. A 300-gallon diesel AST and a 275-gallon waste oil AST are maintained at the building.

Interview and Questionnaire Results

A copy of an interview questionnaire was provided for maintenance facility staff to complete. However, a complete questionnaire has not been provided to Golder.

Reese Aircraft completed the questionnaire. The facilities were toured by Golder accompanied by NYSDOT personnel. The Reeses Aircraft questionnaire states that 7 employees work at the building, one shift per day, 260 days per year. They have been in the building since 1981 as an aircraft service facility. They reported that 60% of their wastewater is sanitary and 40% is equipment and general cleanup.

Reese staff indicated that they generate waste paint spray booth filters, waste paint and solvent cans (which they let dry prior to disposing of in their general trash waste stream) and spent shot blasting grit (plastic pellet and aircraft paint machine).

The questionnaire response indicated the types of paint used in the painting operation, and included the safety data sheets for the paint, thinner and adhesive used by Reese, as well as methyl ethyl ketone (MEK). The questionnaire also included a copy of a 1998 permit from the NYSDEC to operate a process, exhaust or ventilation system (no number provided). The permit provides the estimated VOC and particulate emission rates for the operation of an "automotive-type spray booth for the painting of aircraft parts". Air filters are provided to capture overspray. Three air emission sources were observed by Golder that were of a larger size than a typical automotive-type spray booth. NEG may wish to review this issue to ensure compliance with air quality regulations.

The questionnaire states that all paint and thinner is stored in gallon containers. Only a propane tank is maintained on the Site for heating purposes. No leaks or spills were reported.

Site Observations

The NYSDOT garage has a concrete floor in fairly good condition. A 500-gallon waste oil tank was observed on the northern side of the building. Virgin lubricants and antifreeze were stored in drums and containers inside the garage on top of spill-containing pallets. Soil staining was noted by the diesel fuel pump and along the driveway onto the runway. In addition, a section of dead grass was observed to the rear (north) of the building, which was reported to be the result of a

recent urea spill according to the NYSDOT personnel. Also located in this area was a 500-gallon diesel AST sitting on the grass north of the garage. This tank was reported to be owned by Reese Aircraft. The grass was not stained around the AST. A wobble pump-type dispenser was noted in the top of the tank. Nearby, a diesel generator was observed. The granular aggregate beneath the generator was stained.

Approximately fifteen empty drums were stored along the eastern side of the building. Air exhaust points included a fume hood for the welding area and hoses for vehicle exhaust during servicing inside.

Reese Aircraft has a sand blasting area where plastic pellets were used to remove paint and rust to prepare a surface for painting. The painting operation was viewed; enamel paints were used and paint filters were observed in the exhaust system to capture overspray. Three certificates of approval for air emissions for the paint spray booths were noted from the NYSDEC. Spray booth filters and empty paint cans are discarded in the waste dumpster for off-Site disposal. Reese also maintains an AST for waste oil.

The abandoned glycol recovery system at the Federal Express hangar was noted. The soil was heavily stained in the vicinity of the sump.

7.3 Other Areas of environmental Concern

7.3.1 Former Fire Training Area / Rifle Range, off of Perimeter and Cargo Roads

The area suspected to have housed the former fire training area and firing range was visited. The former pistol/rifle and skeet shooting ranges occupied former Building Nos. 2231, 2230 and 2232. Lead shot is suspected to be present and there are concerns with live ammunition rounds being present in the area. In the fire training area, three burn cells were used: two approximately 50 foot diameter circular areas and one approximately 50 foot by 30 foot rectangular area. The fuels used for training included Jet A, Jet B, waste oils, solvents, and unknown chemicals brought from off-Site. Old hangar demolition debris was also burned. Water and AFFF were used as fire suppressants. Fire training ceased sometime between 1978-1980. The area has in part been backfilled with 20-30 feet of mixed sand, silty clay, and rock fill. The ground surface near and around the hill were mostly vegetated. Also in that general area, towards Perimeter Road, was a lot containing discarded blocks of concrete, asphalt, and other debris.

7.3.2 Former Dump Areas, Northern End of Runway 16/34

Zone 3 contains several dump areas. A concrete rubble area is located at the sound end of Runway 16/34, which received debris from a runway rehabilitation project. Observation of the area indicated primarily concrete rubble, with some metal piping and other debris mixed in with the material.

A Brush dumps were present at both the south and north ends of Runway 16/34. A former manure/bedding placement area, which received waste from the animal impoundment center, is located south of the former fire training area, east of the cargo terminal. A second manure/bedding placement area is reported to be located at the north end of runway 16/34 on the west side of the runway. Airport staff also indicated that a former sewage sludge placement area was located south of runway 09/37, across from the maintenance garage. It was reported that sewage sludge was placed in the area until 1970. This was also reported to have been removed after that date, however final location was not known.

7.3.3 Federal Express Flight 1406, Taxiway A and A4

Federal Express Flight 1406 landed at Stewart International Airport with an on-board fire. The DC-9 aircraft taxied to Taxiway A4, where flames consumed the jet. Due to the nature of the cargo on the flight, concerns were raised with respect to the impact on local soil, groundwater and surface water quality.

A fuel spill occurred from the aircraft which was reportedly contained on the taxiway. Runoff containing fire fighting foam was contained on the area south of the taxiway by blocking the storm inlet. The accumulated water was eventually pumped and treated at the local sewage treatment plant.

The jet was reported to carry a cargo including but not limited to infectious medical materials, hazardous substances, radioactive materials, jewelry and financial documents. During the fire, some of the materials were released. The recovered materials were shipped to off-Site disposal as hazardous waste. The jet carcass was towed to the closed taxiway, where it was subsequently wrapped with plastic and remains in storage. Data was not made available to review regarding the cleanup activities.

NYSDOT personnel reportedly undertook a sampling program to determine if there had been any adverse environmental impacts from the incident and none were found. No documentation was available for review on this incident thus Golder cannot confirm these comments.

8.0 ENVIRONMENTAL BASELINE SURVEY-ZONE 5

8.1 Overview of Zone 5

Zone 5 is located in the northeast section of the Site, and is generally bounded by Route 17K, the Air National Guard Base, Taxiway A and Taxiway G. The facilities included in the zone include the Cessna and American Express hangars and the Northeast Fuel Farm. The zone also includes the eastern portion of runway 09/27 and the northern end of runway 16/34. A listing of the facilities in Zone 5 is provided in Table 1-5.

8.2 Facility-Specific Interviews and Questionnaires

8.2.1 Cessna/Citation Aircraft Company, 3 Express Drive

Description of Activity

Cessna conducts aircraft maintenance in its hangar, located off of State Route 17K on the northern edge of the Site. Maintenance activities include parts replacement or cleaning, engine and airframe maintenance, painting and refueling.

Previously Identified Environmental Concerns

No previous environmental concerns were identified.

Interview and Questionnaire Results

Cessna has operated at this location since 1989, and it has plans for expanding the existing facility. Water usage at the facility totals about 600 gallons per day, used for sanitary and equipment/general clean up purposes. Pipelines consist of above ground fire suppressant system piping and the underground sanitary sewer system. Reportedly, the pipelines have been leak-tested and no leakage has been found.

Tanks on Site include an overhead fire suppressant AST and a concrete oil/water separator UST. Typical waste products include oil, fuel and hydraulic fluids. Cessna maintains that it is a conditionally exempt small quantity generator of hazardous waste under RCRA. Any waste shipments are handled by Cessna's Quality Control Supervisor.

Site Observations

A walkthrough was conducted of the office portion of the facility. This area houses an avionics department, which consists of a lab that performs some occasional service work. The office area also has a room for the hot water tank. No obvious issues of environmental concern were noted in the office areas.

The main area of the facility consists of a hangar, off of which are various maintenance shops, and a paved apron area adjacent to the hangar entrance on the south side of the building. The overhead lights in the hangar were mercury vapor lamps. In the Machine Shop was a parts washer that is serviced by Safety Kleen. There is also a Parts Department, Engine Shop, Battery Shop, Dry Storage Room, Sheetmetal Shop, Equipment Room and Flammable Storage Room (Bomb Room) that are all accessible directly from the hangar area. The Battery Shop contains an UST of unknown size and construction. The tank is used to contain any spillage from lead-acid batteries via a floor drain. Reportedly, this drain has never been used. Nickel-cadmium (NiCad) batteries are currently handled within this room. The Sheetmetal Shop contains a welding fume hood that is vented to the roof. This exhaust is not under any permits. The Equipment Room houses fire suppressant tanks and contains a floor drain. The Flammable Storage Room serves as a storage area for paints, lubricants and thinners. There is a 4-inch curb at the doorway to provide secondary containment. The room contains empty and full paint cans. Open containers of paint are stored in this room until they are disposed. The room is both actively and passively vented and contains a floor drain that was reported to have been sealed in October 1991, per instructions from the local fire marshal. At that time, a conduit leading outside the building was pumped out and the contents shipped off-Site as hazardous waste.

Outside the hanger building was a fenced area containing lids to two underground waste oil tanks of unknown size and construction. Cessna staff indicated that they are no longer used. Also in this area were a dumpster and a large metal cover. The area beneath the large cover was filled with liquid having a floating layer of rust. It was reported that this suspect UST was a former emergency contingency spill UST for the Flammable Room. Cessna officials maintain that this UST now only contains water.

A paint spray booth is located within the hangar and vented to the roof. In a follow-up conversation, a Cessna representative stated that an air permit was not required for the spray booth, and that Cessna has a letter to this effect from the appropriate air pollution control

authority. A copy of the letter was not provided to Golder for review. Also in the hangar was an area for the storage of compressed gas cylinders. An apron area is located outside the hangar entrance, on the south side of the building. Refueling occurs on the apron. This service is commingled with AMR Services. Cessna uses its own fueling trucks supplied by AMR-operated fuel farms, and it has spill containment available. The apron contains designated areas for the fuel truck and refueler. Minor staining was evident in this area of the apron. The asphalt was in good condition with only minor cracking.

On the north side of the building were two manhole covers for an underground oil/water interceptor tank. It was reported to have been pumped out most recently about 5 years ago. Reportedly, water from this tank is discharged to the storm sewer.

Records Review

No records were made available for Golder to review.

Inventory of Materials

The types of chemicals stored on-Site include alcohols, methyl ethyl ketone, toluene, "Skydrol", TKS, "Hy Jet IV-A", and Royco 782 soap (floor cleaner). Aircraft are also stored temporarily in the hangar.

8.2.2 American Express (Amex), 1 Express Drive

Description of Activity

Amex conducts corporate aircraft maintenance activities. Their hangar is located directly adjacent to the Cessna hangar, to the east.

Previously Identified Environmental Concerns

No concerns were previously identified.

Interview and Questionnaire Results

The Amex hangar began operations in 1989. Water usage at the Site is mainly for sanitary purposes, plus some water for equipment and general cleanup. Amex operates one 2,000-gallon gasoline UST at its facility. The UST is registered with the State, and is a ten-year old steel double-walled tank. Reportedly, it is tested and maintained in accordance with the UST regulations. Amex reported that it has removed two 500-gallon USTs from its facility: one waste

oil tank, and one unused underground tank near the pump room. Amex stated that it has three 550-gallon diesel ASTs and a 275-gallon waste oil AST. The diesel tanks are single walled and ten years old. The waste oil tank is double walled and six months old. The only other chemical reportedly stored on Site is Jet A fuel, which is stored in 55-gallon drums. Amex personnel stated that Amex does not perform any aircraft refueling, and that AMR performs all refueling.

Site Observations

In the office portion of the Amex building were administrative offices, a library and kitchen. Off of the hallway that leads into the hangar area were a welding shop, sheet metal shop, hot water heater room, and electrical room. A fume hood in the welding shop vented to the roof, which is not under any permit. Welding was stated to be a minor activity. All of the transformers in the electrical room were dry-type.

A cover to an underground oil/water interceptor was observed in the floor of the hangar area. It receives any water that enters the floor drain in the hangar, which consists of a grate that runs the length of the hangar. It is reportedly cleaned out about once per year. It was reported that the water is conveyed to the sanitary sewer. A small bench-scale paint booth was observed, which was vented to the roof. It is not under any permits. Reportedly, painting is generally done using aerosol cans. Used aerosol cans, dry cans of paint, and used filters are disposed of in the trash dumpster. At the time of the Site visit, various equipment and raw materials were being stored in the paint booth. Amex operates a parts washer that is serviced by Safety Kleen on a monthly basis.

In the tank room adjacent to the hangar area were two 700-gallon Ansulite foam fire suppressant ASTs and the three diesel ASTs. The diesel provides fuel to three diesel generators used for the fire suppression system. The diesel tanks are vented inside the room. These generators exhaust through the roof. The tanks are inspected monthly, as required by NYSDEC (ref. 6NYCRR Part 613). In a chemical storage room, also located adjacent to the hangar area, paints are stored in explosion-proof cabinets. The waste oil AST installed in February 1998, is present, and vents inside the room. A sealed floor drain in this room formerly drained to an outdoor waste oil tank, which was removed in November 1997. The chemical storage room is vented to the roof. There is no diking or other containment for this room, and the entrance to the room ramps down into the hangar area.

On the western side of the Amex building is the gasoline UST and pump. About 20 gallons of gasoline are used per month. Amex is currently deciding whether to continue to operate the UST and associated gasoline pump. Also in this area was a storage cage for compressed gas cylinders.

Records Review

Amex personnel provided its notebooks containing MSDS sheets for all chemicals used on-Site; however, individual MSDS sheets were not reviewed. Amex provided a copy of its Closure Report for the two 500-gallon USTs dated December 31, 1997. The first UST, Tank #4, was an unused standby tank which acted as an Emergency Contingency Spill Tank for the Flammable Room. The tank was inspected prior to removal and found to be empty. Tank #5 stored waste oil and had been periodically pumped out by Safety Kleen; it was pumped out again prior to tank removal. The Closure Report indicated that a visual inspection of the tanks and surrounding soil did not indicate any evidence of contamination. No volatiles or semivolatiles were detected in the soil samples, although some arsenic, barium, chromium and lead were detected. Reportedly, Amex received a final closure letter from NYSDEC, but the letter could not be located. Amex also provided a copy of its Registration Certificate from NYSDEC for the existing three 550-gallon ASTs and 2,000-gallon gasoline UST.

Inventory of Materials

The major materials stored on-Site are gasoline and waste oil. Minor amounts of paint are stored on-Site. The Safety-Kleen parts washer also contains solvent stored in the drum beneath the washer.

8.2.3 Auto Auction, State Route 17k

Description of Activity

The Auto Auction operates a lot containing used automobiles that are auctioned to car dealers.

Previously Identified Environmental Concerns

No environmental concerns were previously identified.

Interview and Questionnaire Results

One staff person on-Site during the Site visit stated that the cars are repossessed or formerly rented/leased. The automobiles are auctioned to car dealers only, not directly to the general public. He added that they do some refueling of cars, but no cleaning or maintenance such as oil

changes. At one time, they used to perform buffing of the cars, but that practice has ceased. No other chemicals are used on-Site.

Site Observations

A brief walkthrough was conducted of the area near the entrance to the Auto Auction lot. Two temporary shelters were present on-Site. A pickup truck adjacent to one shelter contained a small gas tank in the rear of the truck. Outside one temporary shelter were two propane tanks. A wooden shed was present next to the office trailer. The shed contained several gasoline cans, three of which were full, an air compressor, file cabinets, and other equipment.

The Auto Auction lot is completely fenced in, except for the entrance gate. The ground is covered with gravel. Adjacent to the lot entrance was a trash dumpster and a Port-A-Potty.

Records Review

No records were made available for Golder to review.

Inventory of Materials

Besides passenger cars/trucks, the only materials that were identified on-Site were propane and small amounts of gasoline.

8.3 Other Areas of Environmental Concern-Northeast Fuel Farm

Description of Activity

The Northeast Fuel Farm (NEFF) is located on the northern side of the Site, in the vicinity of the Cessna and American Express Hangars. The facility was built in 1989. However, it was not placed into operation until 1997 due to equipment problems. Reportedly, a variety of design and operational problems were encountered in the original constructed facility, resulting in major delays associated with negotiating and incorporating the final changes. Some of the problems were associated with piping, pumps (e.g., pump cavitation), and air release devices. Golder was informed that litigation is pending. The facility contains the following aboveground storage tanks in a bentonite-lined containment area:

- two 50,000-gallon Jet A tanks;
- one 15,000-gallon AV fuel tank;
- one 15,000-gallon gasoline tank;

- two 200-gallon surge tanks;
- one 55-gallon retrofit surge tank; and,
- one 550-gallon waste fuel tank.

Building 2244 houses the controls for the fuel farm along with the fire fighting equipment. There is an associated concrete loading/unloading pad adjacent to the building, south of the storage tanks. The pad drains through a 20,000-gallon oil/water separator to a drainage ditch on the Site, which is a permitted outfall and monitoring point in the SPDES permit.

Previously Identified Environmental Concerns

The NEFF was not put into operation for nine years following construction due to equipment problems. Some of the problems included leaking underground supply lines. Although the product leakage was reported to NYSDEC and a spill number assigned, there was no documentation provided, other than anecdotal evidence, regarding cleanup of contaminated soil. According to the General Manager of AMR Services (i.e., operators of the NEFF) the original seals on the piping were defective. The problem was discovered when samples were taken from the drain at the fueling area and product was recovered in the samples. The area around that drain was remediated, mainly focusing on the soil directly surrounding the piping. The soil in the area of the oil/water separator reportedly was clean, as was the soil a few feet away from the piping.

Site Observations

There was no visible soil or surface staining in the fuel farm area during the Site visit. The containment area was stone covered with surface inlets leading to a dike drain. The tank bottom water draw-off valves were locked. The main materials stored on Site are Jet A fuel, gasoline, and fire suppressant, as described above.

The tanks sit inside a bermed area covered with gravel, underlain by a compacted bentonite-soil subbase covered by a synthetic geofabric. At the base of the containment area was a drain containing standing water. Outside of the containment area, on the grass, was a stormwater grate and drain.

The fueling area at the NEFF is constructed of concrete sloped to a drain. The concrete surface was in good condition. The area is curbed and contains a fueling island. Adjacent to this area was an inlet leading to an underground oil/water separator. The separator's vent pipe, manway and diversion valves were visible.

The building at the NEFF contains a fire protection tank room, with a 150-gallon Ansulite (AFF) foam for fire suppression. This is part of an automatic fire suppression system which floods the fuel loading area with foam in the event of a fire.

To the left of this room is a tank room, which houses transfer pumps and four tanks (i.e., Tank Nos. 1-4) which are used to filter water and grit from the fuels during dispensing and receiving operations. The filters are changed once per year. According to AMR, the filters are air-dried and disposed in the regular trash. In this room were three 55-gallon drums with plastic liners, the contents of which were not known, and two plastic bins containing blankets for minor spill cleanups. Adjacent to the building was a sheltered aviation gas ("AV-Gas") vent tank, which consisted of a horizontal 55-gallon drum.

Records Review

No records were made available for Golder to review.

9.0 ENVIRONMENTAL BASELINE SURVEY-ZONE 6

9.1 Overview of Zone 6

Zone 6 includes the areas of the property to be leased by NEG that are considered off-Site, that is, leased properties not specifically involved with airport operations (Figure 2). It is comprised of four different sub-zones. For the purposes of this study, they include Zone 6A (Industrial Park), Zone 6B (Crestview Lake and the USDA Animal Import Center), Zone 6C (Anheuser-Busch Metal Can Plant), and Zone 6D (Air National Guard Base and Orange County Transfer Station). A listing of the facilities in Zone 6 is provided in Table 1-6.

The review of the Zone 6 facilities was performed as a walk-through evaluation, not a complete environmental audit, with the exception of the Air National Guard Base where activities were limited to interview of the environmental officer and a walk-through was not performed. The purpose of the Site walk was to provide a general overview of the operations at the tenant facilities, observe conditions prior to NEG becoming the landlord, and note any obvious areas of environmental concern at the facilities.

9.2 Zone 6A: Stewart Industrial Park

9.2.1 Grand Union, 20 Governor Drive

Description of Activity

The Grand Union facility processes raw food ingredients into various finished food products for distribution to the Grand Union chain of 220 grocery stores. The main products are delicatessen foods, such as salads and meat dishes. Major process units include ovens, kettles, pressure cooker, and a dicer/chopper. The equipment is all non-ferrous in order to avoid the presence of rust.

Previously Identified Environmental Concerns

No previous environmental concerns were identified.

Interview and Questionnaire Results

The plant began operation upon its construction in 1987. There are two 20,000 pound single-walled, stainless steel vegetable oil tanks located inside the building. Public water is used on-Site for cleaning, chilling, cooking and sanitary purposes. All of the building floor drains convey wastewater to an on-Site wastewater system, which pretreats the wastewater prior to discharge to

the City of Newburgh sanitary sewer system. There are no char-broiler, dust collectors or grease traps in the facility. The types of waste generated include meat fat, raw/cooked vegetables, equipment washwaters, sanitizer rinses, wooden pallets, paper and scrap metal. About 20,000 gallons of water are used per day, about 2,000 gallons of which are estimated to be used in food products.

Site Observations

The Grand Union building faces southeast. During the Site tour, the food processing operations, mechanical equipment and waste/wastewater management practices were observed. The food processing rooms are maintained at less than 40° F. The only transformers are dry units located inside the building in the food preparation room. Containers holding Quorum sanitizing chemicals were stored in a room in the back of the building, and no releases or containers in poor condition were evident. The building's mechanical room houses compressors for the refrigerators and an electrical load center. Freon-22 is used in the refrigeration system; it has never been changed, only refilled as needed. The boiler room houses one natural gas-fired boiler. There are a total of 12 exhausts, including one for each smoke oven, the boiler stack, and restroom exhausts. A shaker was located inside the back of the building, where solids are strained and disposed in the dumpster, and wastewater is sent to the pretreatment plant. The wastewater plant, located outside the southwestern side of the building, is approximately 30 feet long, 20 feet wide and 20 feet deep. It is monitored once per month for bioactivity; microorganisms are added to the concrete pretreatment tank to improve treatment efficiency as necessary, and no other water treatment chemicals are added.

Records Review

A list of the 50 chemicals used at the plant and accompanying Material Safety Data Sheets (MSDS) were provided for review. The main chemical that is stored in containers is Quorum sanitizer, which comes in various forms and may contain such chemicals as potassium or sodium hypochlorite, potassium or sodium hydroxide, phosphoric acid, and sulfanic acid.

Inventory of Materials

Raw materials are food items, including raw meats, fruits and vegetables, oil, condiments, spices, pasta and dairy products. Total annual production of processed food products is 6 million pounds. The major chemical stored on Site is the Quorum sanitizer. Other chemicals used on Site include

lubricants, boiler water treatment chemicals, detergents/cleaners and insecticides. It was stated in the interview and questionnaire that external pesticides are not used.

9.2.2 LSG/Sky Chefs, 41 Governor Drive

Description of Activity

Sky Chefs provides food services to various airlines, such as Lufthansa and Continental. Prepared food items are received at this plant, where they are arranged on trays for upcoming flight meals. Special request meals, such as Kosher, are also prepared. About 185,000 meals are prepared annually. Although there are stove and oven facilities on-Site, generally there is no cooking of food conducted. Most of the food items are prepackaged and stored in freezers or refrigerators until they are used for an individual meal. Sky Chefs also receives tray carts from arriving flights. Employees will remove the trays and separate the contents into disposable items (food, paper products), linens, and washable items (silverware, glassware, dishes, pots). Dishes and similar items are washed in an industrial dishwasher and stored for re-use.

Previously Identified Environmental Concerns

The Sky Chefs building was constructed in October 1991 and began operation at that time. No environmental concerns have been identified previously.

Interview and Questionnaire Results

There are no USTs or ASTs at the facility. Public water is used mainly for dishwashing, sanitary facilities, boiler feedwater and general clean-up. Sky Chef's representatives stated that approximately 20 gallons per day of wastewater and sanitary waste are disposed of in an on-lot septic system, comprised of a 500-gallon tank and absorption bed installed at the time of building construction in 1991. To their knowledge the tank has never been emptied or excavated. Note that public sewers are available in the industrial park and airport employees believe that the facility is actually connected the public sewers. Further investigation is required to determine the point of discharge of Sky Chef's wastewater.

Site Observations

A walkthrough of the general operations was conducted. The food processing and tray dismantling occurs in one big production room. Only one employee was actively preparing meals at the time of the Site visit. This room contains about 10 floor drains, which apparently drain into the septic system. There are no grease traps in the floor, and Drano is put into the floor drains

about once per month. This may be a problem if a septic system exists due to potential toxic shock to the organisms. Two exhaust fans, with filters in the exhaust duct, are located above the ovens and stove. On the northeastern side of the building was a loading dock and dumpster, which can be accessed through a chute on the inside of the building. The boiler room contained a boiler and small water heater, and plastic bags containing a water softening agent called Pure Soft Solar Salt Crystals. The reported location of the septic tank was pointed out by Sky Chef's personnel as the rectangular metal cover at the corner of the parking lot (next to a light pole) at the southwestern corner of the building.

Records Review

No records were made available for Golder to review.

Inventory of Materials

The main materials received on-Site are pre-packaged frozen foods, fruits, condiments and dishware/utensils/linens. The only chemicals used at the facility are the solar salt water softener and ammonium chloride, which is used to clean and disinfect the dumpster.

9.2.3 CRS Business Computers, Inc., 6 Governor Drive

Entry into the CRS facility was denied by the owner of the company. The owner of CRS refused to complete the questionnaire and offered only the following information during the brief visit:

CRS installs software in IBM computerized cash registers. The facility is an office environment, and a new building is currently under construction behind the current Site. The owner reported that there is no septic system on Site.

9.2.4 New England Laminates Company (Nelco), 40 Governor Drive

Description of Activity

Nelco is a manufacturer of circuit board laminate. The major byproduct is spent etching solution, which is sent off-Site for regeneration. Production commenced at this facility in 1995. Prior to this, Johnson Controls operated at this Site from 1978 to 1995.

Previously Identified Environmental Concerns

No environmental concerns were previously identified. No records or knowledge from the tenure of Johnson Controls were available for review.

Interview and Questionnaire Results

Nelco utilizes two natural gas-fired boilers which are subject to Title V permits under the Clean Air Act. Facility representatives do not believe that the boilers have air pollution control devices. Nelco's Title V permit application is still under review by the State. The sources of wastewater on-Site are sanitary facilities, boilers (2,680 gallons per day), cooling system for the presses (2,650 gallons per day), water softener (1,000 gallons per day), and plate cleaning (5,040 gallons per day). The total average daily flow to the public sewer is 11,360 gallons. Nelco representatives stated that plant wastewater is not monitored pursuant to any regulatory requirements at this time, but may be monitored in the future.

Some etching occurs in Nelco's etching lab, mainly for quality control purposes. The wastewater from this process is filtered in carbon adsorption/ion exchange canisters. The canisters are sent off-Site for regeneration, and manifested as hazardous waste under the code F006 (i.e., wastewater treatment sludges from electroplating operations). The spent etching solution is sent off-Site for regeneration but is not manifested as hazardous waste. The Nelco facility is listed as a large quantity generator of hazardous waste under RCRA (i.e., 1,000 kg/month or greater), but operates as a small quantity generator. The only other waste produced is trash.

Site Observations

A walkthrough was conducted inside the production area of the facility. Photographs were not allowed during any point of the walk-through. The maintenance shop was observed and no parts cleaning occurs here. In the boiler room were two boilers, which appeared to be fairly new, whose stacks exited through the roof of the building. The boiler blowdown goes to the sewer. Adjacent to this room, on the southwest side of the building, is a loading dock.

The raw material enters a clean room and then is conveyed to presses. At the finishing department, the laminated copper is sized and packaged for off-Site shipment. In this room, a post-bake operation occurs. Four ovens, which vent to the roof, are used for this purpose. In the finishing department is a quality control lab where the physical characteristics of the finished material are tested (e.g., thickness, shear, peeling). In the etching lab, the copper is etched off in order to check the internal surface for contamination. In this lab were totes of fresh and spent etching solution, as well as the carbon and ion exchange beds that filter the etchant wastewater.

An exhaust to the roof was present in the etching unit. Facility representatives estimated that about two 330-gallon totes of etchant are used for every four weeks of operation.

The outside of the building was toured. From the boiler room, the two stacks could be seen extending about six feet above the roof of the building. A chiller and cooling tower were present in the back of the building. Protruding from the top of the back side of the building was a pipe from which water and water vapor were exhausting intermittently. The water settled on gravel, which was wet and stained. This water also had a mild chemical odor. On the northeast side of the building was a concrete pad surrounded by a chain-link fence. Inside this area were compressed liquid petroleum cylinders, the purpose of which was unknown. Behind the shipping area was a trash compactor. Behind the parking lot on the northeast side of the building was a shack which was apparently owned by AT&T. On this side of the building were the stacks from the etching room. In the front of the building was a transformer that had been installed a few weeks prior.

Records Review

Manifests from the previous year were reviewed. The manifests were completed properly and the appropriate copies had been retained by Nelco. The manifests showed shipments of 26 gallons of F006 hazardous waste on December 8, 1997, and 5093 pounds of hazardous waste on December 19, 1997, classified under waste codes D002-D004 (i.e., corrosive, reactive and toxic for arsenic). This waste is derived from the etchant wastewater.

Inventory of Materials

Raw materials used at Nelco include glass, copper, dry epoxy and etchant. Materials typically kept in containers on Site include Ammoniacal etchant (1,300 gallons) and isopropyl alcohol (55 gallons). The etching solution consists of ammonium chloride, ammonium hydroxide and ammonium carbonate.

9.2.5 Amscan, 3 Enterprise Drive

Description of Activity

Amscan is a manufacturer and distributor of paper cups and napkins, such as those used for party goods. The average annual production is 1,000 tons of napkins and 91 million cups. The products are sold to party stores and supermarkets such as K-mart and Party City. The plant

began production about 1.5 years ago; Childworld occupied the facility prior to Amscan. Amscan leases and occupies the northeast half of the building, or 168,000 square feet of space.

Previously Identified Environmental Concerns

No environmental concerns were previously identified. An Environmental Study was performed by Pilko & Associates for all of Amscan's facilities in January 1997, when the company went from a publicly-owned to privately-owned entity. A copy of the Study was not available for review.

Interview and Questionnaire Results

Amscan receives the materials for the cups and napkins pre-printed and pre-dyed. No printing occurs at this facility. Water is supplied by the Town of Newburgh and is used mainly for sanitary and cleaning purposes. Once per month, water is also used to test the building's sprinkler system, which is a requirement of Amscan's lease. Water usage for the last quarter year was 150,800 gallons, and for the previous quarter was 125,000 gallons. Wastewater enters the public sewer and goes to the Town of Newburgh's treatment plant. The building is not insulated. The transformers used by Amscan are new and are located inside the northwest wall of the building. There are no ASTs or USTs located on the property.

The major machinery used at Amscan's facility includes forklifts, case pickers, napkin folders and cup-forming machines. Ovens are used for shrink-wrapping packages of finished goods. These ovens do not contain exhaust stacks and are kept at about 270° F. Most of the forklifts are battery operated and are charged each night in a charging area located inside the northwest side of the building. Spent batteries are sent off-Site immediately upon replacement.

Once per month, Amscan uses a "Zamboni-type" floor cleaning machine to wash the floors. No chemicals or detergents are used, only water. The washwater is collected with a squee-gee and dumped on the grass behind the building in an undisclosed location, and solids are disposed of in the dumpster. The Zamboni is shared among 12 of the Amscan facilities.

Much of Amscan's waste is comprised of paper and similar products, which is recycled to the extent possible. For example, office paper and other waste paper is sold to recyclers, plastic wrap that accompanies skids of raw materials is collected and shipped to another facility for reuse, and corrugated is resold. The remaining trash is hauled off-Site once per month.

Site Observations

A walkthrough of Amscan's office area and production area was conducted. Electrical lines and compressed air lines run from the machines to the ceiling of the warehouse. One of the ovens used for shrink-wrapping was observed in operation, as were production lines for cup molding and napkin folding. Most of the machines are run on compressed air; a 400 HP air compressor is located in the back of the warehouse. At the time of the Site visit, the compressor area appeared clean. A maintenance contractor is hired to conduct maintenance on the compressor, and the contractor brings in and removes all necessary materials and wastes (e.g. oil filters). The battery charging area for the forklifts was observed along the same wall. Near the air compressor were two Cutler-Hammer electrical transformers, which reportedly do not contain PCBs. A parts washer was located in the maintenance area. The drum containing the solvent was not labeled and the sink lid was open. The solvent used is Safety Kleen 105 Solvent.

A walkthrough was also conducted of the unleased portion of the warehouse. This portion contains the fire sprinkler system and booster pump, which is maintained and tested by Amscan once per month. In the room was a pile of pallets and cardboard. The loading dock and bays on this side of the warehouse are used by Amscan for drive-in deliveries. Amscan also parked several forklifts in the room just outside its leased boundary.

Records Review

The most recent invoice from Safety-Kleen was reviewed for removal of the parts cleaner/ degreaser solvent. According to the invoice, the parts washer was serviced on July 8, 1998, and 16 gallons of the solvent were removed by Safety-Kleen. The spent solvent was classified with hazardous waste codes D001, D006, D008, D018, D027, D039 and D040 (i.e., ignitable and toxic for cadmium, lead, benzene, 1,4-dichlorobenzene, tetrachloroethylene and trichloroethylene). Also, the MSDS sheet for the Safety Kleen 105 Solvent was reviewed in Amscan's "Right-to-Know" notebook which is kept in the employee cafeteria. The solvent contains petroleum distillates, naphtha and Stoddard solvent.

Inventory of Materials

The major raw materials received by Amscan include pre-dyed, pre-printed paper rolls, corrugated boxes, and plastics. Other materials stored on Site include propane gas for the forklifts and mineral oil.

9.2.6 Courtyard Marriott, 1 Governor Drive

Description of Activity

The Courtyard Marriott is a hotel that provides overnight and short-term accommodations for visitors to the Newburgh, New York area.

Previously Identified Environmental Concerns

No environmental concerns were previously identified.

Interview and Questionnaire Results

The Marriott has operated this hotel facility since February 1997. Prior to its construction, the area was vacant. About 200,000 gallons per month of water are used for the following purposes: boiler feedwater, sanitary, laundry, kitchen and general cleanup. All wastewater goes to the sewer. There are no USTs or ASTs on the property. The hotel has two gas-fired boilers in order to provide heat and hot water. The only other air emission sources are the hood over the kitchen grill and the dryer vents in the laundry room.

The main waste stream is trash, including food, cardboard, paper and cans. These streams (except for food) are separated at the source for recycling. No vehicle or equipment maintenance is performed that would produce any other major waste stream. The hotel contracts with Ecolab, who performs pest control for the hotel by applying pesticides internally and bait stations by the dumpster externally.

Site Observations

The hotel contains an indoor pool on the ground floor. Adjacent to this area is a room that contains gas-fired pool heaters and commercial pool chemicals (i.e. for water treatment). In the kitchen, the grill top contains a side drain to catch grease and there are no grease traps in the floor. The two floor drains in the kitchen empty to the sewer.

On the roof was a room that contained the boilers, which are ducted to the side of that building.

Records Review

No records were requested for review.

Inventory of Materials

The types of materials stored at the hotel include: pool chemicals, detergent, linens, food items and office products.

9.2.7 Federal Express City Station (FedEx), 11 Governor Drive

Description of Activity

Fedex operates a package handling facility for package receipt and distribution to its ultimate destination.

Previously Identified Environmental Concerns

No environmental concerns were previously identified.

Interview and Questionnaire Results

The interview was conducted concurrently with the Site walkthrough, and is discussed in the following section. Fedex did not complete a questionnaire. After having occupied this building for ten years, Fedex was planning to relocate into a newly constructed building in the industrial park on Lot 14, and vacate the existing premises in approximately thirty days from the date of the Site visit (August 13, 1998). The building was already in existence when Fedex began its lease.

Site Observations

After walking through the office area, a more detailed walkthrough was conducted of the operations area and around the outside of the building. Adjacent to the operations area was a room housing a gas-fired hot water heater and Square D Transformer.

Grates with floor drains were located in the operations area/warehouse, but it was not known where drains discharged. The floors in the warehouse are washed using a "Zamboni-type", floor washer which also collects the washwater. The warehouse contained a locker housing a spill kit, soap and personal protective equipment appropriate for responding to spills of hazardous materials. The Fedex representative stated that no hazardous materials are allowed on the conveyor belts in the warehouse. Such materials, which have already been inspected prior to arrival, are staged and checked by a hazardous materials specialist in a designated area at the rear of the building. The shipper is notified and the material is returned to the shipper if the materials cannot be shipped. Fedex does not handle medical or hazardous waste, but may handle certain types of explosives and radioactive materials. Fedex operates a corporate environmental hotline

that provides immediate advice on hazardous materials and other environmental issues to its facilities. Exhaust fans were present at the top of the walls of the warehouse.

The mechanics bay was a separate room adjacent to the warehouse, in the northwest corner of the building. Inside the bay was a "Zep Dyna-Clean" parts washer with the sink lid opened. A grate on the floor contained standing water. Fedex staff stated that the drain in the bay was tied in with the drains in the warehouse. In the southwest corner of the bay was a 275-gallon waste oil AST with secondary containment, which is reportedly pumped out by an outside contractor. Oil was noted in the secondary containment enclosure. A fresh oil AST, a rack containing used tires, and used car batteries were also located inside the bay. In the southeast corner of the bay was an in-ground oil/water separator of unknown capacity. The mechanic on-duty could provide little information on the waste handling activities associated with the bay. Upon inquiry, he responded that no air conditioning work was performed, and that removed catalytic converters are disposed of in a scrap metal bin. [There are specific federal requirements for the removal and maintenance of catalytic converters for the automotive service industry]. Outside the building, adjacent to the bay were caged propane tanks, and the propane fuels the forklifts.

On the northeastern corner of the property was a gas pumping station with two hoses and vent pipes for two USTs. The Fedex representative stated that there was an inactive gasoline UST at this Site, but could not provide additional information. Other documents reviewed by Golder indicated that the installation was a 10,000-gallon gasoline tank. No information was provided regarding why it was no longer in service. In this area of the property, beyond the gasoline pumps, were an open-topped scrap metal bin and a dumpster containing yard waste and cardboard. The dumpster had "All-Waste Systems" and a phone number inscribed on it. Another trash dumpster was located in this area, as well. Beyond the paved area behind the Fedex building was a closed 55-gallon drum labeled "Hazardous Waste" and "Corrosive". The label was not dated and no other identifying marks were present on the drum. The drum was sitting unsheltered, directly on a gravel/dirt area. The Fedex representative did not know the contents or purpose of the drum.

Records Review

No records were made available for Golder to review.

Inventory of Materials

Besides the transitional storage of commercial packages, the materials stored on-Site are propane, motor oil and minor amounts of other materials used for automotive maintenance.

9.3 Zone 6B: Western Airport / Drury Lane

9.3.1 Crestview Lake Recreational Area, off of Drury Lane

Description of Activity

Crestview Lake is a water-based recreational area comprised of two man-made lakes separated by a berm (with a culvert connecting the lakes), a clubhouse and a residence. The clubhouse contains a bathhouse, snack bar, offices and a year-round adult day care. Trails are available for hiking and the lakes are available for swimming and non-motorized boating. A sand-covered beach area is present for supervised swimming activities. The Crestview recreational area is surrounded by woods and marshland. The upper, or northern, lake abuts the southwestern edge of Runway 09/27 at Stewart International Airport. A portion of the upper lake was filled as part of the extension of Runway 09/27.

A residence is located on the western side of the property, on the access road from the entrance off of Drury Lane. The Site caretaker lives in the residence year round.

Previously Identified Environmental Concerns

A 1,500-gallon fuel oil UST was excavated in 1997, with evidence of a release. The tank closure and associated remediation are under review by the NYSDEC, which assigned Spill No. 9712003 to the case. A water supply well is located immediately adjacent to the UST Site. No details were provided as to the UST, its closure, or any well monitoring results. However, a letter was received from the Engineer for the Town of New Windsor stating that the town was working with the NYSDEC on the tank closure and remediation. The associated documentation is reportedly maintained at the New Windsor Town Hall.

Crestview Lake staff indicated that there are the two operating septic systems, one of which cannot be precisely located. This is discussed further below.

Interview and Questionnaire Results

The Crestview Recreational facility is owned by the State of New York, and under a lease to the Town of New Windsor that expires in the year 2002. The two lakes are manmade, and the recreational facility began operation some 30 to 40 years ago. The facility operates seasonally, although the adult daycare operates year-round. Natural springs are the source of water for the lakes. The Crestview facility contains two water supply wells and two septic systems. One well is located by the rear entrance to the main building, and the other well (and pumphouse) is located about 200 yards up hill from the residence, along a grassy access road that follows the electrical power lines. A private company comes to Crestview to treat the lake water with copper sulfate and apply a biocide to keep weed growth under control, although the treatment frequency is not known. One septic system, installed a few years ago, is located at the residence, and the other system is located in an unspecified area on the opposite side of the access road from the lower lake.

Two possible PCB-containing transformers were located in front of the main building. No problems have been encountered with any electrical equipment in the last 14 years. The clubhouse is not well insulated, although any existing insulation is suspected to be original to the building.

The heating oil UST was removed sometime during 1997, and a heating oil AST was installed in its place. It is approximately 275-gallons in size, and is the only AST on the property. No staining or stressed vegetation beneath the tank was observed. The snack bar in the lower level of the clubhouse has an exhaust fan to vent the exhaust from the grill.

The well water is tested by the Department of Health once per month for nitrates and coliforms. Well and lake water samples are tested weekly for E.Coli, and once per month for nitrates, as mandated by the Department of Health. The water has never been tested for volatile organic compounds (VOCs). The only bacteria problems occur occasionally after heavy rains. If a problem occurs, three consecutive samples are taken and averaged. According to Crestview staff, no fish kills have ever occurred.

Pesticides and herbicides are not used on the property, although they may have been used in the past since an orchard formerly existed on the Site.

Site Observations

The location of the former UST was observed behind the clubhouse, in the grassy area between the parking lot and the building. To the immediate left of the UST Site was the well, which could not be seen since the wellhead is underground and the area was covered with soil and vegetated. To the left of the well was a cap for a former underground propane tank that had been used for fuel in the kitchen. The cap and the instrumentation were still in place. It is assumed that the tank is still in place underground. The path of the septic pipe was followed from the southwest corner of the main building, past the pavilion, and under the roadway into a densely vegetated area. The exact location of the receiving septic system was unknown, and had not been found on past searches by Crestview staff.

Records Review

No records were made available for Golder to review.

Inventory of Materials

With the exception of minor amounts of cleaning chemicals and soap, no other chemicals or hazardous materials are stored at the facility. Water treatment chemicals are brought on-Site by a contractor.

9.3.2 U.S. Department of Agriculture Animal Import Center, Drury Lane, North of Runway 09/27

Description of Activity

The United States Department of Agriculture (USDA) Animal Import Center (Center) serves as a quarantine station for animals of "agricultural importance" being imported into the country. Typically, the Center houses horses, cattle, sheep, pigs, and birds. No monkeys or pets (dogs, cats) are quarantined at this facility. A permit is required for import of animals into the United States. Every animal is tested while under quarantine, regardless of the testing protocols required by the exporting country. Animals that are refused entry into the United States are either exported back to the originating country or are euthanized.

Previously Identified Environmental Concerns

The only environmental concern expressed in the past regarded the Center's handling of wastewater. According to Center personnel, in 1978, an Environmental Impact Study was conducted in order for the Center to construct an on-Site wastewater treatment plant (WWTP). In

response to requests by the Town of Windsor, the Center installed a gravity sewer line under the Stewart International Airport runway to the Army's WWTP. As a result of protests by a local environmental group, the Center decided not to connect to the WWTP and is hauling its wastewater off-Site to disposal at the Newburgh WWTP.

The Center has two USTs for gasoline and fuel oil, which are discussed below.

Interview and Questionnaire Results

The Center operates two incinerators that are permitted by NYSDEC. Solid waste, including hay, shavings, manure and carcasses, are burned in the incinerators. The incinerators are propane-fired and each has two combustion chambers. Ash from the incinerators is placed into a dumpster and sent to G.R.O.W.S. Landfill in southeastern Pennsylvania as solid waste. Approximately 12-15 cubic yards per year of ash are generated. The ash is tested yearly for hazardous characteristics and has not failed. Sharps (e.g., needles) that are generated are collected separately and picked up by approved medical waste haulers for specially approved incineration. All wastes generated in the lab are locked until they can be sent to proper disposal; however, lab waste are minimal since samples are sent off-Site for analysis. Any wastes generated by vehicle maintenance are put into a barrel and shipped off-Site. No waste is shipped off-Site as hazardous waste.

The source of water for the Center is an on-Site well, which is estimated to be at least 100 feet deep. The water is not treated prior to use. It is typically tested for E. Coli, and has been tested for other constituents on occasion. Water is used at the Center for watering animals, drinking, and washing/disinfecting buildings. All wastewater is kept in a steel in-ground holding tank in the southeastern portion of the property. Wastewater is hauled off-Site each day by truck. About 5-6,000 gallons per day is taken to the City of Newburgh WWTP. The NYSDEC requires that the wastewater be chlorinated to 15 ppm and the pH be between 6-8 prior to shipment to the WWTP. The center uses sodium hypochlorite to chlorinate the water; about five to six gallons are used per shipment.

The Center maintains a fuel oil and gasoline UST, both of which are 6-7 years old. The fuel oil UST is 8,000 gallons, and the gasoline UST is 4,000 gallons. These are located adjacent to Building 2 and Building 1, respectively. It is believed that the tanks are constructed of fiberglass and are both registered with NYSDEC. There are also two 25,000 freshwater holding tank USTs.

The USDA owns an approximately 16,000-gallon propane AST, and Suburban Propane owns two 1000-gallon and ten 500-gallon propane ASTs that are operated on-Site by USDA. These tanks are used for heating the various buildings within the Center, and are located adjacent to the buildings they serve. The large propane tank provides fuel for the incinerators.

Site Observations

Due to the nature of the operations at the Center, a Site walkthrough could not be conducted without having to complete personal decontamination (e.g., showering). However, the Center representative provided a map of the Center showing all of the buildings, tanks, incinerators, and well.

Records Review

No records were made available to Golder to review.

Inventory of Materials

The main materials stored on Site are propane and sodium hypochlorite, as described above. Additionally, hay and animal feeds are used on Site. Pesticides are kept on-Site for spraying the horses.

9.4 Zone 6C: Anheuser-Busch / Metal Container Corporation, 1000 Bruenig Road

Description of Activity

The Metal Container Corporation's can plant ("can plant") forms and prints aluminum cans that are used to store beer and soda, such as Busch Beer and Diet Pepsi. The product consists of open-topped printed, sanitized cans. Approximately 10 million cans per day are produced, which is double the production of 1989, the year operations began at this Site.

Previously Identified Environmental Concerns

Facility representatives indicated that the most salient environmental issues at the plant are wastewater effluent and uncontrolled air emissions. Currently, construction is underway to install a thermal oxidizer to treat the gases vented through stacks in the roof, which contain VOCs. There is also a wastewater treatment system inside the plant, which is described further in the text below.

When the can plant was built, the Site had been vacant. However, due to a previous release of jet fuel from the neighboring fuel loading facility, contaminated soil was excavated and several passive vent wells were installed around the perimeter of the can plant building to prevent fume migration inside the building. There are also twelve groundwater monitoring wells around the northern and northwestern property lines, which are owned by NYSDOT. These wells were installed after building construction and apparently have not been monitored for about ten years. The wells are capped and locked. Data regarding the cleanup activities was not made available for Golder to review.

Interview and Questionnaire Results

Facility representatives stated that any detailed questions must be requested in writing to Anheuser-Busch's corporate office for a response. However, general questions relating to production and environmental issues were answered by plant personnel.

Water is supplied by the treatment plant on the Army Sub-post that is operated by the Town of New Windsor under agreement with the Army. Approximately 110,000 gallons per day of wastewater is generated, on average. Most of the water is used to clean and sanitize the cans after they are formed and trimmed. There are no USTs at this plant. There are ASTs, up to 10,000 gallons to store oils, acids and varnishes used in the process. Facility representatives stated that the largest spill in production history was about 1,000 gallons, which entered a tank containment area and was pumped into drums. There is also a lime silo located outside the eastern side of the building.

The major source of air emissions from the can plant are VOCs from the ovens that are used to cure the cans. According to plant personnel, every stack is under a State permit. A thermal oxidizer, or ThermOx, is in the process of being constructed in order to treat the exhaust gases that are currently vented through rooftop stacks without any secondary air pollution controls. The only dust collector at the can plant is the baghouse on the lime silo, which collects particles during loading and unloading. The collected particles are returned with the lime material. There are also two natural gas fired boilers; the blowdown from which goes to the sewer.

There is an indoor wastewater treatment plant that treats the effluent from the can washers. The washers utilize acid baths to remove the coolant from the cans. The oily wastewater enters the treatment plant, where polymer is added to separate the oil, which is removed and recycled off-

Site by Safety Kleen. The water enters a reactor where lime slurry is added to raise the pH to between 8 and 9 to precipitate dissolved metal contaminants. A flocculent is added to assist the precipitate settle in a 60,000-gallon clarifier, the sludge from which enters a dryer and is sent to a non-hazardous landfill for disposal. The water is discharged to the New Windsor POTW under a permit. The can plant samples the treated wastewater monthly for pH, metals, total toxic organics, and fluoride.

The can plant classifies itself as a small quantity generator of hazardous waste. One waste stream generated is a combination of wastes from the sanitary liner spray and varnish coating. The other stream is waste isopropyl alcohol from cleaning the lithography machines. These wastes are drummed and removed approximately once per month for shipment to incinerators in New York and Ohio. Upon inquiry, plant personnel stated that overspray from the production operations is collected in a filter box. Dried spray and filters go to the trash. Can plant personnel stated that this waste is non-hazardous under RCRA since it passes the TCLP toxicity test.

Site Observations

Photographs were not allowed at any point during the facility walkthrough. There are four identical production lines at the can plant, and a detailed walkthrough was conducted of one line that was producing Budweiser beer cans. During the walkthrough, satellite accumulation drums of hazardous waste and used oil drums were observed. In the eastern side of the building were the raw material storage area and flammables storage room. In the raw material area, all of the drums were segregated by category, labeled and the area taped off. Inside the flammables storage room were grounded drums. Isopropyl alcohol was the only actual flammable material in the room. Approximately 50 drums of raw material were in storage. The outer wall of the room acts as a blowout wall in case of explosion. There was also a floor drain at the doorway to the room. The discharge point from this drain is not known. A separate bulk storage room contained vertical storage tanks, ranging from 2,000 gallon to 10,000 gallons, of varnish, base coat, spray, acid and oil, in a secondary containment structure with a combined capacity of 13,000 gallons.

Each operation of the production line was observed, including applying the base coat to the can, labeling via lithograph, spraying the inside of the cans, and drying in the Inside Bake Oven. The can production process was observed, which includes cutting sheets of aluminum into cups, forming the cups into cans, trimming the cans, waxing and working of the can neck, flanging the

neck, edging the can bottom in the Bottom Profile Reformer, washing/rinsing the cans, and quality control testing.

The washing and rinsing steps comprise six stages, with a final application of ME-50 surfactant coating to reduce stickiness for easier can conveyance. Some of the washwater, such as deionized water, is recycled in the wash process. The boilers provide hot water for the washing process. Before being conveyed to the on Site treatment plant, the water is skimmed of oil with a belt skimmer. The washed cans are dried in a drying oven, which contains two zones but has one burner and one exhaust to the roof.

The wastewater treatment process was observed. The oily water enters two tanks, Split Tanks A and B. In Tank A, acid is added to drop the pH; in Tank B, the temperature is raised, the water is air-sparged and gravity settling occurs. Lime is added in a subsequent step. A pit beneath the treatment area receives the washwater from the washers. The pit is concrete with a fiberglass liner. The clarifier was observed collecting the lime slurry. The clarifier sludge is thickened, dewatered, pressed, and dropped into a hopper. Hourly manual checks, weekly maintenance checks, and daily housekeeping checks are performed at the wastewater treatment plant. Computers throughout the plant allow for monitoring, but not remote control, of wastewater treatment operations.

A walkthrough was conducted around the outside of the building. On the south side of the building were construction trailers. On the east side, or back, of the building was the lime silo, empty drums, a trash dumpster, pallet dumpster, metal dumpster and 90,000-gallon propane tank. The propane is used as a secondary fuel source for the boilers, and has an adjacent blender that mixes in air such that the fuel value matches that of natural gas used in the boilers. Also on this side was an unloading area for trucks, having a reported secondary containment of 14-15,000 gallons. The area was sloped to a drain with a valve in the bottom, which is closed during unloading. The system is tested once per year for losses. Stormwater that enters the drain is not treated, but flows to a pond at the bottom of the hill before discharge to surface waters. Behind the northeast corner of the plant was an area under construction for the thermal oxidizer unit.

Surrounding the building foundation were passive air vents that are State-permitted and maintained by NYSDOT. These had been installed in response to the jet fuel contamination uncovered during the construction of the can plant building. Around the north and northwest

sides of the building are monitoring wells, situated on the grass behind the driveway. The west side of the building contained a dock area where trucks were parked to load pallets of finished cans for shipment.

Records Review

No records were provided for review during the Site visit. Facility personnel stated that requests must be made through the corporate office, or publicly-available documents (e.g. permits, inspection reports) could be reviewed at the State offices.

The EDR Report produced for Golder Associates shows the following aboveground storage tanks registered with the State of New York in its Chemical Bulk Storage database: three 10,000-gallon fiberglass reinforced plastic (FRP) AST for 1-butanol, three 10,000-gallon FRP AST for sulfuric acid, three 2,000-gallon FRP AST for sodium hydroxide, three 2,000-gallon FRP AST for sulfuric acid, and three 10,000 gallon FRP AST for 1-butanol. The EDR Report also showed that in its latest biennial report, the can plant generated 14,025 pounds of ignitable hazardous waste. This amount is not consistent with the generation rates of a small quantity generator, which the can plant claims to be. In a previous compliance evaluation inspection, the can plant violated the RCRA land disposal restriction requirements, although details were not provided.

Inventory of Materials

Major raw materials include aluminum rolls, ink, spray for the inside of the cans, varnish, oils and coolants. Also, hydrated lime is used to neutralize the wastewater, and acids and bases are used for cleaning and regeneration of washwater. Scrap aluminum is sold back for recycling, and bricks are made out of unusable cans.

9.5 Zone 6D: Eastern Airport

9.5.1 New York Air National Guard Base, Militia Way, Newburgh

Description of Activity

Stewart International Airport is the home of the New York Air National Guard (ANG) 105th Military Airlift Group. The ANG leases a portion of the Site, located on the southeast corner of the property. The 105th group is charged with maintaining combat readiness and mobility to support national military commitments. A fleet of aircraft, including C-5 and C-130 transports, are maintained at the airbase. The ANG has its own support facilities and uses the Stewart International Airport only for the runway. The ANG supplies fire protection services to the

airport via the firehouse in Building 142. As a part of maintaining the aircraft in its charge, the ANG has maintenance, painting and fueling facilities. Golder interviewed Lt. Col. Dennis Zicha, Environmental Manager for the ANG, who also completed the environmental questionnaire for the base.

Previously Identified Environmental Concerns

The ANG base at the Stewart International Airport was constructed in 1987. Previously the Guard occupied several buildings on the Army sub-post at Stewart after relocating from the Westchester County Airport in 1983. Before the relocation, an environmental assessment was performed on the impact to the local environs. In addition, two dump sites were identified on the Guard property, comprised of a reported pesticide drum disposal area and a landfill. Portions of the New Windsor landfill were located on the ANG property.

It was reported that pesticide dump site was remediated in two phases, including drum removal and removal of contaminated soil. A deed restriction was placed on this area, limiting the future use of the parcel to industrial activities and prohibiting disturbance. Golder has not reviewed documentation regarding verification of the cleanup activities.

The landfill has been investigated and was undergoing closure during the time of Golder's visit. It was reported that no adverse impact was found from the landfill. A low permeability clay cap was the selected closure method. Golder has not reviewed documentation regarding assessment or closure activities for this landfill.

As stated, portions of the New Windsor landfill were located on the Site leased by the ANG. As part of the landfill closure, the landfilled waste was excavated from the Guard property and placed in the main landfill, which was capped and closed. According to Lt. Col. Zicha, no confirmatory soil samples were taken to document soil quality on the Site where the waste was removed. Removal was confirmed by visual observation by a New Windsor contractor.

During the base construction, the concrete from the existing runway and aircraft parking areas was placed in the fill area at the end of Runway 16/34. According to Lt. Col. Zicha, only concrete rubble was placed in this area.

Rec Pond is located south of the NAG Base and Southeast of the southern end of Runway 16/34. The pond receives stormwater runoff from the following sources: the ANG Base through a concrete-lined spillway; the Stewart International Airport from perimeter drain along the ANG lease line and from runway storm sewers, both of which discharge into the pond through

concrete-lined spillways; and, a storm sewer culvert, believed to originate from the industrial park across Route 17k from the airport, run under the Site and ANG Base, and discharge into the pond. During Golder's visit, a floating berm was observed on the pond, according to Lt. Col. Zizke as a precautionary measure by the airport. The pond has a constructed berm, outlet structure and concrete-lined emergency spillway. The discharges goes to Silver Stream, and is called out as Outfall 014 in the airport's SPDES permit.

Interview and Questionnaire Results

The ANG occupied the Site in 1987, and houses an average of 2,000 personnel during the year. It was reported that no asbestos materials or PCB compounds are believed to be present. The base has its own SPDES permit for three storm sewer outfalls from the ANG site. There are 18 underground tanks, ranging from 1,000- to 15,000-gallons in capacity, containing jet fuel, diesel, gasoline, heating oil and glycol in double-walled tanks. There are 13 aboveground storage tanks containing 275- to 1,000,000-gallons of jet fuel, diesel or used oil in single-walled steel tanks with secondary containment.

The base generates hazardous waste and manages the waste in drums. The ANG unit was commended by the USEPA for its was minimization efforts to reduce the amount and type of hazardous waste generated, including solvents and part cleaning fluids. The Guard is a small quantity generator of hazardous wastes. Wastewater from the base is discharged to the Town of New Windsor sewage treatment plant. Water is supplied from the Stewart Army water works operated by the Town of New Windsor. Glycol recovery facilities are used for aircraft deicing. A private contractor hauls solid waste for off-Site disposal. Weed killer and insecticides are used on the base as needed.

Site Observations

A full tour of the base was not conducted during the Site visit. An interview was held with Lt. Col. Zicha regarding the base property and history. Lt. Col. Zicha was well versed with regard to the environmental regulations that applied to his site.

Records Review

Golder personnel received and copied two reports on the environmental assessments of the base property. The first report was an Environmental Assessment for the Relocation of 105 TASG to Stewart International Airport by the Air Director at the National Guard Bureau (6/82) evaluating the impact of the proposed ANG Base at Stewart Airport. This report provided an evaluation of conditions at Stewart before construction of the base. The second report was an Environmental Baseline Study for the Transition of the Stewart Army Subpost by the Director of Housing and

Public Works at the U.S. Military Academy (12/96-Working Draft). This provided background on the Army Sub-post site.

Inventory of Materials

A complete inventory of materials was not obtained during the Site visit, but is available from Lt. Col. Zicha's office if needed.

9.5.2 Orange County Waste Transfer Station, State Route 17k, Newburgh

Description of Activity

The Transfer Station receives municipal solid waste by truck, compacts the trash using fixed hydraulic compactors, and loads the compacted trash into transfer trailers for off-Site disposal. There is also a public recycling area on-Site for the drop-off of recyclables in designated bins. The station is leased by the county, and county personnel operate the scale where vehicles are weighed before proceeding to the unloading area. The station is operated by J. P. Mascaro & Sons, Inc. or Souderton, PA, a private contract operator.

Previously Identified Environmental Concerns

There were no previously identified environmental concerns associated with the Transfer Station.

Interview and Questionnaire Results

Personnel were not available for interviewing, nor was the questionnaire completed and returned. Representatives from the NYSDOT accompanied Golder staff during the visit.

Site Observations

A house was located to the left of the entrance from Route 17k. It was not known whether this house was within the Transfer Station property.

Prior to the waste transfer building was an area dropping off recyclables. Designated bins or areas were available for styrofoam, paper, telephone directories, charitable donations, newspaper, plastic bags, polystyrene, foil/pie plates, brown/clear/green glass, No. 1 through No. 7 plastic, scrap metal, car batteries, waste motor oil, and antifreeze. The motor oil was kept in a closed container, and the antifreeze was kept in closed drums. However, the used car batteries were being stored, unprotected, on pallets.

At the bottom of the driveway was a staging, parking and maneuvering area for transfer trailers. Trailers to be loaded back up to the lower level of the building to receive trash from the compactors in the transfer station. At the time of the visit, two trucks and six trailers were present, all owned by J.P. Mascaro & Sons of Souderton, Pennsylvania. This area of the parking lot was enclosed by a paved berm ranging from 6 inches to about two feet in height.

In the southeast corner of the lot was a storm drain which was designed to collect stormwater runoff from the trailer maneuvering area. A tanker, parked adjacent to the drain, contained a pipe that entered the drain and connected to a sump pump. No material was being pumped through the pipe at the time of the Site visit. An electrical cord, draped through a stormwater diversion ditch, connected the pump to an outdoor outlet. NEG may wish to review this issue to ensure compliance with state health and safety regulations. The sump area had overflowed as evidenced by the staining on top of the asphalt berm and the distressed vegetation downstream of the sump. Stormwater from the upper parking areas was diverted around the sump by asphalt berms. Outside the berm was a shallow ditch that conveyed water flowing approximately 1-2 inches deep. The source of the water appeared to be an artesian well located at the top of the driveway, at the southwest corner of the property. NEG may wish to review this issue to ensure compliance with county personnel. The well is believed to supply the transfer station with water. The method of disposal for the on-site sewage and wash water could be determined.

At the top of the lot, on the western portion of the property, was the receiving area of the transfer station. This area consisted of enclosed two bays and a paved maneuvering area for trucks to turn around, back up and unload trash into a receiving pit. At the bottom of the pit was the compactor which conveyed the trash into a pit where it was compacted and loaded into the transfer trailers.

In the lot outside of the receiving area were two additional storm inlets used to capture stormwater and convey it to the lower end of the property. At the edge of the paved lot was a trash dumpster, located on a sloped pad and bordered by a gabion retaining wall, used for residents to unload trash without having to enter the transfer station building. Also at the top of the lot was the scale to weigh vehicles using the station, and area containing white goods (e.g., refrigerators). Adjacent to the Transfer Station building was a 550-gallon fuel oil AST. Some staining was evident around the AST on the grassed areas.

Several compressed gas bottles tied together with rope to the operator's trailer. The bottles were labeled as containing argon, oxygen and acetylene.

Records Review

No records were made available for Golder to review.

Inventory of Materials

The main materials present were the municipal waste contained in the compactor, the bins of recyclables (as described above), and other waste materials such as white goods, compressed gas bottles and a fuel oil AST.

9.6 Other Areas of Environmental Concern

9.6.1 New Windsor Landfill, Square Hill Road

The New Windsor Landfill is located along the eastern border of the Site, east of the Air National Guard Base and just south of the Newburgh town line. A portion of the landfill was located on the Site. The site contains a former municipal waste landfill, which was closed in 1994 or 1995 according to Lt. Col. Zicha of the ANG. The site was closed with a low permeability cap, leachate collection and conveyance and gas vents.

As part of the closure, New Windsor agreed to exhume the waste on the Site and deposit it in the landfill on New Windsor property. The waste was subsequently, removed and the landfill closed. However, no post-excavation samples were taken in the area where waste was removed. Only visual observation was used to guide the removal process. Lt. Col. Zicha intends to pursue the sampling of this area to confirm that any contamination associated the landfill is removed.

9.6.2 Former Sewage Sludge Application, Airport Runway

According to Dick Wilson of AGNY, sewage sludge from the Army sewage treatment plant was applied onto a portion of the Site in an evaluation of land application as a method for sludge disposal. The area used was located along Taxiway A, west of Taxiway A3. The amount and quality of sludge applied are unknown. The area used was most likely excavated during runway extension. The placement area of the excavated materials is not known.

9.6.3 Industrial Park Pump Station Overflows, Governor Drive

The Industrial Park is served by sanitary sewers that discharge to the Town of Newburgh wastewater treatment plant. Due to site topography, gravity flow to the Newburgh system is not possible. Therefore, a pump station is provided to collect the wastewater from the park and convey it to Newburgh. The station is located on the lot west of Sky Chef's. It appears to be contain submersible pumps in concrete chambers at grade, in a chain-link enclosed site. The cause of the problems should be investigated and corrected to prevent future problems at the site.

It had been reported anecdotally to Golder that the pump station had problems. Upon observation of the station area, chronic overflows were indicated as evidenced by the sewage debris and stained soil around the station. Upon further investigation, it was learned that the pump station had been constructed with the intention of having Newburgh own and operate the facility. Due to problems during construction, Newburgh never accepted dedication of the station, and NYSDOT continues to be responsible for the operation and maintenance of the station.

10.0 REGULATORY EVALUATION AND COMPLIANCE STATUS

The regulatory evaluation and compliance status summarized herein is based on the information gathered during the Site visit and subsequent investigation work. It includes the information gathered during the NYSDEC file review and subsequent regulatory personnel interviews.

10.1 Water Program

On December 4, 1997, NYSDEC issued SPDES Permit No. NY-0234915 to NYSDOT/Lockheed Air Terminal of NY for the point discharges to surface water from the airport property. There is a long history behind the permit issuance, which includes the filing of a general permit for the discharges from the oil/water separators and the modification of the general permit to an individual permit by the NYSDEC to cover all outfalls from the airport. Regardless of the past history, the airport is currently obligated to comply with the terms of the permit. The permit was issued pursuant to the federal Clean Water Act, the federal NPDES regulations and, since New York State has primacy, 6NYCRR Parts 652 and 750-758.

The permit requires the monitoring of 6 outfalls on a monthly and quarterly basis for parameters specified in the permit. Generally, the outfalls relate to the oil/water separators at the Site and stream points possibly impacted by deicing activities. Golder did not verify the number or location of the outfalls from the Site. The permit also requires that Stewart International Airport complete a summary report of all monitoring data by July 1, 1998, and submit a plan to correct all violations by the 1998-1999 deicing season. Golder reviewed the deicing report submitted in compliance with the permit requirement. Several corrective measures were suggested for implementation and other measures were already taken to prevent the escape of deicing fluid from the Site and comply with the permit.

It should be noted that the permit contains numerical limits, monitor only requirements, and non-specific requirements related to maintaining dissolved oxygen in the receiving waterbody. Since no monitoring for dissolved oxygen is conducted in the stream, actual compliance with the permit requirements cannot be determined. In addition, the permit prohibits the discharge of tank bottom water through the oil/water separators, a condition which could not be confirmed by Golder during the Site visit.

The airport appears to be following the prescribed sampling requirements, and monthly Discharge Monitoring Reports (DMRs) have been submitted as required for the past two years. As noted in the NYSDEC files, some DMR's have been submitted late and some have been submitted without complete data (i.e., flow rates). Only one effluent violation was noted in the 1998 DMRs reviewed by Golder, which was an exceedance of the ethylene glycol limit during February 1998. In an effort to meet the SPDES requirements, the airport banned the use of ethylene glycol for deicing. AMR Services used their remaining ethylene glycol in February 1998 during extreme circumstances, and the sample showed the result. Since that time the DMRs showed no violations, and the airport appears to be in compliance with the permit requirements.

Under the original SPDES permit for the airport, the facility was required to prepare a Stormwater Pollution Prevention Plan (SPPP). A draft report was prepared for the Site, but never implemented. With the issuance of the individual SPDES permit for the airport, the requirement for the SPPP has been eliminated, and NYSDOT has not proceeded with plan implementation.

In August 1997, a Final Aircraft Deicing Study was issued containing recommendations for improvements to the deicing system at the airport. The status of the recommended improvements is not known. While the deicing study was requested by NYSDOT, no regulatory-driven requirement could be found for performing or implementing the study.

Due to the quantity of petroleum product stored on Site, the airport must have a Spill Prevention Control and Countermeasure (SPCC) Plan prepared to be implemented in the event of a petroleum spill or release. SPCC plans are required by 40 CFR 112 of the federal regulations and must be certified upon preparation, modification, or every three years, whichever comes first. Golder obtained a copy of an SPCC plan dated December 6, 1993 for the Southwest Quadrant Fuel Facility and an undated SPCC plan for the Northeast Fuel Farm. The plans present the fuel storage and handling facilities and the measures to be taken to prevent a spill and in the event of a release. While plan content was not reviewed in detail, the fact that the SWFF plan is over 5 years old without an update and the NEFF plan is not certified by a professional engineer renders the facilities out of compliance with federal spill regulations.

In addition, NYSDEC has requested a comprehensive SPCC Plan from the airport for all operations. To date, there is no record of the airport preparing or completing the requested SPCC Plan.

10.2 Storage Tanks

Storage tanks at the Stewart International Airport are covered by the following NYSDEC regulations: chemical bulk storage tanks under 6NYCRR Parts 595-599, and, petroleum bulk storage tanks under 6NYCRR Parts 610 and 612-614. No regulated chemical bulk storage tanks were observed at non-tenant facilities. Due to the sizes of the ASTs at the Site, almost all ASTs at the airport are regulated. Tanks containing heating oil with a capacity of less than 1,100 gallons are exempt, and the oil/water separators and propylene glycol recovery tanks are not currently regulated. However, the glycol recovery tanks at the Cargo and Passenger Terminals must undergo a closure site assessment pursuant to Spill Prevention Operations Technology Series (SPOTS) Memo #14, since they were regulated when ethylene glycol was used for deicing. A modified registration form must also be submitted to reflect the change in service.

Regulated ASTs greater than 10,000 gallons must have secondary containment pursuant to 6 NYCRR 613.3. The need for secondary containment on smaller ASTs is determined on a case-by-case basis if a release could "reasonably be expected to discharge petroleum to the waters of the State." The regulated ASTs observed by Golder had secondary containment. However, the secondary containment around the SWFF AST did not appear to meet the conditions of 6 NYCRR 613.3 as referenced in NYSDEC SPOTS Memo #10 (9/28/94), which requires a permeability of 10^{-7} cm/sec for secondary containment around aviation gasoline ASTs. The soil in the diked area did not appear to meet this criteria as evidenced by a lack of water ponding within the dike. It was reported by a former airport employee that percolation tests were run which showed the soil to be sufficiently impermeable. However, no supporting data was supplied. The containment area permeability must be recertified by an engineer every 5 years (SPOTS Memo #1), and there was no documentation provided related to this certification.

Secondary containment around drummed material storage is not required by regulation but relates to best management practices. While it may not be specifically required by regulation, secondary containment is strongly recommended to prevent releases and spills from causing soil contamination. The storage of drummed materials should be on paved surfaces rather than soil to prevent soil contamination, with curbing or diking to provide for spill containment.

ASTs and associated piping must be visually inspected monthly with integrity checks every 10 years. The airport had a system for regular tank inspections. However, no data was provided for

review by Golder relative to tank or underground piping testing. USTs must be tested every 5 years. The UST serving the generator on Tower Hill had not been tested within 5 years and was out of compliance. That tank was reportedly closed in place in August 1998. Airport personnel claim to have removed all USTs. Any remaining non-exempt USTs (and evidence was observed that some remain) would be out of compliance and have to be closed following applicable regulations.

Stormwater discharged from containment areas must be uncontaminated and free of sheen according to 6 NYCRR 613. If contaminated, the water must be treated to reduce petroleum contamination to less than 15 parts per million. The NEFF is served by an oil/water separator and is meeting the SPPES discharge limits. The SWFF containment area showed no evidence of visual contamination in the dike or at the drain outlet.

The fuel loading area associated with the SWFF is not serviced by an oil/water separator. Rather, a 5,000-gallon containment AST is provided to capture spills. Runoff normally enters a storm sewer and flows into the basin at Breunig Road and Route 207. If a spill occurs, a diversion valve has to be closed manually to send the spill into the containment tank. Testing of the loading area runoff would be required to confirm compliance with the discharge regulations. However, an oil/water separator is strongly recommended to remove residual product from stormwater runoff and capture spills as needed.

A 1997 Tank Registration was provided to Golder. A 1998 Registration was reportedly filed but was not available to Golder for review. A current registration is required.

The NYSDOT June 1998 assessment report indicated a violation of the tank regulations regarding tank labeling. No verification of any corrective measures was provided.

10.3 Solid and Hazardous Waste

Solid and hazardous waste requirements are covered by a wide variety of laws and regulations. The federal hazardous waste regulations are contained in 40 CFR 260-270, and the non-hazardous waste regulations are contained in 40 CFR 258. The New York State hazardous waste regulations are contained in 6NYCRR Parts 370-374 and 374, while the solid waste landfill regulations are contained in 6NYCRR Part 360.

10.3.1 Solid Waste

The airport properties currently are serviced by commercial waste haulers for the removal and off-Site disposal of the municipal-like waste generated by the various operations. The haulers are contracted through each tenant. Recycling is performed where possible at the Site, and generally consists of recycling paper, cardboard and aluminum cans. Other recycling efforts include waste oil removal for reprocessing. No problems were observed by Golder related to the handling of municipal waste at the airport.

The landfill and waste dump areas on the Site are regulated under 6 NYCRR 360. Since they are no longer in use, closure is required by regulation following the guidelines established therein. Based on Golder's experience with other facilities in New York State, the dump areas must be evaluated to determine if any adverse environmental impact has occurred from the dumped materials, and closure of the area must be undertaken, which involves the placement of a low permeability cap and the establishment of a monitoring network. Closure in this manner is required for all solid waste dump sites on the airport property. If hazardous waste is discovered in these areas, then closure under the hazardous waste regulations would be required.

10.3.2 Non-Hazardous Waste

Several operations at the airport generate wastes that are not municipal, and also may not be hazardous. Examples of these wastes are used oil and filters, paint booth filters, spent paint and thinner, sand blast grit, deicing fluid and oil/water separator waste. In order to determine if the waste is non-hazardous, it is the generator's responsibility to properly characterize the waste through laboratory analysis or generator knowledge. The waste must also be properly handled before disposal. For example, containers must be as empty as possible with no free liquids.

Golder observed several of these wastes generated at the airport that were handled as non-hazardous, particularly the parts cleaner fluids and paint-related wastes, which require further documentation before disposal. In addition, proper documentation of handling must be obtained and maintained by the generator to prove adequate handling methods.

10.3.3 Hazardous Waste

Several tenants and occupants of the Site were on the USEPA database listing generators of hazardous waste, including AMR Services, Metal Container Corporation and the Air National Guard. During the Site tour, Golder observed the handling of hazardous wastes by the facilities; however, a complete audit of the hazardous waste handling programs at tenant facilities was not conducted. AMR initially offered to provide manifests for review, and then stated that they did not generate any hazardous waste and, therefore, had none to review. AMR was issued a Notice of Violation by NYSDEC in 1987 for dumping waste fuel into the waste oil. That violation was corrected and no problems have been documented by NYDEC since that time. The Metal Container Corporation is listed as a large quantity generator, but records were not provided for review to confirm material handling. The Air National Guard Base records were not reviewed, but the Guard was cited by USEPA for excellent waste reduction efforts in the reduction of hazardous waste.

Other tenants are generators but were not listed as such on the NYSDEC or USEPA database. Manifests were reviewed at Nelco and seemed in order for the disposal of etchant. Nelco is listed by USEPA as a large quantity generator, but has become a small quantity generator due to a reduction in the waste volume. Reese Aircraft generates hazardous waste in the form of spent thinners. AMSCAN generates parts cleaner fluid as does Federal Express. Rifton Aviation likely generates hazardous waste, but records were not available for review.

Airport operations generate hazardous waste streams primarily from aircraft and vehicle maintenance activities. No manifests or bill of ladings were available for the removal of parts cleaner fluid, waste fuel or waste oil. Manifests were reviewed for the disposal of deicing fluid at Bridgeport United Recycling in Connecticut, and oil/water separator waste at Remtech Environmental in New Jersey by Stewart International Airport (Air Group of New York) and NYSDOT respectively. Non-hazardous waste manifests were used for the disposal of oil/water separator waste at IPC in Wilmington, Delaware. Hauling records were kept for the disposal of deicing fluid into the New Windsor sanitary sewers since it is a non-hazardous waste.

To summarize the hazardous and non-hazardous waste handling at the airport, no blatant violations or intentional mishandling of the waste were observed. However, full compliance with the applicable federal and state regulations could not be ascertained. A follow-up visit to each generator is recommended as part of environmental management efforts to review the wastes

generated, waste characteristics, the handling methods on Site and the off-Site disposal arrangements.

10.4 Air Quality Program

The air quality regulations are covered under the federal Clean Air Act, and under a multitude of state regulations, including 6NYCRR Parts 200, 201, 211, 212, 225, 229, 230, and 235, which cover emission, fuels and vehicles. The airport is located outside the severe non-attainment area of New York City and Lower Orange County. According to Part 201.3, the fuel dispensing operations at the airport are excluded from Air Resources Program regulations permitting. The lab and welding fume hood exhausts are also exempt.

The heaters are excluded from permitting requirements by regulation due to their size (i.e., less than 10 million BTU/hour) and fuel. The emergency generator at the Control Tower is excluded by regulation as long as it operates less than 500 hours/year. The parts cleaners are also excluded from regulation due to their size. While the airport itself does not have any emissions that are regulated by the NYSDEC, several of the tenants appear to have regulated activities, some of which are covered by permits/approvals.

The Metal Container Corporation plant has regulated air emissions, which are discussed in more detail in Section 9.0. The plant is in the process of installing thermal oxidizers to reduce the amount of volatile organic emissions from the facility. To the extent that could be determined, the can plant's air emissions are covered by the regulatory process.

The other regulated sources are emissions from painting operations. Surface coating operations using more than 25 gallons per month of paints and thinners, and conduct abrasive cleaning and surface coating operations inside a building vented through an appropriate emission control device are regulated by NYSDEC and must obtain an operating permit. Operations using less than this amount are excluded from regulation per Part 201, and records of material usage must be maintained for verification. Reese Aircraft has a permit to operate and provided a copy to Golder. Other painting operations were observed in the Rifton and Cessna hangars. Rifton did not provide documentation of operating permits or paint usage. Cessna reportedly has a letter of exemption from NYSDEC, however, a copy was not provided to Golder for review. The paint and thinner usage at these operations must be verified to confirm the applicability of the exclusion.

10.5 Other Programs

The SARA Title III Right-to-Know report has not been filed for 1997. Air Group of New York has requested the information from the regulated tenants, and the response is unknown. The 1996 report was not available for review at the Site.

As discussed in Section 3.4, the Crestview Lake facility appears in compliance with applicable health department regulations.

The airport has an NYSDEC permit, issued under ECL Sections 11-0521 and 0523, for the taking of destructive wildlife that may interfere with airport operations. Typically this involves the taking of deer from the property to prevent their intrusion onto the runways. NYSDEC approval has been given to the airport, covered by 6NYCRR Part 325, for the application of approved herbicides under controlled conditions.

Due to the known and suspect releases of chemical and hazardous substances at the Site, the facility is not in compliance with the provisions of 6NYCRR Parts 595 and 596.

11.0 ENVIRONMENTAL EVALUATION OF EXPANSION AREAS

In addition to evaluating the current environmental condition of the property, Golder Associates was requested to perform a preliminary "desktop" evaluation of the lands proposed for further airport development to identify possible limiting factors or fatal flaws that could adversely impact the use of the land as desired. Golder Associates has reviewed available Site plans, proposed development options, and published information regarding soil, hydrological, geological, and biological conditions at the expansion areas. The following information was provided to Golder Associates for review and use in the evaluation:

Figures and Drawings

1. Stewart International Airport Access Connection Layout Plan, prepared by Berger, Lehman Associates, P.C., Rye, New York, July 1998;

2. Stewart International Airport Access Connection East-West Alignment Options, prepared by Berger, Lehman Associates, P.C., Rye, New York, June 1998;

3. Stewart International Airport Access Connection Preliminary, unknown author, June 1998;

4. Stewart International Airport, Airport Master Plan, Drawing 2, prepared by TRA-BV Airport Consulting, Boston, Massachusetts, February 1992; and

5. New York State Freshwater Wetlands Map for the lands occupied by Stewart International Airport, prepared by Berger, Lehman Associates, P.C., Rye, New York, March 1992.

Documents

6. Stewart International Airport Access Connection-DEIS, prepared by Berger, Lehman Associates, P.C., Rye, New York, undated, pp. 2-103, 2-106 to 114, 2-116 to 120, Figures 2-16, 2-17 and 2-18

7. Final Federal Environmental Impact Statement for Stewart International Airport Properties, prepared by the Federal Aviation Administration and the New York State Department of Transportation, July 1992, pp ES-1 to ES-7, IV-346, IV-349, and Figure IV-44; and

8. Phase I Report, A Study for the Development of Stewart Airport Conclusion, Recommendations, Summary, Prepared by TransPlan Incorporated, New York, New York, and Seelye Stevenson Value and Knecht, Inc., New York, New York, January 1973.

In addition to the above mentioned documents, Golder Associates obtained and reviewed the following documents and figures to identify any possible limiting factors or fatal flaws in the materials provided to Golder Associates by NEG:

Drawings and Figures

9. United States Fish and Wildlife Service, National Wetlands Inventory Maps for the United States Geologic Survey quadrangles of Newburgh, New York (1996), Walden, New York (1990), Maybrook, New York (1990), and Cornwall, New York (1990).

Documents

10. New York Environmental Conservation Law, Article 24 – Freshwater Wetlands, New York Department of Environmental Conservation, Albany, New York, February 1991;

11. New York Codes, Rules, and Regulations, Title 6, Section 617 – State Environmental Quality Review, New York Department of Environmental Conservation, Albany, New York, June 1988;

12. New York Codes, Rules, and Regulations, Title 6, Section 664 –Freshwater Wetlands Classification System, New York Department of Environmental Conservation, Albany, New York, May 1980;

Golder Associates interviewed personnel in the NYSDEC, Environmental Permitting Section, concerning typical wetland mitigation ratio of disturbed versus created wetland and minimum wetland area regulated by the Department on September 10, 1998.

Review of the above mentioned documents provided by NEG and obtained by Golder Associates details the extent of research performed by Golder Associates. A Site visit to observe the general areas of expansion was completed, however, a Site walk to conduct a wetland delineation or identify potential areas of ecological or historical concern was not performed by Golder Associates since it was outside of the scope of work. This "desktop" review is in no way a complete review of all ecological or historical resources located in the proposed expansion area. Golder Associates makes no warranty as to the validity of the information presented by others or to the methods used by others to obtain information.

11.1 Area Descriptions and Proposed Expansion

Several separate areas are included in the proposed expansion area. Areas of disturbance are approximated by Golder Associates unless otherwise indicated based on the drawings and figures

provided by NEG. The approximate area of disturbance is not intended to be used as a valid regulatory or permit number as is typically included in a permit to disturb a wetland. To obtain an accurate area of disturbance, the wetland boundary must be delineated by a wetland scientist, surveyed by a professional land surveyor, and then the surveyed wetland boundary is overlaid on accurate design drawings. The areas of the proposed expansion include:

1. Construction of a new interchange at Interstate Route 84 North of Stewart International Airport at the intersection with Drury Lane. Using Reference 3 above, the interpreted land use is agricultural with the New York City Catskill Aqueduct to the East of the proposed interchange. Figures 2-16 and 2-17 of Reference 6 indicates wetlands are present in the vicinity of the proposed interchange. Reference 9 does not indicate the presence of wetlands in the area of the proposed interchange. It is unclear in Reference 6 whether the wetland boundaries in the vicinity of the proposed interchange was field-verified as section 2.14.2.1 states "the wetland limits within approximately 150 feet of the preferred alternative were flagged and surveyed" but Figure 2-16 (field verified wetland boundaries) include wetlands well outside of the 150 feet radius. The approximate area of wetland disturbance in this area (Wetlands DL-1 and WD-47 on Figure 2-16) is less than one acre.

2. Improvements of Drury Lane South of New York State Route 17K, through the intersection with Interstate Route 84, to approximately 300 feet North of the intersection with Kelly Drive. Improvements include relocating approximately 2400 feet and 2500 feet of Drury Lane South of the intersection with Route 17K and Interstate Route 84, respectively and widening Drury Lane South of the intersection with Interstate Route 84 to approximately 300 feet North Kelly Drive. Additional improvements along Drury Lane include installing a median divider from the intersection with Interstate Route 84 to approximately 300 feet North of Kelly Drive. Using the same reference above for the construction and expansion of the interchange of Interstate Route 84 and Drury Lane, approximately one acre and 2.1 acres of wetland is expected to be disturbed in WD-47 between New York State Route 17K and Interstate Route 84 along Drury Lane and in WD-46 between Interstate Route 84 to the proposed East-West connector road along Drury Lane, respectively.

3. Construction of an intersection on Drury Lane approximately 300 feet North of Kelly Drive with an approximate 7200 feet long East-West connector road to connect Drury Road with Stewart International Airport at "A" Street. Golder Associates understands NEG will use Alternative Options Number 5 (AO #5) as indicated on Reference 2 for the location of the intersection on Drury Lane with the proposed East-West connector road and the location of the East-West connector road. The intersection will impact approximately half an acre of wetland while the East-West connector road may disturb approximately 2 acres of wetland. In addition to wetland disturbance, the Southern portion of Crest View Lake must be filled in to construction the East-West connector road. Also, according to Figure 2-18 of Reference 6, a Jefferson Salamander colony which is a New York State Species of Special Concern is located near the intersection of the East-West Connector and "A" Street;

4. Construction of an approximate 2.3 million square foot (msf) South Air Cargo Area between the East-West connector road and Runway 9, West of the New York City Catskill Aqueduct, and connecting to Taxiway A. According to Reference 2,

approximately 6.7 acres of wetland (CO-1) may be disturbed with the construction of the South Air Cargo Area.

5. Relocation of the Control Tower to lands northwest of the Cessna/Amex Hangars and demolition of the exiting Stewart International Airport Aircraft Control Tower (Control Tower) and the land mass known as Tower Hill located between Runway 34 and the existing airport terminal facility. The Control Tower will be relocated to lands yet undetermined. According to the information provided to Golder Associates, no wetlands or other special areas of biological concern exist on Tower Hill or on the new Tower site. Although several New York State Avian Species of Special Concern were noted (Reference 7, Section 2.14.5.5) in the grassy areas surrounding the runways including the Upland Sandpiper, the Eastern Bluebird, and the Grasshopper Sparrow. It is unclear to Golder Associates from Reference 6 if any of these species occupy either Tower or Commissary Hills.

6. The new fuel farm is under construction and was not considered further. The terminal expansion is proposed for areas already disturbed and should not adversely environmental resources in the areas. Therefore, this is not evaluated further herein.

11.2 Area Evaluation

Wetland disturbance is the largest potential area of concern for the proposed development at Stewart International Airport, with a total of 13 acres potentially impacted as current configured. This amount is derived from the impact areas of the separate development proposals outlined in Section 11.1 above.

According to Reference 6, Section 2.14.2 and verified with References 10 and NYSDEC personnel, the NYSDEC regulates wetlands larger than 12.4 acres regardless of the amount of wetland impacted by development. If an area has not been mapped by NYSDEC, it is not regulated. The proposed development would, therefore, be regulated by NYSDEC and by the U.S. Army Corps. of Engineers (USACOE), which regulates any development in a wetland when the disturbance is greater than 1 acre. Additionally, a permit may be required to fill the southern portion of Crest View Lake for the construction of the East-West connector road from the NYSDEC. The USACOE issues General Permits for wetland projects up to 3 acres, while an Individual Permit will have to be obtained from the USACOE as the impacted area is over 3 acres. Individual Permits are more time consuming and expensive than General Permits.

According to NYSDEC, although each mitigation case is determine on a case by case basis, typical mitigation for wetland disturbance from the NYSDEC is 2 acres of wetland created for each 1 acre impacted. The USACOE usually dictates a one acre created for each acre disturbed. Based on Golder Associates estimates of total impacted wetland of 13 acres, the regulatory

agencies may impose a total of 26 acres of created wetland for mitigation. A created wetland could be constructed west of Stewart International Airport between Barron Road and Drury Lane or by expansion of the existing wetlands on the Stewart International Airport property.

A great blue heron rookery was identified on Figure 2-18 in Reference 6 approximately 700 feet South of lower Crest View Lake. This rookery was identified in 1989, 1994, and 1998 according to Reference 6. Although the great blue heron is not a species of special status at the Federal or State level (i.e. endangered, threatened, or specie of concern), its breeding grounds should be protected and construction activities should not encroach upon the rookery.

The extent of the colony of Jefferson Salamanders at the intersection of the proposed East-West Connector and "A" Street (Figure 2-18, Reference 6) should be reexamined as actual number of individuals were not identified in Reference 6. If the area is still occupied by the colony, a new location for the intersection may be proposed or the colony could be moved to one of the two other colonies of Jefferson Salamanders identified on Figure 2-18 of Reference 7. Both colonies exist approximately 2000 feet South of lower Crest View Lake and 1000 and 2000 feet East of Drury Road. Moving the colony would require a large effort to collect the majority of the individuals during their most active time year, possibly around their breeding time.

These obstacles should not be viewed as fatal flaws in the proposed development at the Stewart International Airport as wetlands disturbance permits can be obtained, wetlands can be created for mitigation purposes, and habitat can be created for any of the species of concern identified in Reference 6. However, the greater the wetland disturbance, the greater time, cost, and difficulty in getting the required approvals.

11.3 Historically Sensitive Areas

According to the Stewart International Airport Environmental Impact Assessment Report (Landrum and Brown Airport Consultants, November 1975), a number of sites of historical importance to Orange County are located in the general area of the airport. These sites include: Benedict House, Hawkins-Rowe House, Miller-Denniston-Backer House, James Clinton House (Orange County Historical Society), Telford Tavern, Elmwood School, and McGregor Stone House. There are additional sites in the airport area which have been previously identified as not to be disturbed, including: Mulliner Cemetery, McClaughty Cemetery, Jonathan Belknop Cemetery, Methodist Cemetery, Jeduthan Belknop Cemetery, SPCA Cemetery, Cleland House,

and Jacob Mills House. There are several other sites in the vicinity of the airport which are or have been proposed for the National Register of Historic Places, including: Washington's Headquarters, Dutch Reformed Church, New Windsor Cantonment, and General Knox's Headquarters.

Those sites that lie within the study area for this Report include the Mulliner Cemetery, Desmond House, Jeduthan Belknap Cemetery, Methodist Cemetery, Joseph Belknap House, SPCA Pet Cemetery, and Mills House. All of these sites lie along State Route 207 between Drury Lane and Interstate 87, in the order listed above, from west to east. The Jonathan Belknap Cemetery is located on State Route 17k next to the Orange County Municipal Waste Transfer Station. The McGregor Stone House lies within the U.S. Army's property at the airport. The remaining sites listed above are beyond the study area for the airport.

None of these sites would appear to represent a fatal flaw or limiting factor in the proposed development.

12.0 SUMMARY OF ENVIRONMENTAL CONDITIONS

Given the nature and history of the Site, there are many areas of environmental concern. Most concerns relate to past operations and activities, while current concerns generally relate to materials handling, disposal documentation and permitting issues.

Table 9 summarizes the facilities by zone with a brief description of the building or facility and the areas of concern related to the specific building or operation. Included with Table 9 is a "Hazard Ranking," intended to put the areas of concern into perspective relative to the potential impact to human health and the environment. The ranking system was developed by Golder and has been used successfully on similar projects to prioritize future investigative and remedial efforts onto the areas with the most severe problems first. The system is subjective and based on the observations made and information gathered by Golder personnel relative to the Site. It is subject to change with the receipt of new information and additional documentation on the area of concern.

For example, if an area of concern is investigated and contamination is found, the risk may increase. Conversely, if additional information is obtained to document that no contamination is present, the ranking may decrease. It is also based on current information, meaning that facilities currently not containing areas of concern could include areas of concern in the future if not operated and maintained properly. This is true for facilities such as the glycol recovery tanks and oil/water separators, as well as underground piping and aboveground tanks.

The ranking system uses the following format:

1 – Known or suspected threat to human health or the environment;
2 – Violation of applicable law or regulation;
3 – Non-compliance with policy, guideline or code;
4 – Not reflective of good environmental practice; and,
5 – Minimal environmental concern.

The lower the number, the greater perceived risk. Multiple numbers are used when more than one category applies or to indicate a range of concerns, depending on the actual or suspected problem at the Site. The ranking is also affected by the potential ramifications of the problem. For example, Lake Washington, located topographically downgradient of the Site, is used as a

water supply reservoir for the Town of Newburgh. Therefore, contamination migrating from the Site has the potential to impact this water supply and a greater threat is realized. In addition, the New York City Catskill Aqueduct runs through the property, and has the potential to receive contamination migrating from the Site under certain conditions. Therefore, all sources of contamination at the Site that are a potential threat to these water supplies must be thoroughly evaluated.

Areas of concern may also result in future liability and expense for NEG should they encounter contamination during future airport construction projects. Potential liabilities include both increased costs and delays.

The areas of principal concern involve a range of problems and situations. They are summarized below.

- Landfills and Dump Sites;
- Soil Contamination from Former Underground and Aboveground Storage Tanks;
- Potential Contamination from Existing Underground and Aboveground Storage Tanks;
- Soil Contamination from the Former Fire Training Area and Rifle Range;
- Contamination from Remaining Infrastructure;
- Potential Contamination of Water Supply Wells and from Septic Systems;
- Concerns Relative to the Operational Practices of Airport Tenants; and
- Other Building and Site-Related Concerns

Landfills and Dump Sites

Golder has identified eleven dump sites at the airport (Figure 4). The waste placed in these areas includes manure and bedding from the Animal Import Center, sewage sludge from the sewage treatment plant, vegetative debris, construction and demolition rubble, and municipal and potentially hazardous waste. The largest dump site area of concern is the former airport landfill located at the end of Runway 16/34. This site was used approximately 1937 until approximately 1979. The materials placed in the landfill included essentially all of the waste generated by airport operations, and may even include munitions as spent casings have been discovered in the fill. Potentially hazardous waste was also reportedly landfilled here, although the amount and type was not determined. Waste and leachate seeps are reportedly visible along the landfill

perimeter, although not observed by Golder personnel. The former airport landfill represents the largest single area of concern at the Site.

Other dump areas of concern are located on, and near, the ANG Base. The Base property contained two dump areas, a pesticide drum disposal area and a landfill. Both are being closed and remediated by the ANG, however, the sites are on property leased to the airport and represent an area of concern. The New Windsor landfill, although closed, represents an area of concern since no post-excavation soil samples were taken to confirm removal of the contamination from the airport property. The ANG is taking the lead in pursuing the Town to perform the necessary sampling and analysis.

Manure and bedding from the Animal Impoundment Center was placed on two areas of the property. Although this practice has ceased, the former waste areas pose a concern due to the nature of the waste.

Brush dumps are located on two known areas of the Site, one north of Runway 16/34 and one south of Runway 16/34. The concern with these areas is lessened due to the nature of the material, but other waste may have been mixed with the vegetation.

The sewage sludge site is located along Runway 09/27 where sludge from the sewage treatment plant was placed as an attempt to beneficially reuse the material. The practice has stopped, but the area receiving sludge is a concern due to the presence of contaminants in the sludge remaining in the soil. The area receiving the sludge may have been excavated during runway extension projects, however, the areas of final deposition are unknown.

Soil Contamination from Underground and Aboveground Storage Tanks

Contamination remaining from UST and AST installations at the Site is also a critical area of concern. Figure 5 shows the tank locations, and Table 3, 4, and 5 present an inventory of former and existing tanks at the Airport. Of the more than 120 USTs and ASTs that were in existence during airport operation, only 25 have documented closures, and 9 of those indicate that contamination remains above NYSDEC cleanup standards. The SWFF has documented free product beneath the storage tank and fuel loading area. Because of this contamination, the Anheuser-Busch Can Plant was constructed with soil gas vents to allow the vapors from the jet fuel contamination under the building to escape. The reports of malodors in the passenger

terminal elevator due to the standing water at the bottom of the elevator shaft may be reflective of subsurface contamination from former on-Site operations. The contamination from these tanks is a significant area of concern that must be addressed through investigation and possible remediation.

It was reported to Golder that the last two remaining USTs were removed during August 1998. However, several USTs possibly remain, including several unaccounted for in the inventories and observed during the Site visit. These tanks must be identified, accounted for, and dealt with in a manner consistent with the regulations and good environmental practice. The remaining ASTs must be properly maintained to prevent future problems from being realized.

Contamination from Spills and Releases

As shown in the database search and preliminary file reviews, there have been multiple spills and reportable releases at the Site. Most relate to aircraft fueling and many are from UST closure where leakage was discovered. Essentially no data was available documenting routine spill cleanup. The Federal Express jet fire resulted in the release and potential release of a wide variety of chemicals, yet little analytical data was available to document levels of contamination below regulatory thresholds.

Soil Contamination from the Former Fire Training Area and Rifle Range

The former fire training area and rifle, pistol and skeet range pose a potential problem due to the nature of the materials used. Lead from bullets and shells used on the range can contaminate soil and groundwater in the area. Accelerants used to start fires for training purposes often remain in the soil since the fire is extinguished before the fuel is consumed. The investigation of this area is complicated by the fact that approximately 20 feet of fill has been placed on the Site. However, the suspect areas of contamination remain on the Site beneath the fill. In addition, there was a water supply well and septic system that served the buildings at the range, which further increases the cause for concern.

Contamination from Remaining Infrastructure

Several items of remaining infrastructure pose a potential problem at the Site. These are primarily the in-ground hoists at rental car vehicle service areas. The other in-ground items of concern are the piping runs for the fuel farms, particularly the SWFF due to its age and the fact that pipes were flanged closed without inspection or cleaning. Leakage has occurred at the NEFF

from underground piping. The other area of concern with the infrastructure is the collapsed sewer lateral for the terminal, which can restrict flow and lead to major problems if a blockage occurs or if the remaining pipe collapses.

Infrastructure concerns may also be realized if expansion is proposed in the vicinity of former structures, since many foundations remain that can complicate construction and act as preferential pathways for contamination migration.

Potential Contamination of Water Supply Wells and from Septic Systems

Several water supply wells remain on the property. The active wells are a concern as potential receptors of contamination from on-Site problems. The well at Crestview is a concern due to its proximity to the leaking fuel oil tank. Out-of-service wells are a concern since they can act as conduits for contamination if not properly abandoned.

Septic systems are a concern where wastewater other than sanitary sewage is discharged into the system. This is the case in Building 2290. Other septic systems appear to have handled only domestic wastewater and pose less of a concern. Abandoned septic systems pose a concern since they can act as conduits for contamination if not properly abandoned.

Concerns Relative to the Operational Practices of Airport Tenants

As discussed, there are many areas of potential concern from the Airport tenants. It is imperative that all tenant facilities be operated in compliance with applicable environmental rules and regulations. It is strongly recommended that routine inspections of the tenants take place to review operational procedure and track compliance with applicable environmental regulations. NEG should consider implementing a Site-Wide Environmental Management System (EMS) including the tenant properties as well as airport operations. Such a system would provide for the monitoring of the activities and the management of environmental programs at the Site.

Other Building and Site-Related Concerns

Mercury-Containing Materials

During the Site walk, Golder personnel observed items with the potential to contain mercury, including lights, switches, and instrumentation. However, a complete survey of all fixtures and equipment was not performed. Suspect mercury vapor switches were observed in Building 404. The SAGE Building has significant instrumentation on the upper floors which may contain

mercury. These items should be identified in each building, as needed, when renovation or demolition is proposed, or if disposal of the mercury material is required. The suspect mercury-containing material must be properly handled and transported to an approved disposal or recycling facility.

Ozone Depleting Substances

Golder did not inventory or identify ozone depleting substances at the Airport since they are outside the scope of work and not required to be addressed under ASTM E1537-97. There were indications of these substances, specifically chlorofluorocarbons, associated with air conditioning units at the Site. NEG should be aware of their presence and institute a management, recovery and conversion plan as part of a Site-wide EMS.

Building Air Quality

Golder personnel observed indications of bacterial growth in some Airport buildings, and while not part of ASTM Phase I Assessments, we are advising NEG of their presence. Certain individuals are sensitive to common molds, such as asthmatics and young children. The presence of certain toxigenic molds, in any amount such as aspergillus or stachybottrys species may represent a health hazard. Testing to determine the mold species may be advisable.

Tenant Lease Review

Golder conducted a limited review of several of the tenant leases during the Site visit, not as legal counsel, but to look for areas of concern relative to environmental technical matters. Available leases were reviewed in Building 138 on August 10, 1998 by Golder personnel. In general, the leases hold the lessee to be responsible for the property condition. However, it should be noted that if the lessee creates an adverse environmental condition at the Site, but is no longer a financially viable entity, the responsibility for the remediation of that condition will likely fall to the lessor. Several leases included language where NYSDOT, the lessor, "..warrants...the Leased Premises is free from any adverse on-Site Environmental conditions and any Hazardous materials..." This lease term places a considerable burden and liability on the lessor. It is strongly recommended that NEG legal counsel review these provisions so as to advise NEG of their impact.

Asbestos-Containing Materials

Given the age and construction of the buildings on the Airport property, it is likely that most of the older buildings contain ACM. Some structures have corrugated asbestos (transite) siding. Golder personnel observed and noted suspect ACM in the buildings and structures visited; however, a complete asbestos survey was not performed and no samples were taken for asbestos analysis. The observation of suspect ACM by Golder does not confirm its presence, and absence of ACM in a building description does not mean that it is not present. Stewart International Airport does not have a formal asbestos management plan for its facilities. Each area of suspect ACM is addressed on an as-needed basis depending on construction or demobilization activities. NEG may wish to implement a formal program, as part of a Site-wide EMS, starting with an asbestos material survey and continuing with a planned abatement schedule.

Polychlorinated Biphenyls

Golder has attempted to address the issue of PCBs at the Stewart International Airport when suspect areas were identified during the Site visit. Areas of concern were generally noted in the narrative, however, no confirmatory samples were taken for analysis. Given the age of facilities, it is likely that PCB-containing fluorescent light ballasts are present throughout the airport in areas not recently renovated. Each suspect fixture was not addressed in the report, rather a general notation is made that older fluorescent light fixtures generally contain PCBs and should be handled accordingly when sent to disposal. Electrical equipment in buildings may also contain PCB fluids and must be handled accordingly during renovation or demolition. Airport personnel are aware of the PCB disposal requirements and have reportedly handled past disposal projects following regulatory requirements. Most PCB transformers have been removed from the Site, and the remaining units have been flushed and refilled to reduce PCB levels. Documentation on this program was to be forwarded to Golder but has not been received. NEG may wish to implement a formal PCB testing and removal program at the Site as part of a Site-wide EMS.

Lead Paint

Lead paint on interior structures is specifically excluded from ASTM Phase I requirements and, therefore, is not addressed in this report. Lead paint becomes an issue during renovation activities for worker protection and waste disposal. Also, lead paint deposition on the ground would become an area of concern. Given the age of the Airport facilities, it is likely that lead paint is present on-Site.

Radon

Radon is specifically excluded from ASTM Phase I requirements and, therefore, is not addressed herein. NEG may wish to implement a radon testing and mitigation program in buildings at the Site for document radon levels present and mitigate them when needed.

Glycol Recovery System

Stewart International Airport has three active and one inactive deicing aprons, collection systems and recovery tanks. As described, the glycol recovery tanks are each associated with an oil/water separator, and a diversion valve must be manually closed by Airport personnel to send the runoff into the recovery tank. The fluid is held in the tanks until it is tested and approved for disposal in the Town of New Windsor WWTP. The liquid is then pumped into a tanker truck, hauled to a sanitary sewer manhole along Breunig Road, and discharged into a 30-inch interceptor for conveyance to the WWTP. Flows in excess of the New Windsor capacity are sent to off-Site disposal facilities.

A deicing study was prepared by Baker Engineering NY, Inc. in 1997 which contained recommendations that have not been implemented. Discussions with Airport personnel have indicated that while the system works, the storage tanks lack the capacity to effectively handle flows during a long deicing season, and NEG may want to investigate improvements to the overall deicing system. It should also be noted that the collection of ethylene glycol from deicing operations caused the tanks to become regulated USTs. Therefore, the tanks must be evaluated for leakage and closed pursuant to the NYSDEC regulations. The change in service must be reflected on the tank registration form.

13.0 CONCLUSIONS

13.1 Areas of Concern

Multiple areas of environmental concern have been identified at the Site, including the following:

- Approximately 11 dump sites;
- Of more than 120 tanks formerly on-Site, only 25 tank closures are documented, and 9 of these show documented soil contamination remaining above regulatory levels after closure;
- Former and existing water supply wells and septic systems;
- Remaining in-ground infrastructure related to hydraulic hoists, petroleum piping and building foundations;
- Former fire training area and rifle range; and,
- Multiple spills and releases without proper remediation documentation.

The concerns for these areas are enhanced because of the proximity to the airport of the Catskill Aqueduct and Lake Washington, municipal water supplies. Further review and investigation of these areas of concern is recommended

13.2 Compliance Status

The airport appears to be in compliance with the applicable water regulations related to the surface water discharges from the facility. The permit is in place and the monitoring and reporting are being handled following the permit requirements. DMR violations were noted in 1998 for ethylene glycol levels, late report submissions, and missing flow data.

Municipal solid waste is currently handled in compliance with applicable regulations. Past disposal of solid waste on the Site must be investigated and the disposal area closed under 6 NYCRR 360. The closure may involve the installation of a low permeability cap and monitoring network.

Hazardous waste handling, while in general conformance with the regulations, needs further documentation from the generators in the form of test data and waste manifests, to verify complete compliance with the regulations.

Due to the presence of documented soil contamination at the Site, the airport is not in compliance with applicable environmental restoration regulations.

Reportedly, all USTs have been removed from the Site. However, several suspect tanks were observed by Golder personnel during the Site visit. In addition, several USTs on past inventories could not be accounted for during the assessment. The glycol recovery tanks must undergo closure as regulated tanks due to the past use of ethylene glycol for deicing.

Based on the information reviewed, it does not appear that the ASTs are in compliance with the applicable tank rules and regulations. The fuel farms were lacking a current certified SPCC plan. The fuel loading area lacks an oil/water separator for stormwater runoff, and the current loading area and Fuel Farm containment facilities are suspect. The SWFF was cited during the 1998 NYSDOT internal assessment as not meeting applicable codes for labeling and no corrective measures have been documented. The SWFF containment area does not appear to meet the required permeability standard. A current tank registration for the remaining tanks at the Site was not available.

Compliance with the air quality regulations could not be verified based on the information than that provided during the assessment. Only one facility (Reese) provided an operating permit for its paint booth. While exemptions exist from the need to obtain a permit, the facility's VOC usage must be provided.

To the extent that could be determined, the airport had the necessary permits for herbicide application, nuisance wildlife harvesting and the Crestview facility.

All active permits will need to be transferred into the name of NEG as the airport operator once the lease is signed and NEG becomes responsible for operation.

It is recommended that NEG implement a Site-wide EMS to maintain compliance and assure best management practices by tenants.

13.3 Summary of Expansion Area Environmental Evaluation

Golder performed a preliminary evaluation of the proposed expansion areas for development limitations due to the presence of wetlands, rare or endangered species and historically sensitive

areas. The areas of interest were the access road from Drury Lane to the terminal, the southern cargo area and the new Control Tower site. Based on the limited review, no conditions were noted that would preclude development in the expansion areas.

13.4 Environmental Professional Qualifications and Signatures

Golder Associates staff for the Stewart International Airport audit has over 8 decades of combined experience in the environmental field, including the evaluation and assessment of properties and operations related to property transfers and management transitions.

Project Director - P. Stephen Finn, C.Eng

Steve Finn is a Principal of Golder Associates and has over 20 years consulting experience. Mr. Finn's experience includes assessment and remediation of numerous sites including several in the New York Metropolitan area. He has extensive experience in the development of appropriate environmental risk management strategies for industrial and commercial clients.

Project Manager - Thomas G. Pullar, P.E.

Tom Pullar served as Golder's Senior Environmental Compliance Engineer on the project, providing over eighteen years of experience in the environmental field. Mr. Pullar has completed over 400 environmental assessments/investigations, in addition to 10 major multi-media facility audits for due diligence and compliance determination purposes. Mr. Pullar is the engineer of record for over thirty waste facilities, including landfills, transfer stations, processing facilities and wastewater treatment plants. His work has also included over 500 wastestream characterization and 50 site closures/remediation projects for manufacturing, industrial and commercial facilities.

Auditor - Dan P. Bunner, M.Sc.

Dan Bunner has acted as Project Manager for many significant environmental projects including the TradePort International Corporation due diligence for the privatization of Hamilton International Airport. He is currently responsible for Project Management of Phase I and Phase II Environmental Site Assessments and Compliance Audits, development of Environmental Management Systems, Decommissioning Programs and Hydrogeological Investigations.

Auditor - Susan A. Sciarratta, P.E.

Susan Sciarratta served as Project Engineer on the Stewart International Airport ESA. Ms. Sciarratta has worked for Golder on multiple projects involving compliance determinations, treatment plant design, and facility assessments. Her background includes work as a Case Manager for the USEPA where she performed site inspections, compliance evaluations, and enforcement activities under the RCRA program.

GOLDER ASSOCIATES INC.

Thomas G. Pullar, P.E.
Senior Environmental Compliance Engineer

P. Stephen Finn, C.Eng.
Project Director and Principal

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14.0 REFERENCES

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TABLE 1-1

ZONE 1 BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Status*	*Notes/Concerns*
1	124	Former Machine Shops	Demolished	See Report
1	126	Former parachute dry building	Demolished	None
1	128	Terminal, Former Hangar "D"	Active	See Report
1	130	Hangar "C"	Demolished	See Report
1	132	AMR, Hangar "B"	Active	See Report (UST & AST)
1	136	AMR, Hangar "A"	Active	See Report (UST)
1	138	DOT Administrative Building	Active	See Report (UST)
1	140	AMR	Active	See Report (UST-2)
1	142	ANG Fire House	Active	Former UST
1	2201	SAGE	Partially leased	See Report (USTs-3, plus AST), transformers
1	2203	SAGE Cooling Tower	Inactive	See Report
1	2207	SAGE (Equipment Room)	Inactive	See Report
1	2292	SAGE Garage	Leased	AST and former UST
1	2227	Equipment Storage (former rocket storage)	Inactive	Painting activities, UST sand blast grit

TABLE 1-2

ZONE 2 BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Status*	*Notes/Concerns*
2	104	Electrical; North of Building 110	Active	Suspect septic tank or cistern; AST (400 gal.)
2	105	School Building, 3 story brick and metal	Inactive	Undergoing renovation; former UST
2	110	DOT Operations Customs	Active	Half of building unoccupied, former UST
2	112	Rifton, Hangar "I"	Active	See Report (UST & AST)
2	114	Hangar "H"	Demolished	
2	118	AMR, Hangar "G"	Active	See Report (USTs-3)
2	120	Hangar "F"	Demolished	Concerns with former operations and fire
2	122	DOT, Hangar "E"	Storage	See Report (UST)
2	147	DOT Storage, Former Engine Test Cell	Inactive	Former engine test cell, AST
2	148	Air Traffic Control Tower	Active	AST, septic
2	149	DOT/FAA regulator and generator	---	Electrical gear, AST
2	150	Emergency generator	---	UST closed in-place 8/98, electrical gear
2	151	Airfield lighting	---	Electrical gear, former UST
2	153	DOT Storage	Inactive	Former UST; AST
2	155	DOT Transmitter	Active	Former UST (2)
2	156	DOT Transmitter	---	---
2	157	DOT Receiver	---	Former UST (2)
2	158	Cleland House	Active	AST (2), Septic
2	162	Water Pump House for 158	Active	On-site well
2	163	Garage for 158	Active	Proper disposal of any stored materials
2	160	Former Incinerator	Demolished	Concerns with ash disposal and decommissioning
2	161	Garage for 164	Demolished	None
2	164	Brochett's House	Demolished	Former well, septic system, UST disposition ?
2	190	Rock Tavern Post Office	Demolished	Former well, septic system, UST disposition ?

TABLE 1-2

ZONE 2 BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Status*	*Notes/Concerns*
2	191	General James Clinton House	Demolished	Former well, septic system, UST disposition ?
2	192	Elmwood School	Demolished	Former well, septic system, UST disposition ?
2	193	Telford Tavern	Demolished	Former well, septic system, UST disposition ?
2	194	Dennison Bacher House	Demolished	Former well, septic system, UST disposition ?
2	195	Hawkins Rowe House	Demolished	Former well, septic system, UST disposition ?
2	196	Benedict House	Demolished	Former well, septic system, UST disposition ?

TABLE 1-3

ZONE 3 BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Status*	*Notes/Concerns*
3	101	Guard shack at Breunig Road entrance	Demolished	
3	200	Scale House	Demolished	None
3	202	Maintenance	Active	See Report
3	204	Maintenance	Active	See Report
3	205	(Located across 1st Street from Customs)	Inactive	Suspect UST
3	206	Maintenance Office and Shop	Active	Suspect UST; AST
3	208	DOT Oil Pump Station	---	Possible product release (UST-5)
3	210	Maintenance	Demolished	Open storage (ASTs-2)
3	212	AVIS Garage	Active	See Report (UST-7)
3	214	Lumber Storage	Active	See Report (AST-2)
3	222	Vehicle Maintenance	---	---
3	400	Warehouse	---	Former UST
3	402	Storage	---	---
3	404	DOT Storage (former ANG warehouse)	Inactive	Former UST
3	500	Across from Building 124	Demolished	Unknown
3	502	Across from Building 124	Demolished	Unknown
3	700	Offices	Active	See Report; AST
3	702	Offices	Active	Former UST
3	704	Offices	Active	Former UST
3	706	Offices	Active	Former UST
3	708	Offices - vacant	Inactive	Former UST
3	710	Offices	Active	Former UST
3	714	APCOA Toll Booth	Inactive	None
3	740	Offices	Active	Former UST
3	800	NY State Police	Active	Former UST
3	802	NY State Police	Active	Current UST and former UST
3	804	NY State Police - Crime Lab	Active	Lab chemicals, former UST
3	806	Bank of NY	Active	Former UST
3	808	Office	Active	Former UST

TABLE 1-3

ZONE 3 BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Status*	*Notes/Concerns*
3	810	Bowling Alley	---	Former UST; AST
3	900	Unknown	Demolished	Near Pool
3	902	Unknown	Demolished	Near Pool
3	910 and 912	Pool	Inactive	Chlorine tank and pool equipment
3	1002	Dry Cleaners, Barber	Demolished	Cleaning fluids (UST?)
3	1006	Army Post Office	Demolished	(UST?)
3	1004	Army	Existing	Excluded
3	1008	APCOA	Demolished	None
3	1009	APCOA	Demolished	None
3	2300	Budget/Hertz Car Garages	Active	See Report (UST-2, AST-4)
3	2302	Vacant-Storage (former W.R. Grace)	Inactive	See Report
3	2304	Unknown	Demolished	---
3	2306	Ultimate Land Developers (contractor garage)	Active	See Report (UST)
3	2312	Southwest Fuel Farm	Active	See Report (UST, AST, transformer)

TABLE 1-4

ZONE 4 BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Status*	*Notes/Concerns*
4	2230	Skeet and Rifle Range	Demolished	See Report
4	2231	Pistol Range	Demolished	Septic and well, see Report

TABLE 1-5

ZONE 5 BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Status*	*Notes/Concerns*
5	2233, 2234, 2236	Unknown (north of Cessna Hangar)	Demolished	---
5	2238	Warehouse	Demolished	---
5	2239	American Express Hangar	Active	See Report (USTs & ASTs)
5	2240	Cessna Hangar	Active	See Report (USTs & ASTs)
5	2243-2243	Reserved for Future Hangars		
5	2244	Northeast Fuel Farm Control Building	Active	See Report
5	2245	Former Transformer Building	Demolished	Possible PCBs
5	---	Auto Auction	Active	See Report

TABLE 1-6

ZONE 6 BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Status*	*Notes/Concerns*
6a	2247	AMSCAN Building and Warehouse	Active	See Report
6a	2248	Grand Union Processing Plant	Active	See Report
6a	2249	CRS	Active	See Report
6a	2251	Nelco (former Johnson Controls)	Active	See Report
6a	2252	Federal Express	Active	See Report (UST, OWS, & AST)
6a	2253	Fabritank	Demolished	---
6a	2260	US Postal Service	Active	Excluded
6a	2263	Sky Chef	Active	See Report
6a	2266	AT&T Regeneration Station	Active	---
6a	2269	Cargo Building	Active	See Report
6a	2290	DOT Maintenance	Active	See Report (USTs-2)
6a	2290	Reese Aviation	Active	See Report (USTs-5)
6a	2290	Federal Express	Active	See Report
6a	2293-2297	Airfield Markers	---	---
6a	---	NY ANG Base	Active	See Report
6b	5001	Crestview Club House	Active	See Report (UST)
6b	5002	Crestview Custodian House	Active	See Report (UST)
6b	---	USDA	Active	See Report
6c	600	MCC Can Plant	Active	See Report
6d	---	Orange County Transfer Station	Active	See Report (AST)

TABLE 2

BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Building No.	*Use/Designation*	*Status*	*Notes/Concerns*
101	Guard shack at Breunig Road entrance	Demolished	
104	Electrical; North of Building 110	Active	Suspect septic tank or cistern; AST (400 gal.)
105	School Building, 3 story brick and metal	Inactive	Undergoing renovation; former UST
110	DOT Operations Customs	Active	Half of building unoccupied, former UST
112	Rifton, Hangar "I"	Active	See Report (UST & AST)
114	Hangar "H"	Demolished	
118	AMR, Hangar "G"	Active	See Report (USTs-3)
120	Hangar "F"	Demolished	See Report
122	DOT, Hangar "E"	Storage	See Report (UST)
124	Former Machine Shop	Demolished	See Report
126	Former parachute dry building	Demolished	None
128	Terminal, Former Hangar "D"	Active	See Report
130	Hangar "C"	Demolished	See Report
132	AMR, Hangar "B"	Active	See Report (UST & AST)
136	AMR, Hangar "A"	Active	See Report (UST)
138	DOT Administrative Building	Active	See Report (UST)
140	AMR	Active	See Report (UST-2)
142	ANG Fire House	Active	Former UST
147	DOT Storage, Former Engine Test Cell	Inactive	Former engine test cell, AST
148	Air Traffic Control Tower	Active	AST, septic
149	DOT/FAA regulator and generator	---	Electrical gear, AST
150	Emergency generator	Active	UST closed in-place 8/98, electrical gear
151	Airfield lighting	---	Former UST, electrical gear
153	DOT Storage	Inactive	Former UST; AST
155	DOT Transmitter	Active	Former UST (2)

TABLE 2

BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Building No.	*Use/Designation*	*Status*	*Notes/Concerns*
156	DOT Transmitter	---	---
157	DOT Receiver	---	Former UST (2)
158	Cleland House	Active	AST (2), Septic
162	Water Pump House for 158	Active	On-site well
163	Garage for 158	Active	Proper disposal of any stored materials
160	Former Incinerator	Demolished	Concerns with ash disposal and decommissioning
161	Garage for 164	Demolished	None
164	Brochett's House	Demolished	Former well, septic system, UST disposition ?
190	Rock Tavern Post Office	Demolished	Former well, septic system, UST disposition ?
191	General James Clinton House	Demolished	Former well, septic system, UST disposition ?
192	Elmwood School	Demolished	Former well, septic system, UST disposition ?
193	Telford Tavern	Demolished	Former well, septic system, UST disposition ?
194	Dennison Bacher House	Demolished	Former well, septic system, UST disposition ?
195	Hawkins Rowe House	Demolished	Former well, septic system, UST disposition ?
196	Benedict House	Demolished	Former well, septic system, UST disposition ?
200	Scale House	Demolished	None
202	Maintenance	Active	See Report
204	Maintenance	Active	See Report
205	(Located across 1st Street from Customs)	Inactive	Suspect UST

TABLE 2

BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Building No.	*Use/Designation*	*Status*	*Notes/Concerns*
206	Maintenance Office and Shop	Active	Suspect UST; AST
208	DOT Oil Pump Station	---	Possible product release (UST-5)
210	Maintenance	Demolished	Open storage (ASTs-2)
212	AVIS Garage	Active	See Report (UST-7)
214	Lumber Storage	Active	See Report (AST-2)
222	Vehicle Maintenance	---	---
400	Warehouse	---	Former UST
402	Storage	---	---
404	DOT Storage (former ANG warehouse)	Inactive	Former UST
500	Across from Hangar	Demolished	Unknown
502	Across from Hangar	Demolished	Unknown
600	MCC Can Plant	Active	See Report
700	Offices	Active	See Report; AST
702	Offices	Active	Former UST
704	Offices	Active	Former UST
706	Offices	Active	Former UST
708	Offices - vacant	Inactive	Former UST
710	Offices	Active	Former UST
714	APCOA Toll Booth	Inactive	None
740	Offices	Active	Former UST
800	NY State Police	Active	Former UST
802	NY State Police	Active	Current UST and former UST
804	NY State Police - Crime Lab	Active	Lab chemicals, former UST
806	Bank of NY	Active	Former UST
808	Office	Active	Former UST
810	Bowling Alley	---	Former UST; AST
900	Unknown	Demolished	Near Pool
902	Unknown	Demolished	Near Pool

TABLE 2

BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Building No.	*Use/Designation*	*Status*	*Notes/Concerns*
910 and 912	Pool	Inactive	Chlorine tank and pool equipment
1002	Dry Cleaners, Barber	Demolished	Cleaning fluids (UST?)
1006	Army Post Office	Demolished	(UST?)
1004	Army	Existing	Excluded
1008	APCOA	Demolished	None
1009	APCOA	Demolished	None
2201	SAGE	Partially leased	See Report (USTs-3, plus AST), transformers
2203	SAGE Cooling Tower	Inactive	See Report
2207	SAGE (Equipment Room)	Inactive	See Report
2292	SAGE Garage	Leased	AST and former UST
2227	Equipment Storage (former rocket storage)	Inactive	Painting activities, UST sand blast grit
2230	Skeet and Rifle Range	Demolished	See Report
2231	Pistol Range	Demolished	Septic and well, see Report
2233, 2234, 2236	Unknown (north of Cessna Hangar)	Demolished	---
2238	Warehouse	Demolished	---
2239	American Express Hangar	Active	See Report (USTs & ASTs)
2240	Cessna Hangar	Active	See Report (USTs & ASTs)
2243-2243	Reserved for Future Hangars		
2244	Northeast Fuel Farm Control Building	Active	See Report
2245	Former Transformer Building	Demolished	Possible PCBs
2247	AMSCAN Building and Warehouse	Active	See Report
2248	Grand Union Processing Plant	Active	See Report
2249	CRS	Active	See Report
2251	Nelco (former Johnson Controls)	Active	See Report
2252	Federal Express	Active	See Report (UST, OWS, & AST)
2253	Fabritank	Demolished	---
2260	US Postal Service	Active	Excluded

TABLE 2

BUILDING INVENTORY LIST
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Building No.	*Use/Designation*	*Status*	*Notes/Concerns*
2263	Sky Chef	Active	See Report
2266	AT&T Regeneration Station	Active	---
2269	Cargo Building	Active	See Report
2290	DOT Maintenance	Active	See Report (USTs-2)
2290	Reese Aviation	Active	See Report (USTs-5)
2290	Federal Express	Active	See Report
2293-2297	Airfield Markers	---	---
2300	Budget/Hertz Car Garages	Active	See Report (UST-2, AST-4)
2302	Vacant-Storage (former W.R. Grace)	Inactive	See Report
2304	Unknown	Demolished	---
2306	Ultimate Land Developers (contractor garage)	Active	See Report (UST)
2312	Southwest Fuel Farm	Active	See Report (UST, AST, transformer)
5001	Crestview Club House	Active	See Report (UST)
5002	Crestview Custodian House	Active	See Report (UST)
---	Orange County Transfer Station	Active	See Report (AST)
---	Auto Auction	Active	See Report
---	NY ANG Base	Active	See Report
---	USDA	Active	See Report

TABLE 3

SUMMARY OF FORMER UNDERGROUND STORAGE TANKS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Contents* *Size (gallons)*		*Type* *Material*	*AGE*[1]	*Potential Issues of Environmental Concern (Yes/No)*	*Comment*	*Closure Report (DEC Spill No.)*
Building 105	Unknown	No. 2	Unknown	Unk	Yes		
Building 110	3,000	No. 2	Unknown	(35)	Yes		
Building 151	550	Diesel	Unknown	(23)	Yes - some contaminants may remain	24 cy contaminated soil removed	9/26/95*
Building 153	550	Gasoline	Unknown	(30)	Yes		
Building 155	550	Diesel	Unknown	(35)	Yes - some contaminants may remain	8 cy contaminated soil removed	9/26/95*
Building 155	550	No. 2	Unknown	(35)	Yes		
Building 157	550	No. 2	Unknown	(35)	Yes		
Building 157	250	Diesel	Unknown	(38)	Yes		
Building 164	1,000	No. 2	Unknown	(30)	Yes		
Building 112	1,000	OWS	Unknown	(5)	ND		
Building 118	10,000	No. 2	Unknown	(26)	Yes		
Building 118	1,000	Gasoline	Unknown	(30)	Yes		
Building 118	3,000	No. 2	Unknown	(30)	Yes		
Building 122	10,000	No. 2	Steel	(35)	Yes	Contaminants remains above STARS levels	5/94 (9400738)
Building 130 (Hangar C)	4,000	No. 2	Steel	(30)	Yes	Removed - contamination remains	
Building 132	10,000	No. 2	Steel	(30)	Yes	Contaminants remains above STARS levels	5/94 (9400030)
Building 132	400	OWS	Unknown	---	Yes		
Building 136	10,000	No. 2	Unknown	(30)	Yes - some contaminants may remain	217 cy contaminated soil removed	9/26/95*
Building 138	3,000	No. 2	Steel	(30)	Yes	Contaminants remains above STARS levels	5/94 (9400216)
Building 140	550	Gasoline	Unknown	(40)	Yes		
Building 140	3,000	No. 2	Unknown	(30)	Yes - contaminated soil	35 cy contaminated soil removed	9/26/95*

TABLE 3

SUMMARY OF FORMER UNDERGROUND STORAGE TANKS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Contents* *Size (gallons)*		*Type* *Material*	*AGE*[1]	*Potential Issues of Environmental Concern (Yes/No)*	*Comment*	*Closure Report (DEC Spill No.)*
					remains		
Building 142	1,000	No. 2	Unknown	(30)	Yes		
Building 202	3,000	No. 2	Unknown	(30)	Yes - contaminated soil remains	40 cy contaminated soil removed	9/26/95*
Building 208	10,000	Diesel	Unknown	(35)	Yes		
Building 208	10,000	___/Glycol	Unknown	(35)	Yes		
Building 208	15,000	Gasoline	Unknown	(35)	Yes		
Building 208	15,000	Diesel	Unknown	(35)	Yes		
Building 208	3,000	Gasoline	Unknown	(35)	Yes		
Building 212	2,000	Gasoline	Unknown	(35)	Yes		
Building 212	2,000	Gasoline	Unknown	(35)	Yes		
Building 212	2,000	Gasoline	Unknown	(35)	Yes		
Building 212	2,000	Gasoline	Unknown	(35)	Yes		
Building 212	3,000	Gasoline	Unknown	(35)	Yes		
Building 212	550	No. 2	Unknown	(35)	Yes		
Building 212	550	Waste Oil	Unknown	(35)	Yes		
Building 400	1,000	No. 2	Unknown	(35)	Yes - some contaminants may remain	64 cy contaminated soil removed	9/26/95*
Building 404	3,000	No. 2	Steel	(35)	Yes - release occurred	Contaminated soil removed	5/94 (9315504)
Building 700	1,000	No. 2	Unknown	---	Unknown	Believed to be closed and removed, list on 6/14/91 UST Plan, not in inventory	
Building 702	1,000	No. 2	Unknown	(35)	Yes - contaminants present, refusal at 8 feet	24 cy contaminated soil removed	9/26/95*
Building 704	1,000	No. 2	Unknown	(35)	Yes - soil not sampled during closure		9/26/95*

TABLE 3

SUMMARY OF FORMER UNDERGROUND STORAGE TANKS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Contents* *Size (gallons)*		*Type* *Material*	*AGE*[1]	*Potential Issues of Environmental Concern (Yes/No)*	*Comment*	*Closure Report (DEC Spill No.)*
Building 706	2,000	No. 2	Unknown	(35)	No - contaminated soil removed	54 cy contaminated soil removed	9/26/95*
Building 708	1,000	No. 2	Steel	(35)	No	No elevated PID; soil LT STARS levels	5/94
Building 710	1,000	No. 2	Unknown	(35)	Yes - soil not sampled during closure		9/26/95*
Building 740	700	No. 2	Unknown	(35)	Yes - soil contamination remained	60 cy contaminated soil removed	9/26/95*
Building 800	1,000	No. 2	Unknown	(35)	Yes - contaminated soil remains	60 cy contaminated soil removed	9/26/95*
Building 802	2,000	No. 2	Unknown	(35)	Yes - some contamination may remain	24 cy contaminated soil removed	9/26/95*
Building 804	1,000	No. 2	Unknown	(35)	Yes	No soil samples taken	9/26/95*
Building 806	1,000	No. 2	Unknown	(35)	Yes - some contamination may remain	32 cy contaminated soil removed	9/26/95*
Building 808	3,000	No. 2	Unknown	(8)	No	48 cy contaminated soil removed	9/26/95*
Building 810 (USMA)	Unknown	Unknown	Unknown	--	Yes		
Building 2201 (SAGE)	30,000	Diesel	Unknown	(36)	Yes		
Building 2201 (SAGE)	30,000	Diesel	Unknown	(36)	Yes		
Building 2201 (SAGE)	10,000	No. 2	Unknown	(36)	Yes		
Building 2290	1,000	Diesel	Unknown	(38)	Yes		
Building 2290	12,000	No. 2	Unknown	(40)	Yes - contamination remains	40 cy contaminated soil removed	9/26/95*
Building 2292 (SAGE)	1,000	No. 2	Unknown	(36)	Yes		
Building 2300	550	Waste Oil	Unknown	(30)	Yes		

TABLE 3

SUMMARY OF FORMER UNDERGROUND STORAGE TANKS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Contents* *Size (gallons)*		*Type* *Material*	*AGE*[1]	*Potential Issues of Environmental Concern (Yes/No)*	*Comment*	*Closure Report (DEC Spill No.)*
Building 2300	1,000	No. 2	Unknown	(35)	Yes		
Building 2306	1,000	No. 2	Steel	(35)	No	No elevated PID, samples LT STARS levels	5/94
P.O.L. D Street FF	10-25,000	Jet A	Unknown	(45)	Yes	Removed but contamination remains	
P.O.L. D Street FF	2 - 1,000	Jet A	Unknown	(35)	Yes		
AM Express	550	Waste Solvents	Unknown	(3)	No	Closed - No contamination found	
Am Express	550	Waste Oil	Unknown	(3)	No	Closed - no contamination found	
Fed Express	10,000	Gasoline	Unknown	(2)	Yes		
Stewart Properties	5,000	No. 2	Unknown	(30)	Yes	Warehouse, status and location uncertain	
Crestview Lake	1,500	No. 2	Unknown	Unknown	Yes	Removed and remediated	9712003

NOTES:

[1] Age as of 1991 Inventory
* DEC Spil No. 9410845

TABLE 4

SUMMARY OF KNOWN EXISTING AND FORMER ABOVEGROUND STORAGE TANKS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Approximate Size (GAL)*	*Contents*	*Type (material/walls)*	*Status*	*Overfill Protection (Yes/No)*	*Current Potential Issues of Environmental Concern (Yes/No)*	*Comment*
Building 132	275	Waste Oil	Steel / Double	In Service	No	No	No obvious staining on ground surface
Building 148	275	Gasoline	Steel / Single	Former	No	Yes	Cradle observed at side of Control Tower
Building 149	1,000	Diesel	Steel / Single	In Service	No	No	No obvious staining on paved ground surface
Building 810	275	Fuel Oil	Steel / Single	Former	No	No	Suspected in basement of bowling alley. Replaced by natural gas. Fill line observed on external wall. Building locked.
Rifton Aviation	20,000	Jet A	Steel / Double	In Service	Yes	No	No obvious staining on paved ground surface
Rifton Aviation	20,000	Jet A	Steel / Double	In Service	Yes	No	No obvious staining on paved ground surface
Hangar T	Unknown	Glycol	PVC / Single	In Service	No	No	Glycol storage for terminal deicing
Building 214	4,000	Diesel	Steel / Double	In Service	Yes	No	No obvious staining on paved/concrete ground surface
Building 214	4,000	Diesel	Steel / Double	In Service	Yes	No	No obvious staining on paved/concrete ground surface
Building 2300	275	Fuel Oil	Steel / Single	In Service	No	No	No staining on concrete floor surface inside building
Building 2300	275	Fuel Oil	Steel / Single	In Service	No	No	No staining on concrete floor surface inside building
Building 2300	1,000	Gasoline (unleaded)	Steel / Double	In Service	Yes	No	No staining observed on paved surface at disposing area
Building 2300	2,000	Gasoline (unleaded)	Steel / Double	In Service	Yes	No	No staining observed on paved surface at disposing area
Southwest Fuel Farm	215,663	Jet A	Steel / Single	In Service	No	Yes	Subsurface soil/groundwater and free product noted when adjacent tank removed. Dike permeability possibly less than 1×10^{-7} cm/sec.
Southwest Fuel Farm	311,246	Jet A	Steel / Single	Closed & Removed (1995)	No	Yes	No soil sampling or analysis performed.
Southwest Tank Farm	5,000	Jet A	Steel / Single	In Service	No	Yes	Emergency spill tank for nearby truck fuelling area
Northeast Fuel Farm	15,000	AV Gas	Steel / Single	In Service	Yes (diked)	Yes	Anecdotal information provided regarding design inadequacies. Possible litigation pending.
Northeast Fuel Farm	50,000	Jet A	Steel / Single	In Service	Yes	Yes	Anecdotal information provided regarding design inadequacies. Possible litigation pending.

TABLE 4

SUMMARY OF KNOWN EXISTING AND FORMER ABOVEGROUND STORAGE TANKS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Approximate Size (GAL)*	*Contents*	*Type (material/walls)*	*Status*	*Overfill Protection (Yes/No)*	*Current Potential Issues of Environmental Concern (Yes/No)*	*Comment*
Building 147	1,000	Waste Oil/Jet A	Steel / Single	Removed	No	No	Closed in May 1994. No release noted by contractor. No soil samples taken. Cradle in-place, stained soil.
Building 153	275	No. 2 Heating Oil	Steel / Single	Unknown	No	No	Status uncertain
Building 158	Two - 275	No. 2 Heating Oil	Steel / Single	Unknown	No	No	Basement - status uncertain
Northeast Fuel Farm	50,000	Jet A	Steel / Single	In Service	Yes	Yes	Anecdotal information provided regarding design inadequacies. Possible litigation pending.
Northeast Fuel Farm	15,000	Gasoline	Steel / Single	In Service	Yes	Yes	Anecdotal information provided regarding design inadequacies. Possible litigation pending.
Northeast Fuel Farm	200	Jet A	Steel / Single	In Service	Yes	Yes	Surge Tank
Northeast Fuel Farm	200	AV Gas	Steel / Single	In Service	Yes	Yes	Surge Tank
Northeast Fuel Farm	55	Gasoline	Steel / Single	In Service	Yes	Yes	Retrofit Surge Tank
Building 2290	3,000	Diesel	Steel / Single	In Service	Yes (diked)	Yes	Anecdotal information regarding spillage from full valve at base of dike. Nearby pump island at grass/apron interface
Building 2290	10,000	Potassium Acetate	PVC / Single	In Service	No	Yes	Filling/unloading location at grass/apron interface
Building 2290	5,000	Waste Glycol	Steel / Single	Out of Service	No	Yes	Heavy staining observed in grass at sump collection point
Building 2290	300	Diesel	Steel / Single	In Service	No	Yes	Minor staining on granular ground surface near tank
Building 2290	275	Waste Oil	Steel / Single	In Service	No	Yes	Minor staining on granular ground surface near tank
Industrial Park	1,800,000	Water	Steel / Single	In Service	No	No	-
Building 206	3,000	No. 2 Heating Oil	Steel / Single	Unknown	No	No	Status uncertain
Building 700	1,000	No. 2 Heating Oil	Steel / Single	Unknown	No	No	Status uncertain
Building 810	Unknown	No. 2 Heating Oil	Unknown	Unknown	No	No	Bowling alley, status uncertain
Transfer Station	550	Diesel	Steel / Single	In Service	No	Yes	Soil staining and evidence of product spillage observed by tank
Federal Express	275	Waste Oil	Steel in second containment	In Service	No	No	Spillage into containment area

TABLE 4

SUMMARY OF KNOWN EXISTING AND FORMER ABOVEGROUND STORAGE TANKS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Approximate Size (GAL)*	*Contents*	*Type (material/walls)*	*Status*	*Overfill Protection (Yes/No)*	*Current Potential Issues of Environmental Concern (Yes/No)*	*Comment*
Building 2201/2207 (SAGE)	275	No. 2 Fuel Oil	Steel / Single	Out of Service	No	No	No staining observed, served former incinerator
Building 2292	275	No. 2 Fuel Oil	Steel / Single	In Service	No	No	Supplies overhead heater for building, no surface staining
Crestview Lake Building 5001	275	No. 2 Fuel Oil	Steel / Single	In Service	No	No	No staining observed, temporary replacement for removed UST

TABLE 5

SUMMARY OF EXISTING UNDERGROUND STORAGE TANKS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Approximate Size (GAL)*	*Contents*	*Type (materials/walls)*	*Protection Catholic*	*Potential Issue of Environmental Concern (Yes/No)*	*Compliance Status (Yes/No)*	*Comment*
Building 2227	550	Fuel Oil	Steel / Single	No	Yes	No	Out-of-Service for greater than two years. No soil and groundwater testing. No UST testing. Removed 8/98
Building 150 Tower Hill Generator	5,000	Diesel	Steel / Single	No	Yes	No	Installed ~ 1979. Out-of-Service. No UST testing. DOT informed DEC of intent to abandon in place in 8/98
Tank 2 - Terminal Apron	30,000	Waste Glycol	Concrete / Single	---	No	No	Waste glycol interceptor tank (1993) Must undergo closure assessment
10 & 11 Cargo Apron	Two - 20,000	Waste Glycol	Steel / Double	Yes	No	No	Waste glycol interceptor tank (1997) Must undergo closure assessment
Tank 4 - Terminal Apron	30,000	Oil/Water	Concrete / Single	No	No	N/A	Oil water interceptor tank (1993)
8 & 9 Cargo Apron	Two - 30,000	Oil/Water	Steel / Double	Yes	No	N/A	Oil water interceptor tank (1997)
Tank 1 & 1A - First Street	Two - 30,000	Waste Glycol	Steel / Double	Yes	No	No	Waste glycol interceptor tank (1991 and 1996). Need closure assessment
Tank 3 - First Street	30,000	Oil/Water	Steel / Double	Yes	No	N/A	Oil water interceptor tank (1991)
First Street	1,000	Oil/Water	Steel	No	Yes	N/A	Reported to be a leaking UST
First Street	Unknown	Unknown	Unknown	No	Yes	N/A	Suspect UST fill pipe observed south of Hangar G, Building 118, west of First Street
Building 802	2,000	Unleaded Gas	Unknown	No	Yes	N/A	No cathodic protection or monitoring wells observed. Concrete and asphalt deteriorated at nearby pump island. Believed installed ~ 1989.
Tanks 5 & 6 Cargo Area	Two - 30,000	Waste Glycol	Steel / Single	No	Yes	No	Abandoned, out of service, must undergo closure assessment

TABLE 5

SUMMARY OF EXISTING UNDERGROUND STORAGE TANKS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Approximate Size (GAL)*	*Contents*	*Type (materials/walls)*	*Protection Catholic*	*Potential Issue of Environmental Concern (Yes/No)*	*Compliance Status (Yes/No)*	*Comment*
Northeast Fuel Farm	20,000	Oil/Water	Steel	Unknown	N.D.	Yes	In service 1998
Southeast Fuel Farm Building 2312	2,000	Waste Fuel	Fiberglass	N/A	Yes	No	Installed 1981, status uncertain
Building 206	Unknown	Fuel Oil	Steel / Single	No	Yes	No	Suspected UST. No information regarding previous testing or whether UST was removed and services left behind
Amex	1,000	Oil / Water	Steel / Single	No	No	N/A	Oil/water interceptor tank
Amex	1,000	Gasoline	Steel / Double	Yes	No	Yes	-
Cessna/Citation	Two - 500	Waste Oil	Steel / Single	No	Yes	N/A	Status uncertain. No data available
Cessna/Citation	1,000	Oil / Water	Steel / Single	No	No	N/A	Oil/water interceptor tank
Cessna/Citation	Unknown	Emergency Spills	Steel / Single	No	Yes	N/A	Floor drains to tank capped with concrete. Tank filled with water. No longer used. No data available. Flammable Storage Room emergency contingency spill UST.
Cessna/Citation	Unknown	Battery Spill	Steel / Single	No	No	N/A	Battery Room emergency contingency spill UST. No use of lead acid batteries, only Ni – Cd. No data available.
Federal Express	10,000	Gasoline	Unknown	Unknown	Yes	N.D.	Inactive, built ~ 1989
Federal Express	Unknown	Oil / Water	Unknown	Unknown	Yes	N.D.	Oil / water separator
USDA	4,000	Gasoline	Unknown	Unknown	Yes	N.D.	-
USDA	4,000	Fuel Oil	Unknown	Unknown	Yes	N.D.	-

TABLE 6

SUMMARY OF OTHER SIGNIFICANT UNDERGROUND SERVICES / INFRASTRUCTURES
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Feature*	*Status*	*Potential Issues of Environmental Concern (Yes/No)*	*Comment*
Building 212	3 Inground Vehicle Hoists	Not in Service	Yes	Single post hoists. No data regarding closure
Building 2300	1 Inground Vehicle Hoists	Not in Service	Yes	Single post hoist. No data regarding closure
Building 208	Piping / Inground Piping	Not in Service	Yes	Former inground oil pumping station for nearby underground storage tanks later converted from oil to fuel uses
Southwest Fuel Farm	Inground Piping	In Service	Yes	Filling and tank supply lines in place to filling station. Pressure tested five years ago. Determined to be tight. However, this greater than twenty years old. One section of piping blanked and capped also remains in place.
Northwest Fuel Farm	Inground Piping	In Service	Yes	Design difficulties cited by Stewart International Airport staff. Possible litigation pending.

TABLE 7

SUMMARY OF REPORTED FORMER AND EXISTING DOMESTIC WELLS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Status*	*Comments*
Crestview (House)	In Service	-
Crestview Lake	In Service	Disinfection required during season. Monthly coliform analysis
USDA	In Service	-
Former Building East of Building 2238	Out of Service	-
Former Building 161	Out of Service	Well and Well House formerly in use at this location
Former Building 2231	Out of Service	Located at former Rifle and Pistol Range

Note: Additional wells may have been or may remain at several former residential and farm dwellings formerly present on the subject property.

TABLE 8

SUMMARY OF REPORTED FORMER AND EXISTING SEPTIC SYSTEMS
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Location	*Existing (Yes/No)*	*Reported Septic Tank (Yes/No)*	*Potential Receptor of Commercial/Industrial Wastes (Yes/No)*	*Potential Issue of Concern (Yes/No)*
Building 158	Yes	Yes	No	No
Former House East of Building 2238	Unknown	Yes	No	No
Building 2290	Yes	Yes	Yes	Yes
Former Building 2231	No	Yes	No	No
Building 150	No	Yes	Yes	Yes
Crestview Lake (House)	Yes	Yes	No	No
Crestview Lake	Yes	Yes	No	No

Note: All systems reported to be concrete septic tanks with clay weeping tile systems.
Additional septic systems may have been or may remain at several former residential and farm dwellings formerly present on the subject property.

TABLE 9

FACILITIES LIST AND HAZARD RANKING
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Notes/Concerns*	*Category*
1	124	Former Machine Shops	Concerns with past operations	3
1	126	Former parachute dry building	None known or reported	5
1	128	Terminal, Former Hangar "D"	Concern with contamination under building from past operations in and near terminal; sanitary sewer crushed	3-4
1	130	Hangar "C"	Contamination remains from UST closure, contaminated with solvents	2-3
1	132	AMR, Hangar "B"	Former UST, current AST, lack of documentation regarding waste disposal	4
1	136	AMR, Hangar "A"	Former UST concerns, lack of documentation regarding waste disposal	4
1	138	DOT Administrative Building	Concern with releases from former UST	3
1	140	AMR	Concern with releases from former USTs	3
1	142	ANG Fire House	Former UST	3
1	2201	SAGE	Concerns with former USTs, transformers, former incinerator, ACM, instrumentation and electrical equipment containing PCBs	3-4
1	2203	SAGE Cooling Tower	Potential for concern from past operation, none observed	5
1	2207	SAGE (Equipment Room)	Concern from past operations and fuel in sump	4
1	2292	SAGE Garage	AST for heating appears old, no staining observed in area	5
1	2227	Equipment Storage (former rocket storage)	Painting activities, UST sand blast grit	3
1	---	LAV Dump Station	Soil contamination from spillage	4
1	---	Fuel tanker staging area	Soil contamination from leakage	4
1	---	Commissary Hill	Potential for concern from filling, grading and former beacon on hill	5

Ratings: 1=Known or suspected threat to human health or environment; 2=Violation of Law; 3=Non-compliance with policy, guideline or code; 4=Not reflective of good practice; 5=Min. concern.

TABLE 9

FACILITIES LIST AND HAZARD RANKING
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Notes/Concerns*	*Category*
2	104	Electrical; North of Building 110	Suspect septic tank or cistern; AST (400 gal.)	3
2	105	School Building, 3 story brick and metal	Undergoing renovation; former UST	4
2	110	DOT Operations Customs	Half of building unoccupied, former UST	4
2	112	Rifton, Hangar "I"	Current OWS and ASTs, concern with past operations and need for air permit for painting	4
2	114	Hangar "H"	Concerns with former operations and UST	4
2	118	AMR, Hangar "G"	Potential for concerns with USTs	4
2	120	Hangar "F"	Concerns with former operations and fire	3
2	122	DOT, Hangar "E"	Concerns with former aircraft washing operation and USTs, suspect UST remains	2,4
2	147	DOT Storage, Former Engine Test Cell	Former engine test cell, AST	4
2	148	Air Traffic Control Tower	AST, septic	5
2	149	DOT/FAA regulator and generator	Electrical gear	5
2	150	Emergency generator	UST closed in-place 8/98, Electrical gear, AST	5
2	151	Airfield lighting	Electrical gear, former UST	4
2	153	DOT Storage	Former UST; AST	4
2	155	DOT Transmitter	Former UST (2)	4
2	156	DOT Transmitter	---	5
2	157	DOT Receiver	Former UST (2)	4
2	158	Cleland House	AST (2), Septic	5
2	162	Water Pump House for 158	On-site well	5
2	163	Garage for 158	Proper disposal of any stored materials	5
2	160	Former Incinerator	Concerns with ash disposal and decommissioning	3-4
2	161	Garage for 164	None	5
2	164	Brochett's House	Former well, septic system & UST disposition ?	5
2	-	Former Residential-related Structures	Former well, septic system & UST disposition ?	5
2	-	Glycol recovery tanks	Must be tested for leakage, change in service	3
2	-	Oil/water Separators (OWS)	None if operated properly and not leaking	5
2	-	Airport Landfill	Significant environmental concerns	1

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TABLE 9

FACILITIES LIST AND HAZARD RANKING
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Notes/Concerns*	*Category*
3	101	Guard shack at Breunig Road entrance	None	5
3	200	Scale House	None	5
3	202	Maintenance	In general for 200 Series Buildings, concerns with past practices, USTs, ACM; current concern with storage, operation and handling or materials	3-4
3	204	Maintenance	Same as 202	3-4
3	205	(Located across 1st Street from Customs)	Suspect UST	2-4
3	206	Maintenance Office and Shop	Suspect UST; AST	2-4
3	208	DOT Oil Pump Station	Possible product release (UST-5)	3-4
3	210	Maintenance	Open storage (ASTs-2)	4
3	212	AVIS Garage	Concerns with former USTs, in-ground hoists and material handling and storage	3-4
3	214	Lumber Storage	Same as 202, ASTs	4
3	222	Vehicle Maintenance	Same as 202	4
3	400	Warehouse	Former UST	4
3	402	Storage	ACM and former UST and munitions storage	3-4
3	404	DOT Storage (former ANG warehouse)	Former UST	4
3	500	Across from Building 124	Unknown	4
3	502	Across from Building 124	Unknown	4
3	700	Offices	Former UST and current AST	4
3	702	Offices	Former UST	4
3	704	Offices	Former UST	4
3	706	Offices	Former UST	4
3	708	Offices - vacant	Former UST	4
3	710	Offices	Former UST	4
3	714	APCOA Toll Booth	None	5
3	740	Offices	Former UST	4
3	800	NY State Police	Former UST	4
3	802	NY State Police	Current UST and former UST	3-4

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TABLE 9

FACILITIES LIST AND HAZARD RANKING
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Notes/Concerns*	*Category*
3	804	NY State Police - Crime Lab	Lab chemicals, former UST	4
3	806	Bank of NY	Former UST	4
3	808	Office	Former UST	4
3	810	Bowling Alley	Former UST; AST	4
3	900	NCO Club	Near Pool, probable UST	4
3	902	Movie Theater	Near Pool, probable UST	4
3	910 and 912	Pool	Chlorine tank and pool equipment	4
3	1002	Dry Cleaners, Barber	Cleaning fluids and probable UST	4
3	1006	Army Post Office	Probable UST	4
3	1004	Army	Excluded, UST present	-
3	1008	APCOA	None	5
3	1009	APCOA	None	5
3	2300	Budget/Hertz Car Garages	Concerns with former USTs and OWS, current operations and ASTs	4
3	2302	Vacant-Storage (former W.R. Grace)	No access provided, vacant, no problems observed	5
3	2304	Unknown	No record of usage other in area of former motor pool	5
3	2306	Ultimate Land Developers (contractor garage)	Former UST and neighboring UST	4
3	2312	Southwest Fuel Farm	Free product under fuel farm and loading facility, no OWS for unloading facility, spill tank marginal, no SPCC plan	1
3	---	Glycol Recovery tanks	Must be tested for leakage, change in service	3
3	---	Short-term parking	Concern with former structures in area of current lot	3-4

Ratings: 1=Known or suspected threat to human health or environment; 2=Violation of Law; 3=Non-compliance with policy, guideline or code; 4=Not reflective of good practice; 5=Min. concern.

TABLE 9

FACILITIES LIST AND HAZARD RANKING
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Notes/Concerns*	*Category*
4	2230	Skeet and Rifle Range	See Report	2
4	2231	Pistol Range	Septic and well, see Report	2
4	2269	Cargo Terminal	None	5
4	2290	Vehicle Maintenance	Several Areas of Concern, including septic system, former USTs, former glycol facilities & soil contamination	3
4	-	Former Dump Areas	Concerns with fill material quality	2
4	-	Federal Express Jet Fire	Lacking cleanup documentation	4
4	-	Former fire training area	Several environmental concerns, particularly contaminated soil	1
4	-	Glycol Recovery-new	Must be tested for leakage, change in service	3
4	-	Glycol Recovery-old	Must be tested for leakage, change in service	3
4	-	Oil/water Separator	None if operated properly	

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TABLE 9

FACILITIES LIST AND HAZARD RANKING
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Notes/Concerns*	*Category*
5	2233, 2234, 2236	Unknown (north of Cessna Hangar)	---	-
5	2238	Warehouse	Former septic system and well	4
5	2239	American Express Hangar	See Report (USTs)	3
5	2240	Cessna Hangar	See Report (USTs)	3
5	2243-2243	Reserved for Future Hangars	---	-
5	2244	Northeast Fuel Farm Control Building	Concern with remediation of former leakage	4
5	2245	Former Transformer Building	Possible PCBs	3
5	---	Auto Auction	Potential for fluid leakage from vehicles	5

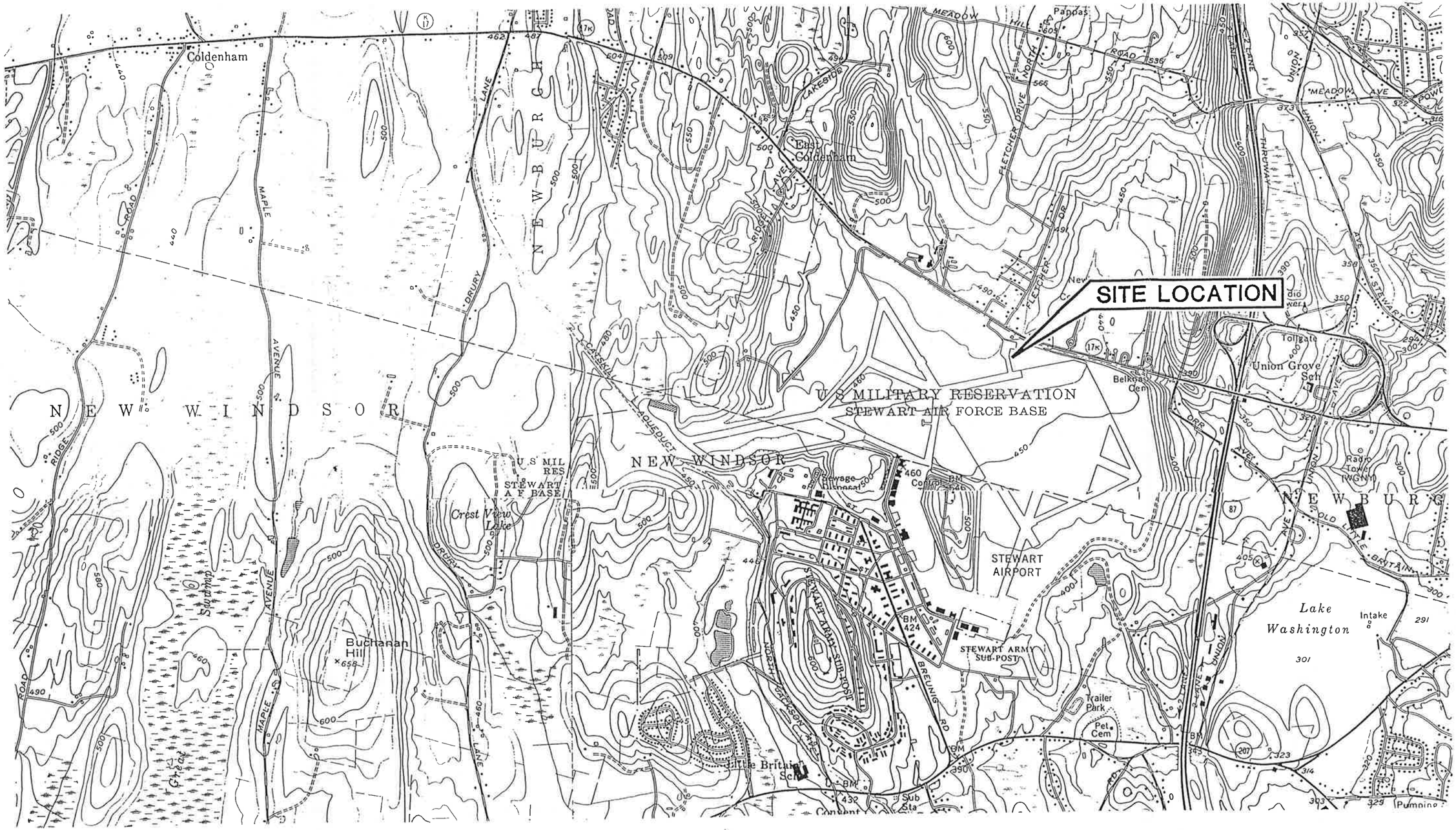
Ratings: 1=Known or suspected threat to human health or environment; 2=Violation of Law; 3=Non-compliance with policy, guideline or code; 4=Not reflective of good practice; 5=Min. concern.

TABLE 9

FACILITIES LIST AND HAZARD RANKING
STEWART INTERNATIONAL AIRPORT
NEW WINDSOR, NEW YORK

Zone	*Building No.*	*Use/Designation*	*Notes/Concerns*	*Category*
6A	2247	AMSCAN Building and Warehouse	Potential for concern with parts cleaner fluid	5
6A	2248	Grand Union Processing Plant	AST and hazardous substance handled	5
6A	2249	CRS	Not observed	5
6A	2251	Nelco (former Johnson Controls)	Potential for concerns with materials handling	5
6A	2252	Federal Express	UST, OWS and AST present, potential for problems unless handled properly during move from site; also former glycol recovery at Building 2290; new building under construction in Industrial Park	4
6A	2253	Fabritank	---	-
6A	2260	US Postal Service	Excluded	-
6A	2263	Sky Chef	Reported septic system, no other problems noted	5
6A	2266	AT&T Regeneration Station	---	-
6A	2293-2297	Airfield Markers	---	5
6A	---	Sewage pump station	Chronic overflows	2
6B	---	Sewage Sludge Disposal Area	Possible soil contamination	3
6B	5002	Crestview Custodian House	Well, septic system and UST present	4
6B	---	USDA	Potential concerns with UST, incinerator, well and wastewater	5
6C	600	MCC Can Plant	Many areas of potential concern	3
6D	---	Orange County Transfer Station	Concerns with operational practices, AST spillage, and storm water and leachate management	3-4
6D	---	New Windsor Landfill	Possible soil contamination remaining, need post-excavation analysis	3-4
6D	---	NY ANG Base	Concerns present but environmental management system in place	5

Ratings: 1=Known or suspected threat to human health or environment; 2=Violation of Law; 3=Non-compliance with policy, guideline or code; 4=Not reflective of good practice; 5=Min. concern.



REFERENCE

1.) BASE MAP TAKEN FROM U.S.G.S. 7.5 MINUTE QUADRANGLES WALDEN & NEWBURGH, NY, DATED 1957, AND MAYBROOK & CORNWALL, NY, PHOTOREVISED 1981.

2000 0 2000
scale feet

JOB No.:	983-6470	SCALE:	AS SHOWN
DR BY:	TVL	DATE:	09/13/98
CHK BY:	SAS	FILE No.:	NY02-443
REV BY:		DR SUBTITLE:	01

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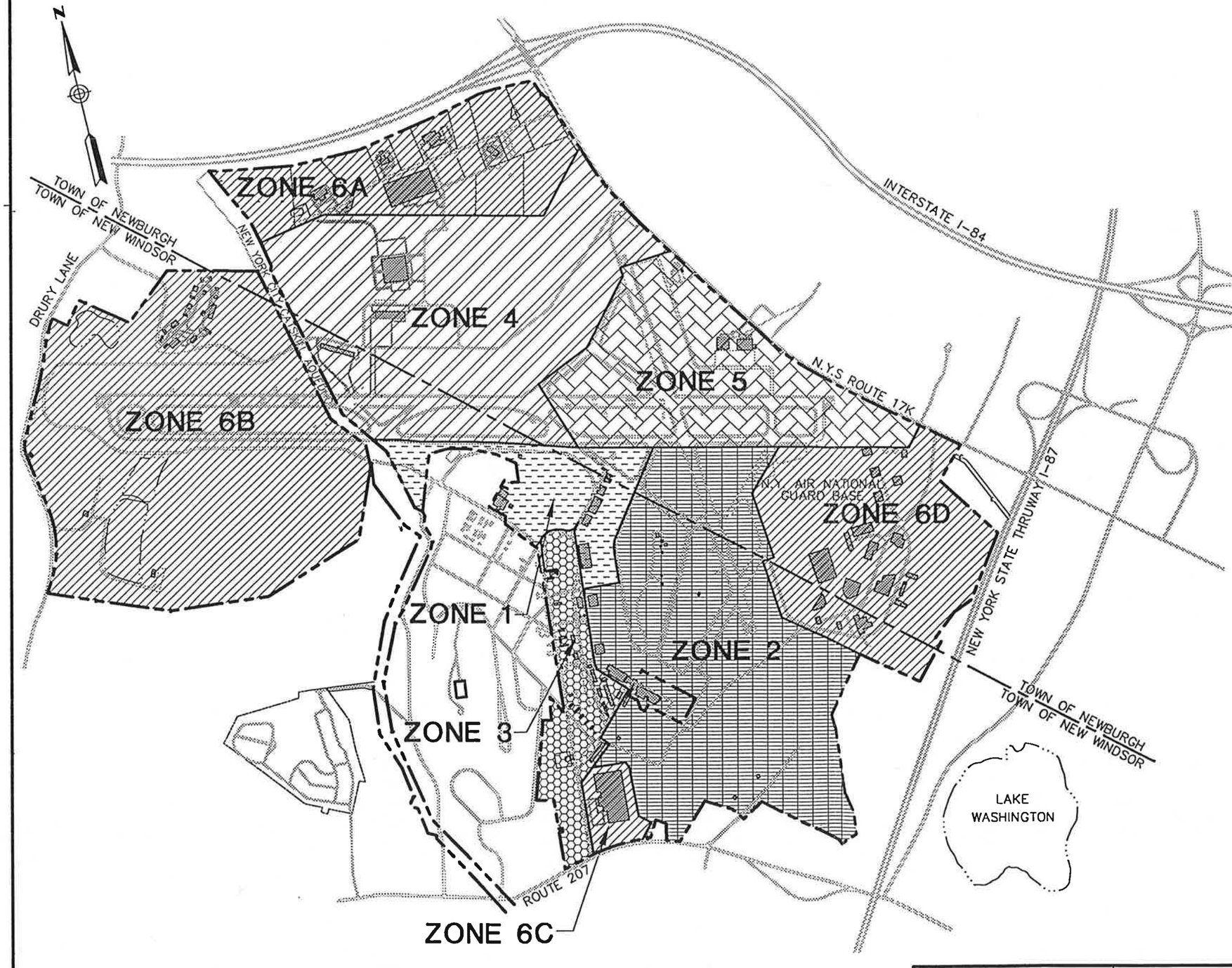
SITE LOCATION MAP

STEWART INTERNATIONAL AIRPORT

FIGURE 1



LEGEND

- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4
- ZONE 5
- ZONE 6
- PROPERTY BOUNDARY
- ZONE BOUNDARY
- LAKE/ POND
- TOWN LINE

REFERENCE

1.) BASE MAP TAKEN FROM HOWARD NEEDLES TAMMEN & BERGENDOFF, NEW YORK ENTITLED "AIRPORT LAYOUT PLAN", DATE NOT SPECIFIED.

1800 0 1800
scale feet

JOB No.:	983-6470	SCALE:	AS SHOWN
DR BY:	TVL	DATE:	09/15/98
CHK BY:	SAS	FILE No.:	NY02-440
REV BY:	TVL	DR SUBTITLE:	01

Golder Associates

ZONE CONFIGURATION

STEWART INTERNATIONAL AIRPORT

FIGURE 2

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
1220 WASHINGTON AVENUE
ALBANY, NEW YORK 12232

JOSEPH H. BOARDMAN
COMMISSIONER

GEORGE E. PATAKI
GOVERNOR

TO: Brad Williams
Lawler, Matusky & Skelly

FROM: G. Menard

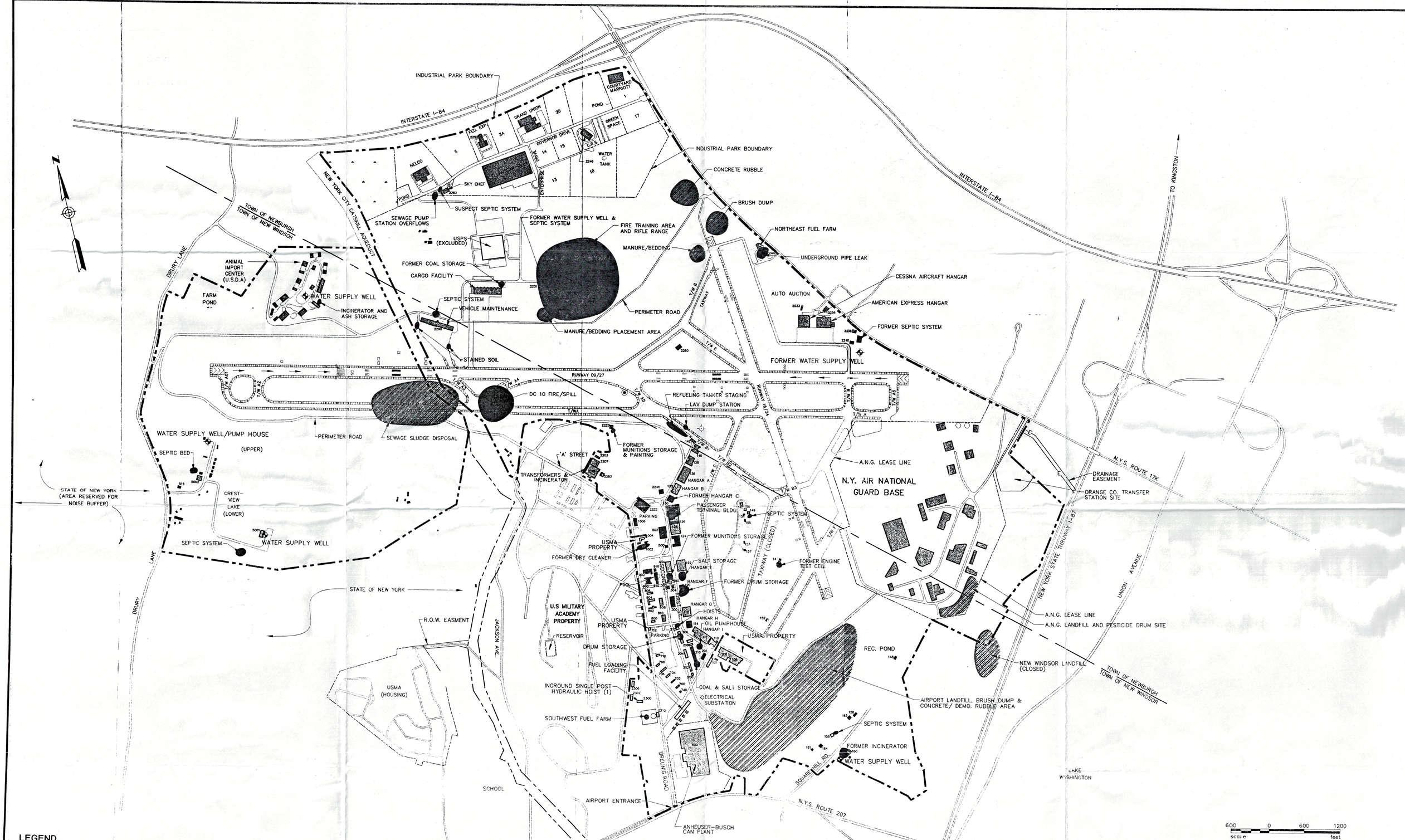
DATE: August 29, 2000

RE: P.I.N 8915.73
SIA

TRANSMITTAL MEMO

DATE	**DESCRIPTION**
10/98	Site Assessment Report (Golder) (please copy and return)
7/00	Copy of Area 1 GW Inv. Report with NYSDOT comments for incorporation Into final report.

REMARKS:



LEGEND

- EXISTING BUILDINGS INCLUDED WITH STUDY WITH BUILDING NUMBER SHOWN
- APPROXIMATE AREA OF WASTE DISPOSAL
- APPROXIMATE SPILL AREA
- APPROXIMATE FIRE TRAINING AREA & RIFLE RANGE
- APPROXIMATE AREA OF CONCERN
- APPROXIMATE LOCATION OF DEMOLISHED BUILDINGS
- SITE BOUNDARY
- LEASE BOUNDARY
- TOWN LIMIT
- LAKE/POND
- PAVED SHOULDER
- T/W TAXIWAY

NOTE

1.) ALL BOUNDARIES FOR AREAS OF CONCERN AND BUILDINGS ARE APPROXIMATE ONLY.

REFERENCE

1.) BASE MAP TAKEN FROM DIGITAL FILE, PROVIDED BY HOWARD NEEDLES TAMMEN & BERGENDOFF, NEW YORK ENTITLED "AIRPORT LAYOUT PLAN", DATE NOT SPECIFIED.

2.) LOCATION OF DEMOLISHED BUILDINGS TAKEN FROM MAP No. C-1 ENTITLED "AIRPORT PLAN", PROVIDED BY METROPOLITAN TRANSPORTATION AUTHORITY, NEWBURGH NEW YORK, DATED DECEMBER 1970.

600 0 600 1200
scale feet

REV	DATE	DESCRIPTION	DR BY	CHK BY	RVW BY

PROJECT: STEWART INTERNATIONAL AIRPORT ENVIRONMENTAL SITE ASSESSMENT NEWBURGH/NEW WINDSOR, ORANGE COUNTY, NEW YORK

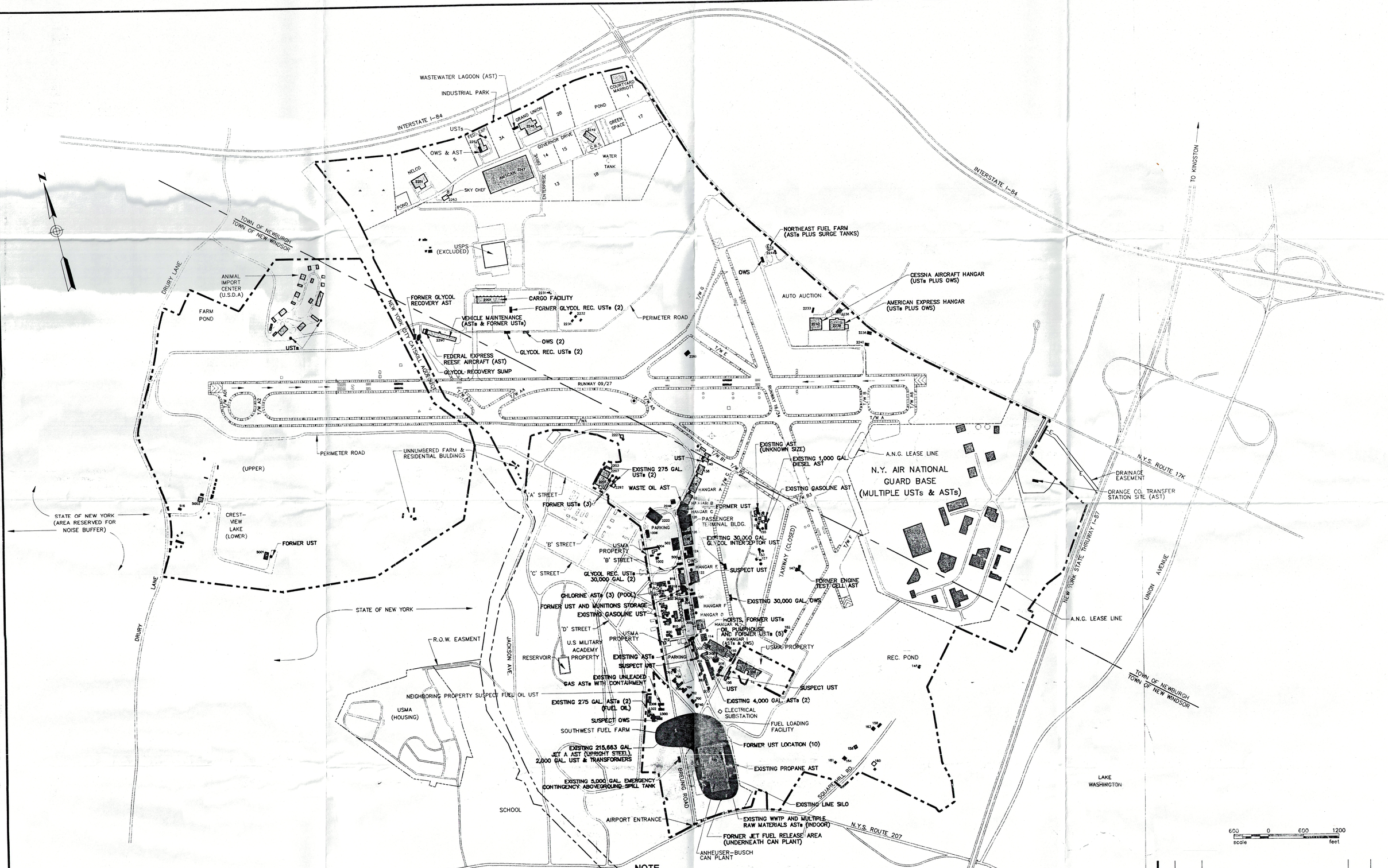
SHEET TITLE: NON-TANK RELATED AREAS OF CONCERN

Golder Associates
Mt. Laurel, New Jersey

PROJECT No.	983-6470	FILE No.: NY02-441
CLIENT PROJ. No.		DRAFTING SUBTITLE: 01
DES BY	TGP	08/31/98
DR BY	TVL	10/07/98
CHK BY		
RVW BY		

SCALE: AS SHOWN

FIGURE 4



LEGEND

- EXISTING BUILDINGS INCLUDED WITH STUDY WITH BUILDING NUMBER SHOWN
- APPROXIMATE LOCATION OF DEMOLISHED BUILDINGS
- APPROXIMATE LOCATION OF EXISTING & FORMER USTs & ASTs
- TANK RELATED AREA OF CONCERN
- LEASE BOUNDARY
- TOWN LIMIT
- LAKE/ POND
- SITE BOUNDARY
- PAVED SHOULDER
- OWS — OIL/WATER SEPARATOR
- UST — UNDERGROUND STORAGE TANK
- AST — ABOVEGROUND STORAGE TANK
- T/W — TAXIWAY

NOTE

1.) ALL BOUNDARIES FOR AREAS OF CONCERN AND BUILDINGS ARE APPROXIMATE ONLY.

2.) NOT ALL ASTs AND USTs SHOWN FOR CLARITY. SEE REPORT FOR COMPLETE TANK LISTING.

REFERENCE

1.) BASE MAP TAKEN FROM DIGITAL FILE, PROVIDED BY HOWARD NEEDLES TAMMEN & BERGENDOFF, NEW YORK ENTITLED "AIRPORT LAYOUT PLAN", DATE NOT SPECIFIED.

2.) LOCATION OF DEMOLISHED BUILDINGS TAKEN FROM MAP ENTITLED "AIRPORT PLAN", PROVIDED BY METROPOLITAN TRANSPORTATION AUTHORITY, NEWBURGH NEW YORK, DATED DECEMBER 1970.

REV	DATE	DESCRIPTION	DR BY	CHK BY	RVW BY

PROJECT:
STEWART INTERNATIONAL AIRPORT
ENVIRONMENTAL SITE ASSESSMENT
NEW WINDSOR, ORANGE COUNTY, NEW YORK

SHEET TITLE:
TANK RELATED AREAS OF CONCERN

Golder Associates
Mt. Laurel, New Jersey

PROJECT No.	983-6470	FILE No.:	NY02-442
CLIENT PROJ. No.		DRAFTING SUBTITLE:	01
DES BY	TGP	08/31/98	SCALE: AS SHOWN
DR BY	TVL	10/07/98	
CHK BY	[illegible]	10/9/98	FIGURE 5
RVW BY	[illegible]	10/13/98	